"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SHARKOV, V.I.; KUYBINA, N.I.; SOIOV'YEVA, Yu.P.

Extraction of hemicelluloses from woodpulp without cleavage of the acetyl groups. Zhur. prikl.khim. 33 no.11:2571-2575 N '60. (MIRA 14:4)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-spirtovoy promyshlennosti.
(Hemicellulose)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

TROYANSKIY, Ye.A.; SOLOV'YEVA, Yu.P.

Nature of the yield strength area. Fiz. met. i metalloved. 12 no.5:758-759 N '61. (MIRA 14:12)

1. Moskovskiy energeticheskiy institut.
(Steel--Testing)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SHARKOV, V.I.; KUYBINA, N.I.; SOLOV'YEVA, Yu.P.; GVOZDEVA, E.N.; ARTEM'YEVA, I.S.

Chemical composition of the corncob. Gidroliz. i lesokhim.prom. 15 no.2:7-8 '62. (MIRA 18:3)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-spirtovoy promyshlennosti.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

TROYANSKIY, Ye.A., kand. tekhn. nauk; KORIKOVSKIY, I.K., inzh.; SOLOV'YEVA, Yu.P., inzh.

Methods for approximate calculation of welded T-pipes. Teploenergetika 10 no.8:43-46 Ag '63. (MIRA 16:8)

1. Moskovskiy energeticheskiy institut.
(Steampipes—Welding)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

TROIANOVSKIY, Ye.A.; SOLOV'YEVA, Ye.P.

Propagation of plastic deformation. Metalloved. i term. obr. met. no.7:11-13 Jl '64. (MIRA 17:10)

1. Moskovskiy energeticheskiy institut.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SHARKOV, V.I.; [illegible], [illegible].; [illegible], Yu.P.

Composition and structure of xylomonide obtained by alkaline extraction. Zhur. prikl. khim. 37 no.12:2720-2725 D '64. (MIRA 18:3)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SHARKOV, V.I.; KUYBINA, N.I.; [illegible], Yu.P.

Study of the homogeneity of xylouronide by fractionation. Zhur. prikl. khim. 38 no.7:1595-1598 Jl '65. (MIRA 18:7)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitnospirtovoy promyshlennosti.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

ALESKOVSKIY, A.M.; SOLOV'YEV, Yu.V.; ANDRUSHKEVICH, V.S.

Magnetic compensating manometers. Prib. i tekh. eksp. no.1:110-112 Ja-F '57. (MLRA 10:6)

1. Saratovskiy gosudarstvennyy universitet im. N.G. Chernyshevskogo.
(Manometer)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SOLOVEVA, Yu.V. and ANANEVA, E.P.

"Etiology of Toxic Diphtheria," Zhu. MEIB, V. 1, No. 2, pp. 41-45, 1945.

Bact. Inst. Khar'kov.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

DANSKER, V.A., RUBELI, L.N.; SOLOV'YEVA, Ye.V.

Materials on the study of leptospiral jaundice. Report no.9: Parallels in the laboratory and clinical aspects of leptospiral and nonleptospiral jaundice. Trudy Len.inst.epid. i mikrobiol. 9:65-83 '62. (MIRA 10:9)

1. Iz laboratorii po izucheniyu leptospiroznoy (zav. K.M.Tokarevich) Instituta epidemiologii i mikrobiologii im. Pastera (dir. F.I.Krasnik) i infektsionnogo otdeleniya bol'nitsy im. Very Slutskoy (glavnyy vrach E.M.Abkin)

(LENINGRAD--HEPATITIS, INFECTIOUS)
(LENINGRAD--WEIL'S DISEASE)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SOLOV'YEVA, YU.V

ZIL'BER, L.A.; SOLOV'YEVA, Yu. V.; VOLINA, E.V.; KRAVCHENKO, N.A.

Antibacterial action of hemin and its derivatives. Biokhimiya 18, 109-11 '53. (MLRA 6:1)
(CA 47 no.15:7594 '53)

1. Central Inst. Epidemiol. Microbiol., Moscow.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SOLOV'YEVA, Yu. V.

"Material Precipitated From S. Diphtheriae Which Possess Antibacterial Characteristics." Proceedings of Inst. Epidem and Microbiol im. Gamaleya 1954 56,

List of Works Sponsored by the institute [Authors are not identified with any specific division, laboratory, or other organizational component of the institute.] Inst. Epidem and Microbiol im. Gamaleya AMS USSR.

SO: Sum 1186, 11 Jan 57.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

Solovyeva, Yu.V.

F-2

USSR/Microbiology - Antibiosis and Symbiosis, Antibiotics.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 14718

Author : Solov'eva, Yu.V., Belova, Z.N.

Inst : -

Title : Mycerin.

Orig Pub : V sb.: Antibiotiki, Eksperim.-klinich. izuch. M., 1956, 207-213

Abstract : A new antibiotic, mycerin, represents a polypeptide and contains reducing substances in its molecule. It does not lose its activity in the presence of serum, possesses a wide spectrum of antibacterial activity, and low toxicity (150 mg/kg in intramuscular injections and 1.5 g in oral application). It exerts no cumulative effect (when introduced 100 mg/kg for a period of 5 days). After intramuscular injection in doses of 200 and 100 mg/kg this antibiotic is found after 24 hours in blood serum, while after the first 6 hours its concentration is respectively

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SOLOV'YEVA, Yu.V.

Substance isolated from Corynebacterium diphtheriae possessing antibacterial properties. Zhur. mikrobiol. epid. i immun. 27 no.2: 41-42 F '56. (MLRA 9:5)

1. Iz Instituta epidemiologii i mikrobiologii imeni N.F. Gamalei AMN SSSR.
(CORYNEBACTERIUM DIPHTERIAE) (BACTERICIDES)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SOLOV'YEVA, Yu. V. (Cand. of Med. Sci.); BELOVA, Z.H.;

"Mycerin (Mitserin),"

p. 207 Ministry of Health USSR Proceedings of the Second All-Union Conference on Antibiotics, 31 May - 9 June 1957. p. 405, Moscow, Medgiz, 1957.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SOLOV'YEVA, NU. V., EBERT, M. K.

"Effect of the new antibiotic, aurantin, on the development and recurrent growth of M-1 sarcoma."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Infectionists, 1959.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

PLANEL'YES, Kh.Kh., prof., red.; SOLOV'YEVA, Yu.V., kand. med. nauk, red.; GRACHEVA, N.P., kand. med. nauk, red.; ANTONOV, B.N., red.; ZUYEVA, N.K., tekhn. red.

[Mycerin; experimental study and the results of its clinical testing] Mitserin; eksperimental'noe izuchenie i rezul'taty klinicheskogo ispytaniia. Moskva, Medgiz, 1961. 307 p. (MIRA 15:3)

1. Akademiya meditsinskikh nauk SSSR, Moscow. Institut epidemiologii i mikrobiologii. 2. Chlen-korrespondent Akademii meditsinskikh nauk SSSR (for Planel'yes).
(ANTIBIOTICS)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

PLANEL'YES, Kh.Kh., prof., red.; SOLOV'YEVA, Yu.V., kand. med. nauk, red.; GRACHEVA, N.P., kand. med. nauk, red.; ANTONOV, B.N., red.; PARAKHINA, N.L., tekhn. red.

[Aurantin, an antineoplastic antibiotic preparation from the actinomycin group; experimental study and the results of a clinical test]Aurantin - protivoopukholevyi antibioticheskii preparat iz gruppy aktinomitsinov; eksperimental'noe izuchenie i rezul'taty klinicheskogo ispytaniia. Moskva, Medgiz, 1962. 279 p. (MIRA 15:9)

1. Akademiya meditsinskikh nauk SSSR, Moscow. 2. Chlen-korrespondent Akademii meditsinskikh nauk SSSR (for Planel'yes).
(CYTOTOXIC DRUGS) (ANTIBIOTICS)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

ORLOV, V.; SOLOV'YEVA, Z.; RUDNOVA, A., inzhener-khimik; KOVALEV, N.; KHAKHEL', L.

Draw ship repair plant laboratories into doing creative work. Mor. flot 22 no.11:36-37 N '62. (MIRA 15:12)

1. Nachal'nik TSentral'noy laboratorii Rizhskogo sudoremontnogo zavoda (for Orlov). 2. Starshiy inzhener-fizik TSentral'noy laboratorii Rizhskogo sudoremontnogo zavoda (for Solov'yeva). 3. Starshiy tekhnik TSentral'noy laboratorii Rizhskogo sudoremontnogo zavoda (for Kovalev). 4. Starshiy laborant TSentral'noy laboratorii Rizhskogo sudoremontnogo zavoda (for Khakhel').

(Ships--Maintenance and repair)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SOLOV'YEVA, Z. A.

Characteristics of cerebral neurodynamics in hypertension with a tendency to repeated critical states. Nauch. trudy Inst. nevr. AMN SSSR no.1:210-217 '60. (MIRA 15:7)

1. Institut nevrologii AMN SSSR.

(HYPERTENSION) (CEREBRAL CORTEX)
(CEREBROVASCULAR DISEASE)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

YARULLIN, Kh.Kh.; SOLOV'YEVA, Z.A.

Characteristics of conditioned and unconditioned vascular reflexes in acute disorders of the cerebral circulation. Zhur. nevr. i psikh. 62 no.1:51-58 '62. (MIRA 15:4)

1. Institut nevrologii (dir. - prof. N.V.Konovalov) AMN SSSR, Moskva.
(CEREBROVASCULAR DISEASES) (CONDITIONED RESPONSE)
(REFLEXES)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

YARULLIN, Kh.Kh.; SOLOV'YEVA, Z.A.

Physiological characteristics of disorders of consciousness in the acute period of a cerebral insultus. Zhur. nevr. i psikh. 64 no.10:1506-1514 '64. (MIRA 17:11)

1. Institut nevrologii (direktor - prof. N.V. Konovalov) AMN SSSR, Moskva.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

MOISEYENKO, U.I.; SOLOV'YEVA, Z.A.; KUTOLIN, V.A.

Heat conductivity of granite in the case of high temperature. Dokl. AN SSSR 165 no.3:670-671 N '65. (MIRA 18:11)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR. Submitted May 29, 1965.

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4

CA

Passivation of the cathode and structure of the electrolytic deposit in solutions of simple and of complex salts. A. T. Vagramyan and Z. A. Solov'eva. *Doklady Akad. Nauk S.S.S.R.* 68, 321-4(1949). Ag cathodes of [illegible] were first subjected to a 5 min. polarization with a d.c. of 5.0 × 10⁻⁸ amp., then the current was turned off for τ sec. (τ = 3, 10, 30, 60, and 300), and the cathode polarized again. The cathode potential φ (against an equil. Ag electrode) was recorded beginning with the last 1 sec. of the rest period, and for about 20 sec. under the polarizing current. In a 0.2 N soln. of $AgNO_3$, polarization gives rise to a momentary upward jump of the potential to a max. φ, followed by a fall to a stationary φ. The difference φ − φ₀ = Δφ increases with the length τ of the preceding rest period, and characterizes the degree of passivation of the surface. Curves of Δφ as a function of τ are termed passivation velocity curves. Addn. of [illegible] decreases the rate of passivation. In contrast to the simple salt, no potential jump Δφ is present in the complex electrolyte 0.2 N $KAg(CN)_2$ + 0.02 N KCN; after the current is turned off, the potential has a more neg. value which falls slowly with time and reaches a stationary value; in other words, the Ag electrode in a complex electrolyte possesses no increased activity. At const. τ = 60 sec., and const. polarizing c.d. [illegible] amp./sq. cm., curves of the potential φ against the time, show, in $AgNO_3$, a fall of φ; in the presence of dextrin, the initial φ (Δφ) is markedly higher and the initial fall is somewhat faster. In the complex electrolyte, φ increases with time; at a lower c.d. [illegible] amp./sq. cm., the shape of the curve remains the same, only the φ are smaller. The absence of passivation in the complex electrolyte is explained, on the basis of the work of Frumkin and Obruchev's, by adsorption of the complex ions which thus prevents adsorption of extraneous matter.

The smooth structure of the deposit is due to uniformity of the surface (absence of passive regions), and deposition of metal from the adsorbed ions. The dependence of Δφ in solns. of simple salts on τ refutes all theories linking the initial max. of polarization with such processes as charge of the double layer, concn. polarization or formation of crystal germs. The latter explanation is further refuted by the absence of a max. in complex electrolytes. The increase of Δφ with the length τ of the rest period is due, rather, to a decrease of the active fraction of the surface and a corresponding increase of the true c.d. This phenomenon is suppressed by the adsorption of complex ions. [illegible]

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CA

7

New method of investigation of cathodic passivation. A. T. Vagramyan and Z. A. Solov'eva (Acad. Sci., U.S.S.R., Moscow). *Zhur. Fiz. Khim.* 34, 1252-61(1960); cf. C. A. 44, 4006. After the const. current I of electrolysis has been interrupted during t sec., one measures a polarization φ_0 at time $t = 0$, i.e. when the circuit is closed again which may be higher than φ_∞, the polarization at $t = \infty$. The difference $\Delta\varphi = \varphi_0 - \varphi_\infty$ is due to the passivation of the cathode during t. A knowledge of the function $\Delta\varphi = f(t)$ gives information on the rate of passivation in various electrolytes

and on the influence of various surface-active compds. on the rate. An automatic app. is described in detail: it records photographically the changes of φ after current interruptions $t = 3.5$, 10, 30, 60, and 300 sec. With this app., passivation during current interruption is observed on a Ag cathode in a 0.2 N $AgNO_3$ soln. but no passivation is found on the same cathode in a 0.2 N $KAg(CN)_2$ soln. Surface-active substances increase $\Delta\varphi$ in the first case but have no influence in the second. The adsorption of octyl alc. on a Zn cathode was also studied. First, a polarization curve $\varphi = f(i)$ where i is the c.d. is detd. for the Zn cathode in a 2 N $ZnSO_4$ + 0.6 N Na_2SO_4 soln. From this curve and from the values of φ_0 detd. in the same soln. without and with octyl alc., one dets. the change in c.d. and thus (since I = const.) the decrease in active surface ΔS due to adsorption. Adsorption rate curves ($\Delta S/S$, t) show that the rate is large at first and slows down when satn. is approached. Adsorption isotherms might be detd. in this fashion. The decrease in active cathode surface $\Delta S/S$ amounts to 84.7% after t = 300 sec. in a soln. satd. with octyl alc.

Michel Boudart

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SOLOV'YEVA, E. A.

"Effect of Surface-Active Agents on the Process of the Electrodeposition of Metals." Sub 20 Dec 51, Inst of Physical Chemistry, Acad Sci USSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

Cand Chemical Sciences

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SOLOV'YEVA, Z.A.

Cathodic Polarization in the Electrodeposition of Nickel. A. T. Vagramyan and Z. A. Solov'eva (*Doklady Akad. Nauk S.S.S.R.*, 1951, 77, (4), 629-631).—(In Russian). V. and S. obtained the dependence of polarization (η) on c.d. by uniformly increasing the current (i) through the cell from zero to some max. value and then returning it to zero; this was done within a short time (1b, 1·5 sec., and less), η being recorded photographically. In some experiments i was varied linearly, in others logarithmically. The cell used contained (g./l.): $NiSO_4.6H_2O$ 140, H_3BO_3 30, KCl 19, temp. 20° C. After switching off the current, the electrode potential had a high negative value which gradually changed in the positive direction. This change also occurred in the polarization of an electrode by a small current. From curves showing changes in η for a Ni electrode when the c.d. varied linearly from 0 to 30 to 0 m.amp./cm.^{2} the value of η at zero c.d. was −306 mV. for a 15-sec. cycle, and −212 mV. for a 1·5-sec. cycle. Taking 306 mV. as the equilibrium potential φ_0, the overvoltage is 486 mV.; if the "steady" value (at c.d. of 30 m.amp./cm.^{2}) be taken as φ_0, the overvoltage is 790 mV. The curves of η/log c.d. are linear over a greater range of c.d. for a 1·5-sec. cycle than a 15-sec. cycle, but the max. value of η is independent of speed. Glasstone's explanation of chem. polarization in terms of an active or metastable deposit (*J. Chem. Soc.*, 1926, 129, 2887; *J. Inst. Metals* (Abstracts), 1927, 37, 627) is not supported by the fact that scraping activates the surface of the electrode; more probably a completely pure Ni surface cannot exist for a prolonged time because foreign particles are absorbed on it and cause passivation. The passive film is absent from a scraped surface or from freshly deposited Ni, and hence the potential is more negative. The change in potential of freshly deposited Ni with time to a more positive value is explained either by passivation or by the as deposited surface not having a normal equilibrium lattice, but contg. an excess of active places, and then undergoing ordering as time elapses. In any case, polarization is not wholly reduced to the slowness of the discharge on the pure surface, but indicates some change in its physico-chem. condition. G. V. E. T.

Ebert 4

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

VAGRAMIAN, A. T.; SOLOV'EVA, Z. A.

Nickel

Investigation of brightness of electrolytic deposits of nickel during electrolysis. Zhur.fiz.khim., 16, No. 6, 1952.

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

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Electrochemistry -4

CA

Gloss of electrolytic nickel deposits during electrolysis

A. T. Vagramyan and Z. A. Solov'eva (Inst. Phys. Chem., Acad. Sci., Moscow). *Zhur. Fiz. Khim.* 26, 910-17(1952).

A light beam was reflected from a cathode on which Ni was being deposited, and the intensity I of the reflected beam was measured. Thus the change of gloss caused by air was eliminated. The cathode was of polished Fe, and the soln. contained $NiSO_4.7H_2O$ 140, H_3BO_3 15, NaCl 5, and NaF 1.5 g./l. The curve "I against δ" (δ is the thickness of the Ni deposit) had 2 parts. Between $\delta = 0$ and $\delta = 2$ or 3 μ I always increased with δ. In this region the surface profile of Ni repeated that of Fe underneath, and the increase of I was due to the greater reflection coeff. of Ni. At δ greater than 3 μ, I increased very little with δ (up to 10 μ was investigated) when c.d. was 1-1.5 amp./sq. dm. and decreased on an increase of δ when c.d. was 0.3 or 2. This was explained by the properties of the surface obtained; an electron microscope showed that the deposit consisted of coarse crystals at high c.d., of crystals of different sizes at small c.d., and of uniform smooth crystals at medium c.d. Addn. of $CS(NH_2)_2$ (e.g., 0.15 g./l.) or of disulfonaphthalenic acid (e.g., 4 g./l.) raised I above the highest value observed in inorg. electrolyte and also made I almost independent of c.d. between 1 and 4 amp./sq. dm. These addns. give rise to small uniform crystals. If the cathode was kept without current for several sec. or min. and current was then switched on, I decreased for several sec. This was caused by the passivation of the electrode during the interruption of current; when the deposition was resumed it occurred on the spots least passivated and, thus, the cathode became less uniform. α-Naphthol at c.d. 2 depressed I. J. J. B.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SOLOV'YEVA, Z.A.

USSR.

Investigation of cathodic polarization with simultaneous discharge of ions of iron and tungsten. Z. A. Solov'eva and A. T. Vagramyan. *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* 1954, 185-9 (Engl. translation).—See *C.A.* 48, 13487i. H. L. H.

(1)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SOLOVYEVA, Z. A.

USSR/ Chemistry Physical chemistry

Card : 1/1

Authors : Vagramyan, A. T., and Solovyeva, Z. A.

Title : Method of studying the rate of electrochemical reactions

Periodical : Zhur. fiz. khim. 28, Ed. 6, 1153 - 1157, June 1954

Abstract : A method of studying the rate of electrochemical reactions, based on complex investigation of relations between polarization and current density, between polarization and time at constant current density and between current intensity and time at constant cathode potential, is described. A more complete and accurate understanding of the processes taking place on the electrode during electro-deposition of metals can be obtained only through study of above mentioned relations. Four USSR and 2 German references. Graphs, drawing.

Institution : Acad. of Sc. USSR, Institute of Physical Chemistry, Moscow

Submitted : December 27, 1953

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SOLOV'YEVA, Z. N.

3

*Investigation of Cathodic Polarization During Simultaneous Discharge of Iron and Tungsten Ions. Z. A. Sokur'ets and A. T. Vagramyan (*Izvest. Akad. Nauk S.S.S.R.*, 1954, (Khim.), (2), 230-235).—[In Russian]. Electrodeposition of Fe, W, and of an Fe-W alloy from citric acid soln. neutralised with NH_4OH (*pH* 8-8·5) was studied at 18° and 70° C. and c.d. 5 amp./dm.^{2}. The deposition of the Fe-W alloy at 18° and 70° C. took place at 978 and 880 mV., resp. The lowering of the deposition potentials with respect to deposition potentials of pure W and Fe was 320 and 109 mV. at ~20° C., and 430 and 208 at 70° C. The decrease of the deposition potential during simultaneous deposition of W and Fe points to the formation of an intermetallic compound of the Fe_2W type. The absence of the periodic oscillations of the p.d. during electrodeposition of Fe-W alloy disproved the theory advanced by Holt and Vasler (*Trans. Electrochem. Soc.*, 1948, 94, 50; see *M.A.*, 16, 293), which stated that Fe and W were deposited on the cathode in alternating layers and not simultaneously.

—S. K. L.

7.

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VA - A

VAGRAMYAN, A.T.; SOLOV'YEVA, Z.A.; ALEKSEYEV, V.A., redaktor; SHEVCHENKO, G.N., tekhnicheskiy redaktor

[Research methods in the processes of electrolytic precipitation of metals] Metody issledovaniia protsessov elektroosazhdeniia metallov. Moskva, Izd-vo Akad. nauk SSSR, 1955. 250 p. (MLRA 8:7)
(Electroplating)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

Bolotova, Z. A.

Determination of bi- and trivalent titanium in fused alkali metal chlorides after electrolysis. B. G. Tabakova and Z. V. Solov'eva. *Zavodskaya Lab.* 22, 1317-19(1956).--The Ti-contg. melt to be tested is the electrolyte for Ti refining (a eutectic KCl + NaCl mixt., or either of the chlorides alone). A sample is dissolved in an excess of Fe NH_4 alum soln. in a stream of CO_2, and the amount of iron reduced by Ti^{3+} and Ti^{4+} is titrated with 0.02 *N* $KMnO_4$ soln. (after adding the Zimmermann-Reinhardt soln.). Another sample is dissolved in 0.1 *N* HCl in a CO_2 stream, adding some satd. $(NH_4)_2SO_4$ soln. to stabilize Ti^{3+}, and raising the acidity of the soln. by adding 65% H_2SO_4 soln., which will oxidize Ti^{3+} to Ti^{4+}, and again titrating with $KMnO_4$. W. M. Sternberg.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SOLOV'YEVA, Z. A.

The effect of the acidity of a solution on the cathode polarization in the electroprecipitation of cobalt and nickel. Z. A. Solov'eva and O. A. Abrarov (Inst. Phys. Chem., Acad. Sci. U.S.S.R., Moscow). *Zhur. Fiz. Khim.* 30, 1572-8(1956).—The effect of pH on the cathode polarization during the electropptn. of the Fe-group metals was studied and a new phenomenon was observed, i.e., the polarization changes sharply in a narrow pH range. This range is displaced toward lower pH values with increasing temp. This phenomenon is related with hydrate formation in solns. of Co salts, thereby indicating that this phenomenon is of a chem. nature. J. Foster Leach

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SOLOV'YEVA, Z. A.

Distr: 4E2c

Effects of boric acid on the cathode polarization during the electrodeposition of cobalt and nickel. Z. A. Solov'eva and O. A. Abratov (Inst. Phys. Chem., Acad. Sci. USSR, Moscow). Zhur. Fiz. Khim. 31, 1248-56(1957); cf. C.A. 51, 6397g.—The effect of the addn. of various amts. of H_3BO_3 upon the Co and Ni electrodeposition from $CoCl_2$, $CoSO_4$, and $NiSO_4$ solns. in a wide range of pH was studied oscillographically against H_2 electrodes. H_3BO_3 raised the cathodic polarization the more the higher its concn., and the rise was higher at higher pH and lower temps. The slope of the η – log i polarization curve was greatly changed by the H_3BO_3 addn. The formation possibility of chem. compds. between the metal ions and H_3BO_3 was suggested, with the discharge of the metal ion on the cathode being correspondingly slowed down. W. M. Sternberg

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

FRUMKIN, A.N., akademik, otv.red.; YESIN, O.A., prof., red.; ZHDANOV, S.I., red.; KABANOV, B.N., prof., red.; KOLOTYRKIN, Ya.M., dokt.khim. nauk, red.; LOSEV, V.V., red.; LUKOVTSEV, P.D., prof., red.; SOLOV'YEVA, Z.A., red.; STENDER, V.V., prof., red.; FLORIANOVICH, G.M., red.; YEGOROV, N.G., red.izd-va; PRUSAKOVA, T.A., tekhn.red.

[Proceedings of the 4th Conference on Electrochemistry, October 1-6, 1956] Trudy 4-go soveshchaniia po elektrokhimii, 1-6 oktiabria 1956 g. Moskva, Izd-vo Akad.nauk SSSR, 1959. 867 p. (MIRA 12:5)

1. Soveshchaniye po elektrokhimii, 4th, Moscow, 1956. (Electrochemistry)

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SOLOV'YEVA, Z A

PHASE I BOOK EXPLOITATION SOV/4828

Vagramyan, Ashot Tigranovich, and Zoya Alekseyevna Solov'yeva

Metody issledovaniya elektroosazhdeniya metallov (Methods of Investigating the Electrodeposition of Metals) 2d ed., rev. and enl. Moscow, Izd-vo AN SSSR, 1960. 447 p. Errata slip inserted. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut fizicheskoy khimii.

Ed. of Publishing House: N.G. Yegorov; Tech. Ed.: G. A. Astaf'yeva.

PURPOSE: This book is intended for metal scientists and persons working in the electroplating industry.

COVERAGE: The book deals with electrochemical, physical, and mechanical research methods used in the electrodeposition of metals from aqueous solutions. The methods considered are primarily those used or developed at the laboratoriya elektroosazhdeniya metallov (Laboratory for the Electrodeposition of Metals) of the Institut fizicheskoy khimii AN SSSR (Institute of Physical Chemistry AS USSR). They include, among others, the method for studying electrode polarization

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SOLOV'YEVA, Z.A.; UVAROV, L.A.; VAGRAMYAN, A.T.

Rate of exchange between cobalt and its ions in solution. Zhur. neorg.khim. 5 no.6:1185-1188 Je '60. (MIRA 13:7)
(Cobalt)
(Reduction, Electrolytic)
(Ion exchange)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

S/076/60/034/03/007/038
B115/B016

AUTHOR: Solov'yeva, Z. A. (Moscow)

TITLE: Investigation of the Adsorption Rate of Surface-active Substances on the Metal Surface

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol 34, Nr 3, pp 537 - 542 (USSR)

TEXT: In the present paper the influence exercised by the electrolyte concentration upon the adsorption rate of saturated aliphatic alcohols in the adsorption on the surface of a zinc electrode is investigated. The study of the adsorption of octyl-, hexyl-, amyl-, and butyl alcohol in solutions of $ZnSO_4$ with different concentrations (1 - 6 N) by application of the electrochemical method showed that the dependence of the saturation of the surface on the adsorption time in a solution with alcohol added considerably depends on electrolyte concentration. The dependence of the polarization increase $\Delta\eta$ on the time τ in a 4 N $ZnSO_4$ solution + $2.5 \cdot 10^{-4}$ mole/l octyl alcohol is investigated (Fig 1), while in the following figure (Fig 2) the same dependence is given for a 1 N $ZnSO_4$ solution. It may be seen from the given diagrams that the adsorption equilibrium in the 1 N $ZnSO_4$ solution is established by about six times more quickly

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than in the 4 N $ZnSO_4$ solution. The establishing rate of the adsorption equilibrium is not changed by a variation of the octyl alcohol concentration, but only the value $\Delta\eta$ (Fig 3). The dependence $\Delta\eta, \tau$ on continuous vigorous supply of the freshly prepared electrolyte to the cathode is investigated as well (Fig 4). Figure 5 shows the $\Delta\eta, \tau$ curves in 1 and 4 N $ZnSO_4$ solutions saturated with butyl alcohol, the solubility of which is by some orders of magnitude higher than that of octyl alcohol. The effect of butyl alcohol as well as of hexyl and amyl alcohol was similar to that of octyl alcohol. Also the behavior of the salts Na_2SO_4, $MgSO_4$, and $Al_2(SO_4)_3$ was the same as that of $ZnSO_4$. It may be said from the results obtained that the increase of the electrolyte concentration effects a change in the structure of the double layer, mainly of the packing, and that the entrance of the organic molecules into the layer is considerably inhibited. The results obtained by O. K. Gal'dikene, S. I. Khotyanovich, and Yu. Yu. Matulis (Ref 8) are mentioned. The author expresses her gratitude to A. T. Vagramyan for his assistance and advice. There are 5 figures and 8 Soviet references.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SOLOV'YEVA, Z.A.; VAGRAMYAN, A.T. (Moscow)

Role of self-adjustment in polarization measurements during the electrodeposition of metals. Zhur. fiz. khim. 34 no.4:754-758 Ap '60. (MIRA 14:5)
(Polarization (Electricity)) (Electroplating)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

S/080/61/034/008/007/018
D204/D305

5 1310

AUTHORS: Solov'yeva, Z. A. and Petrova, Yu. S.

TITLE: On the rates of combined reactions during electrodeposition of chromium

PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 8, 1961, 1752-1759

TEXT: The object of the article was to study the effect of electrolyte composition and conditions of electrolysis on the rates of the combined reactions during electrolysis of chromic acid and to correlate the rate of each reaction with the properties of the cathode film. The relative variation of each of the combined reactions to the others was determined from the variation of current distribution between the reactions. Analytically pure CrO_3 was freed from traces of H_2SO_4 by repeated washing with concentrated HNO_3 with subsequent drying. Potentials were measured by a compensation technique with an electrode of 1.5 cm^2 surface area, current distribution being simultanesouly determined as between the three reactions.

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On the rates of combined reactions... S/080/61/034/008/007/018
D204/D305

An electrode of 0.002 cm^2 was used when the decrease of voltage per cm of electrolyte was high. The electrode surface was re-plated. Experiments were made with solutions containing 250 g/l CrO_3 and varying concentrations of H_2SO_4, with temperatures of 20, 40 and 60°C, and current densities of 250, 650 and 1000 mA/cm^2. At the two higher temperatures, the curves depicting the effect of H_2SO_4 concentration on reaction rates show consistent dependence of the rates on acid concentration. Deposition of Cr passes through a maximum and $Cr^{6+} \rightarrow Cr^{3+}$ increases and $2H^+ \rightarrow H_2$ decreases with increase of H_2SO_4 concentration. At current densities above 250 mA/cm^2, H_2SO_4 concentration retains its character in relation to reaction rates but is less marked for $Cr^{6+} \rightarrow Cr$. A relation was found between the rate of electrochemical reduction of chromic acid and composition, structure and cathode film resistance. The data obtained are indicated in graphic form. There are 4 figures and 4 Soviet-bloc references.

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

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

S/080/61/034/009/008/016
D204/D305

AUTHORS: Solov'yeva, Z.A., Petrova, Yu.S., and Vagramyan, A.T.

TITLE: Effect of chromic acid concentration on the electrode potential of chromium

PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 9, 1961, 2007 - 2012

TEXT: This is report II from a series of papers on investigating the rates of linked reactions in the electrodeposition of chromium. The effect of chromic acid concentration at constant and varying H_2SO_4 contents on the rate of deposition of metallic chromium, the rate of intermediate reduction of chromic acid and the rate of hydrogen evolution were studied. Also, the relationship between current distribution and CrO_3 concentration at constant and varying H_2SO_4 contents at various temperatures, and the variation of cathode potential with CrO_3 concentration at constant H_2SO_4 content

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D204/D305

Effect of chromic acid ...

were investigated. It was found that a decrease in chromic acid concentration increases the rate of chromium deposition sharply, the rate of increase depending on H_2SO_4 concentration, temperature and current density. The rate of intermediate reduction of chromic acid also increases and the rate of hydrogen evolution decreases. A decrease of chromic acid concentration with simultaneous decrease in sulphuric acid concentration increases the rate of chromium deposition considerably. However, the rate of intermediate reduction of chromic acid is initially independent of the CrO_3 and H_2SO_4 concentration and subsequently decreases with a decrease in CrO_3 and H_2SO_4 concentration. The authors suggest that on changing the solution composition, the change in the rates of the linked reactions, taking place at the cathode during reduction of chromic acid in the presence of H_2SO_4, is due to a change in composition and properties of the cathode film formed, from which discharge of Cr^{6+} ions occurs directly. There are 3 figures, 1 table and 4

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D204/D305

Effect of chromic acid ...

Soviet-bloc references.

SUBMITTED: August 29, 1960

Card 3/3

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

S/080/62/035/008/005/009
D267/D308

AUTHORS: Solov'yeva, Z.A., Petrova, Yu.S., Klimasenko, N.L., ~~and Vagramyan, A.T.~~

TITLE: Composition and properties of the cathode film forming during the electrodeposition of chromium

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 8, 1962, 1806 - 1811

TEXT: The variation of concentrations of the ions Cr^{6+} and Cr^{3+} (volumetric method) and SO_4^{2-} (gravimetric method) was studied in the deposited film, as a function of the concentration of H_2SO_4 and H_2CrO_4 in the solution, and the variation of the rate of deposition from H_2CrO_4 to Cr, in order to carry out a more complete investigation of the film composition. The coatings obtained in the course of 2 min on a 6 cm^2 chromium-plated copper strip were either dissolved in distilled water or directly removed into a test tube. The so-

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lutions contained 25, 50, 100 or 250 g/l H_2CrO_4 and 0.5 - 12.5 g/l H_2SO_4, the temperature was $\sim 20^oC$ and the current density 250 or 500 ma/cm^2. Formation of two types of films was established: 1) Films obtained in the presence of H_2SO_4 distinguished by a macroscopic structure, soluble in the electrolyte in the absence of current and contributing to the reduction $H_2CrO_4 \rightarrow Cr$; 2) films obtained during an electrolysis without H_2SO_4 or when H_2CrO_4 acts without current on the cathode metal, possessing a microscopic structure, insoluble in the electrolyte. The latter do not contribute to the reduction of H_2CrO_4. The relative concentration of Cr^{3+} and SO_4^{2-} in the films of the first type increases as the current density and the concentration of H_2SO_4 increases and as the concentration of H_2CrO_4 decreases. There are 4 tables.

SUBMITTED: June 22, 1961

Card 2/2

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

S/076/60/034/06/16/040
B015/B061

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AUTHORS: Vagramyan, A. T., Krasovskiy, A. I., Petrova, Yu. S., Solov'yeva, Z. A. (Moscow)

TITLE: The Role of Passivation in the Electrodeposition of Metals

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 6, pp. 1255-1259

TEXT: The action of the rate of passivation on the electrochemical reduction of metal ions in aqueous solutions was examined. A series of experiments took place in manganosulfate solutions with and without additions of ammonium sulfate at pH = 8 and at 25°C. The results show (Table) that the reduction of the manganese ions takes place through an activation of the electrode surface by ammonium sulfate. In a further series of tests a common electrolytic depositing of molybdenum and nick from ammonium citrate solutions was examined. The rate of depositing of the nickel rises through the activation of the surface with increasing concentrations of ammonia. One of the main obstacles to the reduction of metal ions is the passivation of the surface. Metals with a great

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The Role of Passivation in the Electrodeposition of Metals

S/076/60/034/06/16/040
B015/B061

passivation tendency are hard to reduce on the cathode, and can be divided into three groups in this respect: 1) Metals which are deposited by relatively low overvoltage, such as Sn, Cd, Cu, Ag, etc., 2) Metals which are deposited at high overvoltage, such as Fe, Ni, Co, and Cr, Mn, etc., 3) Metals which cannot be deposited in pure form from aqueous electrolytes, such as Mo, W, U, Nb, Ti, Ta. In order to reduce metal ions, it is necessary to produce conditions which hinder passivation of the electrode surface, or at least strongly reduce it. R. I. Agladze is mentioned in the text. There are 4 figures, 1 table, and 4 references: 2 Soviet and 2 British.

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

SUBMITTED: August 6, 1958

Card 2/2

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SOLOV'YEVA, Z.A.; VAGRAMYAN, A.T. (Moskva)

Oscillographic study of film formation on the cathode surface in the electrolytic reduction of chromic acid. Zhur. fiz. khim. 36 no.4:752-756 Ap '62. (MIRA 15:6)

1. Akademiya nauk SSSR, Institut fizicheskoy khimii.
(Oscillography) (Chromic acid) (Electrolysis)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

VAGRAMYAN, A.T., doktor tekhn. nauk, prof.; SOLOV'YEVA, Z.A., kand. khimich. nauk

Electrolytic precipitation. Nauka i zhizn' 30 no.1:16-21 Ja '63. (MIRA 16:4)

1. Zaveduyushchiy laboratoriyey elektroosazhdeniya metallov Instituta fizicheskoy khimii AN SSSR.
(Electrometallurgy)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SOLOV'YEVA, Z.A.; VAGRAMYAN, A.T.

Effect of the cathode surface as affecting the character of an electrochemical reaction. Dokl. AN SSSR 154 no.4: 918-921 F '64. (MIRA 17:3)

1. Institut fizicheskoy khimii AN SSSR.

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L 46842-66 EWT(m)/EWP(t)/ETI IJP(c) JD/GD

ACC NR: AT6024972 (N) SOURCE CODE: UR/0000/65/000/000/0186/0189

32
B+1

AUTHOR: Solov'yeva, Z. A.

ORG: none

TITLE: Electrolytic preparation of iron-gold alloys

SOURCE: AN SSSR. Otdeleniye obshchey i tekhnicheskoy khimii. Zashchitnyye metallicheskiye i oksidnyye pokrytiya, korroziya metallov i issledovaniya v oblasti elektrokhimii (Protective metallic and oxide coatings, corrosion of metals, and studies in electrochemistry). Moscow, Nauka, 1965, 186-189

TOPIC TAGS: iron alloy, gold alloy, electrodeposition, chemical composition

ABSTRACT: The electrochemical conditions of the codeposition of iron-gold alloys on a copper cathode at room temperature and the chemical composition of the deposits were investigated. The electrolyte was prepared by combining a cyanide solution of gold (0.5 g/l Au, 0.6 g/l KCN, 30 g/l $Na_2HPO_4 \cdot 12H_2O$) and a citric acid solution of iron (40 g/l $FeSO_4$, 60 g/l citric acid) in various proportions. The composition of the deposits depends on the concentration of Au and Fe in the electrolyte and the current density. When the Fe:Au ratio in the electrolyte is 58 and the current density is about 30 mA/cm^2, the deposit contains approximately 85% gold. Such deposits, which constitute Fe-Au alloys, are insoluble in mineral acids, adhere well to copper and nickel bases, and have a grayish-yellow color which changes with the relative content

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of the two metals. If the current distribution at the electrode is not uniform (as in the case of a lamellar cathode), separation of iron and gold in the deposit can be prevented by adding ammonia to the electrolyte. Addition of ammonia also decreases the gold content of the alloy: for example, when Fe:Au = 58 and at a current density of 30 mA/cm^2, the gold content drops from 85 to 10-20%. The current efficiencies in the presence of ammonia are 10-20%, and only 2-3% in its absence.

SUB CODE: 11,13,07/SUBM DATE: 03Aug64/ ORIG REF: 002/ OTH REF: 004

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[illegible]

Effect of thiourea ions on cathodic polarization in chromium electrodeposition. Elektrokhimiia 1 no.5:491-495 My '65. (MIRA 18:6)

1. Institut Fizicheskoy Khimii AN SSSR.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

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SO[illegible]EVA, Z.A.; [illegible], A.T.

[illegible] of the cathode surface on the kinetics of [illegible] of chromic acid. Elektrokhimiia 1 no.2:182. [illegible] '65. (MIRA 18:6)

1. [illegible] Khim I AN SSSR.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SOLOV'YEVA, Z.A.; VAGRAMYAN, A.T.

Cathodic passivation in chromate electrolytes with the additions of chloride ions. Elektrokhimiia 1 no.4:413-417 Ap '65. (MIRA 18:6)

1. Institut fizicheskoy khimii AN SSSR.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

NIKITINA, A.A.; SOLOV'YEVA, Z.A.; SOMINSKAYA, Z.M.; VAGRAMYAN, A.T.

Mechanism of rhenium electrodeposition. Elektrokhimiia 1 no.6: 748-751 Je '65. (MIRA 18:7)

1. Institut fizicheskoy khimii AN SSSR.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SOLOV'YEVA, Z.A.

Electroreduction of chromic acid in the presence of fluoride ion additions. Elektrokhimiia 1 no.7:812-817 Jl '65. (MIRA 18:10)

1. Institut fizicheskoy khimii AN SSSR.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SOLOV'YEVA, Z.A.; LAPSHINA, A.Ye.

Certain features of the electrodeposition of chromium from chromic aicd solutions with fluoride ion additions. Elektrokhimiia 1 no.8: 941-946 Ag '65. (MIRA 18:9)

1. Institut fizicheskoy khimii AN SSSR.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SOLOV'YEVA, Z.A.

Effect of temperature on the electroreduction rate of chromic acid. Part 1. Elektrokhimiia 1 no.9:1088-1092 S '65. (MIRA 18:10)

1. Institut fizicheskoy khimii AN SSSR.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SOLOV'YEVA, Z.A.

Effect of temperature on the electroreduction of chromic acid. Part 2. Elektrokhimiia 1 no.11:1366-1370 N '65. (MIRA 18:11)

1. Institut fizicheskoy khimii AN SSSR.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

SOLOV'YEVA, Z.I. (Donetsk, ul. Gor'kogo, d.25)

Apparatotherapy in spindal paralysis of traumatic origin. Ortop., travm.i protez. no.4:32-35 '62. (MIRA 15:5)

1. Iz Donetskogo instituta travmatologii, ortopedii i protezirovaniya (dir. - kand.med.nauk T.A. Revenko) i Donetskogo proteznogo zavoda (dir. - L.P. Polotskiy).
(SPINE—WOUNDS AND INJURIES) (PROSTHESIS)
(PARAPLEGIA)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

AUTHORS: Perfilov, N. A., Solov'yeva, Z. I. SOV/89-5-2-12/36

TITLE: On a Complex Nuclear Fission of Uranium Under the Influence of Neutrons of an Energy of 14 MeV (O slozhnom delenii yader urana pod deystviyem neytronov s energiyey 14 Mev)

PERIODICAL: Atomnaya energiya, 1958, Vol. 5, Nr 2, pp. 175-176 (USSR)

ABSTRACT: In various papers (Refs 1-3) (with thick photoemulsions as well as with ionization chambers) the occurrence of a far-reaching α-particle was observed when the uranium nucleus undergoes fission. This α-particle is formed during the moment of fission. The angle between the direction of flight of this α-particle and the light fission fragments is about 80°. A maximum was observed within the domain of 16-17 MeV in the energy distribution of the α-particles. By means of nuclear photoplates saturated with uranium salt (exposed to a neutron beam of 14 MeV-neutrons) fission of the uranium was investigated with the emission of a far-reaching α-particle. Eight cases of a fission with emission of a far-reaching α-particle were found among 10 000 normal fission processes. From these and earlier measurements the conclusion may be drawn that under the influence of fast neutrons fission of the uranium

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On a Complex Nuclear Fission of Uranium Under the Influence of Neutrons of an Energy of 14 MeV

SOV/89-5-2-12/36

nucleus with 3 fission fragments corresponds to about 1 000 to 1 300 cases of normal fission. This process, therefore, is about 3 to 4 times less probable than in the case of fission of U^{235} by thermal neutrons. There are 2 figures and 4 references, 1 of which is Soviet.

SUBMITTED: February 10, 1958

Card 2/2

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PHASE I BOOK EXPLOITATION SOV/3503

Akademiya nauk SSSR. Radiyevyy institut

Trudy, t. IX (Transactions of the Radium Institute, Academy of Sciences USSR, Vol. 9) Moscow, Izd-vo AN SSSR, 1959. 287 p. Errata slip inserted. 1,700 copies printed.

Ed.: N.A. Perfilov, Doctor of Physical and Mathematical Sciences; Ed. of Publishing House: G.M. Aron; Tech. Ed.: A.V. Smirnova.

PURPOSE: The volume is intended for physicists.

COVERAGE: The book represents volume 9 of the Transactions of the Radium Institute and contains the results of studies conducted at the Institute chiefly from 1955 to 1956. There are a number of articles dealing with the study of nuclear reactions occurring with particles of different energies ranging from several eV up to hundreds of MeV. Others treat different problems of the physics of neutrons. Results of studies of various neutron sources, neutron energy distribution in a moderator (water), and other problems connected with the theory of neutron interaction with matter are presented. The majority of the articles

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are concerned with problems of method. The authors provide a complete description of the construction of equipment and of the results of tests performed under laboratory conditions. No personalities are mentioned. References accompany individual articles.

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Protopopov, A.N., Yu.A. Selitskiy, and S.M. Solov'yev. Cross Section for Fission of Uranium Bombarded by Fast Neutrons 55

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

PERFILOV, N.A.; SOLOV'YEVA, Z.I.

Special cases of the fission of uranium nuclei induced by slow neutrons. Trudy Radiev. inst.AN SSSR 9:5-40 '59. (MIRA 14:6)
(Uranium) (Nuclear fission)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

PERFILOV, N.A.; SOLOV'YEVA, Z.I.

Angular distribution of long-range α-particles associated with the fission process. Zhur.eksp.i teor.fiz. 37 no.4: 1157-1159 O '59. (MIRA 13:5)
(Alpha rays) (Fission)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

Complex Fission of Uranium Nuclei by 2.5-mev Neutrons. Letter to the Editor

77245
SOV/89-8-2-10/30

double events, i.e., the branching ratio is 1:600. Comparing it to the 1:350 ratio for thermal neutrons and 1:1,100 ratio for 14-mev neutrons, the author concluded that the probability decreases with the increase of neutron energy. In the thermal energy region the fission is mostly due to U^{235}. In the present study with 2.5-mev neutrons, the author performed a second experiment with a uranium salt containing five times less U^{235} isotope than the natural mixture. There was no noticeable change in the probability of triple fission, and the author concluded that he observed triple fission due to U^{238} and not U^{235}. Other aspects of the event were similar to those at other neutron energies. The fission was asymmetric; mean ratio of the ranges of the light and heavy fragments $R_L/R_H = 1.3$. The α-fragment angular distribution with respect to the direction of the light fragment is given in Fig. 1. Figure 2 shows the α-particle range distribution. N. A. Perfilov showed interest

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Complex Fission of Uranium Nuclei by 2.5-mev Neutrons. Letter to the Editor

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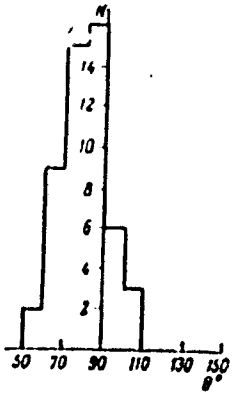

Fig. 1. Angular distribution of α-particles with respect to direction of flight of the light fragment.

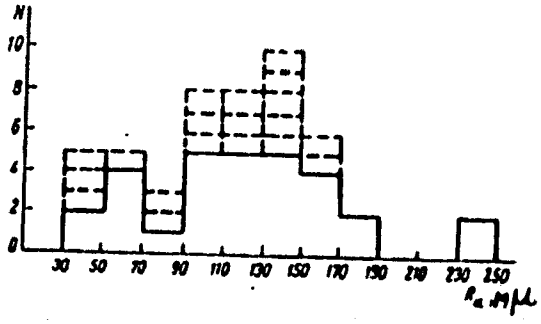

Fig. 2. Distribution of α-particle ranges during uranium fission due to action of 2.5-mev neutrons: - - - -tracks which went out of the photolayer.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

Complex Fission of Uranium Nuclei by 2.5-mev Neutrons. Letter to the Editor

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SOV/89-8-2-10/30

in the work. There are 2 figures; and 3 references, 1 Soviet, 1 French, 1 U.S. The U.S. reference is: E. Titterton, Phys. Rev., 83, 673 (1951).

SUBMITTED: June 20, 1959

Card 4/4

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

S/056/60/038/02/06/061
B006/B011

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24.6600

AUTHORS: Perfilov, N. A., Ivanova, N. I., Lozhkin, O. V., Makarov, M. M., Ostrovskiy, V. I., Solov'yeva, E. I., Shamov, V. P.

TITLE: Fragmentation of Ag and Br Nuclei at Proton Energies of 9 Bev

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 38, No. 2, pp. 345 - 350

TEXT: The authors of the paper under review offer the first results obtained from their investigation of Ag and Br fragmentation (nuclear disintegration in multicharged particles with $Z \geq 4$) by 9-Bev protons. Small emulsion chambers consisting of ten layers of the π-μ (P-R) emulsion (200μ thick) were irradiated on the proton synchrotron of the CITaI (Joint Institute of Nuclear Research) with a 9-Bev proton beam. The individual layers were numbered by a method by V. M. Sidorov and M. I. Trukhin. In the interpretation of the emulsions, such nuclear disintegrations were selected as contained tracks of particles with $Z \geq 4$.

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B006/B011

Fragmentation of Ag and Br Nuclei at Proton Energies of 9 Bev

Depending on the proton energy, the disintegrations were divided into "black" ($E_p < 30$ Mev), "gray" ($E_p \leq 1$ Bev), and "thin" ($E_p > 1$ Bev) ones. For the charge determination, the integral track width was determined with an ocular micrometer. On interpreting the results, the authors found 1,028 disintegrations with four or more prongs each; among them were, as an analysis revealed, 188 ordinary ones having fragments with $Z \geq 4$. Further 709 events were established, in which such fragments occurred, that is a total of 997 disintegrations having fragments with $Z \geq 4$ [Abstracter's Note: One of the above figures must be wrong, since 188 + 709 = 897]. The experimental results are described in detail. a) Characterization of nuclear disintegrations with fragments. A table specifies the average prong numbers for the individual star types. The average number of particles is considerably higher in disintegrations with fragments than it is in ordinary disintegrations, especially in disintegrations with several fragments and in such with fast fragments (range > 100 μ). b) Production cross section of stars with fragments. For stars having fragments with $Z \geq 4$ in Ag- and Br disintegrations it was found to be 100 ± 30 mb, viz.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

Fragmentation of Ag and Br Nuclei at Proton Energies of 9 Bev

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about 10% of the total inelastic interaction cross section. Fig. 2 illustrates the fragmentation cross section as a function of E_p. In the range of proton energies around 1 Bev there appears a steep climb of the cross section. c) Multiplicity in fragment production. The quantity of stars with two or more tracks of multicharged particles is found to grow with the energy of bombarding protons. At E_p = 9 Bev this relative quantity amounts to 0.2, at 660 Mev 0.05 only. d) Nature of fragments. Fig. 3 shows the charge distribution of the fragments: The number of particles decreases in a practically linear manner with growing charge. The charge distribution differs only little from the one found at lower energies of the bombarding particles. e) Angular and energy distributions of the fragments. Their angular distribution was determined by a method by V. I. Ostroumov and R. A. Filov; it is illustrated in Fig. 4 with respect to the proton direction of incidence (for events with one fragment, with fast fragments, and with two or more fragments). Distribution becomes more anisotropic with increasing fragment energy. The forward-backward ratio is 3.4 ± 1.1 at E > 100 s. The angular distribution is less anisotropic at E_p=9 Bev with respect to the proton direction

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Fragmentation of Ag and Br Nuclei at Proton Energies of 9 Bev

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B006/B011

tion than it is at E_p < 1 Bev. The three diagrams of Fig. 6 show the energy distribution for particles with the charges 4, 5, and 6. It is only little dependent on E_p (cf. Fig. 7). f) Hyperfragment production. Three cases of a hyperfragment production (one of them with a charge equal to 6) were recorded among the 937 fragmentation events. The author finally thanks the team of the laboratoriya vysokikh energiy (Ob"yedinennaya Institute yadernykh issledovaniy (High-energy Laboratory of the Joint Institute of Nuclear Research) for assistance given in the irradiation of the emulsion chambers. There are 7 figures, 1 table, and 9 references: 8 Soviet and 1 Japanese.

ASSOCIATION: Radiyevyy institut Akademii nauk SSSR (Radium Institute of the Academy of Sciences, USSR)

SUBMITTED: August 1, 1959

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

S/053/60/071/03/03/008
B006/B063

AUTHORS: Perfilov, N. A., Romanov, Yu. F., Solov'yeva, Z. I.

TITLE: Fission of Heavy Nuclei With Emission of Long-range α-Particles

PERIODICAL: Uspekhi fizicheskikh nauk, 1960, Vol. 71, No. 3, pp. 471-483

TEXT: Long range particles are said to be formed in a nuclear fission such as is shown in Fig. 1, where three charged particles are emitted. The nature of the long-range component is discussed first. Then experiments are described by which Z^2/m and mZ^2 of these particles were determined leading to their identification as α-particles. The probability of such a complicated fission event, as well as the methods used to determine the relative probability of triple fissions are discussed next. Photoemulsions and U^{233} or Pu^{239} are most frequently used. The authors give a brief description of the method of the double ionization chamber (Ref. 6) and of the possibility of determining the relative probability by integrating the α-particle distribution function (Ref. 10). Then, the

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Fission of Heavy Nuclei With Emission of Long-range α-Particles

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apparatus used in Ref. 9 is described (Fig. 2), and a comparison is made between the results obtained by various methods for U^{235} fission induced by thermal-neutrons (Table 1). Reference is made to numerous Western authors, whose results are compared with one another and discussed. The next part of the present paper deals with the energy distribution of long-range α-particles. The spectrum may be analyzed by means of photographic plates, absorption in thin aluminum foils, an ionization chamber with a grid, and the deviation in the magnetic field. Methods described in some Western articles are discussed in more detail, and distribution curves obtained by several authors are compared with one another in Fig. 3. Good agreement was found between the data obtained by various methods. In this connection the authors briefly refer to their own investigations (Refs. 15 and 16). The fourth section presents details on methods and results of the determination of angular distribution. Fig. 4 shows a typical distribution curve. The fifth section deals with the energy spectrum of the fragments of a triple fission. Two peaks were found for U^{235}, one at 10 Mev and another at 7 Mev. Investigations by V. N. Dmitrivev, L. V. Drapchinskiy,

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Fission of Heavy Nuclei With Emission of Long-range α-Particles

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V. A. Petrzhak and Yu. F. Romanov (Ref. 25, Fig. 5), as well as by . N. Mostovoy, T. A. Mostovaya, M. Sovinskiy, and Yu. S. Saltykov (Ref.26) are discussed in this connection. Fig. 6 shows a comparison between the results of Refs. 9 and 25. Some hypotheses on the mechanism of triple fission, published in Western articles, are discussed in the final part. There are 7 figures, 1 table, and 31 references: 10 Soviet, 13 American, 5 French, and 4 British.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

PERFILOV, N.A.; SOLOV'YEVA, Z.I.; FILOV, R.A.

Triple fission of uranium nuclei by fast neutrons. Zhur.eksp.i teor. fiz. 41 no.1:11-12 Jl '61. (MIRA 14:7)

1. Radiyevyy institut AN SSSR.
(Nuclear fission) (Uranium isotopes) (Neutrons)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

PERFILOV, N.A.; SOLOV'YEVA, T.I.; FILOV, [illegible]; KHLEBNIKOV, G.I.

Spontaneous triple fission of curium-242. Dokl. AN SSSR 136 no. 3:581-582 Ja '61. (MIRA 14:2)

1. Radiyevyy institut imeni V.G. Khlopina AN SSSR. Predstavleno akademikom [illegible] Konstantinovym.
(Curium--Decay)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

L1121
S/056/62/043/004/004/061
B102/B186

24600

AUTHORS: Solov'yeva, Z. I., Filov, R. A.

TITLE: Dependence of the kinetic energy of fragments on the α-particle energy during triple fission of uranium

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 4(10), 1962, 1146 - 1148

TEXT: Studies of the energy distribution of U^{235} fragments formed in double and triple fission showed that, the most probable total kinetic energy of double-fission fragments, equals the energy triple-fission fragments plus the probable energy of the long-range α-particle. Further studies were made to find out whether this relation holds generally. π-80 (P-80) nuclear emulsion plates were impregnated with uranium salt and irradiated with thermal neutrons from a reactor. α-particle and total fragment energies were determined from fission ranges, and the energy distributions were established for the intervals 6-14 Mev (10.4 Mev mean value), 14-17 Mev and 17-30 Mev (21.0 Mev mean value). The most probable fragment ranges were found to be shifted by ~10 Mev in dependence on the mean energy

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of the long-range α-particles. This confirms that the relation stated above is valid also for energies other than the most probable. The triple fission mechanism is discussed in the context of a dumbbell-shaped nuclear model. There is 1 figure.

SUBMITTED: April 14, 1962

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L 10677-63 EPF(n)-2/EWT(m)/BDS--AFFTC/ASD/AFWL/SSD--Pu-4

ACCESSION NR: AP3002265 S/0089/63/014/006/0575/0577

60

AUTHOR: Perfilov, N. A.; Solov'yeva, Z. I.; Filov, R. A.

TITLE: Triple fission of U sup 235 by neutrons of 14 mev energy

19

SOURCE: Atomnaya energiya, v. 14, no. 6, 1963, 575-577

TOPIC TAGS: triple uranium fission, neutron uranium fission

ABSTRACT: The triple splitting of uranium nucleus (fission plus the formation of a high energy alpha particle) was observed in a previous work to be more probable for bombardment with thermal neutrons than with fast ones. However, these observations were made with different isotopes: thermal neutrons with U sup 235, fast neutrons with U sup 238. Therefore, neutrons of 14 Mev were used with U sup 235 in this study. Photoemulsions P-9-0 were soaked in uranium salt solutions and irradiated in the neutron beam from the reactor t(d,n) He sup 4. About 100 thousand fission events were observed, among them 65 triple ones. The energy spectrum of alpha particles and their angular distribution were observed and given in diagrams. They are approximately the same for thermal and for fast neutrons. The probability of triple splitting decreases with the increase of the isotopic mass. Orig. art. has: 3 figures.

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L 13613-63 EWT(m)/BDS AFFTC/ASD

ACCESSION NR: AP3003107 S/0056/63/044/006/1832/1836 54 53

AUTHOR: Perfilov, N. A.; Solov'yeva, Z. I.; Filov, R. A.; Khlebnikov, G. I.

TITLE: Ternary fission of plutonium 19

SOURCE: Zhurnal eksper. i teor. fiziki, v. 44, no. 6, 1963, 1832-1836

TOPIC TAGS: ternary fission of plutonium, Alpha particle energy spectra, plutonium thermal fission, uranium complex fission

ABSTRACT: The energy spectra of long-range Alpha particles produced in the spontaneous fission of Pu sup 238 and Pu sup 240 and in thermal fission of Pu sup 239 have been studied by the nuclear emulsion method with an aim at comparing both the fission probabilities and the fission Alpha-particle energy spectra of the different isotopes. Electrolytic films of Pu sup 238 and sup 240, containing 78 plus or minus 4 and 450 plus or minus 25 microgram respectively were used in the spontaneous fission test, and Pu sup 239 film irradiated with neutrons from the reactor of FTI AN SSSR was used to obtain the alpha-particle energy spectrum from thermal-neutron fission. The photographic plates were scanned with a microscope and the resultant histograms were tested for fits to Gaussian distributions with various maxima and half-widths. The spectrum shapes are discussed and compared

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ACCESSION NR: AP3003107

with the results for complex uranium fission. Logical reasons for representing the Alpha-particle spectra as Gaussian or near-Gaussian distributions are advanced and agreement in the case of ternary fission of Pu sup 240 is noted with recent work by R. A. Nobles (Phys. Rev. v. 126, 1508 (1962)). "In conclusion, the authors wish to thank V. M. Kulakov for experimental assistance." Orig. art. has: 2 figures, 1 formula, and 2 tables.

ASSOCIATION: none

SUBMITTED: 17Jan63 DATE ACQ: 23Jul63 ENCL: 003

SUB CODE: 00 NO REF SOV: 008 OTHER: 007

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

ACCESSION NR: AP4042591 S/0056/64/046/006/2244/2245

AUTHORS: Perfilov, N. A.; Solov'yeva, Z. I.; Filov, R. A.

TITLE: Alpha particle spectrum of ternary spontaneous fission of Cm-244

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 6, 1964, 2244-2245

TOPIC TAGS: curium, alpha particle, fission product, energy distribution, alpha spectroscopy

ABSTRACT: The investigation was undertaken in order to check whether the spectral characteristic of the fission alpha particles is indeed independent of the mass number, as was observed by the authors earlier (Atomn. energ. v. 14, 575, 1963; ZhETF v. 44, 1832, 1963). The test was also aimed at checking the correctness of the value obtained for the most probable energy of the fission alpha particles for Cm^{242}. The same experimental setup was used as in the earlier

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ACCESSION NR: AP4042591

investigation, and geometrical corrections were introduced into the experimentally observed energy distribution. The obtained energy spectrum for the ternary fission of Cm^{244} was found to have a maximum near 15.5 ± 0.5 MeV and, assuming a Gaussian distribution, a width 11.5 ± 0.5 MeV at half height. The values obtained for Cm^{242} are 15.5 ± and 12 ± 1, respectively, indicating that the spectral characteristics agree, within the experimental error, also for two curium isotopes, as they did agree before in the case of U and Pu. However, the shift in the most probable energy of ternary-fission alpha particles cannot be established on the basis of data on three elements only. "The authors thank A. S. Krivokhatskiy for assistance." Orig. art. has: 1 figure.

ASSOCIATION: None

SUBMITTED: 01Apr64 ENCL: 01

SUB CODE: NP NR REF SOV: 004 OTHER: 003

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APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

PERFILOV, N.A., SOLOV'YEVA, Z.I.; FILOV, R.A.

Spectrum and particles in the triple spontaneous fission of cm244. Zhur. eksp. i teor. fiz. 46 no.6:2244-2245 Ja '64. (MIRA 17:10)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652330007-4

DORMAN, L.I.; INOZEMTSEVA, O.I.; MAZARYUK, Ye.A.; SOLOV'YEVA, Z.T.

Modulation of the solar diurnal effect and the possibility for establishing variations in cosmic ray intensity as measured in sidereal time. Izv. AN SSSR.Ser.fiz. 29 no.10:1898-1901 O '65. (MIRA 18:10)

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SOLOV'YEVA, Z. I.

Nov/Dec 47

USSR/Medicine - Pyridoxal Phosphate

Medicine - Biochemistry

"Pyridoxal Phosphate Synthesis by Animal Tissues," A. V. Trufanov, V. A. Kirsanova, Z. I. Solov'yeva, Lab of Chem of Vitamins, Nutrition Inst, Acad Med Sci USSR, 8 pp

"Biokhim" Vol XII, No 6

Explained synthesis of pyridoxal phosphate (codecarboxylase) in vitro in sections of livers, kidneys, heart, muscles and brains of normal rats in the presence of pyridoxene. Synthesis of pyridoxal phosphate is related to the enzymatic system of the cells which have optimum pH of about 7.2. Maximum synthesis occurs when pyridoxene and fresh tissues are mixed in a ratio of 2.5 mg doxane, to 1 g of tissue. Submitted 18 Feb 48.

62/49T50

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SOLOV'YEVA, 9-1

PROCESSES AND PROPERTIES INDEX

11C

CA

Biosynthesis of pyridoxal phosphate by yeasts. A. V. Trufanov and Z. I. Solov'eva. *Biokhimiya* 14, 327-30 (1949); cf. C.A. 42, 6017*f*.—The yeasts *S. cerevisiae* and *S. carlsbergensis* when grown in a synthetic medium with pyridoxine produce the max. amt. of pyridoxal phosphate after 12-15 hrs. at a pH of 5.0-5.4. In the absence of pyridoxine, *S. cerevisiae* synthesizes pyridoxal phosphate very slowly, or not at all, whereas *S. carlsbergensis* is incapable of such synthesis. H. Priestley

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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SOLOV'YEVA, Z. I.

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Absorption, elimination, and distribution of radioactive thiopental in rat organs and tissues. L. I. Grebenuik and Z. I. Solov'eva. *Farmakol. i Toksikol.* 17, No. 1, 27-8(1954). —When Na thiopental (contgo S^{35}) was given to rats, 61.61% was eliminated in 4 days (mostly in the first 2 days); 30.15% appeared in oxidized form and 9.30% as unchanged Na thiopental or its primary degradation products. Nephritis due to CCl_4 inhibits elimination of Na thiopental and its degradation products by the kidneys. J. F. S.

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(THIOPENTAL)

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Quantitative determination of cutisone in preparation and in tablets. Med.prom. 16 no.4:33-36 Ap '62. (MIRA 15:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze.
(BENZALDEHYDE)

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SOLOV'YEVA, Z.M.

Some characteristics of the performance of the equipment for casting and vulcanization of diaphragms for molder-vulcanizers in the Dnepropetrovsk Tire Plant. Kauch.i rez. 22 no.2:43-46 F '63. (MIRA 16:2)

1. Dnepropetrovskiy shinnyy zavod.
(Dnepropetrovsk—Rubber industry—Equipment and supplies)
(Vulcanization)

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SOLOV'YEVA, Z.M., ALEKSANDROV, V.V.

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STEPANOV, V.N., prof., doktor sel'skokhoz. nauk; GOLUNOVA, N.E., nauchnyy sotrudnik; SOLOV'YEVA, Z.M., nauchnyy sotrudnik

Yield capacity and productivity of farm crops during crop rotations of various combinations in central regions of the non-Chernozem belt. Izv. TSKHA no.5:106-121 '64. (MIRA 18:5)

1. Kafedra rasteniyevodstva Moskovskoy ordena Lenina sel'skokhozyaystvennoy akademii imeni Timiryazeva.

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1. Khar'kovskiy zavod transportnogo mashinostroyeniya imeni Malysheva.

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