

BARCANFALVI, F

Distr: H2O

The vapor-liquid equilibrium of the germanium chloride-hydrochloric acid system. I. Effects of the concentration of hydrochloric acid on the volatility of germanium chloride. Andor Almásy and Ferenc Barcánfalvi (Német-  
 kémiai Kutató Intézet, Veszprém, Hung.). *Német-  
 kémiai Kutató Intézet Közleményei* 1, 293-301 (1959).  
 The effects of HCl compn. on the volatility of GeCl<sub>4</sub> was studied in the temp. interval 83-109.5° by detg. the value of *K*, defined as the ratio of the GeCl<sub>4</sub> mol. % in the vapor and liquid, resp. At <10% concns. the GeCl<sub>4</sub> content in the vapor was infinitesimal, in the 10-17% HCl concn. range *K* was <1, at 17% *K* ~ 1, i.e., the GeCl<sub>4</sub> concn. in the vapor and in the liquid was identical, in the 17-20.2% range the GeCl<sub>4</sub> concn. in the vapor increased appreciably, and at 20.2% (by wt.) the azeotropic concn. was reached. Above 20.2% the GeCl<sub>4</sub> concn. in the liquid was negligible. From the foregoing it follows that a distn. column is preferable to a simple distn. app. for enriching GeCl<sub>4</sub>. The addn. of CaCl<sub>2</sub> increased the GeCl<sub>4</sub> concn. in the vapor phase at all temps. and concns.

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G. J. Ernyei

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30667  
S/137/61/000/010/021/056  
A006/A101

AUTHORS: Almásy Andor, Baróánfalvi Ferenc, Kováts Gábor

TITLE: A method of concentrating a hydrochloric-acid germanium solution and extracting and (or) refining germanium

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 10, 1961, 45, abstract 106352 P (Hungarian patent no. 146235, 15.02.60)

TEXT: The solution is supplied at 103-109°C into a continuously operating rectification column which separates sufficiently well the azeotropic mixture of HCl with water. Rectification is conducted until Ge is accumulated on the individual plates in amounts disturbing the normal operational conditions of the column due to a reduced overflow section. The Ge itself is then already considerably refined from As and Si impurities which are removed with the residual products. Subsequently, rectification is continued with the aid of HCl whose concentration exceeds the azeotropic one. As a result  $GeCl_4$  or  $Ge(OH)_x$  saturation is obtained. If the concentration of the initial HCl solution exceeds the azeo-

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A method of concentrating ...

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tropic one, then water is top supplied to the column. The method may also serve to the independent refining of Ge from contaminating As and (or) Si.

G. Sekey

[Abstracter's note: Complete translation]

X

Card 2/2

TOPCIU, Vl.; BARCARU, Elena; LEVIN, S.

Studies on the bacteriophagic and bacterial infections in the fermenting acetobutylic industry. Studii chim Timisoara 9 no.1/2:121-139 Ja-Je '62.

1. Fabrica de butanol-acetona "Solventul" si Institutul de Igiena, Timisoara.

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RUSSU, C.; CRUCEANU, I.; MONGIU, D.; BARCARU, V.

Contributions to the determination of chloramphenicol in  
pharmaceutical products. Pt.3. Rev chimie Min petr 15 no.2:  
111 F '64.

1. Institutul pentru controlul de stat al medicamentului  
si cercetari farmaceutice, Bucuresti.

RUSSU, C.; CRUCEANU, I.; BARGARU, Valeria

Contributions to the determination of chloramphenicol in  
pharmaceutical preparations. Pt. 2. Rev chimie Min petr  
15 no. 1: 45-46 Ja '64.

1. Institutul pentru controlul de stat al medicamentelor  
si cercetari farmaceutice.

1. BARCH, I. Z., Eng.
2. USSR (600)
4. Water Pipes
7. Rapid method building an intake water main. Biul. stroi. tekhn. 9 no. 22, 1952.

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

BARCH, I.Z., inzhener.

Methods for increasing labor productivity in construction.

Stroi. prom. 34 no.8:6-13 Ag '56.

(MLRA 9:10)

1. Yushnyy nauchno-issledovatel'skiy institut Minmetallurgkhimstroya.  
(Labor productivity) (Construction industry)



VOLOVEL'SKIY, A.L., kandidat tekhnicheskikh nauk; KUTOVOY, E.N., inzhener;  
BARCH, I.Z., inzhener.

Using gantry cranes in the industrial building. Stroi.prom. 34  
no.11:10-15 N '56. (MLRA 9:12)  
(Cranes, derricks, etc.)

BARCH, I.Z.

100-7-3/11

AUTHORS: Barch, I.Z., Istomin, G.I. and Kutovoy, E.N. Engineers.

TITLE: Expedient Assembly and Dismantling of Building Tower  
Cranes (Skorostnoy montazh i demontazh stroitel'nykh  
bashennykh kranov)

PERIODICAL: Mekhanizatsiya Stroitel'stva, 1957, Vol.14, No.7,  
pp. 10 - 14 (USSR).

ABSTRACT: The YuzhVII Research Institute for Standards, which is attached to the Trusts of Zaporozhstroy, Krivbaserudstroy, Magnitostroy, etc. recently investigated the assembly and dismantling operations of the crane KCM-5. Certain assembly operations were found to require 79.6 man-hours, i.e. 49.2% of the total assembly time. The corresponding dismantling operations take 43.8 man-hours, i.e. 43% of the total dismantling time. Engineer G.I. Istomin designed an assembly mast (viz. Fig.1) which reduces considerably these periods. Specifications of the assembly mast are given. The mast has a winch which is incorporated in the former (built into the mast). The hoisting mechanism is shown in Fig.2. The HT-51 control mechanism is used. These assembly masts have been used by the building organisations in Khar'kov and the Voroshilov Trust for the assembly and dismantling of the cranes KCM-5, CK-1 and T-128. Fig. 3 shows the assembly, dismantling and transportation

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100-7-3/11

Expedient Assembly and Dismantling of Building Tower Cranes

of the 5KCM-5 crane whilst using the above described mast. A cable is fixed to the lever of the hoisting arm of the crane. This is done to prevent any movement of the winch as the electromagnetic brake KMT-101 cannot operate when the winch is in an inclined position. The lowered crane is loaded on the ЗМЛ-150 lorry which has a trailer attached to it. Fig. 4 shows the assembly of the crane. Comparative data for the periods of assembly and dismantling by the old and by the new method are given in a table on p.14. This method of assembly can also be used for the С6К-1 and Т-128 cranes. It has been shown that the assembly mast can be used for the following cranes: 5KCM-5, С6К-1, Т-128, Т-178, 5К-2, 5KCM-2 and Т-189. When cranes of up to 5 tons capacity are assembled or dismantled, a 4-cable pulley instead of a 2-cable pulley should be used. Light cranes (capacity 1-2 tons) can be assembled by using the winch attached to the crane. It was shown that the mast can be constructed from lighter sections when used in conjunction with the 5KCM-5 and С6К-1 cranes. There are 4 figures and 1 table.

AVAILABLE: Library of Congress  
Card 2/2 1. Cranes-Handling 2. Cranes-Operation 3. Construction-Equipment

BARCH, I., inzhener; PONOMARENKO, N., inzhener.

Assembling the operation area of a casting yard. Stroitel' no.5:2-4  
My '57. (MIRA 10:6)  
(Reinforced concrete construction) (Blast furnaces)

SHIRIN, P.K. (Moskva); POVERMNNYY, L.D. (Moskva); KAMENEV, M.O. (Moskva);  
BARCH, I.Z., inzh. (Khar'kov); PUSHKAREV, V.V. (Novosibirsk);  
~~BAKABAYEV, A.I.~~ (Khar'kov); DZHILOYEV, I.M. (Khar'kov); RUBINSKIY,  
M.Z. (Khar'kov); RYABCHICH, V.F. (Magnitogorsk); SOLOVAREV, K.N.,  
(Kazan'); KHODOROVSKAYA, O.R. (Khar'kov); NEFEDOV, Ye.M. (Leningrad).

Discussion on plans and regulations for the organization and the  
technology of building. Stroi. prom. 35 no.12:5-20 D '57.

(Architecture--Designs and plans)  
(Construction industry)

(MIRA 11:1)

BARCELIZ

BARCH, I.Z., inzh.; GMRSHUNOVICH, M.Ya., inzh.

Increasing labor productivity in earthwork. Stroi. prom. 36 no.1:  
2-6 Ja '58. (MIRA 11:1)

(Earthwork)

BAROH, I., inzh.; KUTOVOY, E., inzh.

Standard apparatus used for erecting tower cranes. Stroitel'  
no.6:29 Je '58. (MIRA 11:7)  
(Cranes, derricks, etc.)

BARCH, I.Z., inzh.; DZHIOYEV, I.M., inzh.

Methods for evaluating efficiency of plans and the results of  
constructing industrial structures. Stroi.prom. 36 no.4:42-44 Ap  
'58. (Building--Estimates) (MIRA 11:4)



BARCH, I.Z., inzh.; DZHIOYEV, I.M., inzh.; PONOMARENKO, N.I., inzh.;  
RUBINSETEYN, M.Z., inzh.; GURVITS, A.I., inzh., nauchnyy red.;  
VLASOV, P.Ye., red.izd-va; SOLNTSEVA, L.M., tekhn.red.

[Using sectional reinforced concrete construction in building  
blast furnace plants] Primenenie sbornykh zhelezobetonnykh  
konstruktsii na stroitel'stve ob'ektov domennykh tsekhov.  
Moskva, Gos.izd-vo lit-ry po stroit., arkhitekt. i stroit.mate-  
rialam, 1959. 63 p. (MIRA 12:8)  
(Metallurgical plants--Design and construction)  
(Precast concrete construction)

BARCH, I.Z.

Draft for new norms for the time spent in the construction of blast furnaces. Prom. stroi. 38 no.10:41-46 '60. (MIRA 13:9)

1. Yuzhnyy nauchno-issledovatel'skiy institut Akademii stroitel'stva i arkhitektury USSR.  
(Blast furnaces)

BARCH, I.Z., inzh.; KUTOV, E.N., inzh. Prinsipialni uchastiye: KADOCHNIKOVA, G.N., mladshiy nauchnyy sotr.; SAPOZHNIKOVA, G.F., starshiy laborant; BLOKHA, L.A., starshiy laborant; KONYUSHEVSKIY, Ye.I., red.; DONSKOY, Ya. Ye., red.; SHEVCHENKO, M.G., tekhn. red.

[Construction cranes] Stroitel'nye krany; spravochnoe posobie. Pod red. E.I. Konyushevskogo. Khar'kov, Khar'kovskoe knizhnoe izd-vo, 1961. 409 p. (MIRA 15:1)

1. Kharkov. Yuzhnyy nauchno-issledovatel'skiy institut promyshlennogo stroitel'stva. 2. Chlen-korrespondent Akademii stroitel'stva i arkhitektury USSR (for Konyushevskiy). (Cranes, derricks, etc.)

САРЧІІ І.Т.Л.

BLACH, I.G.; BLAGOV, V.L.; ZHEGOLEV, B.A.; DASHOVSKIY, B.I.;  
B.A.; AGREST, D.

Using combined assembly blocks in constructing blast furnaces.  
Prom. stroi. 39 no. 2:5-9 '61. (NYM 11:9)

1. Yuzhnyy mashino-issledovatel'skiy institut khimicheskoy stroyitel'stva i arkhitektury USSR (for Blagov).
2. Donbasspromstroystroyeniye (for Zhegolev).
3. Gosudarstvennyy proyektnyy institut khimicheskoy stroyitel'stva i arkhitektury (for Dashovskiy).
4. Donbasspromstroystroyeniye (for Agrest).
5. Voroshilovstroystroyeniye (for Agrest).  
(Blast furnaces) (Precast concrete construction)

BARCH, I.Z., nauchnyy sotrudnik; RUBINSHTEYN, M.Z., nauchnyy sotrudnik;  
PONOMARENKO, N.I., nauchnyy sotrudnik

Method of developing progressive standards for the time re-  
quired to build production units for ferrous metallurgy.

Trudy MIEI no.15:372-378 '61. (MIRA 14:12)

1. Yuzhnyy nauchno-issledovatel'skiy institut po stroitel'stvu  
Akademii stroitel'stva i arkhitektury USSR.  
(Machinery--Erecting work)

BARCH, Vilmos, dr., a muszaki tudományok kandidátusa

Quality of floors from the point of view of heat engineering.  
Épületgépészet 10 no.6:216-220 D '61.

1. Építéstudományi Intézet.

(Floors) (Heat engineering)

RASHCHEPKIN, K.Ye.; BARCHAN, N.I.; TIMERBAYEV, N.Sh.

Mechanized removal of protective coatings from pipelines. Trudy  
NII Transneft' no.1:295-303 '61. (MIRA 16:5)  
(Pipelines) (Protective coatings)

RASHCHEPKIN, K.Ye.; BARCHAN, N.I.

Mechanized cleaning of pipelines in service during major repairs.  
Nef't.khoz. 39 no.1:54-58 1 Ja '61. (MIRA 17:3)



RASHCHEPKIN, K.Ye.; BARCHAN, N.I.

Analyzing the degree of the mechanization of labor consuming  
processes in the major repair of pipelines. Trudy NIITransneft'  
no.1:304-314 '61. (MIRA 16:5)  
(Pipelines--Maintenance and repair)

ACC NR: AP7007595

SOURCE CODE: UR/0104/66/000/00E/0095/0096

26

AUTHOR: Chuprakov, N. M.; Dorovoy, A. A.; Postnikov, N. A.; Kalychev, A. A.;  
Magidson, E. M.; Sin'chugov, F. I.; Zeylidzon, Ye. D.; Baraninov, G. S.;  
Yermolenko, V. M.; Vasil'yev, A. A.; Sokolov, N. I.; Ul'yanov, A. S.;  
Fedoseyev, A. M.; Sarkisov, M. A.; Rokotyay, S. S.; Azari'yev, D. I.; Arson,  
G. S.; Dabinskiy, L. A.; Zhulin, I. V.; Kolpakova, A. I.; Antoshin, N. N.  
Krikunchik, A. B.; Kuchkin, M. D.; Preobrazhenskily, N. Ye.; Rout, M. A.;  
Kheyfits, M. E.; Sharov, A. N.; Yakub, Yu. A.; Gorbunov, N. I.; Shurmukhin,  
V. A.; Beschinskiy, A. A.

ORG: none

TITLE: Boris Sergeyevich Uspenskiy (on his 60th birthday)

SOURCE: Elektricheskiye stantsii, no. 8, 1966, 95-96

TOPIC TAGS: hydroelectric power plant, electric engineering personnel.

SUB CODE: 10

ABSTRACT: B. S. Uspenskiy was born in June 1906. He graduated from  
the State Electric Machine Building Institute in 1928 as an electric  
installation engineer. He worked in the State Electro-Technical Trust  
for four years, then in the All-Union ElectroTechnical Union, where he  
planned power construction units. Plans which he made up at that time  
for the electrical portion of electrical stations and sub-stations are  
still being used. He was involved in planning and installation of the  
electrical portion of hydro-electric power stations and powerful pumping  
stations in the Moscow-Volga Canal. During the war, he was in charge in  
installation of the Krasnogorskaya Heat and Electric Power Station, the  
planning of the Urals Hydro-Electric Power Station and other projects. He

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AUTHOR: Barchaninov, N. N.

S/169/63/000/002/117/127  
D263/D307

TITLE: On the application of radiometry to preliminary assessment of petroleum-bearing structures

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 2, 1963, 34, abstract 2D204 (Geol. nefiti i gaza, 1962, no. 9, 33-36)

TEXT: The reduction of the intensity of natural  $\gamma$ -radiation in boreholes made into petroleum stratum was compared with the intensity in boreholes without petroleum, using gamma logging diagrams. The degree of reduction of the intensity decreases with decreasing depth. The contents of Li, Ba, Sc, Zn, Cu, Mo and Ni are higher in rock specimens collected from boreholes distributed beyond the petroleum contours than when the boreholes contain petroleum. From the logging data of seismic exploration boreholes, obtained with the РП-1к (RP-1k) radiometer, it was possible to mark out sections of decreased  $\gamma$ -activity, the outline of which corresponded to the structural elements of the basement. A petroleum deposit was dis-

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On the application of ...

S/169/63/000/002/117/127  
D263/D307

covered by boreholes on one of these sections. An activity minimum was also discovered in one case in the region of a depression, and a maximum in one structure. Drillings were made in the revealed promising areas of the structure. [Abstracter's note: Complete translation.]

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BARCHANOWSKA, Z.

"Wgoscinie na ziemi radzieckiej; wycieczka chlopow polskich do Aqiazku Radzieckiego w 1952 r. Warszawa, Ksiazka i Wiedza, 1953. 113p. (Visit to the Soviet Union; an excursion of Polish peasants to the Soviet Union in 1952)

SO: East European Accessions List, Vol 3, No 8, Aug 1954

/ X-Ray determination of unit cell of  $K_2Co(CN)_6$  crystals. V. Barbatov and H. Shdanov (*Acta Physicochim. U.R.S.S.*, 1942, 16, 43-49).— $K_2Co(CN)_6$  is pseudorhombic, with the apparent cell dimensions  $a$  13.6,  $b$  10.4,  $c$  8.4 Å.;  $V$  1202 cu. Å.;  $Z$  4 mols. per unit cell; space-group  $D_{2h}^{11}$ . The true cell contains 2 mols. and has  $a$  7.1,  $b$  10.4,  $c$  8.4 Å.,  $\beta$  107° 20';  $V$  600 cu. Å.; space-group  $C_{2h}^2$ . The unit cells given by Gottfried *et al.* for compounds of the type  $K_2M^{III}(CN)_6$  (cf. A., 1931, 27; 1933, 215) are incorrect.  
A. J. E. W.

CONFIDENTIAL

**X-Ray examination of the structure of  $K_2Co(CN)_6$ .** V. Barchakov  
(*U.S.S.R. Physicochem. J. R.S.S.*, 1942, **10**, 123-124; of preceding abstract).—The Co and K parameters are deduced by consideration of the pseudorhombic symmetry of the crystal, and by one-dimensional Patterson analyses based on visually estimated intensities. The C.N. positions are found by examining the configuration of the  $Co(CN)_6$  group and determining its orientation from interstitial and space-filling conditions. K<sup>+</sup> ions are of two types, surrounded by 6 CN<sup>-</sup> arranged octahedrally or in a trigonal prismatic configuration, respectively; each CN<sup>-</sup> adjoins 3 K<sup>+</sup> and 1 Co<sup>2+</sup>. The Mill atom positions in structures of compounds of the type  $K_2M(CN)_6$ , deduced by Gottfried *et al.* are incorrect. A. J. E. W.

METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

*BC*

*11*

**X-Ray determination of the elementary cell of potassium cyanide crystal. V. I. Barabarov and G. S. Sazanov (*J. Phys. Chem. Russ.*, 1944, 18, 627-644). The cell contains 2 mols. of  $K_2Co(CN)_6$  and has  $a$  7.1,  $b$  10.4,  $c$  8.4 A.,  $\beta = 107^\circ 20'$ . The direction of  $a$  differs by  $17^\circ 20'$  from that assumed heretofore.**

J. J. B.

METALLURGICAL LITERATURE CLASSIFICATION

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BARCHENKO, I.P.

"Food Products as Factors in the Transmission of Basic Geohelminthiases."  
Dr Med Sci, Kiev Medical Inst, Kiev, 1954. (RZhBiol, No 4, Feb 55)

SO: Sum. No. 631, 26 Aug 55 - Survey of Scientific and Technical Dissertations  
Defended at USSR Higher Educational Institutions (14)

~~BARCENKO, I.P.~~ professor (Kiyev)

"Therapeutic diet" by V.A.El'berg. Reviewed by I.P.Barchenko.  
Vrach.delo no.6:665 Je '57. (MIRA 10:8)  
(DIET IN DISEASE) (EL'BERG, V.A.)

BARCHENKO, I.P.; KRYZHANOVSKAYA, Ye.S.

Effect of nutrition on lactating capacity of nursing mothers.  
Zhur.ob.biol. 20 no.2:40-44 Mr-Apr '59. (MIRA 12:5)

1. Iz kafedry gijeny pitaniya (zav. - prof. I.P.Barchenko)  
Kiyevskogo ordena Trudovogo Krasnogo Znameni meditsinskogo  
instituta imeni akademika A.A.Bogomol'tsa.

(DIETS, effects,

on lactation in nursing mothers (Rus))

(LACTATION,

eff. of diets in nursing mothers (Rus))

BARCHENKO, I.P.; KRYZHANOVSKAYA, Ye.S.; MALEVANNAYA, Ye.M.; SKOROPOSTIZHANAYA,  
A.S.; KOZLOVA, T.P.

Method for determining ammonium dinitroorthocresolate (DNOK) for  
a comparative sanitary and hygienic examination of plant products  
treated with it. Vop. pit. 19 no.2:72-75 Mr-Ap '60. (MIRA 14:7)

1. Iz kafedry gigiyeny pitaniya (zav. - prof. I.P.Barchenko) Kiyevskogo  
ordena Trudovogo Krasnogo Znameni meditsinskogo instituta imeni akademika  
A.A.Bogomol'tsa.

(GRESOL)

BRATUS', V.D., dots., red.; BARCHENKO, I.P., prof., zam. red.;  
VERZHNIKOVSKAYA, N.V., dots., red.; GROMASHEVSKIY, L.V.,  
prof., red.; SHAKHBAZYAN, G.Kh., prof., red.; BARATNIK,  
P.I., prof., red.; SHMAL', D.D., dots., red.; POZNANSKIY,  
S.S., dots., red.; KALNUZHNYI, D.N., red.; CHUCHUPAK, V.D.,  
tekh. red.

[Hygienic norms and the sanitation of the external environ-  
ment]Gigienicheskie normativy i ozdorovlenie vneshnei sredy:  
sbornik nauchnykh rabot. Kiev, Gosmedizdat USSR, 1961. 268 p.

(MIRA 15:11)

1. Kiev, Medychnyi instytut. 2. Deystvitel'nyy chlen Akademii  
meditsinskikh nauk SSSR (for Gromshevskiy). 3. Chlen-  
korrespondent Akademii meditsinskikh nauk SSSR (for Shakhbazyan).  
4. Direktor Kiyevskogo meditsinskogo instituta (for Bratus').  
5. Kafedra gigiyeny pitaniya Kiyevskogo meditsinskogo instituta  
im. A.A.Bogomol'tsa (for Barchenko). 6. Kafedra obshchey gigiyeny  
Kiyevskogo meditsinskogo instituta Kiyevskogo meditsinskogo in-  
stituta im. A.A.Bogomol'tsa (for Verzhnikovskaya, Shmal').

(PUBLIC HEALTH)

BARANNIK, P.I., red.; ~~BARCHENKO, I.P.~~, red.; GABOVICH, R.D., red.;  
KAGAN, S.S., red.; KALIOZHNYI, D.N., red.; KRIVOGLAZ, B.A.,  
red.; POZNANSKIY, S.S., red.; SUPONITSKIY, M.Ya., red.;  
TRAKHTENBERG, I.M., red.; SHAKHBAZIAN, G.Kh., red.; SHMAL',  
D.D., red.; OSETRV, V.I., red.; CHUCHUPAK, V.D., tekhn.red.

[Problems of general and specialized hygiene] Voprosy obshchei  
i chastnoi gigieny. Kiev, Gosmedizdat USSR, 1963. 308 p.  
(MIRA 16:10)

1. Ukraine. Ministerstvo zdravookhraneniia.  
(PUBLIC HEALTH)

BURSHTEYN, Aron Iosifovich, zasl. deyatel' nauki; BARCHENKO, I.P.,  
red.

[Methods for the examination of food products] Metody is-  
sledovaniia pishchevykh produktov. Kiev, Gosmedizdat USSR,  
1963. 642 p. (MIRA 17:5)



BARCHENKO, I.P., prof.; MALEVANNAYA, Ye.M.

Content of molybdenum in food products and its hygienic significance. Vrach. delo no.6:102-103 Ja '63. (MIRA 16:9)

1. Kafedra gigiyeny pitaniya (zav. - prof. I.P.Barchenko)  
Kiyevskogo meditsinskogo intituta.  
(FOOD—COMPOSITION) (MOLYBDENUM—PHYSIOLOGICAL EFFECT)

BARHENKO, I.P., prof.; MAKHINYA, G.A.

Pathogenesis of aging and problems of an appropriate diet. Vrach.  
delo no.3:107-110 Mr '64. (MIRA 17:4)

1. Kafedra gigiyeny pitaniya (zav. - prof. I.P.Barchenko)  
Kiyevskogo meditsinskogo instituta.

SHMAL', Dmitriy Dionisovich, dots.; BARCHENKO, I.P., red.

[Sanitary minimum for the workers of public eating places  
and the food product trade; in questions and answers] Sa-  
nitarnyi minimum dlia rabotnikov obshchestvennogo pitania  
i torgovli pishchevymi produktami; v voprosakh i otvetakh.  
6., perer. i dop. izd. Kiev, Zdorov'ia, 1965. 108 p.  
(MIRA 18:4)

LESHCHENKO, P.D., red.; BARCHENKO, I.P., red.; KOLOMEYTSEVA, M.G.,  
red.; KRYZHANOVSKAYA, Ye.S., red.; SHALYA, L.A., red.

[Rational nutrition] Ratsional'noe pitanie. Kiev, Zdorov'ia,  
1965. 219 p. (MIRA 18:9)

1. Ukrainskiy nauchno-issledovatel'skiy institut pitaniya.
2. Ukrainskiy nauchno-issledovatel'skiy institut pitaniya  
(for Ieshchenko, Kryzhanovskaya, Shalya).

BARCHENKO, Ivan Petrovich, prof.; CHISTYAKOVA, Aleksandra Matveyevna, dots.; VANKHANEN, Vil'yam Davidovich, kand. med. nauk; KRYZHANOVSKAYA, Yelena Stanislavovna, dots.; Primalni uchastiy: PETROVSKIY, K.S., prof.; ALEKSANDROVA, N., nauchn. sotr., prepodavatel'; BEDULEVICH, T., nauchn. sotr., prepodavatel'; TURUK-PCHELINA, Z., nauchn. sotr., prepodavatel'; SHARINA, Ye., nauchn. sotr., prepodavatel'; BURSHEYN, A.I., prof.; SHEVCHENKO, M.G.; STOLMAKOVA, A.I., ~~prof.~~

[Manual on the vocational training of students in nutritional hygiene] Rukovodstvo k proizvodstvennomu obucheniiu studentov po gigiyene pitaniya. 2. izd., ispr. i dop. Kiev, Zdorov'ia, 1965. 221 p. (MIRA 18:7)

1. Zaveduyushchiy kafedroy gigiyeny pitaniya I Moskovskogo meditsinskogo instituta im. I.M.Sechenova (for Petrovskiy).
2. Kafedra gigiyeny pitaniya I Moskovskogo meditsinskogo instituta im. I.M.Sechenova (for Aleksandrova, Bedulevich, Turuk-Pchelina, Sharina).
3. Zaveduyushchiy kafedroy gigiyeny pitaniya Odesskogo meditsinskogo instituta (for Burshteyn).
4. Glavnyy inspektor po gigiyene pitaniya Ministerstva zdravookhraneniya SSSR (for Shevchenko).

BARCHENKOV, S.A., inzhener-kapitan 1-go ranga

Phased antennas. Mor. sbor. 47 no.9:83-86 S '64.

(MIRA 18:7)

*BARCHENKO, L.I.*

USSR/General Problems of Pathology - Tumors.

S-4

Abs Jour : Referat Zhur - Biologiya, No 16, 1957, 71420

Author : *Barchenko, L.I.*

Inst :

Title : On the Problem of Origin of the Tumour Cell.

Orig Pub : Fiziol. Zh. 1955, 1, No 6, 101-106

Abstract : Malignisation of mesenchyma cultures of 9-10 day-old chicken embryo cultures, which were infected by "Raus" virus, were studied. The culture assumed all the characteristics of "Raus" sarcoma: growth with an intensive formation of thinned out areas, pleomorphism of the cellular structure, increase of fat in the cells, and the ability to produce tumors in chicken implants. Fibroblasts of the normal connective tissues changed into small, intensely colored macrophages and large ameboid cells with light, vacuolated protoplasm. There was no production of malignant cells from the "non-cellular live substance."

Card 1/1

*Inst. Physiology, Acad Sc. USSR, M.  
O.O. Bogomol'ba, Lab. Experimental Cytology*

BARCHENKO, L.I.

Pathways of infection with ascariasis in living quarters. Med.  
paraz. i paraz. bol.24 no.2:122-125 Ap-Je '55 (MLRA 8:10)

1. Iz kafedry biologii Kiyevskogo meditsinskogo instituta imeni  
A.A Bogomol'tsa (dir.instituta - dotsent I.P. Aleksyenko, zav.  
kafedroy-prof. K.Yu. Kostryukova)  
(ASCARIASIS, transmission,  
in living quarters)



BARCHENKO, L.I.

Stability and development periods of ascarid eggs in the climate  
of Kiev. Med.paras. i paraz.bol. 25 no.2:106-109 Ap-Je '56.

(MLRA 9:8)

1. Iz kafedry biologii Kiyevskogo meditsinskogo instituta imeni  
A.A.Bogomol'tsa (dir. instituta - dotsent I.P.Alekseyenko, zav.  
kafedroy - prof. K.Yu.Kostryukova)

(ASCARIS

eggs, vital capacity & develop. periods in Kiev climate  
in Russia)

(CLIMATE, eff.

on Ascaris egg vital capacity & develop. periods in  
Kiev in Russia)

BARCHENKO, L.I., kand. med. nauk; GORODETSKAYA, S.F. (Kiyev)

Study of the osmotic resistance of erythrocytes and of the number of reticulocytes in the blood at various ages. Vrach. delo no.4: 393-395 Ap '59. (MIRA 12:7)

1. Gruppya po izucheniya fiziologii i patologii stareniya (rukovoditel' - prof. Yu. A. Spasokukotskiy) Instituta fiziologii AN USSR.  
(ERYTHROCYTES) (HEMOPOIETIC SYSTEM)  
(AGE)

BARCHENKO, L.I.

Studying the effect of age on the regenerative capacity of tissues  
in explants. *Fiziol. zhur. [Ukr.]* 6 no.3:378-385 My-Je '60.

(MIRA 13:7)

1. Institut fiziologii im. A.A.Bogomol'tsa AN USSR, laboratoriya  
kompensirovannykh i zashchitnykh funktsiy.

(REGENERATION (BIOLOGY)) (AGE)

BARCHENKO, L.I.; GENIS, Ye.D. [Henis, IE.D.]

Studying the morphological composition of peripheral blood in elderly persons. Fiziol. zhur. [Ukr.] 6 no.6:801-808 N-D '60.

(MIRA 14:1)

1. Laboratory for the Study of the Action of Biologically Active Substances of the Institute of Physiology of the Ukrainian S.S.R. Academy of Sciences.

(AGING)

(HEMOPOIETIC SYSTEM)

SPASOKUKOTSKIY, Yu.A., prof.; BARHENKO, L.I., kand.med.nauk

Amount of prothrombin and quantity of thrombocytes in persons  
at various ages. Vrach.delo no.7:51-54 JI '60. (MIRA 13:7)

1. Gruppya po izucheniya fiziologii i patologii stareniya (ruko-  
voditel' - prof. Yu.A. Spasokukotskiy) Instituta fiziologii im.  
akad. A.A. Bogomol'tsa AN USSR.  
(PROTHROMBIN) (BLOOD PLATELETS) (AGING)

BARCHENKO, L.I., kand.med.nauk

Ukrainian centenarians. Nauka i zhittia 11 no.10:48-51 0 '61.

(MIRA 15:1)

(Ukraine--Longevity)

SFASOKUKOTSKIY, Yuriy Aleksandrovich, prof.; BARCHENKO, Liliya  
Ivanovna, kand. med. nauk; GENIS, Yevgeniya Danilovna,  
kand. med. nauk; KAVETSKIY, R.Ye., red.; BOYKO, P.V.,  
tekhn. red.

[Longevity and physiological senility] Dolgoletie i fizio-  
logicheskaia starost'. Kiev, Gosmedizdat USSR, 1963. 217 p.  
(MIRA 17:1)



МАКРОВЕНКО, Т. П.

Study of the specificity of cytotoxic serum by the tissue culture method. Pat.fiziol. i ekp. terap. 9 no.4:38-43. 41-Ag '65.  
(MIRA 18:9)

1. Laboratoriya po izucheniya deystviya biologicheskikh aktivnykh veshchestv (zav. - prof. Yu. A. Spasokukotskiy) Instituta fiziologii imeni A. A. Bogdanova (direktor - akademik AN UkrSSR A. F. Makrovenko) AN UkrSSR, Kiev.



BARCHENKO, L.I.

Effect of small doses of antitesticular and antiovarian  
cytotoxic sera on explants of testicular and ovarian  
tissues. Fiziol. zhur. [Ukr.] 11 no.6:775-778 N-D '65.  
(MIRA 19:1)

1. Laboratoriya po izucheniyu deystviya biologicheski  
aktivnykh veshchestv Instituta fiziologii im. A.A. Bogo-  
mol'tsa AN UkrSSR, Kiyev.

ИЗДАВАН. М.А.; БАРЧЕНКО, Т.Н.

Effect of the circuit parameters on the process of electric  
explosion of wires. Izv. vys. ucheb. zav.; fiz. S no.4:59-65, 1963.  
(MIRA 16:12)

1. Tomskiy politekhnicheskii institut imeni S.M. Kirova. Submitted  
December 9, 1963.

BARCHNEV, M.P., assistant (Kiyev)

Fixation of fragments of the mandible in bone-grafting operations.  
Probl. chel. litr. khir. no.1:44-46 '65.

Free skin grafting into a defect of the mucous membrane of the  
oral cavity. Ibid. 47-50 (MIRA 18:10)

BARCHENKO, N.I.; KOLPAKOV, A.M.; FIGURINA, Z.G.; YASHIN, V.I.,  
Starshiy instruktor

Effect of balloon breakers on the breakage of staple yarn No.40  
in unwinding. Tekst.prom. 21 no.6:35-36 Je '61.

(MIRA 15:2)

1. Glavnyy inzh. Istom'inskoy pryadil'no-tkatskoy fabriki (for  
Barchenko). 2. Nachal'nik tkatskogo proizvodstva Istomkinskoy  
pryadil'no-tkatskoy fabriki (for Kolpakov). 3. Nachal'nik  
prigotovitel'nogo tsekha Istomkinskoy pryadil'no-tkatskoy  
fabriki (for Figurina).

(Textile machinery)  
(Yarn)

66197

SOV/143-59-7-7/20

~~(a, b)~~ 24-7800

AUTHORS: Barchenko, T.N., Mel'nikov, M.A., Engineers

TITLE: An Investigation of the Discharge Propagation Velocity in Alkali-Haloide Salt Crystals

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Energetika, 1959, Nr 7, pp 43-49 (USSR)

ABSTRACT: The authors investigated the puncturing process of solid dielectrics by impact ionization with electrons. They obtained the dependence of velocity and direction of the path of the discharge on the polarity of the electrode spike. As shown by A.W. Walter (A.F. Val'ter) (Ref.2), in the presence of such a dependence it will be hardly possible that the puncturing process occurs as a destruction of the dielectric by the electric field. This dependence provides the possibility of an impact ionization in the dielectrics investigated by the authors. The assumption of the impact ionization by electrons in dielectrics (NaCl, KCl) is in agreement with the author's experimental data of the discharge propagation speed in dielectrics of different chemical composition.

Card 1/2

66197

SOV/143-59-7-7/20

An Investigation of the Discharge Propagation Velocity in Alkaline-Haloid Salt Crystals

tion. The authors mention the Laboratoriya gazovogo razryada EI AN SSSR (Gas Discharge Laboratory of EI AS USSR) in which the propagation speed of discharges in air is investigated during different phases. The authors used rectangular pulses with a front of  $1 \cdot 10^{-8}$  sec and an amplitude of 48 kv for their experiments. Some results of their experiments are compiled in five graphs (Figs. 2, 3, 5, 6 and 7). They express their gratitude to professor A.A. Vorob'yev for the scientific guidance. This paper was presented at a seminar on physics of dielectrics of the departments of physics, high-voltage engineering, electrical insulation and cable engineering. There are 5 photographs, 5 graphs, 1 table and 19 references, 11 of which are Soviet, 4 English and 4 German.

Card 2/2

ASSOCIATION: Tomskiy ordena Trudovogo Krasnogo Znameni politekhnicheskii institut imeni S.M. Kirova (Tomsk - Red Labor Banner Order - Polytechnic Institute imeni S.M. Kirov) ~~X~~

SUBMITTED: March 18, 1959

BARCHEVSK, T. N.

PHASE I: CORE EXPLOITATION 207/437

Vsesoyuznaya konferentsiya po fizike dielektrikov. 24, 1958  
Pis'ma dlelatrikov, tudy vopros vsesoyuznoy konferentsii (Physics of Dielectrics, Letters of the 24 All-Union Conference on the Physics of Dielectrics) Moscow, Izdatel'stvo AN SSSR, 1950. 323 p. Erata slip inserted. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR, Fizicheskii Institut imeni P. L. Lebedeva, Zet. of Publishing House: Ye. L. Starobinskiy, Fezh. Kaz. I. N. Porzina, Kibernetika (Moscow, Kaz.) G. I. Sazonov, Doctor of Physics and Mathematics (Moscow), and K. V. Filippov, Candidate of Physics and Mathematics.

PURPOSE: This collection of reports is intended for scientists investigating the physics of dielectrics.

COVERAGE: The Second All-Union Conference on the Physics of Dielectrics held in Moscow at the Fizicheskii Institut imeni P. L. Lebedeva (Physics Institute) in November 1958 was attended by representatives of the principal scientific centers of the USSR and of several other countries. The principal section contains most of the reports presented at the conference and summaries of the discussions which followed. The reports in this collection deal with dielectric properties, losses, and polarization, and with specific properties of various crystals, chemical compounds, and organic polymers. Ferroelectrics, crystals, and various radiation and irradiation effects on dielectrics are investigated. The volume contains a list of other references presented at the conference dealing with polarization, losses, and breakdown of dielectrics, which were published in the journal "Fizika i Khimiya SSSR, seriya fizicheskaya" (Physics and Chemistry of the USSR, Series in Physics and Chemistry) and in "Doklady Akademiya Nauk SSSR, Seriya fizicheskaya" (Reports of the Academy of Sciences of the USSR, Series in Physics and Chemistry). No personal files are mentioned.

Prilozheniya: 1. Development and Investigation of Certain Dielectric Processes (SSSR, Moscow) 197

Discussion 164

Oskolovskiy, I. I., M. K. Yermolovskiy, and L. M. Fedina. Effect of Heat Treatment on the Electrophysical Properties of Certain Alkali-Free Silicates. 170

Yoffe, V. A., and I. S. Yanchewskaya. Dielectric Properties of Certain Crystal Alloys (Russian) (Fizicheskii Institut imeni A. N. Shtrombina (Institute of Solid State Chemistry, AS USSR)) 182

Podolskaya, K. A. Effect of the Sorption Shape of the Water Bond on the Dielectric Properties of Organic Dielectrics 194

X Rodionov, N. A. Dielectric Losses in K1SO4 · 6H2O 203

Kozlovskiy, K. A. Dielectric Properties of Calcinate Crystals (Fizicheskii Institut imeni A. N. Shtrombina (Institute of Solid State Chemistry, AS USSR)) (Moscow State University, Faculty of Physics Division, Moscow) 211

Discussion 215

Boyer, G. Y., and M. I. Kozlov. Electrical and Mechanical Properties of Ion Polycrystal Dielectrics in Connection With Their Heat Treatment. 220

Egorkov, S. M., and A. V. Tsiklin. Third Kind of Thermal Breakdown (Langmuir-type Polyturbulentsiy) Institut imeni M. I. Kalitana (Leningrad Polytechnical Institute imeni M. I. Kalitana) 230

X Korshakov, A. A., and K. K. Gornobit. Some Regularities of Discharge Delays in Solid Dielectrics (Fizicheskii Institut imeni A. N. Shtrombina (Institute of Solid State Chemistry, AS USSR)) (Leningrad Polytechnical Institute imeni M. I. Kalitana) 235

X Korshakov, A. A., and M. I. Kozlov. On the Possibility of a Stream Discharge in Solid Dielectrics (Fizicheskii Institut imeni A. N. Shtrombina (Institute of Solid State Chemistry, AS USSR)) (Leningrad Polytechnical Institute imeni M. I. Kalitana) 247

X Mal'tsev, N. A. Investigation of the Pulse Junctions of Certain Polymers and Waxes (Fizicheskii Institut imeni S. M. Kirova) 256

X Balyzina, I. Ye. On Certain Post-Puncture Processes in Liquid Dielectrics 262

X Balyzina, I. Ye. Investigation of Discharge Processes in Distilled Water 271

Discussion 280

Tol. B. M., and S. Z. Begunov. Effect of Unilateral External Pressure on Domain Orientation in Polarized Polycrystalline Barium (Fizicheskii Institut imeni P. L. Lebedeva, AS USSR, Moscow) 281

L 64116-65 EWT(m)/EMA(d)/EWP(t)/EWP(k)/EWP(b)/EMA(c) JD/HW

ACCESSION NR: AP5021165

UR/0139/65/000/004/0039/0045

AUTHOR: Mel'nikov, M. A.; Barchenko, T. N.

TITLE: The effect of the circuit parameters on the processes associated with ex-  
ploding wires M  
B

SOURCE: IVUZ. Fizika, no. 4, 1965, 39-45

TOPIC TAGS: exploding wire, electric wire, fine wire

ABSTRACT: An investigation was made of the effects of various generator parameters (voltage, capacitance, inductance, and energy stored by the generating capacitor) and wire parameters (resistivity, diameter, resistance) on the energy released in the wire up to the current pause and on the time and rate of the energy release. Ni-chrome, constantan, and copper wires were tested. Constantan required the lowest energy for explosion and copper the highest. The percentage of the stored energy used depended only weakly on the material. When the energy stored in the capacitor was greater than that required for the explosion, the higher energy due to the increased capacitance did not result in an increase in the energy released in the explosion. Both the time required to reach the pause and the rate of energy release remained constant. The percentage of the stored energy used depended on the relation-

Card 1/2



L 64116-65

ACCESSION NR: AP5021165

ship between the wire resistance and the characteristic impedance of the generator. An increase in the energy stored in the capacitor at the expense of the voltage at a constant capacity did not change the amount of energy released. However, there was a decrease in both the period and rate of the energy release. The reduction of the wire diameter led to a decrease of the energy required for explosion in proportion to the mass of the wire. A cable used to transmit the energy to the wire did not affect the amount of energy, although the time required for the wire to explode increased. Thus the rate of the energy release decreased. Orig. art. has: 6 figures. [JA]

ASSOCIATION: Tomskiy politekhnicheskii institut imeni S. K. Kirova (Tomsk Poly-technical Institute)

SUBMITTED: 09Dec63

ENCL: 00

SUB CODE: EC

NO REF SOV: 006

OTHER: 000

ATD PRESS: 4070

Card

*dm*  
2/2

BARCHENOV, A. B.

"Investigation of the Dynamic Effect of a Movable Load on Wooden Road Bridges."  
Cand Tech Sci, Moscow Automobile and Roads Inst and V. K. Holotov, Min Higher  
Education USSR, Moscow, 1954. (KL, No 1, Jan 55)

Survey of Scientific and Technical Dissertations Defenelat USSR Higher Educational  
30: Sum. No 598, 29 Jul 55

BARHENKOV, A.G., kand. tekhn. nauk.

Dynamic action of truck loads on metal bridges having main girders  
connected by reinforced concrete slabs. Avt.dor. 21 no.9:13-15  
S '58. (MIRA 11:11)

(Bridges, Iron and steel)

BARCHENKOV, A.G., kand.tekhn.nauk (Voronezh)

Determining the frequencies of natural vibrations of regular hinged  
chains on flexible inactive supports. Issl.po teor. sooruzh.  
no.11:83-87 '62. (MIRA 15:8)

(Chains--Vibration)

BARCHENKOV, A.G. (Voronezh)

One characteristic of the general stability of frames. Stroi.  
mekh.i rasch.soor 4 no.4:29-31 '62. (MIRA 15:8)  
(Structural frames)

BARHENKOV, A.G.; DEMKOV, Ye.A.; MAL'TSEV, R.I.; TUROVSKIY, L.M. (Voronezh)

Free vibrations of some frame-cantilever systems. Stroi. mekh.  
i rasch. soor. 4 no.6:44-49 '62. (MIRA 16:1)  
(Vibration)

NEVSKIY, Nikolay Alekseyevich, kapitan 1 ranga. Prinjmalj uchastiye:  
KULINICH, D.D., inzh.-kapitan 1 ranga; RODIONOV, A.I., kontr-  
admiral; OLENEV, K.I., general-mayor aviatsii; IGHNAT'YEV, N.M.,  
kapitan 1 ranga; BARHENKOV, S.A., inzh.-kapitan 1 ranga;  
KRYVIN, P.F., inzh.-kapitan 1 ranga; BASOV, A.V., kapitan 2  
ranga; BOSOV, P.I., inzh.-kapitan 2 ranga; MOROZOV, K.V.,  
inzh.-podpolkovnik; PUZANOV, N.P., inzh.-podpolkovnik. MEDNI-  
KOVA, A.N., tekhn.red.

[The Navy] Voenno-morskoi flot. Moskva, Voen.izd-vo M-va  
obor. SSSR, 1959. 328 p. (MIRA 12:6)  
(Russia--Navy)

BARCHENKOV, S.A., inzhener-kapitan 1-go ranga

Fiber optics and its use in military radio electronics. Mor.  
sbor. 46 no.8:81-87 Ag '63. (MIRA 16:10)

(Optics) (Electronics in military engineering)



KOTOV, Ye. I.; BARGHEVSKI, V. ; HO'MGOROV, V. ②

"Spectral Investigations of Molecular Ion Formation  
on the Surface of Solids"  
Presented at the IUPAC Symposium on Molecular Structure and Spectroscopy,  
Tokyo, Japan, 10-15 Sep 62.

FRID, Ye.S.; MIROSHNIKOV, G.V.; SLOZHENIKIN, N.I.; BARCHUGOV, V.V.

Neutron detector on the basis of a "long" counter. Atom.  
energ. 16 no. 4:365-366 Ap '64. (MIRA 17:5)

BARCHUK, A. F.

"How We Guarantee Shelter for the Growing Number of Livestock," Dost.  
Sel'khoz, No.7, 1952

BARCHUK, I. F.

USSR/Nuclear Physics - Positrons  
Nuclear Physics - Internal Conversion

Dec 48

"Monochromatic Positrons in the Spectrum of Internal Conversion," G. D. Latyshev, V. V. Gey, A. A. Bashilov, I. F. Barchuk, Leningrad Physicotech Inst, Acad Sci USSR, 3 pp

"Dok Ak Nauk SSSR" Vol LXIII, No 5

Sharp peaks observed in a spectrum of positrons of RaC' internal conversion are shown to correspond to monochromatic positrons. Their presence is assumed to depend on a special type of internal conversion where the electron component of a pair is captured by a free level in the electronic envelope. On the basis of a list of gamma rays of the RaC' nucleus, part of the gamma rays must be attributed to monochromatic positrons. Submitted by Acad A. F. Ioffe 24 Sep 48.

PA 55/49T75

BARCHUCK, I. F.

4693 The Fine Structure of the 1414-keV Line and the Problem of the Multipolarity of Its Components. G. D. Latyshev, L. A. Sliv., I. F. Barchuck, and A. A. Bashilov, Izvest. Akad. Nauk S.S.S.R., Ser. Fiz. 13, 340-6 (1949) (in Russian).

Ellis and Astor (Proc. Roy. Soc. (London) 129A, 180 (1930)) have found that the internal-conversion line 1414 keV of  $\text{RaC}'$  ( $\text{Po}^{214}$ ) has no counterpart in the  $\gamma$  spectrum. Fowler (ibid, 1 (1930)) interpreted the 1414-keV nuclear transition as a 0-0 transition, in which the initial and the final total moments of the nucleus are zero and the process involves either projections of electrons from outer shells or pair creations, without any  $\gamma$  radiation. The present authors obtained recently a conversion spectrum of  $\text{RaC}'$ , which shows a fine structure of the lines K, L, and M of the 1414-keV transition: the peak K has 18 indentations corresponding to two series of nine lines 6 keV distant from each other, the distance between corresponding lines of the two series being 2.5 keV; peaks L and M show similar indentations. The ratios between the conversion probabilities are  $W_K/W_L/W_{M+N} = 5.4/1/0.33$ , and  $W_K/W_p = 440$ , where  $W_p$  is the probability of the formation of pairs. These results are in good agreement with values calculated by using formulas given by the theory of the 0-0 transition (Sakharov, thesis, 1948, in Russian; Yukawa and Sakata, Proc. Phys. Math. Soc. Japan 17, 306 (1935)); on the other hand, there is a disagreement with theoretical values obtained for transitions that involve conversions (or pair creation) and radiations of various multipolarity (electric and magnetic dipoles or quadrupoles). It is difficult to explain, so far, the large number (18) of close levels revealed by the fine structure; something similar has been observed in other transitions of  $\text{RaC}'$  (1760, 2200 keV) by Gei et al (Izvest. Akad. Nauk S.S.S.R., Ser. Fiz. 12, 729 (1948)).

BARCHUK, I.F.

CA

The spectrum of electrons of inner conversion from an ampul filled with radium emanation. I. G. D. Latyshev, I. P. Barchuk, V. A. Sergienko, Yu. K. Ioffe, and V. A. Malev (Leningrad Phys. Tech. Inst.). *Izv. Akad. Nauk. Ser. Fiz.* 13, 428-31 (1949). A table listing 50 lines of  $\gamma$ -rays between 584 and 1127 e.kv. is given. Whether the lines come from the K, M, N or L shell and the products  $P_{\alpha}$  ( $P_{\alpha}$  = probability of formation of a  $\gamma$  line,  $\alpha$  = coeff. of conversion) are also indicated. II. G. D. Latyshev, I. P. Barchuk, V. A. Sergienko, Yu. K. Ioffe, A. A. Bashilov, K. V. Imshentsev, and V. A. Malev. *Ibid.* 432-3. - For the interval  $k_{\alpha} = 1150$  - 1438 e.kv. 36 lines are listed. The multipolarity is indicated. S. Pakover

BARCHUK, I. E.

1/1

**Multipolarity of  $\gamma$ -lines of radium C'. G. D. Latsyshev, I. P. Barchuk, V. A. Sergienko, Yu. K. Ioffe, A. A. Bashilov, V. A. Malev, and K. V. Inoseitsev (Leningrad Phys.-Tech. Inst.). *Izvest. Akad. Nauk S.S.S.R., Ser. Fiz.* 13, 440-2(1949).—The ratio  $\alpha_1/\alpha_2$  ( $\alpha_1$  is coeff. of conversion with formation of a pair;  $\alpha_2$  is coeff. of conversion with formation of a K electron) is compared to theoretical curves for a dipole and a quadrupole. Only weak  $\gamma$ -lines are dipolar, strong lines being quadrupolar or having higher polarity. Line 1414 e.kv. corresponds to a 0-0 transition. S. Pakawer**

BARCHUK, I.F.

C.A

Fine structure of  $\gamma$ -lines of radium C'. H. G. D. Latshev, I. P. Barchuk, V. A. Serghenko, Yu. K. Ioffe, V. A. Malev, A. A. Bashilov, and K. V. Imosutsev (Leningrad Phys. Tech. Inst.). *Izv. Akad. Nauk S.S.S.R., Ser. Fiz.* 19, 443 (1949), cf. following abstr. Lines 000, 1120, and 1238c. kv. are complex and have a fine structure characterized by a const. sepn. of 6 e.kv. between the fine-structure components of each series and a fast drop of line intensities on the side of lower energies. S. Pakswel



5090470, 1.1

USSR/Fitting Out of Laboratories - Instruments.  
Their Theory, Construction, and Use.

H-

Abs Jour : Ref Zhur - Khimiya, No 3, 1957, 8691

Author : Barchuk, I.F., Galkin, Ye.M., Pasechnik, M.V., Pucherov,  
N.N.

Inst : Academy of Sciences USSR

Title : On the Resolving Power of Scintillation Spectrometers

Orig Pub : Izv. AN SSSR, Section on Physical Sciences, 1955, 19,  
No 3, 352-354.

Abstract : See RZhFiz, 1956, 15844.

Card 1/1

*Handwritten:* BARCHUK, I. F.

USSR/Fitting Out of Laboratories - Instruments, Their Theory, Construction, and Use, H

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61925

Author: Barchuk, I. F., Belykh, G. V.

Institution: None *Instit. Physics Acad. Sci. Ukr SSR*

Title: Magnetic Prismatic  $\beta$ -Spectrometer with Scintillation Electron Counter

Original

Periodical: Ukr. fiz. zh., 1956, 1, No 1, 98-105; Ukrainian

Abstract: Calculations are presented and a description is given of the design of a  $\beta$ -spectrometer, axially symmetrical and with a scintillation electron counter.

Card 1/1

BARCHUK, I. F., PASECHNIK, M. V., TSYBUL'KO, Yu. A.

"Determination of Nuclear Energy Levels from Inelastic Scattering of Fast Neutrons,"

Inst. for Physics, Acad. Sci. Ukr SSR

paper submitted at the A-U Conf. on Nuclear Reactions in Medium and Low Energy Physics, Moscow, 19-27 Nov 1957.

BARUCH, I. F.

BARUCH, I. F.

"The Application of a Spectrometric Photo-Multiplier to a Scintillation  
Spectrometer."

A conference on Electron and Photo-Electron Multiplier; Radiotekhnika i  
Elektronika, 1957, Vol. II, No. 12, pp. 1552-1557 (USSR)

Abst: A conference took place in Moscow during February 28 and March 6, 1957  
and was attended by scientists and engineers from Moscow, Leningrad, Kiev  
and other centres of the Soviet Union. Altogether, 28 papers were read and  
discussed.

SOV/81-59-24-84749

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 24, p 9 (USSR)

AUTHORS: Barchuk, I.F., Vertebnyy, V.P., Konstantinov, B.D., Nemets, O.F.,  
Pasechnik, M.F.

TITLE: The Spectra of Fast Neutrons Scattered From Atomic Nuclei

PERIODICAL: Tr. Sessii AS UkrSSR po mirn. ispol'zovaniyu atomn. energii. Kiyev,  
AS UkrSSR, 1958, pp 94 - 101

ABSTRACT: The spectra of neutrons inelastically scattered from the nuclei of Mg, Al, Fe, Ni, Zn, Cu, Sn, Cd, Hg, Pb and Bi were studied by means of ionization chambers filled with hydrogen or methane, and a scintillation counter with an anthracene crystal. The reaction  $D(d, n) He^3$  served as source of neutrons with an energy of 2.8 Mev. The experimental data obtained by means of ionization chambers were corrected for the "wall" and "induction" effects; the curves have singularities in the points which pertain to the excited states of the nuclei. The results of the measurements are presented in the form of graphs and tables of the

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The Spectra of Fast Neutrons Scattered From Atomic Nuclei

SOV/81-59-24-84749

energy levels. The authors point out that in heavy nuclei in the case of inelastic scattering of the neutrons only individual levels are excited. It is therefore incorrect to consider the process statistically in the case of energies of several Mev.

I. Sadikov



Card 2/2

*I. F. BARCHUK*

**AUTHORS:** Barchuk, I. F., Pasechnik, M. V., Tsybul'ko, Yu. A. 89-2-3/35

**TITLE:** The  $\gamma$ -Ray Spectra Produced by Inelastic Fast Neutron Scattering in Mg, Al, Fe, Cu, Sn and Sb (Spektry  $\gamma$ -luchey, возбуждаемых при неупругом рассеянии быстрых нейтронов ядрами магния, алюминия, железа, меди, олова и сур'ямы).

**PERIODICAL:** Atomnaya Energiya, 1958, Nr 2, pp. 132-137 (USSR).

**ABSTRACT:** The fast neutrons were generated by the D (d, n)He<sup>3</sup> reaction. The intensity of the source amounted to about 200 - 300  $\mu$ C radon-beryllium equivalent. The scattering body was shaped like a ring, which concentrically surrounded a well shielded Na I (Tl) crystal. The crystal represented the detector of a  $\gamma$  scintillation spectrometer. The following lines were obtained with an energy of the neutrons  $E_n = 2,8$  MeV:

	Element	$E_\gamma$ (MeV)	relative intensity	Element	$E_\gamma$ (MeV)	relative intensity
Card 1/2	Mg	0,97 $\pm$ 0,05	0,3	Al	0,84 $\pm$ 0,02	0,6
		1,41 $\pm$ 0,02	1,0		1,00 $\pm$ 0,02	1,0

The  $\gamma$ -Ray Spectra Produced by Inelastic Fast Neutron Scattering  
in Mg, Al, Fe, Cu, Sn and Sb.

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	1,92 $\pm$ 0,04	0,2		1,80 $\pm$ 0,05	0,8
	2,3			2,16 $\pm$ 0,03	0,7
Fe	0,84 $\pm$ 0,02	1,0	Sn	0,84 $\pm$ 0,02	0,6
	1,25 $\pm$ 0,04	0,1		1,16 $\pm$ 0,02	1,0
	1,46 $\pm$ 0,04	0,1		1,50 $\pm$ 0,04	0,3
	1,70 $\pm$ 0,04	0,1		1,80 $\pm$ 0,04	0,4
Cu	0,63 $\pm$ 0,04	0,3	Sb	1,04 $\pm$ 0,02	1,0
	0,78 $\pm$ 0,08	0,6		1,50 $\pm$ 0,04	0,4
	0,96 $\pm$ 0,02	1,0		1,84 $\pm$ 0,04	0,4
	1,12 $\pm$ 0,04	0,9		2,16 $\pm$ 0,04	0,2
	1,38 $\pm$ 0,04	0,6			
	1,46 $\pm$ 0,04	0,5			
	1,72 $\pm$ 0,04	0,4			
	2,03 $\pm$ 0,04	0,4			

SUBMITTED: There are 9 figures, 1 table, and 9 references, 5 of which are Slavic,  
August 22, 1957.  
AVAILABLE: Library of Congress.

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1. Neutrons-Scattering

2. Gamma ray spectrum analyzers



~~BARCHUK, I.F.~~; PASICHNIK, M.V. [Pasichnyk, M.V.]; TSYBUL'KO, Yu.A.  
[TSybul'ko, IU.A.]

Gamma spectra due to inelastic scattering of neutrons [In  
Ukrainian with summary in English]. Ukr.fiz.zhur. 3 no.1:  
53-63 Ja-F '58.

(MIRA 11:4)

1. Institut fiziki AN URSR.

(Neutrons--Scattering)

(Scintillation spectrometry)

PARCHIV, I. F.

21(0) **TABLE I BOOK REFERENCES** 897/2062

International Conference on the Neutron Loss of Atomic Energy, 2d., Geneva, 1968 (Nuclear Physics) Moscow, Atomizdat, 1969. 528 p. (Soviet East West, Vol. 1) 0,000 copies printed.

Ms. (XVIII page); A.I. Alibekov, (Academician) V.I. Veksler, (Academician); and I.A. Vlasov, (Candidate of Physical and Mathematical Sciences); M. of this volume; B.L. Brodyer and B.P. Gavrilov, (Candidates of Physical and Mathematical Sciences); M. (Durable book); G.S. Smirnov; Sub. M.I. Zh.I. Masal.

**Footnote:** This collection of articles is intended for scientific research workers and other persons interested in nuclear physics. The volume contains 4 papers presented by Soviet scientists at the Second Conference on Neutron Loss of Atomic Energy, held in Geneva in September 1968.

**Contents:** It is divided into two parts. Part I contains 17 papers dealing with plasma physics and controlled thermonuclear reactions, and Part II contains 26 papers on nuclear physics, including problems of particle cosmogenesis and of cosmic ray physics. The first paper by L.A. Artamonov presents a review of Soviet work on controlled thermonuclear reactions. The remaining papers in Part I deal with particular problems in this field.

The papers in Part II deal in detail with various problems in nuclear physics, such as the fission of heavy atoms and their isotopes, and with the study of cosmic rays induced by means of artificial earth satellites and rockets, described in a paper by G.H. Nevay. The Russian-language edition of the proceedings of the conference is published in 16 volumes. The first 6 volumes contain all the papers presented by Soviet scientists as follows: Volume (1), Subgroups (1) and (2) (Physics of Neutrons and Neutrons); Volume (2), Subgroups (3) and (4) (Nuclear Energy and Nuclear Energy); Volume (3), Subgroups (5) and (6) (Nuclear Energy and Nuclear Energy); Volume (4), Subgroups (7) and (8) (Nuclear Energy and Nuclear Energy); Volume (5), Subgroups (9) and (10) (Nuclear Energy and Nuclear Energy); Volume (6) (Nuclear Energy and Nuclear Energy). The other 10 volumes contain selected papers presented at the Conference by non-Soviet scientists. In the present volume discrepancies between the English and Russian language editions of the proceedings have been noted in three articles where the texts are not identical: by A. Kikuchi, et al., (High Current Pulsed Neutron); A. Kikuchi, et al., (High Current Pulsed Neutron); and by G. B. Barabga, et al., (Investigations of the Neutron-Induced Fission of <sup>235</sup>U and <sup>239</sup>Pu). The investigations of the Neutron-Induced Fission of <sup>235</sup>U and <sup>239</sup>Pu, is numbered 2526 and 2528 are reported in the English edition. Report 2521, by Barabga, et al., is numbered 2525 in the English edition.

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Barabga, G. B., G. B. Barabga, I. A. Fokid, V. I. Veksler, A. M. Kozlov, S. V. Gerasimov, G. B. Barabga, E. A. Kozlov, and G. B. Barabga, (Soviet Neutron Research and Capture by Atomic Nuclei) (Report 2096)	330
Gavrilov, B. P. On the Asymmetry of Nuclear Fission (Report 2174)	346
Articles mentioned include G. B. Barabga, A. B. Kozlov, and S. V. Barabga.	
Gavrilov, B. P. Excitation Energy of Fragments in Nuclear Fission (Report 2473)	374
Articles mentioned include V. M. Galitskiy and V. M. Stetsko.	
Ms., A. I., E. M. Galitskiy, L. B. Jankov, E. V. Nikitin, and V. A. Shumakov, Angular Distribution of Fission Fragments in the Fission of Uranium-235 (Report 2077)	366
Ms., A. I., M. A. Shumakov, Neutronium Cross Section Near the Threshold of Reaction (Report 2172)	369



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S/185/62/007/001/001/01;  
D299/D302

21-1000

AUTHORS: Pasichnyk, M.V., Barchuk, I.P., and Klymentov, V.B.

TITLE: Experimental study of the physical parameters of the VVR-M reactor of the Institute of Physics of the Academy of Sciences UkrSSR

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 1, 1962, 3-13

TEXT: The VVR-M reactor, built at the Institute of Physics of the AS UkrSSR, is an improved version of the light-water moderated reactor VVR-S. The design and characteristics of the reactor are described in V.V. Goncharov et al. (Ref. 1: "Trudy" of the Second International Conference on the Peaceful Uses of Atomic Energy, Geneva 1958 Doklady sovetskikh uchenykh, v. 2, Atomizdat, M., 1959). The improvement resulted in a fivefold increase in the power level of the reactor and in a tenfold increase in the density of the neutron flux in the active section. The results are given of experiments conducted during the operation of the reactor at almost-zero power. The critical experiment was completed when a power of 5000 kw was reached. X  
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Experimental study of the physical ...

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D299/D302

ched. Two types of active section were studied: 1) With central configuration, and 2) A shifted section. The loading of the section and the disposition of all the elements of the reactor are shown in two figures. The attainment of critical size was controlled by means of three starting devices. The pre-critical experiments were conducted in the presence of a radium-beryllium neutron source. Graphs are shown of the multiplication, upon reaching the critical state; according to these graphs, the critical mass of the reactor with beryllium neutron moderator equals 50.5 fuel units (1.39 kg/ U<sup>235</sup>). The efficiency of manual rod-control (with respect to the shell-and-tube heat exchangers (THE)) was estimated. The relative distribution of the thermal-neutron flux was determined by the method of activated copper indicator wires (0.7 to 1.0 mm in diameter). The distribution curves show a maximum of thermal-neutron flux at a distance of 4 - 5 cm from the outer THE-elements. The mean value of the neutron flux for a distribution down the central THE-elements, is  $\bar{N}_g = 0.49$ , whereas the maximum value  $N_{rel} = 0.6$ . The distribution curves are almost symmetrical, with the exception of one curve, whose nonsymmetri-

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Experimental study of the physical ...

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cal shape is due to the influence of the boron automatic-control rods. Calibration of control rods: The following control-rods were calibrated: 1) The automatic control rod, 2) the first- and the second manual control-rods, and 3) the precision control-rod. The manual control-rods contain boron carbide. The automatic control-rod is of steel or boron carbide. Calculations showed that upon reaching a power of 5000 kw, the reactor contained a maximum flux of thermal neutrons --  $0.5 \cdot 10^{14}$  neutr./cm<sup>2</sup>sec. With an active section of  $5.5 \cdot 10$  cm<sup>3</sup>, the mean flux of thermal neutrons was  $0.37 \cdot 10^{14}$  neutr./cm<sup>2</sup>sec. The authors express their thanks to the personnel of the reactor of the Institute of Physics of the AS UkrSSR, who started the reactor, and of the Institute of Atomic Energy of the AS USSR im. I.V. Kurchatov. There are 12 figures, 2 tables and 2 Soviet-bloc references.

ASSOCIATION: Instytut fizyky AN URSR (Institute of Physics of the AS UkrRSR), Kyiv

SUBMITTED: March 6, 1961

Card 3/3

X

35094

S/185/82/007/001/002/01.  
D299/D302

24.6410

AUTHORS: Barchuk, I.F., Byelykh, H.V., Holyshkin, V.Y., and  
Ogorodnyk, A.F.

TITLE: Magnetic spectrometer with nonhomogeneous field

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 1, 1962,  
15 - 20

TEXT: A spectrometer with nonhomogeneous axially-symmetric field is described which can be used both as a Compton  $\gamma$ -spectrometer and as a  $\beta$ -spectrometer. The instrument has greater resolving power than spectrometers using a homogeneous field; it has also the advantage of using a single field for both the collimation and focusing of electrons; this facilitates considerably the design and operation of the instrument. The spectrometer incorporates a  $\beta$ -shaped magnet (made of Steel-3), a vacuum chamber (in the form of a brass cylinder of diameter 600 mm and height 136 mm), and 3 counters. In order to check the operation of the instrument and to obtain its spectral characteristics, test measurements were conducted of the spectra of con-  
Card 1/2

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Magnetic spectrometer with ...

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D299/D502

version electrons during the decay of Cs<sup>137</sup> and of  $\gamma$ -rays of Co<sup>60</sup>. With an angle of incidence of 30°, a resolution of 0.5 % was obtained for the Cs<sup>137</sup>-line (660 keV); it is recommended using only external electron-orbits when measuring  $\beta$ -preparations. The resolution for the Co<sup>60</sup>-line was 1 %. Further, the electron orbits and the resolving power of the instrument are calculated. The calculations involve several approximate formulas. The spectrometer was built by the authors and is designed for studying  $\gamma$ -ray spectra, emitted by nuclei on capture of thermal neutrons in the reactor VVR-M. There are 5 figures and 7 references: 4 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: L.N. Langer, C.S. Cook, Rev. Sci., Instr., 19, 257, 1948; A.M. Beiduk, E.J. Konopinski, Rev. Sci. Instr., 19, 504, 1948; E. Persico, C. Georfrion, Rev. Sci. Instr., 21, 945, 1950.

ASSOCIATION: Instytut fizyki AN URSS (Institute of Physics of the AS UkrRSR), Kyiv

SUBMITTED: March 14, 1961

Card 2/2

X



33975

S/089/62/012/003/013/013  
B102/B108

26.2246

AUTHORS: ~~Barchuk, I. E.~~, Belykh, G. V., Golyshkin V. I.  
Ogorodnik, A. F.

TITLE: Gamma spectrum from a horizontal channel of a BBP-M (VVR-M) reactor

PERIODICAL: Atomnaya energiya, v. 12, no. 3, 1962, 251 - 253

TEXT: A Compton gamma spectrometer with non-uniform magnetic field and 180°-recoil electron focusing was used to measure the spectrum of gammas emerging from a horizontal channel of a VVR-M reactor. The recoil electrons leaving the spectrometer radiator were recorded with three coincidence gas counters. The channel leads from the Be reflector of the core through shields of water, pig iron, concrete, paraffin + boron carbide and lead. Inside the channel are a neutron filter (paraffin + boron carbide), a steel and a lead collimator. The results are shown in Fig. 3 and the Table 1. There are 3 figures, 2 tables, and 5 Soviet references. ✓

SUBMITTED: August 16, 1961

Card 1/2 2

Gamma spectrum from a...

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B102/B108

Fig. 3. Corrected gamma spectrum from VVR-M reactor;  $\gamma$  ( $\lambda$ ) in arbitrary units.

Table 1. Gamma line identification.

Legend: (1) number of line, (2) element; (a) uranium fission products.

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ACCESSION NR: AT4010692

S/2601/63/000/017/0078/0082

AUTHOR: Gertsriken, S. D. (Deceased); Plotnikova, N. P.; Sarchuk, I. F.; Liu, Chia-k'un

TITLE: A study of the effect of neutron irradiation on the hardness and thermoelectromotive force of some metals

SOURCE: AN UKrRSR. Insty\*tut metalofizy\*ky\*. Sbornik nauchny\*kh trudov, no. 17, 1963. Voprosy\* fiziki metallov i metallovedeniya, 78-82

TOPIC TAGS: electromotive force, thermoelectromotive force, hardness neutron beam, neutron irradiation, metal hardness, plastic deformation, copper hardness, nickel hardness, iron hardness, niobium hardness, niobium thermoelectromotive force, molybdenum thermoelectromotive force, torsion deformation, rolling deformation, thermoelectromotive force deformation dependence

ABSTRACT: In connection with the growing need for new durable materials for reactor and rocket construction, the field of radiation physics is being increasingly developed. Exposure to neutrons as well as plastic deformation are powerful means of creating various imperfections in metals and alloys which lead to the strengthening of materials. The authors therefore investigated the hardness and thermoelectromotive force of several technically pure metals with varying crystal

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ACCESSION NR: AT4010692

structure - electrolytic copper and nickel, Amco iron, chromium, niobium, and molybdenum - following exposure to neutrons in a VVR-M reactor at a maximum neutron density of  $10^{14}$  n/cm<sup>2</sup> sec. The hardness of annealed and irradiated samples was measured with a type TK Rockwell apparatus especially adapted for work in a hot chamber. The results showed the greatest increase in hardness in copper and nickel, i.e., in metals with tightly packed body-centered lattices. The hardness of iron increased considerably (a metal with a relatively low melting point); that of niobium (high melting point) showed hardly any change. In all cases -- with the exception of niobium -- the increase in hardness appeared only after a total dose of  $10^{19}$  n/cm<sup>2</sup>. The effect of exposure to neutrons on the thermoelectromotive force of molybdenum and niobium was determined by the potentiometric method. A dose of  $10^{17}$  n/cm<sup>2</sup> yielded a thermoelectromotive force of  $10^{-8}$  V/degree. Comparison of this value with the values obtained following maximal torsion or rolling deformation ( $10^{-7}$  v/degree) showed that the effect of neutron irradiation was lower by one order of magnitude. Judging by the results obtained, it may be assumed that the thermoelectromotive force increases with an increase in dose. It should be noted that the effect on the thermoelectromotive force appeared at lower total doses of exposure than the effect on hardness. Orig. art. has: 2 tables and 2 figures.

ASSOCIATION: Instytut metalofizyky AN UkrRSR (Metallophysics Institute, AN  
Card 2/32