"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

USSR.

Electron-microscopic study of colloidal objectives by means of development. A. V. Bromberg, V. M. Lukyanovich, V. V. Nemtsova, L. V. Rafushkevich, and K. V. Chmutov. *Doklady Akad. Nauk S.S.S.R.* 87, 81–4(1952); cf. *C.A.* 47, 9717*i*.—The method of development (cf. *C.A.* 46, 1842*b*) as a means of detecting, with the electron-microscope, anisotropic structures of colloidal prepns. is further demonstrated with $Zn(OH)_2$ hydrosols (I) and with dil. solns. of tobacco mosaic virus (II). Colloidal Ag formed by reducing 0.05*N* $AgNO_3$ in I with 1 drop of 1% hydrazine is condensed at the sharp edges with none on the surface of the plates of I. To a lesser degree this is true of Au formed by reducing 0.2% $AuCl_3$ with 1 drop of 1% NH_4OH-HCl. Because of the opacity of I the dry prepn. on the cellulose film is treated with a drop of 0.01*N* HCl, the liquid phase blotted off with strips of filter paper, washed with H_2O, and dried. The outlines of I thus lost are observed by preliminary inspection before the acid treatment. Colloidal Ag formed by reduction with hydrazine in II condenses at the sharp end-to-end joints of the rods of II. None condenses on the surface. Unlike with V_2O_5 hydrosols (cf. *C.A.* 46, 1331*f*), aging does not affect the distribution of Ag on II; this indicates not only anisotropy but also a more compact, impermeable (to Ag) structure of the rods of II. I. Bencowitz

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

KADANER, D.G.; LUK'YANOVICH, V.M.; RADUSHKEVICH, L.V.

Adsorption and capillary condensation of vapors on nonporous carbon black. Doklady Akad.Nauk S.S.S.R. 87, 1001-4 '52. (MLRA 5:12)
(CA 47 no.14:6734 '53)

No-6

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANOVICH, V.M.

DUBININ, M.M., akademik, otvetstvennyy redaktor; KISELEV, A.V., professor, redaktor; LUK'YANOVICH, V.M., kandidat khimicheskikh nauk, redaktor.

[Methods of studying the structure of highly dispersed and porous bodies; transactions of the conference of June 25-29, 1951] Metody issledovaniia struktury vysokodispersnykh i poristykh tel; trudy soveshchaniia 25-29 iiunia 1951 g. Moskva, Izd-vo Akademii nauk SSSR, 1953. 163 p. (MLRA 7:4)

1. Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk.
(Porosity) (Adsorption)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

BROMBERG, A.V.; LUKYANOVICH, V.M.; NEMTSOVA, V.V.; RADUSHKEVICH, L.V.; CHMUTOV, K.V.

Electron-microscopic study of vanadium pentoxide sols. Zhur. Fiz. Khim. 27, 379-88 '53. (MLRA 6:5)
(CA 47 no.19:9717 '53)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANOVICH, V.M.

USSR

Electron microscope studies of the form of the continuous pores of activated carbons from sugar. V. M. Luk'yanovich and L. V Radushkevich. *Doklady Akad. Nauk S.S.S.R.* 91, 585-7(1953).—By continuous pore is meant an uninterrupted canal of minute diam., passing all the way through a material particle. Carbons made from sugar and activated by inorg. addns. have adsorption properties that suggest the presence of continuous pores and, at the same time, such carbons are easy to prep. for observation under the electron microscope. Three sets of photographs show: (1) (a) sugar coke at × 13,400; (b) part of (a) at × 47,000 with a clear case of continuous pore; (2) three prints of sugar carbons × 47,000; (3) stereoscopic electron microscope photograph of sugar carbon at × 11,000. While the continuous pores are said to have dimensions of the order of 10^{-4}-10^{-5} cm., adsorption measurements indicate that activated sugar coke contains a large no. of micropores with diams. of the order of 10^{-7} cm. V. H. Gottschalk

Inst. Phys. Chem., AS USSR

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANOVICH, V.M.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

Name	Title of Work	Nominated by
Chmutov, K.V. Bromberg, A.V. Neatsov, V.V. Luk'yanovich, V.M. Radushkevich, L.V.	"Investigation by Electron-microscope of the Fine Structure and Properties of Colloids"	Institute of Physical Chemistry, Academy of Sciences USSR

SO: W-30604, 7 July 1954

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUKYANOVICH, V.M.

The application of replica production to the electron-microscopic investigation of silica gel and porous glass. B. A. Leont'ev and V. M. Luk'yanovich. *Doklady Akad. Nauk S.S.S.R.* 103, ~~1030-10(1955)~~. Two methods of replica production were used, the collodion and the quartz-polystyrene. The samples were first treated with HF. The electron-microscope pictures at 14,000 magnifications showed that the SiO_2 gel consisted of somewhat elongated rounded particles. The porous glass photomicrographs exhibit a different structure, namely a blistered, spongy structure, with pores of the order of hundredths and tenths of a μ. These pores are explained on the basis of the porous-glass-formation method in which sol. components are leached from borosilicate glass.

W. M. Sternberg

5

M. A. YOUTZ
2 copies

RM

Inst. Phys. Chem. AS USSR

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANOVICH, V. M.

Electron-microscope study of Polish silica from the Sandomir region. E. A. Leont'ev, V. M. Luk'yanovich, and Z. Ya. Sokal'skii (Polytech. Inst., Gliwice, Poland). *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1956, 1168-70.—The structural properties of silica were studied by means of the electron microscope. I. Rostar Leach

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK YANOVICH, V.M.

Category : USSR/Atomic and Molecular Physics - Liquids D-8

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 6432

Author : Luk'yanovich, V.M.
Title : Methods of Investigation of the Structure of Highly Dispersed and Porous Bodies (Conference in Leningrad).

Orig Pub : Vestn. AN SSSR, 1956, No 9, 101-103

Abstract : On 13 -- 18 June 1956 there was held in Leningrad the Second Conference on Methods of Investigation of the Structure of Highly-Dispersed and Porous Bodies, organized by the Institute of Physical Chemistry and the Institute of Chemistry of Silicates of the Academy of Sciences, USSR. A brief contents of the papers and discussions is given.

Card : 1/1

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANOVICH, V.M.

Second conference on methods used in studying the structure of highly dispersive and porous solids. Izv. AN SSSR. Otd.khim. nauk no.11:1423-1426 N '56. (MLRA 10:3)
(Sorbents) (Catalysts)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANOVICH, V.M.

KISELEV, A.V.; LEONT'YEV, Ye.A.; LUK'YANOVICH, V.M.; NIKITIN, Yu.S.

Adsorptional and electron microscopic investigation of the structural changes of aluminosilicate catalysts. Zhur. fiz. khim. 30 no.10:2149-2159 O '56. (MLRA 10:4)

1. Institut neftyanoy promyshlennosti, Adademiya nauk SSSR, Institut fizicheskoy khimii, Moskva.
(Catalysts) (Aluminosilicates)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANOVICH, V.M.

LEONT'YEV, Ye.A.; LUK'YANOVICH, V.M.; MIL'MAN, B.S.

Electron microscopic investigation of the structure of spheroidal graphite in cast iron. Dokl. AN SSSR 112 no. 3:461-463 Ja '57. (MLRA 10:4)

1. Institut fizicheskoy khimii Akademii nauk SSSR i TSentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya. Predstavleno akademikom M.M. Dubininym.
(Cast iron) (Graphite)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUKYANOVICH, V. M., DUBININ, M. M., LEONT'YEV, Ye. A., SARACHOV, A. I.

"Examination of the Porous Structure of Activated Charcoals."

paper submitted for presentation at Fourth Int'l. Conference on Electron Microscopy, Berlin, GFR, 10-17 Sep 58.

Institute for Physical Chemistry, USSR Acad. Sci. Moscow.

C-3,800,829, 25 Jul 58.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANOVICH, V. IN.

RADUSHKEVICH, L.V.

24(6) P-3 PHASE I BOOK EXPLOITATION SOV/1408

Soveshchaniye po metodam issledovaniya struktury vysokodispersnykh i poristykh tel. 2d, Leningrad, 1956.

Metody issledovaniya struktury vysokodispersnykh i poristykh tel; trudy vtorogo soveshchaniya (Methods of Investigating the Structure of Highly Disperse and Porous Bodies; Transactions of the Second Conference) Moscow, Izd-vo AN SSSR, 1958. 294 p. 2,000 copies printed.

Sponsoring Agencies: Akademiya nauk SSSR. Institut fizicheskoy khimii and Institut khimii silikatov.

Resp. Ed.: Dubinin, M.M., Academician; Ed. of Publishing House: Barumova, L.L.; Tech. Ed.: Markovich, S.M.

PURPOSE: This book is intended for scientists, teachers and advanced students interested in the structural analysis of highly disperse and porous bodies.

COVERAGE: This collection contains reports by members of various Soviet institutions of higher education: Institute of Physical Chemistry, AS UkrSSR; Institute of Chemistry, AS Georgian SSR; Far Eastern Branch, AS USSR; Georgian Scientific Research Institute for Petroleum; State Optical Institute; Leningrad Technological Institute; Moscow and Leningrad State Universities; Far Eastern Polytechnic Institute; "Agrophysical" Institute, and others. Introductory remarks were made by Professor N.A. Toropov, Director of the Institute of Silicate Chemistry. Apart from reports under the four subject divisions (see Table of Contents), the collection includes discussions, considerations and proposals adopted at the close of the conference.

TABLE OF CONTENTS:

Babokov, V.S., Ye.N. Paleolog, and N.D. Tomashov (Institute of Physical Chemistry, AS USSR). Sorption Method of Determining the Structures of Protective Films on Metals 137

Tsitsishvili, G.V. (Institut khimii imeni P.G. Melikishvili Akademii nauk Gruzinskoy SSR-Institute of Chemistry imeni P.G. Melikishvili, Academy of Sciences, Georgian SSR). Porosity Characteristics of Adsorbents With Mixed Structure 146

Discussion (by contributing authors; K.D. Shcherbakova, Moscow State University imeni M.V. Lomonosov, and D.P. Dobychin, Gosudarstvennyy opticheskiy institut imeni S.I. Vavilova-State Optical Institute imeni S.I. Vavilov) 151

C. Comparison of the Results of Employing the Adsorption Method With Data From Other Methods of Studying Structure

Kiselev, A.V., V.M. Luk'yanovich, and Ye.A. Foray-Koshits. Results of a Complex Study of Adsorbent and Catalyst Structures Obtained by Employing Adsorption, Small-angle X-ray and Electron-microscope Methods 161

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

SOV/58-59-7-15876

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 7, p 176 (USSR)

AUTHORS: Leont'yev, Ye.A., Luk'yanovich, V.M.

TITLE: Electron Microscopic Study of the Structure of Porous Bodies Using the Replica Method

PERIODICAL: V sb.: Metody issled. struktury vysokodospersn. i poristykh tel. Moscow, AS USSR, 1958, pp 19 - 36. Diskus., pp 37 - 44

ABSTRACT: The authors describe various methods of preparing replicas for the study of the structure of porous and highly dispersed (single-stage colloidal and carbon) bodies, and two-stage polysterene-quartz, colloid-quartz, and colloid-beryllium bodies, preshadowed with chrorium. They carry out a quantitative check of the accuracy of the replica method for particles ~ 100 Å in size. The results of this check show that the various replicas yield very similar data. The authors note that it is expedient to use stereoscopy for the study of porous bodies. The bibliography contains 24 titles. (In-t fiz. khimii AS USSR, Moscow).

Card 1/1

A.N.P.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

AUTHORS: Leont'yev, Ye. A., Lukiyanovich, V. M., Neymark, I. Ye., Piontkovskaya, M. A. SOV/62-58-9-4/26

TITLE: Investigation of the Structure of Titanium Dioxide Gels by Independent Methods (Issledovaniye struktury geley dvuokisi titana nezavisimymi metodami)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1958, Nr 9, pp 1037 - 1044 (USSR)

ABSTRACT: In only a few papers on the structure of titanium dioxide gels is the dependence of the catalytic and adsorption properties of titanium dioxide gel upon the conditions of their preparation exclusively considered (Ref 4). The porous structure of the titanium dioxide gels is not considered in this paper. In order to get a comprehensive conception of the structure of these gels and to define more clearly the various methods with which they may find practical application the authors of this paper investigated titanium dioxide gels of various structures. Independent methods of investigation were used. Working in cooperation with the Institute of Physical Chemistry

Card 1/3

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

Investigation of the Structure of Titanium Dioxide Gels of Independent Methods SOV/62-58-9-4/26

AS UkrSSR (preparation of the titanium dioxide gels of various structures and investigations on adsorption and structure) and with the Institute of Physical Chemistry AS USSR (electron microscopic, X-ray, and electron diffraction investigations) they obtained good results. The adsorption and electron microscopic investigations were extended to a series of gels of titanium dioxide, which was prepared by the hydrolysis of titanium chloride. The gels consisted of spherical particles which appeared non-porous at first sight. The specific surface area of the gels depended mainly on the size of the particles, whereas the character of the porosity depended on the size and the density of packing. The pores appeared as interstitial spaces (between the touching particles). The exchange of water present in the gels for other liquid of smaller surface tension made it possible to adsorb larger particles while maintaining the tight packing of particles. Increasing the formation time for the titanium dioxide gel in the formation solution diminished the porosity as a result

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

Investigation of the Structure of Titanium Dioxide Gels of Independent Methods SOV/62-58-9-4/26

of the adsorbed particles becoming more closely packed. There are 7 figures, 2 tables, and 14 references, 10 of which are Soviet.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry, AS USSR) Institut fizicheskoy khimii im.L.V.Pisarzhevskogo Akademii nauk Ukrainskoy SSR (Institute of Physical Chemistry imeni L.V.Pisarzhevskiy, AS UkrSSR)

SUBMITTED: March 28, 1957

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APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

Lukyanovich, V. M.

S/076/60/034/009/015/022
B015/B056

AUTHORS: Dubinin, M. M., Vishnyakova, N. M., Zhukovskaya, Ye. S., Leont'yev, Ye. A., Lukyanovich, V. M., and Sarakhov, A. I.

TITLE: Investigation of the Porous Structure of Solids by Sorption Methods. V. Application of Different Methods for Studying the Structure of Intermediate and Macro-pores of Active Coals

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 9, pp. 2019-2029

TEXT: A thorough investigation of the structure of intermediate pores, whose size is between micro- and macro-pores, of some typical kinds of coal (from the type AY-10 - AY-14 (AU-10 to AU-14)) with intermediate porosity is carried out by the method of capillary condensation of vapors (benzene or nitrogen), by pressing in mercury, or by electron microscopy. Data concerning the volumes of the micro- and intermediate pores of the investigated kinds of coal are given in a table and show that in all

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samples the volumes of the intermediate pores exceed those of the micro-pores by a multiple. The sorption and desorption experiments carried out with nitrogen vapors at -195°C and benzene at 20°C a device with quartz scales. A detailed description of this device is given in Ref. 11. The sorption isothermal lines (Figs. 1-3) are all S-shaped and have a hysteresis, the beginning of which corresponds to the equilibrium pressure $(p/p_s)_o = 0.175$ for benzene at 20°C and $(p/p_s)_o = 0.45$ for nitrogen at -195°C. For the purpose of determining the porous structure by the method of pressing-in mercury, two pore gauges of the type ПА-4 (PA-4)(Ref. 8) (one for low and one for high pressure) were used. For electro-microscopic examinations a УЭМ-100 (UEM-100) electron microscope was used, carbon replicas were recorded (Fig. 5), and pore diameters from 70 to 110 A were found. The summational curves (Figs. 6-8) of the volume of the intermediate pores with respect to their effective diameters, which were calculated from the sorption isothermal lines for benzene and were measured

Card 2/3

by pressing in mercury, showed good agreement. In the case of the results obtained for nitrogen, less good agreement was found. The electron-microscopic values qualitatively confirm the sorption values and the measured values obtained by pressing in mercury. B. P. Bering and V. V. Serpinskiy are thanked for their interest in the present paper. There are 8 figures, 1 table, and 15 references: 12 Soviet and 1 US.

ASSOCIATION: Akademiya nauk SSSR Institut fizicheskoy khimii (Academy of Sciences USSR, Institute of Physical Chemistry)

SUBMITTED: December 24, 1958

Card 3/3

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANOVICH, V. M.; RADUSHKEVICH, L. V.; TSITSISHVILI, G. V.; YERMOLENKO, N. F.; DUBININ, M. M.; BERING, B. P.; SERPINSKIY, V. V.;

"The adsorption from vapors and liquids."

report presented at the Fourth All-Union Conference on Colloidal Chemistry, Tbilisi, Georgian SSR, 12-16 May 1958 (Koll zhur, 20,5, p.677-9, '58, Taubman, A.B)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

AUTHOR: Luk'yanovich, V. M. (Moscow) SOV/74-27-6-3/6

TITLE: The Present Stage of Transmission Electron Microscopy and Its Application in Physical-Chemical Investigations (Sovremennoye sostoyaniye prosvechivayushchey elektronnoy mikroskopii i yeye primeneniye v fiziko-khimicheskikh issledovaniyakh)

PERIODICAL: Uspekhi khimii, 1958, Vol. 27, Nr 6, pp. 690 - 716 (USSR)

ABSTRACT: In his introduction the author gives a survey of the development of electron microscopy since the construction of the first electron microscope (1932). The technical possibilities in the field of electron microscopy increased especially in the course of the past 2-4 years. A number of newly published surveys is mentioned in which the development of electron microscopy is discussed from various points of view. (Refs 7-12). Paragraph 2 deals with the basic methods employed in investigations carried out by means of electron microscopy such as: 1) Direct investigation of the object in the electron beam passing through.
2) The shadow-casting method employed for the purpose of ob-

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SOV/74-27-6-3/6

The Present Stage of Transmission Electron Microscopy and Its Application in Physical-Chemical Investigations

taining better contrast effects when reproducing the object. 3) The replica method: A thin film is removed from the object, which reproduces the surface relief of the said object. The bases of this method are discussed: Bradley (Refs 35, 36), Kiselev, Leont'yev, Luk'yanovich, and Nikitin (Ref 42), Adams, Voge (Ref 43).
4) Extraction replicas. 5) Ultrathin sections. 6) The "enclosure" method. 7) Cooling and heating of the preparations in the electron microscope. 8) Special methods of application. 9) Additional remarks: a) application of microscopy. b) the effect produced by electronic irradiation of the object.
The third paragraph contains some general remarks concerning the application of electron microscopy in biology and in metallurgical science. - Paragraph 4: The application of electron microscopy in physical-chemical investigations. The following subjects are discussed: 1) Electron microscopy, electron diffraction, and radiostructural analysis. 2) Electron microscopy and sorption-methods of investigation.
3) Electron microscopy and the investigation of the catalytic activity of massive contacts. 4) Electron microscopy and chemical methods of investigation. 5) Electron microscopy

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SOV/74-27-6-3/6

The Present Stage of Transmission Electron Microscopy and Its Application in Physical-Chemical Investigations

and colloid-chemical methods of the investigation of sols. 6) New problems arising in connection with electron microscopy. There are 27 figures and 146 references, 47 of which are Soviet.

1. Electron microscopy 2. Electron microscopes--Applications 3. Electron microscopes--Operation 4. Electron microscopes --Effectiveness

Card 3/3

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

AUTHORS: Leont'yev, Ye. A., Luk'yanovich, V. M. SOV/76-32-8-30/47

TITLE: The Preparation Technique in the Electron-Microscopic Investigations of Porous Bodies and Powders According to the Replica Method (Tekhnika preparirovaniya pri provedenii elektronno-mikroskopicheskikh issledovaniy poristykh i poroshkoobraznykh tel metodom replik)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol. 32, Nr 8, pp. 1922-1926 (USSR)

ABSTRACT: Some modifications of the technique employed in the preparation of replicas are described. In the explanation of the selection and application of the replica of porous bodies it is mentioned that the carbon replica obtained according to the method by Bredli (Bradley) (Ref 3) yields the best results. The well-known polystyrene-quartz method is recommended for carrying out the two-state method. The separation and processing of the replicas is explained according to four points, and an apparatus for stripping the replica is described. Some instructions are given, and in the selection of the type of replica the character of the porous structure of the object is pointed out. A preparation method of powder

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

SOV/76-32-8-32/37

The Preparation Technique in the Electron-Microscopic Investigations of Porous Bodies and Powders According to the Replica Method

replica is described which is modified according to the solubility of the powder. There are 2 figures and 7 references, 2 of which are Soviet.

ASSOCIATION: Akademiya nauk SSSR, Institut fizicheskoy khimii, Moskva (AS USSR, Institute of Physical Chemistry, Moscow)

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APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANOVICH, V. M., POPOV, M. M., CHMUTOV, K. V., KASACHOTKIN, V. I.

"Research by microdiffraction on the structure of lampblack particles."

report to be submitted for the 10th Annual Meeting, French Society of Chemistry (Structure and Reaction Kinetics of Graphite) - Paris, France, 7-10 Jun 1960.

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

PHASE I BOOK EXPLOITATION SOV/4767

Luk'yanovich, Vsevolod Mikhaylovich

Elektronnaya mikroskopiya v fiziko-khimicheskikh issledovaniyakh; metodika i primeneniye (Electron Microscopy in Physicochemical Research; Methods and Application) Moscow, Izd-vo AN SSSR, 1960. 271 p. Errata slip inserted. 7,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut fizicheskoy khimii.

Resp. Ed.: K.V. Chmutov, Corresponding Member, Academy of Sciences USSR; Ed. of Publishing House: A.A. Babad-Zakhryapin; Tech. Eds.: T.V. Polyakova and T.A. Prusakova.

PURPOSE: This book is intended for physicists, chemists and other scientists interested in electron microscopy as a tool of physicochemical analysis.

COVERAGE: The book describes the field of electron microscopy. Historical data on electron microscopes and the characteristics, handling techniques and fields of application of the transmission electron microscope are discussed. The Appendix contains 91 sample electron micrographs. No personalities are mentioned. References follow each chapter.

Card ~~1~~/6

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LEONT'YEV, Ye.A.; LUK'YANOVICH, V.M.

Electron microscope study of the porous structure of active carbons with the use of the replica method. Izv. AN SSSR.Otd. khim. nauk no.11:1955-1961 N '60. (MIRA 13:11)

1. Institut fizicheskoy khimii AN SSSR.
(Carbon, Activated)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

CHMUTOV, K.V.; LUK'YANOVICH, V.M., kand.khimicheskikh nauk

Structure of graphite and the kinetics of its reactions. Vest AN SSSR 30 no.9:73-74 S '60. (MIRA 13:9)

1. Chlen-korrespondent AN SSSR (for Chmutov).
(Graphite)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LEONT'YEV, Ye.A.; LUK'YANOVICH, V.M.

Structure of the particles of graphitized thermal carbon black and of the products of their dissociation. Dokl.AN SSSR 134 no.2:384-386 S '60. (MIRA 13:9)

1. Institut fizicheskoy khimii AN SSSR. Predstavleno akad. M.M.Dubininym.

(Carbon black)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANOVICH, V. M.

Doc Chem Sci - (diss) "Electron-microscopic study of the structure of several highly dispersed systems and porous bodies." Moscow, 1961. 22 pp; (State Committee of the Council of Ministers USSR for Chemistry, Order of Labor Red Banner Scientific Research Physical Chemistry Inst imeni L. Ya. Karpov); 150 copies; price not given; (KL, 6-61 sup, 196)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

S/062/61/000/003/002/013
B117/B208

AUTHORS: Dubinin, M. M., Vishnyakova, M. M., Zaverina, Ye. D., Zhukovskaya, Ye. G., Leont'yev, Ye. A., Luk'yanovich, V. M., and Sarakhov, A. I.

TITLE: Study of adsorption properties and structure of secondary pores of adsorbents having the effect of molecular sieves. Report 1. Industrial samples of synthetic zeolites

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, no. 3, 1961, 396-406

TEXT: The authors studied some peculiarities of the adsorption properties of typical industrial samples of synthetic zeolites and the structure of their secondary pores. They used industrial samples from molecular sieves designed by Linde 4A (designated by MC-4A (MS-4A)), and 5A (designated by MC-5A (MS-5A)) in the form of 4-8 mm long grains with an average diameter of ~3.2 mm. Sorption isotherms and, in some cases, desorption isotherms of nitrogen vapors at -195°C, and water, benzene, and cyclohexane vapors at 20°C were determined. A similar apparatus as that described in Ref. 2

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(B. P. Bering, M. M. Dubinin, Ye. G. Zhukovskaya, A. I. Sarakhov, and V. V. Serpinskiy, Zh. fiz. khimii 31, 712, 1957) was applied. To study the structure of secondary pores of MS-4A and MS-5A grains, low- and high-pressure porosimeters were used. The latter was a redesigned device of the ПА-4 (PA-4) type (Ref. 5: T. G. Plachenov, V. A. Aleksandrov, and G. M. Belotserkovskiy, Metody issledovaniya struktury vysoko-dispersnykh i poristykh tel, Izd. AN SSSR, M., 1953, str. 59). For the electron-microscopic examination of the structure of secondary pores, the method of single-stage carbon replicas was used. The pictures of carbon replicas of MS-4A and MS-5A taken by means of an УЭМ-100 (UEM-100) electron microscope showed no marked differences. A thorough analysis of stereophotographs indicates that there was no dense packing of the zeolite crystals in the grains. There are interstices of the order of magnitude of small crystals, i.e., some tenths of a micron or some thousandths of an angstrom. Strong enlargements show that the crystal surface is not amorphous. The studies of MS-4A and MS-5A disclosed that the potential adsorption theory could be applied to them. As the authors had not obtained any experimental data, they used the results obtained by N. V. Kel'tsev, for water vapor at 20° and 80°C and at equilibrium pressures p = 1 and 25 mm Hg, which had been

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made available to them. The measured values of adsorption daviate from the calculated values by 3 % at most. Eq. (1) expresses the temperature dependence of the adsorption isotherms satisfactorily:

$$a = (W_0/v) \exp \left[-B \frac{T^2}{\beta^2} (\log p_s/p)^2 \right] \quad (1)$$

W_0 = limiting volume of the adsorption space, which is equal to the volume of the micropores of the adsorbent; B = constant dependent on the dimensions of the micropores, which determine the increase of the adsorption potentials; β = affinity factor of the characteristic lines; v = volume of 1 mM of the vapor liquefied at the experimental temperature T. When considering the structure of the secondary pores, it was found that it may be quantitatively described by the sorption and mercury methods of measuring the pores. The characteristics obtained for the pore structure of MS-4A and MS-5A are given in Table 4. There are 9 figures, 7 tables, and 13 references: 12 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry, Academy of Sciences USSR)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

SPIVAK, G.V.; VERTSNER, V.N.; LUK'YANOVICH, V.M.; LEVIN, Ye.Ye.; SKAKOV, Yu.A.

Third All-Union Conference on Electron Microscopy. Radiotekh. i elektron. 6 no.5:852-862 My '61. (MIRA 14:4)
(Electron microscopy—Congresses)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

S/062/61/000/008/003/010
B117/B206

AUTHORS: Dubinin, M. M., Zaverina, Ye. D. (Deceased), Luk'yanovich, V. M., and Kharlamov, N. P.

TITLE: Investigation of the adsorption properties and the secondary pore structure of adsorbents having the effect of microfilters. Communication 3. Components of grains of synthetic A-type zeolites

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 8, 1961, 1380-1387

TEXT: In sorption technique synthetic zeolites are mainly used in the form of grains, tablets, and balls. The main components of the grains are crystalline zeolite powders and binding agents. In order to clarify the properties of these components, the authors investigated the dispersity of zeolite crystals and their adsorption properties as well as the share of the binding agent in sorption. Crystalline specimens of A-type zeolites were used, which were synthetized by some Soviet scientists: I. Ye. Neymark (Nm), Ya. V. Mirskiy (Mr), L. M. Maksimova (Mk) and B. A. Lipkind (Lp).

Card 1/4

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

The designation of the specimens is composed of the abbreviated name of the scientist and the specimen number given by him. American commercial specimens in the form of crystalline zeolite powders of the types 4-A and 5-A by the firm of Linde were used for comparison. To the sodium form (NaA) belonged: Нм-300 (Nm-300), Nm-347, Мр-275 (Mr-275), Мк-90 (Mk-90), Mk-1 experiment, Лп-202-2 (Lp-202-2) and Linde 4-A. To the calcium form (CaA) belonged: Mr-276 and Linde 5-A. The specimens were photographed in an electron microscope of the type УЭМ-100 (UEM-100) with 800-fold magnification. Further magnification was achieved optically. The photographs made of different places of the preparations were statistically evaluated after magnification. Distribution curves of these crystals according to their size were plotted on the basis of these data. The zeolite specimens synthetized by Neymark and Mirskiy were found to be distinguished by relatively close distribution. Crystals of the size of 0.75 μ are predominant in the preparations by Neymark and of the size of 1.2 μ in those by Mirskiy. The zeolite specimens prepared by Maksimova and Lipkind are not only more coarsely disperse, but also have a wider distribution of the crystals. Benzene was used for investigating the adsorption properties. The adsorption isotherms were determined at 20°C

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

by means of sorption scales in vacuum. The curves showed a similar shape as those corresponding to M. M. Dubinin, M. M. Vishnyakova, Ye. D. Zaverina, Ye. G. Zhukovskaya, Ye. A. Leont'yev, V. M. Luk'yanovich and A. I. Sarakhov (Ref. 6: Izv. AN SSSR, Ord. khim. n. 1961, 396). The adsorption isotherms of water vapor were measured by sorption scales, for comparison of the adsorption properties of crystalline, completely dehydrated zeolites. The crystalline A-type zeolites synthetized by Soviet scientists are generally marked by good adsorption capacity which is characteristic of zeolites of this type. The Debye powder patterns of specimens of Soviet and American origin are identical. A clay specimen of the betonite type used by Ya. V. Mirskiy for the preparation of granulated zeolites served as example for the binding agent. The adsorption of benzene vapors was investigated at 20°C on a specimen which was heat-treated at 600°C. The application of betonite-type clay as binding agent was found to have no great effect on the adsorption properties of zeolite granules. The authors thank B. A. Lipkind, I. Ye. Neymark, Ya. V. Mirskiy and L. M. Maksimova for supplying synthetic zeolite specimens. There are 3 figures, 5 tables, and 6 references: 2 Soviet-bloc and 4 non-Soviet-bloc. The four references to English-language publications read as

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

Investigation of the adsorption... S/062/61/000/008/003/010
B117/B206

follows: D. W. Breck, W. G. Eversole, R. M. Milton, T. B. Read, T. L. Thomas, J. Amer. Chem. Soc. 78, 5963 (1956); T. B. Read, D. W. Breck, J. Amer. Chem. Soc. 78, 5972 (1956); R. M. Barrer, W. M. Meier Trans. Faraday Soc. 54, 1072 (1958); L. Broussard, D. P. Shoemaker, J. Amer. Chem. Soc. 82, 1041 (1960).

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry, AS USSR)

SUBMITTED: December 12, 1960

Card 4/4

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANOVICH, V.M.

Some urgent problems arising in applied electron microscopy; survey. Zav. lab. 27 no. 12:1475-1480 '61. (MIRA 14:5)
(Electron microscopy)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANOVICH, V.M.; MAKHINKO, V.V.

Electron microscope investigation of silicotic dust. Dokl.AN SSSR 145 no.3:609-611 Jl '62. (MIRA 15:7)

1. Institut fizicheskoy khimii AN SSSR i Permskiy nauchno-issledovatel'skiy ugol'nyy institut. Predstavleno akademikom M.M.Dubininym.

(LUNGS—DUST DISEASES) (ELECTRON MICROSCOPY)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LEVIN, YE.Ye.; LUK'YANOVICH, V.M.

All-Union Conference on Electron Microscopy. Zav. lab. 29 no.10:1276-1277 '63. (MIRA 16:12)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUKYANOVICH, V. M.; KASATOCHKIN, V. I.; NEDOSHIVIN, Yu. N.; FINKELSHTEYN, G. B.

"Elektronenmikroskopische Untersuchung der Russe."

report submitted to 3rd European Regional Conf, Electron Microscopy, Prague, 26 Aug-3 Sep 64.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANOVICH, V.M.

Conference on the introduction of electron microscopy into industry. Zav. lab. 30 no.1:121-122 '64. (MIRA 17:9)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

KAVTARADZE, N.N.; SOKOLOVA, N.P.; LUK'YANOVICH, V.M.; YEVKO, E.I.

Preparation and structure of solid finely dispersed metals for spectral studies. Kin.i kat. 5 no.6:1095-1099 N-D '64. (MIRA 18:3)

1. Institut fizicheskoy khimii AN SSSR.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

L 1125-66 EWT(m)/T

ACCESSION NR: AP5022938

UR/0062/65/000/008/1500/1502
541.183+546.284

AUTHOR: Dubinin, M. M.; Zhukovskaya, Ye. G.; Luk'yanovich, V. M.; Murdmaa, K. O.; Polstyanov, Ye. F.; Senderov, E. E.

TITLE: Adsorption volumes of synthetic mordenites

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 8, 1965, 1500-1502

TOPIC TAGS: molecular sieve, synthetic zeolite, mordenite

ABSTRACT: Adsorption (pore) volumes of sodium and hydrogen forms of synthetic mordenite were determined in order to check them against the corresponding values calculated on the basis of X-ray analysis. For comparison, also H-Zeolon (product of Norton Company) was examined. The saturation volumes of Na and H synthetic mordenites were determined from water vapor isotherm at 20°C, nitrogen and argon isotherms taken at -196°C, and from sorption and desorption isotherms for benzene taken at 20°C and various pressures. For all mordenites an excellent agreement was found between the calculated pore volumes and the values obtained from water vapor, nitrogen, and argon adsorption measurements, while benzene adsorption gave values for the pore volumes that were too low. This was due to the fact that the small cavities in the

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

L 1125-66

ACCESSION NR: AP5022938

6

mordenite tube-like channels were inaccessible to benzene. It was concluded that only the channels with openings made of oxygen rings containing 12 atoms are accessible to benzene. Orig. art. has: 2 figures, 2 tables.

44,55

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry, Academy of Sciences, SSSR); Institut geokhimii i analiticheskoy khimii im. V. I. Bernadskogo Akademii nauk SSSR (Institute of Geochemistry and Analytical Chemistry, Academy of Sciences, SSSR)

44,55

SUBMITTED: 17Dec64 ENCL: 00 SUB CODE: MT, GC

NO REF SOV: 004 OTHER: 003

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

PREOBRAZHENSKAYA, T.P.; MAKSIMOVA, T.S.; LUK'YANOVICH, V.M.; YEVKO, E.I.

Using carbon replica method for the electron microscopic strudy of the surface of Actinomyces spores. Mikrobiologiia 34 no.3:519-523 My-Je '65.

(MIRA 18:11)

1. Institut po izyskaniyu novykh antibiotikov Ministerstva zdravookhraneniya SSSR.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

L 21763-66 ETC(m)-6/T-2/EWP(w) EM/WW

ACC NR: AP6011247 SOURCE CODE: UR/0413/66/000/006/0090/0091

36
B

INVENTOR: Kogan, P. A.; Luk'yanovskaya, L. V.

ORG: none

TITLE: A stand for testing gas jets. Class 42, No. 179967

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 6, 1966, 90-91

TOPIC TAGS: gas jet, test stand

ABSTRACT: An Author Certificate has been issued for a stand for testing gas jets, consisting of a receiving chamber containing a nozzle fitted on a rod, a scale for visual observation of nozzle position, and ball-bearing supports mounted in vertically moving brackets, with a rod mounted in the supports and capable of longitudinal motion. To determine the efficiency of remote gas jets, the stand is equipped with a drive mechanism consisting of a cylinder with a nozzle on its rod. To position the nozzle, a locking device is used which consists of a housing in which moves a piston connected to the lock, which in turn, interacts with the cylinder rod of the drive mechanism. [WH]

SUB CODE: 13, 14/ SUBM DATE: 22Feb65/ ATD PRESS: 4227

Card 1/1 PB UDC: 533.697.5:620.1.052.5

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANOVSKIY, S.V.

KAZANSKIY, Georgiy Alekseyevich, kand.tekhn.nauk; MIROSHNIK, Boris Martynovich, inzh.; LUK'YANOVSKIY, S.V., inzh., red.; VERINA, G.P., tekhn.red.

[Construction and repair of railroad car trucks] Ustroistvo i remont vagonnykh telezhek. Moskva, Gos.transp.zhel-dor. izd-vo, 1958. 343 p. (MIRA 11:5)
(Railroads--Cars)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANSKAYA, Ye.I, uchitel'nitsa

Nature study room at the Chismena seven-year school. Biol. v shkole no.5:58 S-O '58. (MIRA 11:11)

1. Chismenskaya semiletnyaya shkola Volokolamskogo rayona Moskovskoy oblasti.

(Nature study)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUKYANSKI, M. [Lukjanski, M.] (Pol'sha)

Role of functional studies of the respiratory apparatus in surgical treatment of pulmonary tuberculosis. Probl. tub. 42 no.3:23-27 '64. (MIRA 18:1)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANTSEV, I.Ye.

Mechanizing the opening of cupola furnace bottoms. Lit.proizv. no.9:32 S '57. (MIRA 10:10)

(Cupola furnaces)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

ZHENILOV, B., instruktor uchebnoy yezdy, (Yaroslavl'); STAROBAKIN, N.; LUK'YANTSEV, P., prepodavatel' mashinovedeniya i avtodela (Slutsk); MALOFEYEV, Yu., shofer-ekskavatorshchik (Lodeynoye pole); IVANOV, N.; slesar'; OLEYNIK, N. (Yoshkar-Ola); IVANOV, B., mayor militsii; BORODIN, M., sportsmen 1-go razryada, gvardii starshina; YEMEL'YANOV, Yu., sud'ya Vsesoyuznoy kategorii (Moskva); STREL'CHIK, M. (Moskva); YEMEL'YANOV, I., shofer (Astrakhan').

Our discussions. Za rul. 19 no.4:8-9 Ap '61. (MIRA 14:7)

1. Nachal'nik 2-go gruzovogo avtokhozyaystva, g. Tomsk (for Starobakin).
2. Starshiy inspektor Gosavtoinspektsii Leningrada (for B.Ivanov).
3. Predsedatel' Federatsii vodnomotornogo sporta SSSR, (for Yu. Yemel'yanov).

(Automobile drivers) (Automobile racing)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

DENISOVA, Z.I.; SHAPOSHNIKOVA, Ye.M.; LUK'YANTSEVA, V.P.

Gamasid mites in rodents of Kursk Province. Sbor. trud. Kursk. gos. med. inst. no.16:101-105 '62. (MIRA 17:9)

1. Iz kafedry obshchey biologii i parazitologii (zav. - dotsent G.M. Tkachenko) Kurskogo meditsinskogo instituta i Kurskoy oblastnoy sanitarno-epidemiologicheskoy stantsii (glavnyy vrach - V.I. Latanov).

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

FEDOTOV, N.I.; GEYZER, R.I.; GERASIMENKO, L.N.; LUK'YANTSEVA, V.Ya.; PERSIANOVA, I.P.

Relation between the degree of microflora permeation of canned food before sterilization and the results of the bacteriological analysis of the finished product. Konserv.i ov.prom. 17 no.7:37-39 Jl '62. (MIRA 15:6)

1. Ukrainskiy nauchno-issledovatel'skiy institut konservnoy promyshlennosti.
(Food, Canned--Sterilization)
(Food--Bacteriology)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

L 21147-66 EWT(1)/EWA(h)

ACC NR: AT6008788 SOURCE CODE: UR/2657/65/000/014/0170/0184

AUTHOR: Luk'yanuk, I. Ye.; Naumov, Yu. Ye.

ORG: none

TITLE: Examination of transient conditions in a semiconductor delay line

SOURCE: Poluprovodnikovyye pribory i ikh primeneniye; sbornik statey, no. 14, 1965, 170-184

TOPIC TAGS: circuit delay line, carrier lifetime

ABSTRACT: On the basis of the solution of the continuity equation, an analysis of the basic characteristics of a semiconductor delay line was made. The study covered the transfer constant of the circuit, the magnitude of the delay, and pulse widening at the output. Graphs of the basic characteristics of the delay circuit, and its dependences on the mode, geometrical dimensions, length of the diffusion path, and the lifetime of minority carriers are presented. The results of experimental measurements are also given. Orig. art. has: 6 figures, 1 table, and 24 formulas. [Based on authors' abstract] [JKP]

SUB CODE: 09/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 002

Card 1/1 UDC: 621.382.001.24

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

MAYSURYAN, N.A., akademik; STEPANOV, V.N., prof.; KUZNETSOV, V.S., dots.; LUK'YANYUK, V.I., dots.; CHERNOMAZ, P.A., dots.; OZEROV, V.N., red.

[Plant growing] Rastenievodstvo. Izd.2., perer. [By] N.A. Maisurian i dr. Moskva, Kolos, 1965. 471 p. (MIRA 18:4)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANYCHEVA, V.I.; TIKHOMIROVA, V.I.; BAGOTSKIY, V.S.

Effect of the state of platinum surface on the electrochemical adsorption of oxygen in acid solutions. Elektrokhimiia 1 no.3:262-266 Mr '65. (MIRA 18:12)

1. Institut elektrokhimii AN SSSR.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

25381
S/089/61/011/001/010/010
B102/B214

21.4300

AUTHORS: Nikolayev, N. S., Luk'yanychev, Yu. A.

TITLE: Investigation of the hydrolysis of uranium tetrafluoride

PERIODICAL: Atomnaya energiya, v. 11, no. 1, 1961, 67 - 69

TEXT: There are entirely different and sometimes conflicting views on the problem of the degree of and conditions for the hydrolysis of UF_4 in water, and whether it occurs at all. Conflicting views are published, for example, in Refs.3 and 4. So the authors of the present paper have investigated recently the hydrolysis of UF_4. The tetrafluoride in the form of $UF_4 \cdot 2.5\ H_2O$ was obtained by the electrolytic reduction of uranyl fluoride solution. Experiments were carried out on it with the help of the cation exchanger КУ-2 (КП-2) and the anion exchanger ЭДЭ-10П (EDE-10P). Experiments showed that the uranium was absorbed by the cationite by up to 90 - 95%, and not at all by the anionite. From this it may be concluded that the UF_4 in the solution is present in the form of cations. The hydrolysis

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of UF_4 was followed by pH measurements at different concentrations of the solution. These measurements had an accuracy of ± 0.02 pH units. The results are shown in Table 1. The saturated UF_4 solutions are seen to have a high degree of acidity, which can be explained only by the assumption of hydrolysis. The data obtained in two series of measurements were used for the calculation of the equilibrium constant of the hydrolytic reactions. The hydrolysis may be described by the reaction equation $UF_4 + nH_2O \rightleftharpoons U(OH)_nF_{4-n} + nHF$, or, if account is taken of the low solubility, by $U^{4+} + nH_2O \rightleftharpoons U(OH)_n^{+(4-n)} + nH^+$, where n is the number of hydroxyl groups; n=1..4. Thereby one obtains for the equilibrium constant $K_p = \frac{[U(OH)_n^{+(4-n)}][H^+]^n}{[U^{4+}]} = \frac{[H^+]^{n+1}}{n(C-[H^+]/n)}$. C is the total concentration of uranium in the solution. Table 2 gives the K_p values obtained for the two series of measurement and for four different hydrolytic reactions. The general instability constants for the

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Investigation of the ... S/089/61/011/001/010/010
B102/B214

hydroxy-complexes UOH^{3+}, $U(OH)_2^{2+}$, $U(OH)_3^{+}$ and $U(OH)_4$ were calculated from the K_p values. The results obtained were: $4.4 \cdot 10^{-12}$ (ionic force 0.008), $2.5 \cdot 10^{-22}$ (ionic force 0.001), $2.0 \cdot 10^{-31}$ (ionic force 0.0004), and $5.7 \cdot 10^{-40}$ (ionic force 0.0001), respectively. There are 2 figures, 2 tables, and 9 references: 4 Soviet-bloc and 5 non-Soviet-bloc. The references to the English-language publications read as follows: Ref.3: J. Dobratz et al. Reports, N-34, April 9, 1943; Ref.4: A. Roberts. Reports, B-64, February 6, 1942; Refs.8,9: K. Kraus, F. Nelson. J. Amer. Chem. Soc. 72, 3901 (1950) and 77, 3721 (1955).

SUBMITTED: February 1, 1961

Card 3/5

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

TANANAYEV, I.V.; NIKOLAYEV, N.S.; LUK'YANYCHEV, Yu.A.; OPALOVSKIY, A.A.

Chemistry of uranium fluorides. Usp.khim. 30 no.12:1490-1522 D '61. (MIRA 14:11)

1. Institut obshchey neorganicheskoy khimii imeni N.S. Kurnakova, AN SSSR.
(Uranium fluoride)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

S/069/62/012/004/012/014
B102/B104

21.4200

AUTHORS: Nikolayev, N. S., Luk'yanychev, Yu. A.

TITLE: Determination of the solubility product of thorium tetrafluoride

PERIODICAL: Atomnaya energiya, v. 12, no. 4, 1962, 334-336

TEXT: V. I. Spitsyn (Zh. rus. fiz.-khim. o-va, 49, 357, 1917) and I. V. Tananayev and A. D. Vinogradova (Zh. neorganich. khim., 2, no. 10, 2455, 1957) had already determined the solubility product of ThF_4 and obtained $1.2 \cdot 10^{-29}$ and $1.84 \cdot 10^{-24}$, respectively. The present authors determined the solubility of a $ThF_4 \cdot 0.5\ H_2O$ as a function of the solvent ($HClO_4$) concentration. The solubility was found to increase rapidly with the concentration up to about 0.5 M $HClO_4$ which indicates a reaction of the type $ThF_4 + (4 - n)H^+ \rightleftharpoons ThF_n^{4-n} + (4 - n)HF$. This reaction can be described by

$$\lg [ThF_n^{4-n}] = \frac{4-n}{5-n} \lg [H^+] + \frac{1}{5-n} \lg K_p - \frac{4-n}{5-n} \lg (4-n),$$

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where K_p is the equilibrium constant. As the HF_4 solubility is a function of the hydrogen ion concentration, n can be determined from the slope of the straight line $-\log S = f(pH)$ ((4-n)/(5-n) is the tangens of inclination). The reaction equation reads: $ThF_4 + 3H^+ \rightleftharpoons ThF^{3+} + 3HF$; the equilibrium constant is $8.1 \cdot 10^{-11}$. The solubility product is obtained from $SP = [Th^{4+}][F^-]^4$ with $[F^-] = 4[S_{Th}]/(1 + [H^+]/k_1)$, $k_1 = 6.9 \cdot 10^{-4}$, the dissociation constant, and

$$[Th^{4+}] = \frac{S_{Th}}{\left(1 + \frac{[F^-]}{K_{ThF^{3+}}} + \ldots + \frac{[F^-]^i}{K_{iThF_i^{4-i}}} + \frac{[OH^-]}{K_{ThOH^{3+}}} + \ldots + \frac{[OH^-]^q}{K_{qTh(OH)_q^{4-q}}}\right)},$$

i.q. = 1..4. For $K_{ThF^{3+}} = 1.2 \cdot 10^{-6}$ and $K_{ThOH^{3+}} = 0.15$, $SP = 4.5 \cdot 10^{-26}$ is obtained. The deviation from the SP value obtained by Tananayev and Vinogradova is attributed to the fact that they neglected complexation and

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hydrolysis of the Th ions in the solution. There are 2 figures, 1 table, and 7 references: 5 Soviet and 2 non-Soviet. The reference to the English-language publication reads as follows: R. Bell, J. George. Trans. Faraday Soc. 49, 619, 1953.

SUBMITTED: June 16, 1961

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S/089/62/013/002/007/011
B102/B104

AUTHORS: Luk'yanychev, Yu. A., Nikolayev, N. S.

TITLE: Solubility of uranium (IV) hydroxide in hydrofluoric acid solutions

PERIODICAL: Atomnaya energiya, v. 13, no. 2, 1962, 179-181

TEXT: As only scarce and contradictory data have hitherto been published on the interaction between U(IV) and F ions, the authors examined the solubility of U(IV) hydroxide by two methods: (1) Freshly prepared U(IV) slime was filled into a teflon container with a stirrer and a hydraulic seal and kept under a H_2 atmosphere. Equilibrium was reached after 3 hrs. (b) Together with hydrofluoric acid the U(IV) hydroxide slime was filled into a polyethylene flask and nitrogen was passed through it. Equilibrium was reached after 25 days. The U^{4+} concentration increased with the molar HF concentration (HF: $5\cdot10^{-4}$, $1\cdot10^{-3}$, $1\cdot10^{-2}$; U^{4+}: $4.6\cdot10^{-5}$, $6.6\cdot10^{-5}$, $1.08\cdot10^{-4}$). Results: The dissolution is characterized by the formation of complex ions: $U^{4+} + nHF \rightleftarrows UF_n^{4-n} + nH^+$. The change in the HF

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concentration does not alter the pH value of 5.5-7. The equilibrium constant is found to be

$$K = \frac{\left[UF_n^{4-n}\right]\left[H^+\right]^n}{\left[HF\right]^n} = \frac{\left[UF_n^{4-n}\right]K_{HF}^n}{\left[F^-\right]^n} \text{ or } \log\left[UF_n^{4-n}\right] = n \log\left[F^-\right] + \log(K/K_{HF}^n).$$

log S as a function of log $\left[F^-\right]$ is almost a straight line with an inclination of 45°, i.e., $U^{4+} + HF \rightleftarrows UF^{3+} + H^+$ (S = solubility). The instability constant of UF^{3+}, $K_{in} = \frac{\left[U^{4+}\right]\left[F^-\right]}{\left[UF^{3+}\right]}$, was found to be $6.0 \cdot 10^{-5}$ (a) and $4.6 \cdot 10^{-5}$ (b). The UF^{3+} equilibrium constants were equal to 15 (a) and 21 (b). There are 1 figure and 3 tables.

SUBMITTED: December 27, 1961

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANYCHEV, Yu.A.; NIKOLAYEV, N.S.; ASTAKHOV, I.I.; LUK'YANYCHEVA, V.I.

Mechanism of copper fluorination at high temperatures. Dokl. AN SSSR 147 no.5:1130-1132 D '62. (MIRA 16:2)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova AN SSSR. Predstavleno akademikom I.P. Tananayevym.
(Copper) (Fluorination)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

L 13506-63 EWT(m)/BDS ESD-3 RM

ACCESSION NR: AP3003473 S/0078/63/008/007/1617/1622

AUTHORS: Luk'yany*chev, Yu. A.; Nikolayev, N. S.; Mikhaylov, Yu. N.

55

TITLE: Complex uranium pentafluorides

SOURCE: Zhurnal neorganicheskoy khimii, v. 8, no. 7, 1963, 1617-1622

TOPIC TAGS: uranium, uranium pentafluoride, thermogravimetric curve, hydiazine

ABSTRACT: Uranium pentafluorides complexed with hydroxylamine, hydrazine, and aniline were synthesized. These were uranium hydroxylamine pentafluoride, uranium hydrazine pentafluoride, and uranium aniline pentafluoride. X-ray and chemical data was obtained. Thermogravimetric curves indicated thermal instability of all 3 compounds. The hydroxylamine and hydrazine complexes decomposed to UF_4 which in turn decomposes about 400F; the aniline complex dehydrated, then decomposed at about 240F to a black residual U and F containing material. Orig. art. has: 7 figures, 1 table.

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

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANYCHEV, Yu.A.; NIKOLAYEV, N.S.

Solubility products of uranium tetrafluoride. Zhur. neorg. khim. 8 no.7:1786-1788 Jl '63. (MIRA 16:7)

1. Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova AN SSSR.
(Uranium fluorides) (Solubility)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANYCHEV, Yu.A.; NIKOLAYEV, N.S.

Solubility of uranium tetrafluoride in aqueous acid solution. Atom. energ. 15 no.5:423-425 N '63. (MIRA 16:12)

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L 24521-65 EWT(m)/EPF(c)/EPF(n)-2/EPR/EWP(t)/EWP(b) Pr-4/Ps-4/Pu-4 IJP(c)/AFWL
JD/WW/JW/JG

ACCESSION NR AM4040592 BOOK EXPLOITATION S/

Tananayev, Ivan Vladimirovich (Academician); Nikolayev, Nikolay Sergeyevich; Luk'yanyechev, Yuriy Alekseyevich; Alenchikova, Inna Feofilaktovna Br/

Chemistry of fluoride compounds of actinides (Khimiya ftoristykh soyedineniy aktinidov), Moscow, Izd-vo AN SSSR, 1963, 227 p. illus., biblio. Errata slip inserted. 3,000 copies printed. (At head of title: Akademiya nauk SSSR. Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova)

TOPIC TAGS: actinide-fluoride compound, chemistry, thorium-fluoride compound, uranium-fluoride compound, neptunium-fluoride compound, plutonium-fluoride compound, americium-fluoride compound, curium-fluoride compound

PURPOSE AND COVERAGE: In the last twenty years, research on the chemistry of fluoride compounds has increased considerably. Interest in this group of compounds is due chiefly to their use in processing nuclear raw material and the use of uranium, thorium, and plutonium fluorides directly as nuclear fuel. Despite the large number of experimental studies of actinide fluorides, there are no general works devoted to the achievements in this field of chemistry. The objective of this monograph is to generalize the available material in the field of actinide fluorides. The authors believe that the monograph will be useful for a wide circle

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of researchers and engineers. The monograph gives a complete review of material on the methods of obtaining, the physical and chemical properties of actinide-fluoride compounds that have been published in Soviet and foreign literature up to 1963; it also considers certain works that appeared in 1963.

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SUB CODE: GC SUBMITTED: 30Oct63 NR REF SOV: 083

OTHER: 450

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L 44806-65 EWT(m)/EPF(c)/EPR/EWP(t)/EWP(z)/EWP(b) Pr-4/Ps-4/Pad IJP(c)
JW/JD/HW

ACCESSION NR: AP5012446 UR/0062/65/000/004/0588/0593

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B

AUTHOR: Luk'yanychev, Yu. A.; Astakhov, I. I.; Nikolayev, N. S.

TITLE: Formation and properties of the fluoride films on nickel

27 18 27

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 4, 1965, 588-593, and insert facing p. 587

TOPIC TAGS: nickel fluoride film, film formation, diffusion coating, dielectric film

ABSTRACT: A study has been made of the mechanism of formation, the phase composition, crystal structure, and thickness of nickel fluoride films formed on a smooth nickel surface at 540—810C, and of the chemical and thermal stability and dielectric strength of the films. This study was prompted by the present use of nickel and its alloys as structural materials in the nuclear power industry and the suggested application of the fluoride films on nickel as electric insulating material. It was shown in an earlier study that films of copper fluoride formed on copper at 300C exhibited good electric insulating properties, but films formed at higher temperature were brittle. Thin (0.3—8 μ) films were formed on pure (99.94%) nickel plates heated in a reactor to a given temperature and then exposed to

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fluorine at atmospheric pressure. The kinetics of the reaction were studied gravimetrically. A diffusion of nickel and fluorine ions through the film was found to be the process determining the reaction rate. The plot of temperature versus the logarithm of the reaction rate constant was linear but had two different slopes corresponding to different values of activation energy: 59 kcal/m in the 540—600C range, and 18.5 kcal/m in the 720—810C range. X-ray diffraction patterns of the fluoride films indicated that only one phase, NiF_2, was formed over the entire temperature range, but electron micrographs showed a change in crystal structure which occured in the films formed at 660C, i.e., corresponding to the change in activation energy. Dielectric strength of the films at room temperature increased with increasing thickness, but in films of equal thickness it decreased with increasing temperature of formation of the film. Therefore, dielectric strength, as measured by the breakdown voltage, was highest in the films formed at 540—600C because up to 650C diffusion is limited to fluorine anions and the energy of activation is high due to a fine, compact crystalline structure of the film. Utilization of the NiF_2 films as dielectrics is limited to 410C because of hydrolysis in moist air. Orig. art. has: 6 figures and 1 table. [JK]

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

L 44806-65

ACCESSION NR: AP5012446

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

SUBMITTED: 27Apr63 ENCL: 00 SUB CODE: SS, MM

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L 2503-66 EWA(k)/EWT(1)/EWT(m)/EPF(c)/ETC/EWG(m)/EWP(t)/EWP(b) IJP(c)
RDW/JD/JW/JG/LHB/

ACCESSION NR: AP5014606 UR/0181/65/007/006/1892/1894

AUTHOR: Baturina, E. A.; Luk'yanychev, Yu. A.; Malyuchkov, O. T.

TITLE: Investigation of trifluorides of rare earth elements of the cerium group by the nuclear magnetic resonance method

SOURCE: Fizika tverdogo tela, v. 7, no. 6, 1965, 1892-1894

TOPIC TAGS: cerium, lanthanum, praseodymium, neodymium, nuclear magnetic resonance, line width, fluorine compound

ABSTRACT: The nuclear magnetic resonance of F^{19} in LaF_3, PrF_3, and NdF_3 was investigated with a spectrometer using a permanent magnet of intensity 5035 Oe and a Pound type generator. The permanent magnetic field was modulated at a frequency 73 cps with a depth not exceeding 0.1 of the line width. The resonance was observed in the temperature interval from 22 to -150C. Comparison of the calculated values of the second moments with the experimental ones shows that the symmetrical nuclear magnetic resonance signal of diamagnetic LaF_3 is satisfactorily described by dipole-dipole interaction. In the case of the other trifluorides, the experimental second moments exceeded the calculated values. This discrepancy is attributed to the contribution of paramagnetism. A decrease in the temperature distorts the F^{19}

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ACCESSION NR: AP5014606

absorption line shape, although complete splitting is not reached until -190C. The different trifluoride exhibited different temperature behavior in the line shape and line width. Since all compounds had similar chemical properties and nearly equal lattice parameters, the difference between them can be attributed only to differences in their magnetic properties. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: Institut stali i splavov, Moscow (Institute of Steel and Alloys)

SUBMITTED: 22Jan64 ENCL: 00 SUB CODE: IC, NP

NO REF SOV: 003 OTHER: 001

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

L 13563-66 EWT(m)/ETC(F)/EWG(m)/EWP(t)/EWP(b) IJP(c) RDW/JD/JW

ACC NR: AP6001235 SOURCE CODE: UR/0363/65/001/012/2182/2188

AUTHOR: Luk'yanychev, Yu. A.; Baturina, E. A.; Malyuchkov, O. T.

ORG: Moscow Institute of Steel and Alloys (Moskovskiy institut stali i splavov)

TITLE: Study of the composition and structure of lanthanum and cerium trifluoride crystal hydrates

55,27 55,27 27

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 12, 1965, 2182-2188

TOPIC TAGS: lanthanum compound, cerium compound, CRYSTAL STRUCTURE ANALYSIS, CRYSTAL LATTICE, METAL CRYSTAL

ABSTRACT: Lanthanum and cerium trifluoride crystal hydrates were precipitated from hydrochloric and nitric acid solutions by adding 40% hydrofluoric acid. Chemical analysis showed the composition of the crystal hydrates to be $LaF_3 \cdot (0.8-0.5)H_2O$ and $CeF_3 \cdot (0.5-0.3H_2O)$. NMR, x-ray phase analysis, and IR methods showed that the hydrates have a lattice similar to the anhydrous salts. The water molecules entering into the composition of the crystal hydrate are located in the vacancies of the lattice and form hydrogen bonds of the type F... H-O of different configurations. The presence of water molecules in the lattice appreciably affects the mobility of fluorine atoms. X-ray phase analysis, NMR, thermographic and thermogravimetric methods established that the removal of water molecules occurs gradually in $LaF_3 \cdot 0.5H_2O$, at 60 — 80 and 80 — 225C; in $CeF_3 \cdot 0.5H_2O$, at 60 — 80, 80 — 360, and 380 — 450C. The structure of phases dehydrated below 225C remains unchanged, and on further

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ACC NR: AP6001235

heating the compound changes from a metastable to a stable state; this transition is associated with a change in the position of the fluorine atoms. Orig. art. has: 5 figures and 2 tables.

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

Luk'yanycheva, V. I.

Distr: 4E4j

The activation of the anodic process by small amounts of oxygen. R. Kh. Burshtein and V. I. Luk'yanycheva (Inst. Phys. Chem., Acad. Sci. U.S.S.R., Moscow). Zhur. Fiz. Khim. 31, 1870-8(1957).—The effect of definite amts. of O adsorbed on Fe upon the rate of anodic oxidation in an electrochem. process in 0.25 and 0.75N NaOH was investigated by a combination of vacuum absorption and electrochem. methods. The app. used was described by B., et al. (C.A. 41, 6454b; 42, 1985g) and was based on the O adsorption from the gas phase upon Fe being practically irreversible, so that when Fe was brought into contact with O and the gas phase evacuated, the adsorbed O could be detd. from the amt. of the unadsorbed O. Until the amt. of adsorbed O increased to 1.2×10^{14} mole/sq. cm. of the Fe true surface, the rate of the anodic oxidation and the rate of the electrochem. oxidation yields were increased. At further increase in the O amt. the oxidation rate and the electrochem. yield decreased. A strong passivation was observed at 3.5×10^{14} mole O/sq. cm., and such iron became self-activated in an alk. soln. W. M. Sternberg

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LUK'YANYCHEVA, V. I.: Master Chem Sci (diss) -- "Investigation of the activating and deactivating effect of oxygen absorbed from the gas phase on the electrochemical behavior of iron electrodes in alkali solutions". Moscow, 1958. 10 pp (Inst of Physical Chem Acad Sci USSR), 150 copies (KL, No 5, 1959, 144)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANYCHEVA, V.I.; BURSHTEYN, R.Kh.

Impedance measurement of an iron electrode in alkaline solutions.
Zhur.fiz.khim. 35 no.6:1343-1350 Je '61. (MIRA 14:7)

1. Akademiya nauk SSSR, Institut fizicheskoy khimii.
(Electrodes, Iron)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANYCHEVA, V.I.; BAGOTSKIY, V.S.

Oxygen adsorption on smooth degassed platinum in electrolyte solutions. Dokl. AN SSSR 155 no.1:160-163 Mr '64. (MIRA 17:4)

1. Institut elektrokhimii AN SSSR. Predstavleno akademikom A.N.Frumkinym.

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TIKHOMIROVA, V.I.; LUK'YANYCHEVA, V.I.; BAGOTSKIY, V.S.

Oxygen-hydrogen peroxide equilibrium on a degassed platinum in the presence of oxygen traces. Elektrokhimiia 1 no.6:645-650 Je '65. (MIRA 18:7)

1. Institut elektrokhimii AN SSSR.

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LUK'YANYUK, V. I.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr. 1954)

Name	Title of Work	Nominated by
Sokolov, N. S. Yarkov, S. P. Chizhevskiy, M. G. Cherkasov, A. A. Shestakov, A. G. Gulyakin, I. V. Peterburgskiy, A. V. Troitskiy, A. N. Luk'yanyuk, V. I. Savzdarg, E. E. Trofimovich, A. Ya. Kuznetsov, V. S. Kudryavtsev, N. Ye. Pronin, A. F. Alekhin, N. V. Sachli, S. N.	"Elements of Farming" (textbook)	Moscow Agricultural Academy imeni K. A. Timiryazev

SO: W-30604, 7 July 1954

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MAYSURYAN, N.A., akademik; LUK'YANYUK, V.I., kand. sel'skokhoz. nauk

Centennial of domestic plant growing. Zemledelie 27 no.9:89-96 S '65. (MIRA 18:10)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni Lenina (for Maysuryan).

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANYUK, V.I.

LUK'IANIUK, V.I. How to attain high winter wheat yields. Moskva, Gos, izd-vo sel'khoz. lit-ry, 1954. 95 p.

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANYUK, V.I., kandidat sel'skokhozyaystvennykh nauk.

New varieties of corn. Nauka i zhizn' 22 no.4:49-50 Ap '55.
(Corn (Maize)) (MLRA 8:6)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

KAVUN, Vasiliy Mikhaylovich; SAVITSKIY, Konstantin Amosovich;
LUK'YANYUK, V.I., nauchn. red.; SHALYT, N.A., red.

[Cultivation practices for principal farm crops] Agrotekhnika vazhneishikh sel'skokhoziaistvennykh kul'tur. Moskva, Vysshaia shkola, 1964. 234 p. (MIRA 17:9)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YANYUK, V.I., kand. sel'skokhoz. nauk, dotsent; VASILENKO, I.I., aspirant

Effect of high fertilizing rates on the formation and performance the photosynthetic apparatus in winter wheat plants. Izv. TSKHA no.2:7-18 '63. (MIRA 16:10)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

KASHCHEYEV, B.; LUK'YASHKO, D.

Meteor activity of the Quadrantid shower. Astron. tsir. no.189: 19-20 F '58. (MIRA 11:8)

1. Khar'kovskiy politekhnicheskiy institut im. V.I. Lenina.
(Meteors--January)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

KASHCHEYEV, B.; LUK'YASHKO, D.

Radar observations of sporadic meteors in January and February 1958. Astron. tsir. no.191:22-23 My '58. (MIRA 11:9)

1. Khar'kovskiy politekhnicheskiy institut im. V.I. Lenina.
(Meteors) (Radio astronomy)

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29661
S/169/61/000/005/018/049
A005/A130

3.2440

AUTHORS: Kashcheyev, B., Luk'yashko, D.

TITLE: Radar observations of sporadic meteors during January and February 1958

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 5, 1961, 7, abstract 5 G 45. (Astron. tsirkulyar, 1958, 8 maya, no. 191, 22-23)

TEXT: The authors observed radio reflections from meteor trails on a 8.13 m wavelength. High activity was recorded on the nights of January 15 and 16 and February 16. The hourly number of meteor reflections is given. In the main, the duration of reflections amounts to fractions of a second. 54% of the number of sporadic meteors whose velocity was measured in January had a geocentric velocity of 25-45 km/sec.

G.Z.

[Abstractor's note: Complete translation.]

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

LUK'YASHKO, D.

Observation of the Geminid shower. Astron. tsir. no.199:24 Ja '59. (MIRA 13:2)

1.Khar'kovskiy politekhnicheskiy institut im. V.I. Lenina.
(Meteors--December)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

KASHCHEYEV, B.L.; LEBEDINETS, V.N.; LUK'YASHKO, D.N.

Radar observations of meteor activity under the program of the International Geophysical Year in 1958. Mezhdunar. geofiz. god [Kiev] no.2:32-36 '60. (MIRA 14:1)

1. Kharkov Polytechnical Institute.
(Meteors) (Radar in astronomy)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820019-7

KASHCHEYEV, B.L.; DUDNIK, B.S.; LAGUTIN, M.F.; LEBEDINETS, V.N.; LUK'YASHKO, D.N.; LYSENKO, I.A.

Radio echo observations of meteors in Kharkov. Issl.ionosf.i met. no.8:7-20 '62. (MIRA 15:4)
(Meteors) (Kharkov—Radar in astronomy)

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E032/E114

AUTHORS: Kashcheyev, B.L., Dudnik, B.S., Lagutin, M.F., Lebedinets, V.N., Luk'yashko, D.N., and Lysenko, I.A.

TITLE: Radar observations of meteors at Khar'kov

SOURCE: Ionosfernyye issledovaniya (meteory). Sbornik statey, no.8. V razdel programmy MGG (ionosfera). Mezhduved. geofiz. kom. AN SSSR. Moscow, Izd-vo AN SSSR, 1962, 7-20

TEXT: This paper reports the results of analyses of radio echoes from meteor trails which were recorded at the Khar'kovskiy politekhnicheskiy institut imeni V.I. Lenina (Khar'kov Polytechnical Institute imeni V.I. Lenin) during July 1957 - May 1959. The observations were in accordance with the IGY programme and were carried out at 73.2 Mc/sec and 36.9 Mc/sec. Special measures were taken to suppress extraneous interference. Pulse lengths of ten microseconds were employed at repetition frequencies up to 500 cps and power per pulse ~50-70 kW. The detector sensitivity was 5×10^{-14} W. The half-power beamwidth in the final

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