

RODIN, S.

RODIN, S.

New initiative of Gorkiy workers. Sots. trud no.12:131-133 D '57.
(MIRA 11:1)

1. Sekretar' Gor'kovskogo gorodskogo komiteta Kommunisticheskoy
partii Sovetskogo Soyusa.
(Gorkiy--Construction industry)

RODIN, S.

Efficient help. Okhr. truda i sots. strakh. no.2:56-60 Ag '58.
(MIRA 12:1)

1. Sekretar' Gor'kovskogo gorkoma Kommunisticheskoy Partii Sovetskogo
Soyuza.
(Gor'kiy--Industrial hygiene)

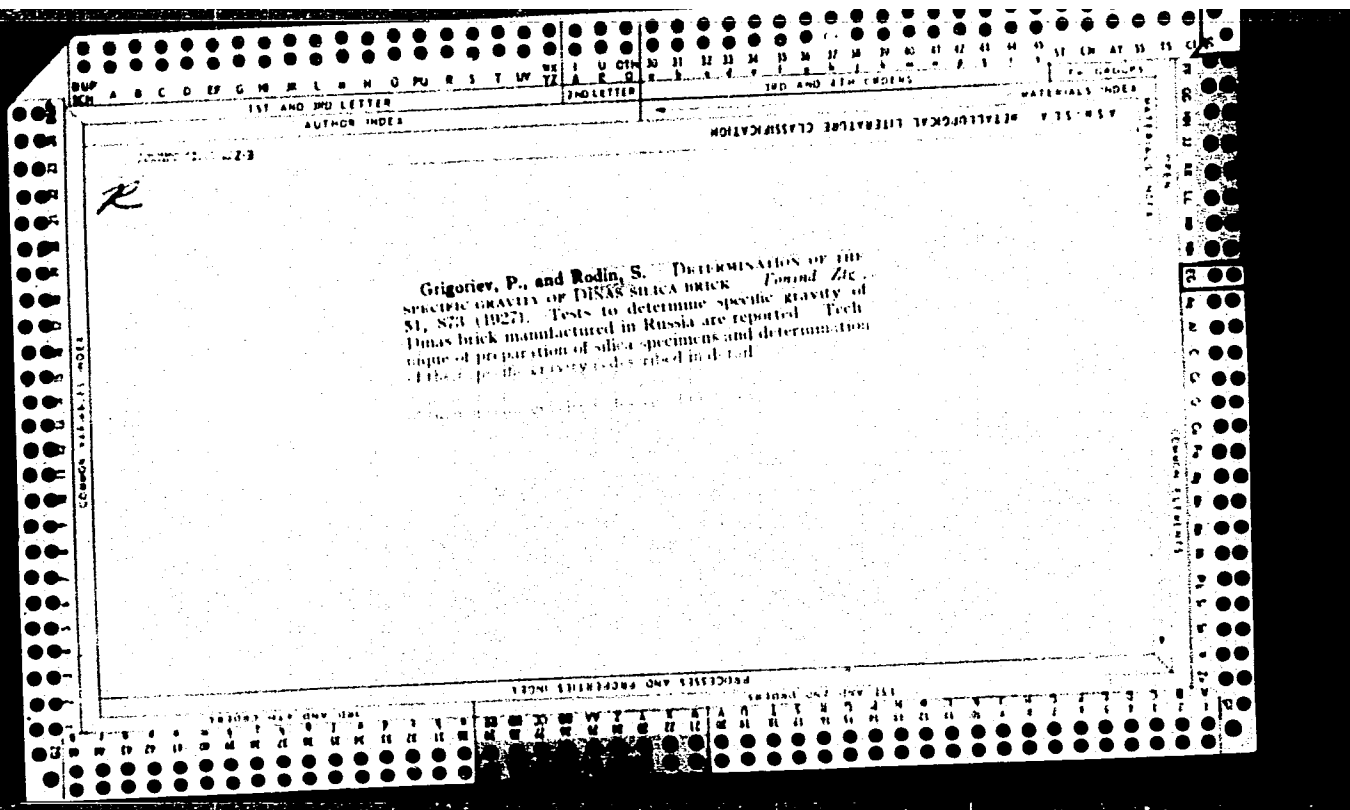
RODIN, S. Deputy Chief, Administration of Managing Cadres, Ministry of Trade USSR.

"Improve the Level of Scientific Work"

Sovetskaya Torgovlya, No. 3, Moscow, Mar 1956, pp 5-9.

Translation U-3,053,280.

24 January 1957



RODIN, S.

Training and employment of trade specialists. Sov.torg. no.5:10-14
My '57. (MLRA 10:8)

(Wholesale trade)

RODIN, S.

Improve the training of commercial personnel. Sov.torg. 34
no.7:10-13 JI '61. (MIRA 14:7)

1. Zamestitel' nachal'nika Upravleniya uchebnykh zavedeniy
Ministerstva trgovli RSFSR.
(Distributive education)

BARER, A. S.; GOLOV, G. A.; ZUBAVIN, V. V.; MURAKHOVSKIY, K. I.; RODIN, S. A.; SOROKINA,
Ye. I.; TIKHOMIROV, Ye. P.

"Physiological reactions of the human organism to transverse accelerations and
means of raising the resistance to such forces."

report presented at the 15th Intl Astronautical Cong, Warsaw, 7-12 Sep 64.

BARER, A. S.; GOLOV, G. A.; ZUBAVIN, V. E.; MURAKHOVSKIY, K. I.; RODIN, S. A.; SOROKINA,
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"Physiological reactions of the human organism to transverse accelerations and
some means of raising the resistance to such probes."

report submitted to 15th Intl Astronautical Cong, Warsaw, 7-12 Sep 64.

1ST AND 2ND ORDERS
PROCESSES AND PROPERTIES INDEX

19

CA

Manufacturing glass with sulfates from Crimea. S. B. ROZIN. Krasn. i Sestio o. No. 2, 20-1(1932).--R. describes expts. made on mfg. glass with sulfates from Lake Saki, Crimea. The glass mass was easily melted, had no bubbles, streaks or stones; the glass obtained was of a greenish color. M. V. KONDOTOV

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

RODIN, S.S.

Discovery of negative protons. Priroda 45 no.5:80-81 My '56.
(MLRA 9:8)

1. Institut geokhimii i analiticheskoy khimii imeni V.I.
Vernadskogo Akademii nauk SSSR.
(Protons)

RODIN, S S

28(5);21(0);6(6) p

PHASE I BOOK EXPLOITATION

SOV/1458

Dosyahnennya suchasnoyi fizyky, vyp. 5 (Achievements of Modern Physics, nr. 5) Kiyev, Radyans'ka shkola, 1957. 310 p. 3,500 copies printed.

Compilers: O.Z. Zhmuds'kyy, Candidate of Physical and Mathematical Sciences, Docent, and M.Ye. Hurtovyy; Ed. (Title page): O.Z. Zhmuds'kyy, Candidate of Physical and Mathematical Sciences, Docent; Ed. (Inside book): A.S. Kryvosheya; Tech. Ed.: N.K. Volkova.

PURPOSE: This book is intended for physics students at vuzes.

COVERAGE: The 22 articles in this collection have been translated into Ukrainian from Russian language articles which originally appeared in Atomnaya energiya, Priroda, and other Soviet periodicals. They were written by 23 physicists, including such eminent scholars as Kurchatov, Blokhintsev, and Veksler. The book attempts to provide a simple account of some of the recent Soviet advances in nuclear research and in the industrial application of nuclear energy. In discussing the present-day exploitation of atomic power and its potential for peacetime uses, some authors also outline a guide for future goals. Each

Card 1/5

Achievements of Modern Physics (Cont.)

SOV/1458

chapter deals with one particular problem and gives a concise statement of the modern Soviet theory about it. Among the central topics dealt with in the book are power generation through nuclear reactors, physics and the application of semiconductors, the development of new high-energy particles and radioelements, and changes brought about in production engineering by the ever increasing use of radioactive substances. Radiation effects in the auroral zone of the Arctic, television transmitters aboard Earth satellites, and technological aspects of high-pressure phenomena also come within the scope of this collection. The book contains diagrams, photographs, and a few scattered Soviet references in the text.

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RODIN, S.S.
AUTHOR: Rodin, S.S.

25-12/26-39

TITLE: Discovery of the Element 102 (Otkryt element 102)

PERIODICAL: Nauka i Zhizn', 1957, # 12, p 47 (USSR)

ABSTRACT: In July 1957 the discovery of the new element, No.102, was announced by a group of Swedish scientists. The new element was obtained by bringing particles of the curie element (element No.96) into contact with carbon ions, accelerated in a cyclotron. The new element has the mass 253 and is extremely unstable. Its period of semi-decomposition is from 10-12 minutes, emitting alpha particles with an energy of 8.5 Mev.

ASSOCIATION: Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy of the USSR Academy of Sciences. (Institut geokhimiii analiticheskoy khimii imeni V. I. Vernadskogo Akademii nauk SSSR)

AVAILABLE: Library of Congress

Card 1/1

LAVRUKHINA, A.K.; RODIN, S.S.

Review of Ed. C.E. Crouthamel's book "Progress in nuclear
energy (Analytical chemistry. Vol.3)." Zhur. anal. khim.
19 no.3:403 '64. (MIRA 17:9)

RODIN, S. S. and LAVRUKHINA, A. K.

"Investigated the co-precipitation of francium with different sediments
by short-lived radioactive isotope Fr²¹²."

report presented at The Use of Radioactive Isotopes in Analytical
Chemistry, Conference in Moscow, 2-4 Dec 1957
Vestnik Ak SSSR, 1958, No. 2, (author Rodin, S. S.)

RODIN, S. S.

5(2); 21(5) **VALUE I BOOK EXPLANTATION** SOV/1900
 Akademiya nauk SSSR. Komissiya po analiticheskoj khimii
 Prikladnye radioaktivnykh izotopov v analiticheskoj khimii
 (Use of Radioactive Isotopes in Analytical Chemistry) Moscow
 Izd-vo An SSSR, 1958. 368 p. [Series: Izv. Trudy, t. 9 (12)]
 Errata slip inserted. 3,000 copies printed.

Imp. Ed.: I. P. Alimova, Corresponding Member, USSR Academy
 of Sciences; Ed. of Publishing House: A. M. Yermakov; Tech.
 Ed.: T. V. Polyakova.

PURPOSE: The book is intended for chemists and chemical
 engineers concerned with work in analytical chemistry.

CONTENTS: The book is a collection of the principal papers
 presented in Moscow at the Second Conference on the Use of
 Radioactive Isotopes. The problems discussed at the
 Conference included coprecipitation, aging, and solubility
 of precipitates, determination of the instability constants

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of complex compounds, separation of rare earth metals, and
 ion-exchange chromatography. No personalities are mentioned.
 There are 331 references, 175 of which are Soviet, 33 German,
 19 French, 9 Swedish, 2 Hungarian, and 2 Czech.

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Rodin, S. S.

30-2-40/49

AUTHOR: Rodin, S. S.

TITLE: The Use of Radioactive Isotopes in Analytical Chemistry
(Primeneniye radioaktivnykh izotopov v analiticheskoy khimii).
Conference in Moscow (Konferentsiya v Moskve)

PERIODICAL: Vestnik Akademii Nauk SSSR, 1958, Nr 2, pp 108-110
(USSR)

ABSTRACT: This conference took place from December 2 to December 4, 1957.
It was called by the Commission for Analytical Chemistry of
the Institute for Geochemistry and Analytical Chemistry imeni
V.I. Vernadskiy of the AN USSR. About 450 scientists from 40
cities of the USSR took part as well as some foreign scien-
tists: Shu Chuan-lyan, En Zhen-in, Lyu Tsin-i (China);
I. Kol'tgov (USA); G. Irving (Great Britain); R. Prshibl,
I. Kerbl, Ya. Malyy, I. Vodegnal, V. Bezdek (Czechoslovakia);
Yu. G. Minchevskiy (Poland); L. Erdei, A. Schner (Hungary);
L. S. Tutundzhich, M. V. Shushich (Yugoslavia); N. I. Petrov
(Bulgaria); K. Dragulesku (Roumania);
Some reports dealt with the working out of radioisotopic meth-

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30-2-40/49

The Use of Radioactive Isotopes in Analytical Chemistry. Conference in Moscow

ods of analysis:

- 1) I. P. Alimarin reported on the method of diluting isotopes (the Nb⁹⁵, Zr⁹⁵, and Ta¹⁸² radioisotopes were used);
- 2) M. B. Neyman, V. Ya. Yefremov, V. M. Panfiliv reported on the determination of the alcohol content in the oxidation products of propylene and butane (C¹⁴ was used);
- 3) G. S. Rozhavskiy, I. Ye. Zimakov reported on the method of repeated radioactive dilution for the determination of small admixtures (of the order of 10⁻⁴ to 10⁻⁷ %);
- 4) A. I. Kulak reported on the determination of the quantity of micro admixtures of nickel, cobalt, copper, tellurium, and antimony;
- 5) V. B. Gaydadyomov, L. I. Il'ina reported on the possibility of analyzing tantalum-niobium alloy samples in different physical states by the reflection of rays;
- 6) I. Ye. Starik reported on the method of the perfect separation of micro quantities of uranium from weighable quantities of iron by means of the isotope U²³³;
- 7) V. I. Kuznetsov, T. G. Akimov recommended a method for precipitating uranium;

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The Use of Radioactive Isotopes in Analytical Chemistry. Conference in Moscow

- 8) Professor Irving reported on the determination of indium by radioactivation analysis in rocks and minerals;
- 9) K. B. Yatsimirskiy reported on the determination of phosphate, sulfate and molybdate;
- 10) K. V. Troitskiy described two new methods of the determination of metal traces;
- 11) A. K. Lavrukina reported on some peculiarities of radiochemical analysis;
- 12) I. M. Kol'tgov reported on the use of the radioactive isotope $\text{ThB}(\text{Pb}^{212})$ for the investigation of the aging of crystalline sediments;
- 13) M. M. Senyavin reported on the use of radioactive isotopes in chromatography;
- 14) A. M. Yermakov, V. K. Belyayeva, I. M. Marov showed the possibilities of using anionites for the calculation of the constants of the stability of charged ions;
- 15) N. A. Izmaylova, V. S. Chernyy gave data of the investigation of the solubility of salts;

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The Use of Radioactive Isotopes in Analytical Chemistry. Conference in Moscow

- 16) A. K. Lavrukhina, S. S. Rodin investigated the co-precipitation of francium with different sediments by the short-lived radioactive isotope Fr^{212} ;
- 17) I. V. Tananayev showed the possibility of separating francium from cesium;
- 18) Yu. I. Bykovskaya, A. A. Grizik, N. I. Marunina investigated the use and the methodology of radioactive indicators;
- 19) M. I. Tsekhanskiy, N. I. Shishkin, K. V. Khudoyarov and G. D. Susloparov described the use of Ca^{45} ;
- 20) P. V. Zimakov, and L. A. Krasnousov described the use of Cl^{36} ;
- 21) K. I. Karasev reported on the use of the marked-atom method.

AVAILABLE: Library of Congress

1. Isotopes (Radioactive)-Applications
2. Scientific research-Chemistry
3. Chemistry-USSR

Card 4/4

LAVRUKHINA, A.K.; RODIN, S.S.

Study of the chemical properties of francium by means of the
radioactive isotope Fr^{212} . Trudy kom.anal.khim. 9:274-283 '58.
(MIRA 11:11)

(Francium--Isotopes)

RODIN, S.S.

Use of radioactive isotopes in analytical chemistry; conference in
Moscow. Vest.AN SSSR 28 no.2:108-110 F '58. (MIRA 11:5)
(Radioisotopes--Congresses) (Chemistry, Analytical--Quantitative)

5 (0)

AUTHOR:

Rodin, S. S.

SOV/30-59-8-36/56

TITLE:

Investigation of Complex Compounds

PERIODICAL:

Vestnik Akademii nauk SSSR, 1959, Nr 8, pp 94 - 95 (USSR)

ABSTRACT:

From May 26 through 29 the 8th All-Union Conference on the Chemistry of Complex Compounds took place in Kiyev. Soviet scientists and guests from Poland and Czechoslovakia participated in the work. These compounds are used to an increasing degree, among others in the production of nuclear fuel, of auxiliary materials in atomic industry, as catalysts in the synthesis processes of high polymeric material, in biology, medicine, and in various fields of modern technology. 97 reports were presented in 2 plenary and 15 group sessions. Among others the following questions were discussed in the reports: problems of the "transeffect"; investigation of complex compounds by means of physical and physicochemical methods; investigation of the structure of complex compounds by means of optical and thermodynamic data. In the closing session the tasks arising through the Seven-Year Plan were discussed.

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21 (0)
AUTHOR:

Rodin, S. S.

S/030/60/000/01/053/067
B015/B011

TITLE:

Use of Atomic Energy for Peaceful Purposes

PERIODICAL:

Vestnik Akademii nauk SSSR, 1960, Nr 1, pp 101 - 102 (USSR)

ABSTRACT:

The author describes the course of the Conference on the peaceful uses of atomic energy, held in Tashkent from September 28 to October 3, 1959. The Conference had been convened by the Akademiya nauk (Academy of Sciences) and the Nauchno-tehnicheskii komitet Soveta Ministrov Uzbekskoy SSR (Scientific-technical Committee of the Council of Ministers of the Uzbekskaya SSR). It was attended by scientists of the institutions of the Academy of Sciences of the USSR and the Academies of Sciences of the Union Republics as well as by experts in various branches of national economy. Kh. M. Abdullayev, President of the Academy of Sciences of the Uzbekskaya SSR, opened the Conference. V. I. Sinitsyn, delegate of the Glavnoye upravleniye po ispol'zovaniyu atomnoy energii pri Sovete Ministrov SSSR (Main Administration for the Use of Atomic Energy at the Council of Ministers of the USSR), reported on the prospects of the peaceful uses of atomic energy in the USSR, and G. M. Fradkin on

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Use of Atomic Energy for Peaceful Purposes

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production of radioactive isotopes in the USSR. Over 300 reports were heard at two plenary meetings and 40 sessions of the sections, half of them being delivered by scientists of the Uzbekistan. U. A. Arifov, Director of the Institut yadernoy fiziki Akademii nauk Uzbekskoy SSR (Institute of Nuclear Physics of the Academy of Sciences of the Uzbekskaya SSR), spoke on the prospects of scientific research development at this Institute. The technical basis was offered by a recently installed reactor, generators of fast neutrons, a cobalt-gamma-radiation system. S. V. Starodubtsev, Vice President of the Academy of Sciences of the Uzbekskaya SSR, reported on the major working results obtained by the scientists of the Uzbekskaya SSR in the field of modification of the properties of solids and liquids. A survey was offered by A. K. Lavrukina on "Modern Methods of Radiochemistry". The lecturer described the work done by a group of collaborators of the Institut geokhimii i analiticheskoy khimii Akademii nauk SSSR (Institute of Geochemistry and Analytical Chemistry of the Academy of Sciences of the USSR) in the Ob'yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research) at Dubna. The delegates of the Conference

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Use of Atomic Energy for Peaceful Purposes

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visited the nuclear reactor and undertook excursions to industrial enterprises, scientific institutions, kolkhoz, and sovkhos of the Republic. ✓

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S/186/60/002/001/014/022
A057/A129

24.6600

AUTHORS: Lavrukhina, A.K.; Rodin, S.S.

TITLE: Radiochemical investigation of uranium fission products obtained by 660 Mev proton bombardment

PERIODICAL: Radiokhimiya, v. 2, no. 1, 1960, 83 - 93

TEXT: Fission and spallation products of uranium obtained by bombardment with 660 Mev protons were investigated radiochemically. From experimental data and results obtained by interpolation a full chart of residual nuclide products is prepared and basic regularities in their formation are determined. High-energy fission was discovered in 1947 by G.T. Seaborg et al. [Ref. 1: Phys. Rev. 72, 740 (1947)]. The present authors started in 1955 detailed radiochemical investigations of fission products (in the interval $Z = 78 - 93$) obtained by 660 Mev proton bombardment of uranium. Comparison with literature data on fission products of copper and bismuth can give information concerning the dependence of fission characteristics on the atomic number of the target-element (from $Z = 29$ up to $Z = 92$). M. Linder and R. Osborn's paper [Ref. 12: Phys. Rev., 103, 378 (1956)] on fission products obtained by 100 - 340 Mev proton bombardment of ura-

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Radiochemical investigation of uranium fission...

nium in connection with the present results may give some informations on the effect of the bombardment energy in the range of 100 - 660 Mev on the yield of some fission and spallation products. In the present work metallic uranium foils (0.3 - 0.5 g) were bombarded in a circulating 660 Mev proton beam of the synchro-cyclotron in the laboratoriya yadernykh problem Ob'yedinennogo instituta yadernykh issledovaniy (Laboratory for Nuclear Problems of the Joint Institute of Nuclear Investigations), varying the duration from 15 min to 2 h. After irradiation the uranium foils were dissolved in HNO_3 or HCl adding H_2O_2 , the elements Pt, Au, Hg, Tl, Pb, Bi, Po, At, Fr, Ra, Ac, Th, Pa, U and Np were separated by chemical processes and identified by their radioactive properties. Activity measurements were carried out with a standard end-window counter [of MCT-17 (MST-17) type] and scintillation counter with $\text{ZnS}(\text{Ag})$ crystal. In the obtained uranium fission and spallation products 42 nuclides in the interval of $A = 188 - 237$ with a half-life T from 20 min to 140 days were identified (see Table 1). Relatively high yield of neutron-excess nuclides was observed. Data were obtained by interpolation. From the experimental and interpolation results distribution curves according to the mass number were plotted (Fig. 4) and it was demonstrated that nuclides with maximum yield are distributed close to nuclear stability curve. Distribution curves for the elements $Z < 90$ are not in agreement with the previously observed

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A057/A129

Radiochemical investigation of uranium fission....

tendency [Ref. 3: GYeOKhI AN SSSR, M. (1955); Ref. 5: Atomnaya energiya, 2, 345 (1957); Ref. 9: Atomnaya energiya, 2, 27 (1957); Ref. 8: T.V. Malysheva, I.P. Alimarin, ZhETF, 35, 5, 1103 (1958)] of the increasing probability for the formation of neutron-deficient nuclides with increasing n/p ratio in the bombarded nuclei. Even more surprising are the values calculated for neutron and proton emission as 5.2 or 11.7, i.e., $\Sigma n / \Sigma p = 2.3$. Thus the probability of proton emission in uranium spallation is relatively high being half of the probability of neutron emission. The present authors assume that these effects are caused not only by the contribution of spallation processes, but by the greater cross section of the fragmentation process on uranium in comparison with other heavy elements [such as Au or Bi, see A.K. Lavrukhina et al., Ref. 18: Atomnaya energiya, 3, 285 (1957)]. From the yield distribution curves (Fig. 4) formation cross sections were determined, summary yield curves were plotted (Fig. 7) and thus the total fission cross section of uranium was estimated at 0.4 barn. According to Lindner (Ref. 12) after 340 Mev proton bombardment uranium fission cross section is 0.28 barn, not considering the contribution of Fr, Rn, At, Po, Bi, Pb, Tl, Hg, Au and Pt. From the present data it can be seen that the contribution of these elements is about 40% of the total fission cross section. Their formation cross section decreases twice in the energy range from 660 to 340

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Radiochemical investigation of uranium fission....

Mev. Thus the total fission cross section of uranium in 340 Mev bombarding is about 0.35 barn and remains constant in this proton energy range. However, formation cross sections of single fission products change considerably with increasing proton energy. The yield of Th, Ac and Ra, for instance, increases with the proton energy while the yield of U and Pa decreases (see Table 2). Decrease in U and Pa yield is explained by the fact that with increasing proton energy the mean excitation energy increases, but the probability of the transfer of a smaller part of the energy from protons to the nucleus decreases. Since U and Pa are formed at relatively small excitation energies, their yield decreases. The range of applicability of S.G. Rudstam's formula [Ref. 21: Phyl. Mag., 44, 1131 (1953)] was checked comparing the experimental curve of dependence of the cumulative yield of isobars on the number of emitted nucleons (Fig. 9) with the theoretical curve calculated by J.D. Jackson [Ref. 17: Can. J. Phys., 35, 21 (1957)]. The difference between the two curves demonstrates that emission of α -particles and fission possibility of residual nuclei must be considered in the calculation of uranium fission products yield. It was observed that the experimental yield of Po^{210} ($N = 126$) is about three times less than the interpolated value (Fig. 4). In previous investigations by I.A. Yutlandov [Ref. 6: RIAN SSSR, L. (1956)], A. N. Murin, I.A. Yutlandov [Ref. 7: Izv. AN SSSR, OKhN, 4, 408 (1957)] and A.K.

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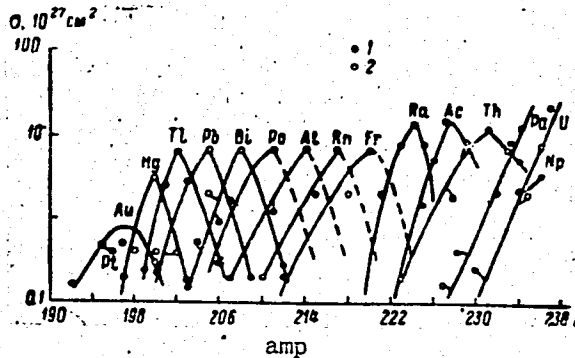
S/186/60/002/001/014/022
A057/A129

Radiochemical investigation of uranium fission....

Lavrukhina, A.A. Pozdnyakov [Ref. 22: Atomnaya energiya, 7, 382 (1959)] the effect of shell structure on the yield of residual nuclei was also noticed. Decrease in yield of nuclides with closed shells can be explained by the static theory of nuclear reactions. The present authors thank the coworkers in the laboratory L.M. Satarov, G.V. Perfeyev and M.I. Blokhin for the help as well as V.N. Mekhedov and V.G. Solov'yev for discussing the present paper. There are 9 figures, 2 tables and 22 references: 11 Soviet-bloc and 11 non-Sviet-bloc.

SUBMITTED: April 10, 1959

Figure 4: Distribution curves of the yield of isotopes of different elements according to mass number in uranium fission with 660 Mev protons. 1 - experimental values; 2 - interpolated values.



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S/026/60/000/0310271
D001/D006

21(0)

AUTHORS: Rodin, S.S., and Parfenov, Yu.D.

TITLE: The Peaceful Atom in Action

PERIODICAL: Priroda, 1960, Nr 3, pp 107 - 109 (USSR)

ABSTRACT: A conference on the peaceful applications of atomic energy was convened in Tashkent at the end of 1959 by the Akademiya nauk Uzbekskoy SSR (Academy of Sciences of the Uzbekskaya komitet Soveta Ministrov (Scientific and Technical Committee of the Council of Ministers). Over 1,000 scientists and specialists participated and more than 300 papers were read at the 2 plenary and 40 ordinary sessions - 50% of them by Uzbek scientists. The sessions were devoted to research on nuclear physics - radiation chemistry, the uses of radio-isotopes in industry, geology, biology, medicine and agriculture. The following reports were heard: the development prospects of scientific research by U.A. Arifov, Director of the Institut yadernoy fiziki (Nuclear Physics Institute)



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D001/D006

The Peaceful Atom in Action


of the AS UzSSR; prospects for the peaceful utilization of atomic energy in the USSR by V.I. Sinitsyn, representative of Glavatom at the Sovet Ministrov SSSR (Council of Ministers of the USSR); the production of radioactive isotopes in the USSR by G.M. Fradkin; the results of the work of Uzbek scientists on the effect of radiation on solids and liquids by S.V. Starodubtsev, vice-president of the AS UzSSR; "Modern Methods of Radiochemistry" by A.K. Lavrukhina who discussed the work of the Institute of Geochemistry and Analytic Chemistry at the Ob'yedinennyy institut yadernykh issledovaniy (Joint Nuclear Research Institute) in Dubna; the adsorption of alkali- and rare earth elements in chernozem by the marked atom method by E.A. Chuveleva, K.V. Chmutov and P.P. Nazarov. Other papers and reports dealt with:

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D001/D006

The Peaceful Atom in Action

research into radio chemical processes; the effect of ionizing radiation on matter; the radio chemical method of obtaining highly active metallic catalysts; the effect of radiation on various polymers; the influence of gamma-radiation on the composition and physico-chemical properties of different components of cotton seed; the radiochemical conversion of matter in aqueous solutions; methods of obtaining pure radioactive isotopes; the state of micro-quantities of radio-elements in solutions; the use of radioactive iodine to diagnose and cure functional disorders of the thyroid gland, to determine its speed of accumulation in cases of gastritis and to diagnose brain tumors; the use of radio-isotopes to study the circulation of blood and lymph and introduce "marked"

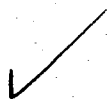


Card 3/6

S/026/60/000/03/025/047
D001/D006

The Peaceful Atom in Action

medicines into the organism; the effect of radioactive vapours at Khodzhi-Obirgam spa on the human organism; the functional change of different systems, organs and tissues under the influence of ionizing radiation; the use of radio-isotopes in treating tumors of the mouth, throat, nasopharynx, etc., and experimenting on living organisms; radio-isotopes in plant cultivation; the properties of chlorophyll biosynthesis and destruction by radioactivity of the cycle in plant organisms; the transmigration of mineral matter in the nourishment of plants; the effect of small doses of radiation on the growth, development and fertility of cotton, mulberry-trees, etc; the problems of using radiation in cattle-breeding and veterinary surgery. The participants in the conference inspected the recently built reactor.



Card 4/6

S/026/60/000/03/025/047
D001/D006

The Peaceful Atom in Action

Apart from the new reactor, the Uzbek Nuclear Physics Institute is equipped with a complex of fast-neutron generators, a powerful cobalt gamma-radiation installation and specially equipped physical and radio-chemical buildings. A cyclotron is under construction. In its short existence the Institute has performed much valuable research. One of its contributions is the discovery that gamma-radiation is excellent for preserving the cocoon of the mulberry silk-worm. Instruments for automating labor-wasting production-quality control-processes and production regulating processes evolved by the Institute are already in use at enterprises in Tashkent, Chirchik and Ammalyk. Radiation methods are also being used to solve the problems of supplying the virgin



Card 5/6

S/026/60/000/03/025/047
D001/D006

The Peaceful Atom in Action

soils of the Golodnaya Steppe and Central
Fergana with water.

ASSOCIATION: Institut geokhimii i analiticheskoy khimii
Akademii nauk SSSR (Institute of Geochemistry
and Analytic Chemistry of the AS USSR) -
Rodin. Ministerstvo zdravookhraneniya RSFSR
(RSFSR Ministry of Health / Moscow) Parfenov. ✓

Card 6/6

GHERLIT, I.B. [Gerlit, Yu.K.]: PAVLOTKAIA, F.I. [Pavlotskaya, F.I.]; RODIN, S.S.

Chemistry of some new elements: technetium, promethium, astatine,
francium. Analele chimie 15 no.1:166-180 Ja/Mr '60 (EAI 9:8)
(Astatine) (Francium) (Technetium)
(Promethium)

PETRUKHIN, O.M. [translator]; RODIN, S.S. [translator]; ZOLOTOV, Yu.A.,
kand. khim. nauk, red.; ARNOL'DOV, V.V., red.; GRIBOVA, M.P.,
tekh. red.

[Extraction in analytical chemistry and radiochemistry] Ek-
straktsiia v analiticheskoi khimii i radiokhimii. Moskva,
Izd-vo inostr. lit-ry, 1961. 350 p. (MIRA 15:4)

Translated articles.

(Extraction (Chemistry)) (Radiochemistry)

RODIN, S.S.

Discovery of the element 103. Usp.khim. 30 no.11:1424-1428 N '61.
(MIRA 14:10)

1. Institut geokhimii i analiticheskoy khimii imeni V.I.Vernadskogo
AN SSSR.

(Lawrencium)

29011

S/020/61/140/CCA/015/023
B106/B110

5 2100

AUTHORS:

Kourzhim, V., Lavrukhina, A. K., and Rodin, S. S.

TITLE:

Use of ammonium phosphotungstate for the separation of rubidium and cesium by ion exchange

PERIODICAL:

Akademiya nauk SSSR. Doklady, v. 140, no. 4, 1961, 832-834

TEXT: J. van R. Smith and co-workers (Ref. 10, see below) recently published a paper on the separation of alkali metals on an exchanger column with ammonium phosphomolybdate. J. Krtil and V. Kouřim (Ref. 11, see below) showed that the chemical stability of ammonium phosphotungstate in neutral and highly acid solution was higher than that of ammonium phosphomolybdate, and that the sorption capacity of the former salt was twice that of the latter. On the basis of these data, the authors studied the separation of the heavy alkali metals rubidium and cesium on a column filled with ammonium phosphotungstate. To reduce the high hydraulic resistance of fine-crystalline ammonium phosphotungstate, a coarse packing had to be added. A fine-fibered tremolite asbestos of the amphibolic type was used for this purpose. Silica gel, glass wool,

Card 1/4

29014

S/C20/61/140/004/015/023

B106/B110

Use of ammonium phosphotungstate . . .

cellulose, and cork crumbs were less suitable. The column used had an inside diameter of 5 mm, and was filled with a suspension of asbestos in 1 M NH_4NO_3 solution up to a height of about 30 mm. A 0.2 M solution of phosphotungstic acid, and then a 0.3 M NH_4NO_3 solution, were passed through this column. 0.1 ml of a 1 M HNO_3 solution was then introduced which contained 10^{-4} M rubidium (radiolabeled with Rb^{86}) and 10^{-6} M cesium (radiolabeled with Cs^{134}). The absorption of β -radiation by an aluminum filter was used to identify the activities since the energies of β -particles of Rb^{86} (1.79 Mev) and Cs^{134} (0.65 Mev) are highly different. A filter of a thickness of 204 mg/cm^2 was used. The radioactivity of fractions obtained after separation on the column was measured in an end-window counter of the MCT-17 (MST-17) type with and without aluminum filter. The relative quantities of the two active isotopes in the fractions were calculated from the following equations:

$$A_{\text{Rb}} = 6.82 \cdot A_{\text{Al}} - 0.31 \cdot A_{\text{tot}}; \quad A_{\text{Cs}} = 1.31 \cdot A_{\text{tot}} - 6.82 \cdot A_{\text{Al}}; \quad (A_{\text{Rb}}, A_{\text{Cs}} - \text{activities of } \text{Rb}^{86} \text{ and } \text{Cs}^{134}, \text{ respectively; } A_{\text{Al}} - \text{total activity when}$$

Card 2/4

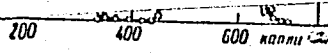
29014 . . .

S/O20/61/140/004/015/023
B106/B110

Use of ammonium phosphotungstate ...

measuring with filter; A_{tot} - total activity without filter). Rubidium was eluted from the column, with 1 M ammonium nitrate solution cesium with 6 M ammonium nitrate solution. Fig. 1 shows the resultant chromatogram. Rb and Cs can also be separated by ammonium silicomolybdate, but this salt is more soluble in NH_4NO_3 solution than ammonium phosphotungstate, and is therefore, slowly eluted from the column. The chromatograms obtained with ammonium phosphomolybdate agree with data in Ref. 10 (see below). Ammonium silicotungstate cannot be applied to chromatographic separations because of its good solubility in ammonium nitrate solutions. The chromatographic separation method described may be valuable for the separation of highly active isotopes of rubidium and cesium since phosphotungstates are very stable to radiation. There are 1 figure and 16 references: 3 Soviet and 13 non-Soviet. The three most recent references to English-language publications read as follows: Ref. 10: J. van R. Smith, W. Robb, I. I. Jacobs, J. Inorg. and Nucl. Chem., 12, 104 (1960); Ref. 11: J. Krtil, V. Kouřim, J. Inorg. and Nucl. Chem., 12, 367 (1960); A. K. Lavrukhina, A. A. Pozdnjakov, S. S. Rodin, Intern. J. of Appl. Rad. and Isotopes, 2, No 1-4, 34 (1960).

Card 3/4



RODIN, K. G.

26(1,5);14(0)

PHASE I BOOK EXPLOITATION SOV/3135

Budyka, Ivan Nikolayevich, Viktor Ivanovich Bulanin, Solomon Abramovich Kantor, and Konstantin Georgiyevich Rodin

Atlas konstruktsiy parovykh i gazovykh turbin (Atlas of Steam and Gas Turbine Designs) Moscow, Gosenergoizdat, 1959. 9,000 copies printed. 1. Opisatel'naya chast' (Part I. Descriptive Part) 130 p. 2. Chertezhi (Part II. Drawings) 118 p.

Ed.: S. A. Kantor, Professor; Tech. Ed.: A. A. Zabrodina.

PURPOSE: This atlas is intended for students taking advanced courses in turbine design. It may also be useful to personnel of design offices in plants and planning organizations.

COVERAGE: Drawings and descriptions of basic types of Soviet steam and gas turbines are presented. Rated capacities and such auxiliary equipment as surface condensers and steam-jet ejectors are discussed. Book I contains the descriptions and general information for each turbine type, while Book II contains the drawings. The drawings in Book II correspond to the turbine types listed in Book I. For Part I of the text the corresponding

Card 1/7

Atlas of Steam (Cont.)

SOV/3135

drawings are found on Sheets 1-1 to 1-21 on pages 3 to 23 in Book II. For Part II the drawings are on Sheets 2-1 to 2-26 on pages 24 to 61; for Part III, Sheets 3-1 to 3-4 on pages 57 to 61; for Part IV, Sheets 4-1 to 4-25 on pages 62 to 89; for Part V, Sheets 5-1 to 5-10 on pages 90 to 101; and for Part VI, Sheets 6-1 to 6-17 on pages 102 to 118. The following are expansions of the three-letter designations of turbine types listed, indicating the plant where they are designed or manufactured: LMZ, Leningradskiy metallicheskiy zavod (Leningrad Metal Plant); KhTZ, Khar'kovskiy turbinnyy zavod imeni S.M. Kirova (Khar'kov Turbine Plant imeni S. M. Kirov); UTZ, Ural'skiy turbomotornyy zavod (Sverdlovsk Ural'skiy Turbine Plant); NZL, Nevskiy mashinostroitel'nyy zavod imeni V.I. Lenina (Leningrad Nevskiy Machinery Plant imeni V. I. Lenin); and KTZ, Kaluzhskiy turbinnyy zavod (Kaluzhskiy Turbine Plant). The atlas was compiled by members of the Turbine Construction Department, Leningradskiy politekhnicheskii institut imeni M. I. Kalinina (Leningrad Polytechnical Institute imeni M. I. Kalinin). I. N. Budyka wrote Parts III and IV; V.I. Bulanin wrote Part I, Paragraphs 10, 11, and 13 of Part II, and Paragraph 18 of Part IV; S. A. Kantor wrote Part VI; and K. G. Rodin wrote Parts II and V. The authors

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Atlas of Steam (Cont.)

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Atlas of Steam (Cont.)

SOV/3135

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Card 6/7

RODIN, KONSTANTIN GEORGIYEVICH

BUDYKA, Ivan Nikolayevich; BULANIN, Viktor Ivanovich; KANTOR, Solomon Abramovich; prof.; RODIN, Konstantin Georgiyevich; SHCHEGLYAYEV, A.V., prof., retsenzent; ZABRODINA, A.A., tekhn.red.

[Atlas of designs for steam and gas turbines; drawings] Atlas konstruktsii parovykh i gazovykh turbin; chertezhi. Pod red. S.A.Kantora. Moskva, Gos.energ.izd-vo, 1959. 118 diagra.

[__Descriptive part] Opisatel'naya chast'. 130 p.

(MIRA 12:7)

1. Kafedra turbinostroyeniya Leningradskogo politekhnicheskogo instituta im. M.I.Kalinina (for Budyka, Bulanin, Kantor, Rodin).
2. Chlen-korrespondent AN SSSR (for Shcheglyayev).
(Turbines--Catalogs)

ZAVADOVSKIY, Anatoliy Mikhaylovich: Prinsipal uchastiye BABENKO, Kh.L.,
inzh. POVKH, I.L., prof., doktor tekhn.nauk, retsenzent;
RODIN, K.G., kand.tekhn.nauk, red.; GOFMAN, Ye.K., red.izd-va;
SHCHETININA, L.V., tekhn.red.

[Principles of designing the blading of steam and gas turbines]
Osnovy proektirovaniia protochnoi chasti parovykh i gazovykh
turbin. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry,
1960. 246 p. (MIRA 13:12)
(Steam turbines--Blades) (Gas turbines--Blades)

RODIN, L. YE.

PA 5/49T1

USSR/Academy of Sciences
Geography

Mar/Apr 48

"Report on the Scientific Work of E. M. Murazayev,"
L. Ye. Rodin, Mem, Sci Council, Geog Society USSR,
1½ pp

"Iz v-s Geog Obshch" Vol LXXX, No 2

Murazayev worked, 1940 - 1944, as Scientific Leader,
Geog Cabinet, Sci Committee to Council of Ministers,
Mongolian Peoples Republic. Lists expeditions
covering 26,000 kilometers. Murazayev has written
14 books and articles on physical geography and on
Mongolia. Mentions various other activities.

5/49T1

1. RODIN, L. YE.
2. USSR (600)
4. Geology and Geography
7. Vegetation Cover of Eastern Pamir. By K. V. Stanyukovich. (All Union Geographical Society, New Series, Vol. 10., Moscow, Geography Press, 1949). Reviewed by L. Ye. Rodin. Sov. Kniga, NO. 11, 1950.

9. FDD Report U-3081, 16 Jan. 1953. Unclassified.

RODIN, L.Ye.

ANDREYEV, V.N.; GALKINA, Ye.A.; IGOSHINA, K.N.; LAVRENKO, Ye.M.; RODIN, L.Ye.,
SAKHOKIA, M.F.; SEMENOVA-TYAN-SHANSKAYA, A.M.; SOCHAVA, V.B.; SHIF-
YERS, Ye.V.; PEVZNER, R.S., tekhnicheskiy redaktor

[Vegetation map of European U.S.S.R. on a scale of 1:2,500,000;
explanatory text] Karta rastitel'nosti Evropeiskoi chasti SSSR.
m. 1:2,500,000. Poiasnitel'nyi tekst. Sost. V.M.Andreev i dr.
Pod red. E.M.Lavrenko i V.B.Sochavy. Moskva, 1950. 288 p.
(MLRA 10:7)

1. Akademiya nauk SSSR. Botanicheskiy institut.
(Phytogeography)

1. RODIN, L. Yo.
2. USSR (600)
4. Botanical Research
7. Work of the Komarov Botanical Institute of the Academy of Sciences of the U.S.S.R. along the Main Turkmen Canal. Bot.zhur. 37 no. 6, 1952.

9. Monthly Lists of Russian Accessions, Library of Congress, March 1953, Unclassified.

RODIN, L. Ye.

(5)

C.A. V-48
Jan 10, 1951
Water Sewage
and Sanitation

The role of biological factors in forming takyrs along the route of the Turkmen Canal. N. I. Bazilevich, N. M. Gollerbakh, M. A. Litvinov, L. E. Rodin, and D. M. Shtefberg. *Botan. Zhur.* 38, 3-30(1953).—A slime membrane of biol. origin (algae) coats mineral particles, reduces evapn., and decreases the upward movement of salts. This in turn encourages more algal growth. The O₂ released in the photosynthetic processes is trapped by the fibers of the algae and when silting takes place a porous structure is formed as the O₂ is forced out or reacts with the medium. With more sediment the porosity is reduced by compaction and a scaly structure ensues. On the surface, cementation causes crust formation, the cementing agents being SiO₂, organo-mineral gels, and carbonates of Ca and Mg. The Na of the incoming waters causes a rise in pH. It has been noted that as the algae develop on the surface after a rain the pH rises to 8.2-8.3.
J. S. Joffe -

HODIN, L.Ye.

Seasonal rhythm of the tropical forest. Bot.zhur. 38 no.4:485-496 J1-Ag '53.

(MLRA 6:9)

(Botany--Tropics)

RODIN, L. Ye.

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
Rodin, L. Ye.

Title of Work
"Five Weeks in South
Americac" (2d edition)

Nominated by
Botanical Institute,
Academy of Sciences
USSR

RODIN, L. E.

Chemical Abstracts
May 25, 1954
Soils and Fertilizers

⑥
Changes produced in taky soils by vegetation. N. T. Masilevich, L. E. Rodin, E. I. Ruchkovskaya, R. A. Kalashnikova, and N. E. Bekarevich (V. L. Komarov Botanic Inst. and Agr. Inst., Dnepropetrovsk). *Pedagogicheskii Zhurnal*, 1953, No. 11, 26-42.—Data are presented on the invasion of various plants (tops and roots) invading taky soils. The compn. of the soil and its aq. exts. show a favorable effect with the change in the plant assocns. I. S. Joffe.

RODIN, LEONID YEFIMOVICH

RODIN, Leonid Yefimovich; ROZIN, M.S., redaktor; RIVINA, I.N., tekhnicheskii redaktor.

[Five weeks in South America] Piat' nedel' v IUzhnoi Amerike. Moskva, Gos.izd-vo geogr.lit-ry, 1954. 331 p. (MIRA 8:4)
(Brazil--Description and travel)

Rodin, L. Ye.

PAVLOVSKIY, Ye.N., akademik, redaktor; BARANOV, P.A.; IL'IN, M.A., professor, doktor biologicheskikh nauk, redaktor; GRICHUK, V.P., redaktor; ZALENSKIY, O.V., redaktor; KRISHTOFOVICH, A.M., redaktor [deceased]; LARIN, I.V., zaslushennyy deyatel' nauki, professor, redaktor; MALYUGIN, Ye.A., redaktor; ~~RODIN, L.Ye.~~ redaktor; SHARAPOV, N.I., redaktor; BOLOVIN, M.M., redaktor; LITKEVICH, S.V., redaktor; PEVZNER, R.S., tekhnicheskij redaktor

[U.S.S.R. waste lands and their reclamation] Pustyni SSSR i ikh osvoenie. Moskva, Izd-vo Akademii nauk SSSR. Vol. 2 1954. 801 p.
[Microfilm] (MIRA 8:2)

1. Akademiya nauk SSSR. Botanicheskiy institut. 2. Chlen-korrespondent Akademii nauk SSSR (for Krishtofovich, Pavlovskiy).
(Reclamation of land) (Phytogeography)

RODIN, L. E.

USSR/Agriculture - Soil science

Card 1/1 : Pub. 22 - 33/44

Authors : Bazilevich, N. I., and Rodin, L. E.

Title : Characteristics of a small biological cycle in various soil-plant zones

Periodical : Dok. AN SSSR 97/6, 1061-1064, Aug 21, 1954

Abstract : It is shown that the inter-relation between the vegetation and the soil in the form of a small cycle of ash elements is sharply different within the limits of various natural zones. The characteristics of such a small biological cycle, are explained. Ten USSR references (1944-1954). Table; graphs; drawings.

Institution :

Presented by : Academician V. N. Sukachev, May 17, 1954

RODIN, Leonid Yefimovich

[Journey to the tropics] Puteshestvie v tropiki. Leningrad, Detgiz,
1955. 1 v. (MLBA 9:7)

(Argentina--Description and travel)
(Brazil--Description and travel)

TYURIN, I.V., akademik, redaktor; KOVDA, V.A., redaktor; LAVRENKO, Ye.M., redaktor; BAZILEVICH, N.I., redaktor; LETUNOV, P.A., redaktor; RODIN, L.Ye., redaktor; SHUVALOV, S.A., redaktor; MARKOV, V.Ya., redaktor izdatel'stva; SHEVCHENKO, G.N., tekhnicheskii redaktor

[Takyrs of Western Turkmenistan and ways of reclaiming them for agriculture] Takyry Zapadnoi Turkmenii i puti ikh sel'skokhozia-
stvennogo osvoeniia. Moskva, 1956. 735 p. (MLRA 9:11)

1. Akademiya nauk SSSR. Pochvennyy institut. 2. Chlen-korrespondent AN SSSR (for Kovda, Lavrenko)
(Turkmenistan--Reclamation of land)

LAVRENKO, Ye.M., obshchiy red.; RODIN, L.Ye., otvetstvennyy red.; GERBIKH,
A.A., tekhn. red.

[Vegetation map of Central Asia] Karta rastitel'nosti Srednei Azii.
[Pod obshchei red. Ye.M. Lavrenko. 1956. Moskva, 1957] 18 sheets.
col. maps (in portfolio) 92 x 62 cm. Cover title. Scale of maps 1:
1,000,000. Covers Soviet Central Asia south of lat. 46°. Errata slip
included. (MIRA 11:8)

1. Akademiya nauk SSSR. Botanicheskiy institut. Otdel geobotaniki.
2. Chlen-korrespondent Akademii nauk SSSR (for Lavrenko).
(Soviet Central Asia--Botany--Maps)

USSR/Soil Science - Genesis and Geography of Soils. J

Abs Jour : Ref Zhur Biol., No 22, 1958, 99973

Author : Rodin, L.Ye.

Inst : Academy of Sciences USSR

Title : The Influence of Human Activity on the Formation of Takys.

Orig Pub : V sb.: Takyry Zap. Turkmenii i puti ikh s.-kh. osnovaniya. M., AN SSSR, 1956, 104-108

Abstract : In a number of cases, immoderate plowing, cutting haloxylon for fuel and destroying the shrubs, building of wells and various other structures assist in the formation of takys; analysis of the effects of these factors indicates that all of them are accompanied by changes the water stream, by worsening of the territory's water and salt regimes, by thinning out and the

Card 1/2

- 6 -

USSR/Soil Science - Genesis and Geography of Soils.

Abs Jour : Ref Zhur Biol., No 22, 1958, 99973

complete disappearance of the higher plants and their resettlement by lower plants, principally the blue-green algae. The processes of takyr formation are intensified in conditions of open biocoenoses with a predominance of rootless plants and also in conditions of the territories' subjection to periodic inundations by waters of the surface flow with sudden ensuing discoloration. -- N.I. Daxilevich

Card 2/2

USSR/Soil Science - Genesis and Geography of Soils.

J

Abs Jour : Ref Zhur Biol., No 22, 1958, 99974

composition of lower organisms, a rapid increase in the quantity of flowering plants, a substitution of annual plants by perennials, and an exchange of plants of a weak surface-root system by plants having more vigorous roots. On the described territory, there is observable a series of transitions from the geological-alluvial and primitive takyr-solonchak formations (the accumulative complex) by way of mature takyrs, in conjunction with meadow soils of sinks and hollows (the sunken-suffusive complex), to the more fertile soils of the zonal sierozem order (incipient-erosive complex with residual takyr formation in the primitive sierozem soils). From the accumulative and incipient-erosive complex, there are noted an increasing significance of the mobilizations by plants of the fertility elements and a decreasing share of the biocalogea elements (Na, Cl, excess of S). In the same plant species, depending upon

Card 2/3

RODIN, L. Ye.

USSR/Soil Science - Soil Genesis and Geography.

J

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15232

Author : N.I. Bazilevich, L.Ye. Rodin

Inst : -

Title : The Role of Vegetation in the Formation and Evolution of the Takys of the Meshed-Messerianskaya Alluvial Delta Lowland.
(O roli restitel'nosti v formirovanii i evolyutsii takyrov Meshed-Messerianskoy allyuvial'no-del'tovoy ravniny).

Orig Pub : V sb.: Takyry Zap. Turkmenii i puti ikh s.kh. osvoyeniya, M., AN SSSR, 1956, 222-279

Abstract : The authors distinguish three zones within the borders of the old Meshed-Messerianskaya alluvial delta lowland:
1) the low zone with a preponderance of succulent semi-shrubs and annula saltworts on the wet salt marshes having ground moisture;

Card 1/4

USSR/Soil Science - Soil Genesis and Geography.

J.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15232

annually up to 90 kilograms per hectare of ash 9 - 14 kg. per hectare of N are added. The chief elements are N and Cl. The further drying up of the territories is accompanied by a narrowing in the sphere of small organic matter cycles to about 20 - 30 cm on the takyrs. The higher plants give way to algae and lichens. The stage of lichen covered takyrs is long and persistent. Subsequent overgrowth is composed of halophytic groups (annual saltworts, halophytic ephemera with the participation of shvednik [?]). The store of organic mass during this phase does not exceed 5-6 centners per hectare. The ash which entered was 70-80 kg. per hectare, the N 10-12 kg. per hectare. The elements Na, Cl, S predominated. The later stages of takyr overgrowth were characterized by an accumulation of organic matter of about 40 centners per hectare; the sinking amounted to 15-16 centners per hectare yearly;

Card 3/4

APPROVED FOR RELEASE: Tuesday, August 01, 2000 - CIA-RDP86-00513R001445

the ash coming into it was 175 kg. per hectare, the N 25 kg. per hectare. The role of N and Cl sunk down to 25-30% that of the total of ash matter. During the formation of meadow serozem saline soil the accumulation of the organic matter reached 120 centners per hectare. The amount of ash entering the soil was 400-450 kg. per hectare, that of N about 80 kg. per hectare. The elements K, Ca, Si were predominant, although the role of Na, Cl, and S was significant still. An evaluation of the various types of soil complexes is given from the point of view of melioration.

Card 4/4

Rodin, L. Ye.

J-2

USSR/Soil Science - Genesis and Geography of Soils.

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10458

Author : Bazilevich, N.I., Gollervakh, M.M., Rodin, L.Ye.,
Zemskiy, P.M.

Inst : -
Title : The Morphology of the Profile of the Takyr; the Takyr
Crust.

Orig Pub : Takyr Zap. Turkmenii i puti ikh s.-kh. osvoyeniya,
Moskva, Akad Nauk SSSR, 1956, 337-350

Abstract : The decisive factor in the formation of the takyr crust is
the combination of the photosynthetic process effected by
the algae and the continual fine silting going on in the
accumulating surface waters. The innumerable O₂ bubbles
given off by the algae during photosynthesis are coated
with Ca carbonates in a very fine suspension /oblekayutsye
Ca karbonatami tonchayshey vzves'yu/ and when cemented to-
gether form the characteristic porous shell of the takyr

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Abs Jour : Ref Zhur - Biol., No 3, 1958, 10458

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001445
Calculations have shown that up to 250 kilograms
of O₂ per hectare can be secreted on the algeous takyr
over a 24 hour period. Physical phenomena also have the
greatest significance in the formation of the crust hori-
zon of the takyr: swelling, drying up, shrinking, fissu-
ring. The interaction of these processes, combined with
the effect of biological processes on the soil base /poro-
da/, leads to the formation of the takyr profile.

Card 2/2

Rodin, L. Ye.

J-4

USSR/Soil Science - Cultivation, Amelioration, Erosion.

Abs Jour : Ref Zhur - Biol., No 2, 1958, 5813

Author : Kovda, V.A., Rodin, L.Ye., Bazilevich, N.I.

Inst : -

Title : The Reasons for the Natural Infertility of the Takry and the Principles of their Amelioration.

Orig Pub : Sb. Takry Zap. Turkmenii i puti ikh s, kh. osvoyeniya, Moskva, Akad Nauk SSSR, 1956, 711-717

Abstract : The authors consider the fundamental reasons for the natural lack of fertility of the takry to be: the weak biological activity of the soils, their insignificant content of organic and fundamental nutritive substances (humus is less than 1%; N -- 0.05-0.06%; P₂O₅ -- 0.1%), the low (10%) content of humic acids in the humus and their weak acidity [the text is confused here], general salinity of the soils, their high alkalinity (up to 0.2% HCO₃; 0.04% CO₃; pH 9-10), the increased content of exchange Na in the

Card 1/2

ANDRIANOV, B.V.; BAZILEVICH, N.I.; RODIN, L.Ye.

Historical note on the ancient irrigation of Khorezm. Izv. Vses.
geog. ob-va 89 no.6:516-535 N-D '57. (MIRA 10:12)
(Uzbekistan--Irrigation)

RODIN, L.Ye., Doc Bio Sci —(diss) " Dynamics of desert vegetation.
(On the example of Western Turkmenia)." Len, 1958. 61 pp (Acad
Sci USSR. Botanical Inst im V.L.Komarov). 150 copies. —List of
author's works , pp 60-61 (15 titles) (KL, 20-58, 95)

RODIN, L. YE.

IVANOV, Vseolod Vecheslavovich; PAVLOVSKIY, Ye.N., akademik, glavnyy red.;
RODIN, L.Ye., otv.red.; GOLOVNIN, M.I., red. izd-va; ZENDEL', R.Ye.,
tekh.red.

[Steppes of western Kazakhstan and the dynamics of their plant
cover] Stepi Zapadnogo Kazakhstan v sviazi s dinamikoi ikh
pokrova. Moskva, Izd-vo AN SSSR. 1958. 288p. (Geograficheskoe
obshchestvo SSSR. Zapiski, Novaya seriia, vol.17) (MIRA 11:12)
(Kazakhstan--Steppe flora)

RODIN, L.Ye.

GELLER, S.Yu.; ZIMINA, R.P.; KEMMERIKH, A.O.; KUNIN, V.N.; KUVSHINOVA, K.V.;
MURZAYEV, E.M., doktor geograf.nauk; RYAZANTSEV, S.N.; FORMOZOV,
A.N.; FREYKIN, Z.G.; CHUBUKOV, L.A.; ZABIROV, R.D.; KOROVIN, Ye.P.;
ROZANOV, A.N.; RODIN, L.Ye.; RUBTSOV, N.I.; SPYGINA, L.I., red.
izd-va; POLENOVA, T.P., tekhn.red.

[Central Asia; its physical geography] Sredniaya Azia; fiziko-
geograficheskaya kharakteristika. Moskva, 1958. 647 p. (MIRA 11:6)

1. Akademiya nauk SSSR. Institut geografii.
 2. Institut geografii Akademii nauk SSSR (for Geller, Zimina, Kemmerikh, Kunin, Kuvshinova, Murzayev, Ryazantsev, Formozov, Freykin Chubukov).
 3. Akademiya nauk Kirgizskoy SSR (for Zabirotov).
 4. Akademiya nauk Uzbekskoy SSR (for Korovin).
 5. Pochvennyy institut AN SSSR (for Rozanov).
 6. Botanicheskiy institut AN SSSR (for Rodin).
 7. Akademiya nauk Kazakhskoy SSR (for Rubtsov)
- (Soviet Central Asia--Physical geography)

VAVILOV, Nikolay Ivanovich, akademik [deceased]; SUKACHEV, V.N., akademik, glavnyy red.; BARANOV, P.A., red.; BARULINA-VAVILOVA, Ye.I. [deceased]; red.; BAKHTEYEV, F.Kh., red.; ZHUKOVSKIY, P.M., red.; IPAT'YEV, A.N., red.; RODIN, L.Ye., otv.red.toma; YAKOVLEVA, V.M., red.izd-va; BLEYKH, E.Yu., tekhn.red.

[Selected works in five volumes] Izbrannye trudy v plati tomakh. Moskva, Izd-vo Akad.nauk SSSR. Vol.1.[Agricultural Afghanistan] 1959. 415 p. (MIRA 12:8)

1. Chlen-korrespondent AN SSSR (for Baranov). 2. Deyatvitel'nyy chlen Vsesoyuznoy akademii sel'skokhoz.nauk imeni V.I.Lenina (for Zhukovskiy).
(Afghanistan--Agriculture)

RODIN, Leonid Yefimovich; LAVRENKO, Ye.M., otv. red.; YAKOVLEVA, V.M.,
red. izd-va; SOROKINA, V.A., tekhn. red.

[Dynamics of desert flora; based on data of western Turkmenia]
Dinamika rastitel'nosti pustyn'; na primere zapadnoi Turkmenii.
Moskva, Izd-vo Akad. nauk SSSR, 1961. 227 p. (MIRA 14:5)
(Turkestan--Desert flora)

KOSTRITS, I.B.; RODIN, L.Ye., otv. red.

[Geographical Society of the U.S.S.R.; manual] Geograficheskoe
obshchestvo SSSR. Spravochnik. Leningrad, 1962. 146 p.
1. Geograficheskoye obshchestvo SSSR. (MIRA 16:9)
(Geographical societies--Handbooks, manuals, etc.)

RODIN, Leonid Yefimovich; MITROKHINA, S., red.; KUVYRKOVA, L., tekhn.
red.

[In the land of deep wells] V strane glubokikh kolodtsev. Moskva,
Molodaia gvardiia, 1962. 270 p. (MIRA 16:1)
(Syria--Description and travel)

DZHALALBEKOVA, L.A.; VERZILIN, I.M.; prof., red.; ZUBKOV, A.I., red.;
KALESNIK, S.V., prof., red.; NEVSKIY, S.V., red.; OBRUCHEV, S.V.,
prof., red.; RODIN, L.Ye., doktor biol.nauk, red.; USPENSKIY,
L.V., pis., red.; SHCHERBAKOV, D.I., akademik, red.; GRODENSKIY,
G.P., otv. red.; LEONT'YEVA, L.B., tekhn. red.; TRUSOVA, P.L.,
tekhn. red.

[The globe; geographical yearbook for children] Globus; geogra-
ficheskiy ezhegodnik dlia detei. Detgiz, Leningrad, 1962. 428 p.
4 maps. (MIRA 16:5)

1. Chlen-korrespondent Akademii pedagogicheskikh nauk (for
Verzilin). 2. Chlen-korrespondent Akademii nauk SSSR (for Kalesnik,
Obruchev).

(Geography--Yearbooks)

VAVILOV, Nikolay Ivanovich, akademik; SUKACHEV, V.N., akademik, glav. red.; BARANOV, P.A., zam. glav. red. [deceased]; ZHUKOVSKIY, P.M., zam. glav. red.; BARULINA-VAVILOVA, Ye.I., red. [deceased]; BAKHTEYEV, F.Kh., otv. red. toma; SINSKAYA, Ye.N., otv. red. toma; IPAT'YEV, A.N., red.; ~~RODIN, L.Ye., red.~~; YAKOVLEVA, V.M., red. izd-va; GALIGANOVA, L.M., tekhn. red.

[Selected works in five volumes] Izbrannye trudy v p'ati tomakh. Moskva, Izd-vo Akad. nauk SSSR. Vol.3. [Problems of the geography, phylogeny, and breeding of wheat and rye. Plant resources and problems of the classification of cultivated plants] Problemy geografii, filogenii i selektsii pshenitsy i rzhi. Rastitel'nye resursy i voprosy sistematiki kul'turnykh rastenii. 1962. 531 p. (MIRA 15:7)

1. Chlen-korrespondent Akademii nauk SSSR (for Baranov).
2. Deystvitel'nyy chlen Vsesoyuznoy akademii sel'sko-khozyaystvennykh nauk imeni V.I.Lenina (for Zhukovskiy).
(Wheat) (Rye)

RODIN, Leonid Yefimovich; LAVRENKO, Ye.M., otv. red.; YAKOVLEVA,
V.M., red.izd-va; KONDRAT'YEVA, M.N., tekhn. red.

[Vegetation of the deserts of Western Turkmenia] Rastitel'-
nost' pustyn' Zapadnoi Turkmenii. Moskva, Izd-vo AN SSSR,
1963. 309 p. (MIRA 16:10)
(Turkmenistan--Desert flora)

LAVRENKO, Ye.M.; RODIN, L.Ye.

In memory of P.A. Baranov, 1892-1962. *Izv. Vses. geog. ob-va* 95
no. 1:98-100 Ja-F '63. (MIRA 16:4)
(Baranov, Pavel Aleksandrovich, 1892-1962)

VORONOV, Ye.Ye.; RODIN, L.Ye., doktor biol. nauk, otv. red.

[Brief report on the Society's work in 1960] Kratkiy otchet o deiatel'nosti Obshchestva za 1960 god. Leningrad, 1963. 39 p. (MIRA 18:2)

1. Geograficheskoye obshchestvo SSSR. 2. Glavnyy uchenyy sekretar' Geograficheskogo obshchestva SSSR (for Rodin).
3. Uchenyy sekretar' Geograficheskogo obshchestva SSSR (for Voronov).

REMEZOV, N.P. [deceased]; RODIN, L.Ye.; BAZILEVICH, N.I.; Primalni
uchastiye: ALEKSANDROVA, V.D.; BORISOVA, I.V.; BYKOVA, L.N.;
ZONNA, S.V.; KARPOVA, V.G.; MINA, V.N.; NECHAYEVA, N.T.;
PONYATOVSKAYA, V.M.; REMEZOVA, G.L.; SAMOYLOVA, Ye.M.;
SMIRNOVA, K.M.; SUKHOVERKO, R.V.

Methodological instructions for studying the biological
cycle of ash substances and nitrogen of terrestrial plant
communities in the main natural zones of the temperate
zone. Bot. zhur. 48 no.6:869-877 Je '63. (MIRA 17:1)

1. Botanicheskiy institut imeni V.L. Komarova AN SSSR, Lenin-
grad i Pochvennyy institut imeni V.V. Dokuchayeva Ministerstva
sel'skogo khozyaystva SSSR, Moskva.

BAZILEVICH, N.I.; RODIN, L.Ye.

Biological cycle of nitrogen and ash elements in the plant communities of tropical and subtropical zones. Bot. zhur. 49 no.2:185-209 F '64. (MIRA 17:6)

1. Pochvennyy institut imeni V.V. Dokuchayeva, Moskva i Botanicheskiy institut imeni V.L. Komarova AN SSSR, Lenin-grad.

ROBIN, L. Ye.; BAZILEVICH, N. I.

"Dynamics of the organic matter in the chief types of vegetational cover."

report submitted to 10th Intl Botanical Cong, Edinburgh, 3-12 Aug 64.

AS USSR, Leningrad.

RODIN, L.Ye.

Pastures and geobotanical zoning of the Syrian Arab Republic.
Trudy Bot. inst. Ser. 3 no.16:253-300 '64. (MIRA 17:9)

VINOGRADOV, B.V.; RODIN, L.Ye.

Landscapes of the Syrian desert. Trudy Bot. inst. Ser. 3
no.16:301-312 '64. (MIRA 17:9)

DZHALALBEKOVA, L.A., prof.; VERZILIN, N.M., prof., red.;
ZUBKOV, A.I., red.; KALESNIK, S.V., prof., red.;
KISELEV, Yu.N., red.; NEVSKIY, V.V., red.; OBRUCHEV,
S.V., prof., red.; RODIN, L.Ye., doktor biol. nauk,
red.; USPENSKIY, L.V., red.; SHCHERBAKOV, D.I.,
akademik, red.

[The globe, a Geographical yearbook for children]
Globus. [Geograficheskii ezhegodnik dlia detei.] Le-
ningrad. Detskaia literatura, 1964. 333 p. (MIRA 18:1)

1. Chlen-korrespondent Akademii pedagogicheskikh nauk
(for Verzilin). 2. Chlen-korrespondent AN SSSR (for
Kiselev, Rodin). 3. Prezident Vsesoyuznogo Geograficheskogo
obshchestva (for Kiselev).

BAZIL'EVICH, N. I.; RODIN, L. Ye.

Cycle of ash elements and nitrogen in the main types of vegetation
in the Northern Hemisphere of the Old World. Dokl. AN SSSR 156
no. 1:78-81 My '64. (MIRA 17:5)

1. Botanicheskiy institut im. V. L. Komarova AN SSSR.
Predstavleno akademikom V. N. Sukachevym.

RODIN, L.Ye.; BAZILEVICH, N.I.

Biological productivity of the main types of vegetation in
the northern hemisphere of the Old World. Dokl. AN SSSR
157 no.1:215-218 J1 '64 (MIRA 17:8)

1. Botanicheskiy institut im. V.L. Komarova AN SSSR. Predstav-
leno akademikom V.N. Sukachevym.

RODIN, Leonid Yefimovich; BAZILEVICH, Natal'ya Ivanovna; LAVRENKO,
Ye.M., otv. red.

[Dynamics of the organic matter and the biological turn-
over of ash elements and nitrogen in the main types of
world vegetation] Dinamika organicheskogo veshchestva i
biologicheskii krugovorot zol'nykh elementov i azota v
osnovnykh tipakh rastitel'nosti zemnogo shara. Moskva,
Nauka, 1965. 252 p. (MIRA 18:8)

1. Chlen-korrespondent AN SSSR (for Lavrenko).

DZHALALBEKOVA, L.A.; VERZILIN, N.M., prof., red.; ZUBKOV, A.I., kand.
geogr. nauk, red.; KALESNIK, S.V., red.; KISELEV, Yu.N.,
red.; NEVSKIY, V.V., kand. geogr. nauk, red.; RODIN, L.Ye.,
prof., red.; USPENSKIY, L.V., doktor biol. nauk, red.;
SHCHERBAKOV, D.I., akademik, red.; OBRUCHEV, S.V., red. [deceased]

[The Globe, 1965; geographical yearbook for children] Globus 1965;
geograficheskii ezhegodnik dlia detei. Leningrad, Detskaia li-
teratura, 1965. 333 p. (MIRA 19:1)

1. Chlen-korrespondent Akademii pedagogicheskikh nauk (for
Verzilin). 2. Chlen-korrespondent AN SSSR (for Kalesnik,
Obruchev).

RODIN, L.Ye.

Shifting sands in the oases of the United Arab Republic. Vest.
AN SSSR 35 no.2:83-84 F '65. (MIRA 18:3)

L 22034-66

ACC NR: AP6001423 (A,N) SOURCE CODE: UR/0319/65/050/009/1268/1275

AUTHOR: Sochava, V. B.; Lukicheva, A. N.; Zubkov, A. I.; Kerezhgin, 20
A. A.; Rodin, L. Ye.; Semenova-Tyan-Shanskaya, A. K.

ORG: Botanical Institute im V. L. Komarova, Academy of Sciences, SSSR,
Leningrad (Botanicheskiy institut Akademii nauk SSSR)
Geography Institute of the Siberian Division of the Academy of Sciences,
SSSR, Irkutsk (Institut geografii Sibirskogo otdeleniya Akademii nauk
SSSR)

TITLE: Main developmental periods of continental vegetation cartography

SOURCE: Botanicheskiy zhurnal, v. 50, no. 9, 1965, 1268-1275

TOPIC TAGS: botany, mapping, physical geography, cartography

ABSTRACT: In 1964 a Physicogeographical Atlas of the World prepared with the assistance of various scientific institutes was published by the Main Board of Geodesy and Cartography. This major work includes a large number of new detailed vegetation maps of the world drawn by a group of 6 Soviet geobotanists, the authors of the article. The literature sources for these new maps are described. The authors point out that the data on which the small scale vegetation maps are based are

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UDC: 528.9:339.44:551.4

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not equally detailed for all countries and natural regions. The study of the earth's vegetation cover is divided into 4 periods. The first period is largely based on Schroter's works and ends in 1910, the second period covers the years up to the Second World War, the third period covers the 1940's and 1950's. Vegetation cartography now is in its fourth period of development marked by more detailed small scale geobotanic maps of the continents composed with international cooperation. Geobotanical survey maps are gradually assuming greater importance in solving various economic and social problems. Orig. art. has: none.

SUB CODE: 06, 08/ SUBM DATE: 30Mar65/ ORIG REF: 020/ OTH REF: 106

Card 2/2 WJS

RODIN, M., inzhener.

Mechanized storing of clay in a tile factory. Stroi. mat. 3 no.5:23-24
My '57. (MLA 10:6)

(Automatic control)

(Files)

PROCESSES AND PROPERTIES INDEX

RCDIN, M. I.
BC

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Hall effect in plasma. M. I. RODIN and G. V. SPIVAK (Compt. rend. Acad. Sci. U.R.S.S., 1939, 20, 247-249).—The change in electron concn. along the radius of a cylindrical discharge tube has been studied for A, Ne, and Hg vapour, and the cross p.d. of the Hall effect has been determined. A crossed magnetic field deviates the entire discharge towards the wall of the tube according to Ampere's law, although a weak field has only a slight effect on the heavy Hg ions. The Hall effect decreases with increasing current. C. R. H.

Lab. Electronic & Ionic Processes, Phys. Inst,
Moscow State U.

A 38-35A METALLURGICAL LITERATURE CLASSIFICATION

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