

KOCHERGIN, S.V.; GORYUSHKIN, F.F., dorozhnyy master; BORISENKO, D.G., brigadir;
GRINEVICHUS, E.A. [Grinevichus, E.]; KURS, V.G., brigadir; SELIONOV, S.I.;
BEN'KOVSKIY, V.Ya.; PIRIYEV, A.M.

Letters to the editor. Put' i put.khoz. 7 no.2:36-37 '63. (MIRA 16:2)

1. Zamestitel' nachal'nika Rossoshanskoy distantzii Yugo-Vostochnoy dorogi (for Kochergin).
2. Stantsiya Kudinovo, Moskovskoy dorogi (for Goryushkin).
3. Stantsiya Rahanitsa, Moskovskoy dorogi (for Borisenko).
4. Starshiy dorozhnyy master, stantsiya Klaypeda, Litovskoy dorogi (for Grinevichus).
5. Stantsiya Cherenkhovo, Vostochno-Sibirskoy dorogi (for Kurs).
6. Zamestitel' nachal'nika distantzii, Manzovka, Dal'nevostochnoy dorogi (for Selionov).
7. Nachal'nik otdela zashchitnykh lesonasazhdeniy sluzhby puti, g.Kuybyshev (for Ben'kovskiy).
8. Zamestitel' nachal'nika distantzii, Khachmas, Azerbaydzhanskoy dorogi (for Piriyeu).

(Railroads--Track)

GORYUSHKIN, Leonid Mikhaylovich; RAZGON, I.M., doktor ist. nauk,
prof., otv. red.; NAZARYANTS, T.M., red.; YEFREMOVA, G.A.,
tekhn. red.

[Social and economic prerequisites of socialist revolution
in the Siberian village; the level and characteristics of
the development of capitalism in the agriculture of
Western Siberia at the end of the 19th and the beginning
of the 20th century] Sotsial'no-ekonomicheskie predposylki
sotsialisticheskoi revoliutsii v Sibirskoi derevne; ob
urovne i osobennostiakh razvitiia kapitalizma v sel'skom
khoziaistve Zapadnoi Sibiri v kontse XIX-nachale XX vv. No-
vosibirsk, Izd-vo Sibirskogo otd-niia AN SSSR, 1962. 128 p.
(MIRA 16:5)

(Siberia, Western--Agriculture--Economic aspects)

ZUBOV, N.N.; SABININ, K.D.; GORYUSHKIN, M.N., red.; ZEMTSOVA, T.Ye.,
tekhn.red.

[Calculating the density of mixed sea water] Vychislenie
uplotnenia pri smeshenii morskikh vod. Moskva, Gidrometeor.
izd-vo, 1958. 36 p. (MIRA 11:12)
(Seawater--Density)

SAMOYLENKO, V.S.; BAGROV, N.A., kand.fiz.-matem.nauk, red.; GORYUSHKIN,
M.N., red.; ZEMTSOVA, T.Ye., tekhn.red.

[Formation of the temperature regimen in seas] Formirovanie
temperaturnogo rezhima morei. Pod red. N.A.Bagrova. Moskva,
Gidrometeor.izd-vo, 1959. 144 p. (MIRA 13:1)
(Ocean temperature)

GORUSHKIN, N.N., inzh.

Resistance to cutting in frozen ground. Stroi. i dor. mash. 9 no.
5:29-31 My '64. (MIRA 17:6)

GORYUSHKIN, N.N., starshiy prepodavatel'

Wear of steel as a function of the adherence of abrasive mineral particles to frozen ground. Trudy STI 37:3-14 '64.

Speed of cutting and the wear of the elements of cutting parts in frozen ground. Ibid.:15-23 (MIRA 18:5)

GORYUSHKIN, N.N., starshiy propedavatel'

Possible way of prolonging the road construction season at logging camps in Krasnoyarsk Territory. Trudy MII 33:22-31 '62.

Device for studying the abrasive characteristics of frozen soils.
Ibid.:74-81 (MIRA 18:6)

KAUFMAN, D.I.; GORYUSHKIN, V.D.

Automatic line for machining wooden bars. *Biul. tekhn.-ekon.
inform. Gos. nauch.-issl. inst. nauch. i tekhn. inform.* 17
no.6:59-60 Je '64. (MIRA 17:11)

GORYUSHKIN, V.N.

The MPZ ties for bolting horizontal workings. *Biul.tekh.-ekon.*
inform.Gos.nauch.-issl.inst.nauch.i tekh.inform. 16 no.6:18-20
'63. (MIRA 16:8)

(Mine roof bolting)

SHOR, D.I.; BARANOV, V.V.; GORYUSHKIN, V.N.; LEV, M.A.

Basic parameters for sectional reinforced-concrete linings in
the horizontal underground mining by the shield method. Trudy
TSNIIPodzemshakhtstroia no.3:144-158 '64. (MIRA 18:9)

PANKOVA, R.A.; KHODOVA, D.N.; GORYUSHKINA, I.A.

Study on the survival of dysentery microbes in dried feces in transportation under the conditions of Northern Caucasus. Zhur. mikrobiol.; epid. i immun. 41 no.6:133-134 Je '64.

(MIRA 18:1)

1. Dorozhnaya sanitarno-epidemiologicheskaya stantsiya Severo-Kavkazskoy zheleznoy dorogi.

GORYUSHKINA, I.A.; KHODOVA, D.N.

Some simplification of the methodology for determining the
sensitivity of microbes to sulfanilamides. Lab. delo no.3:
178-179 '65. (MIRA 18:3)

1. Laboratoriya dorozhnoy sanitarno-epidemiologicheskoy stantsii
Severo-Kavkazskoy zheleznoy dorogi (nachal'nik V.S. Krivtsov).

L 15767-63

EPR/EWP(j)/EPF(o)/EWT(m)/BDS ASD/ESD-3 Pa-4/Pc-4/Pr-4

RM/WW

ACCESSION NR: AP3005858

S/0051/63/015/002/0286/0287

AUTHOR: Voloshin, V. A.; ~~Goryushko, A. G.~~; Kul'chitskiy, V. A.

73

TITLE: Spectroscopic investigation of poly(methyl methacrylate) activated by europium benzoylacetate

SOURCE: Optika i spektroskopiya, v. 15, no. 2, 1963, 286-287

TOPIC TAGS: rare earth chelate, rare earth, chelate, europium benzoylacetate, polymer, poly(methyl methacrylate), laser, laser material, absorption spectrum, emission spectrum, europium, benzoylacetone, complex

ABSTRACT: A study has been made of the spectroscopic properties of a rare-earth chelate in a polymer because rare-earth chelates in the crystalline state are not likely to be used in laser systems owing to too high a concentration of both absorption and emission centers. Two percent of europium 1-phenyl-1,3-butanedione complex (I) activating poly(methyl methacrylate) and crystalline I were both used in the experiment. The main results are given in Fig. 1 of the Enclosure. The absorption spectrum at room temperature ($\lambda_{\max} = 308 \text{ m}\mu$, $\epsilon = 1.6 \times 10^4$) is characterized by a wide region of singlet-singlet transition of I. In general, the emission spectra of I are identical in the crystalline

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ACCESSION NR: AP3005858

state and in the polymer and are characterized by the following data: 1) Emission occurs only from the $5D_0$ level except for the very weak, but sharp, 5336-Å line which appears in crystalline I at 100K and a 60-min. exposure and may be due to a component of the $5D_1 \rightarrow 7F_1$ transition. 2) The $5D_0 \rightarrow 7F_0$ transition is very strong, nearly identical in intensity to the $5D_0 \rightarrow 7F_1$ transition. This indicates the low symmetry of the field in which the europium ion is located. 3) The complete removal of degeneracy from the $5D_0 \rightarrow 7F_1$ and $5D_0 \rightarrow 7F_2$ transitions also indicates a low degree of symmetry. 4) The presence of transitions for which ΔJ exceeds 2 indicates that the europium ion is not at the center of symmetry. 5) The most intense lines occur in the $5D_0 \rightarrow 7F_2$ transition. 6) Only four of the seven components of the $5D_0 \rightarrow 7F_2$ transition were observed, which was apparently due to a loss of film sensitivity. These data prove that both the strength and the symmetry of the field in which the europium ion is located are identical in the crystalline state and in the polymer. However, there are certain differences in the spectra of the two samples: 1) In the polymer the half-width of lines is 2 to 3 times as great (10-30 Å versus 3-10 Å). 2) The most intense component (5879 Å) of the $5D_0 \rightarrow 7F_1$ transition in the crystal is the least intense in the polymer. 3) A number of weak lines, 6153, 6218, 6299, and 6328, can evidently be attributed to the superposition of vibration frequency on electron transitions. Orig. art. has: 1 figure.

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L 61672-65 EWT(1)/EWT(m)/ENP(v)/ENP(b) Pi-4 LJP(c) JD/JG

ACCESSION NR: AP501115

UR/0051/65/018/004/0628/0630
535.37

AUTHOR: Voloshin, V. A.; Goryushko, A. G.; Davidenko, N. K.; Klimusheva, G. V.; Eul'chitskiy, V. A.

TITLE: Investigation of the ²¹luminescence spectrum of crystalline europium benzoyl-acetate. I. Luminescence from two resonant levels

SOURCE: Optika i spektroskopiya, v. 18, no. 4, 1965, 628-630

TOPIC TAGS: europium compound, luminescence spectrum, luminescence center

ABSTRACT: The authors obtained and analyzed in detail the luminescence spectra of crystalline europium benzoylacetate in the 500--700 mμ band at 20K. The luminescence was photographed with a spectrograph (STE-1) of high resolution and more sensitive photographic material, which displayed hitherto unnoticed details in the spectrum. The luminescence spectra of two benzoylacetate compounds, prepared by different methods, were identical, except for diffusion of some lines. The frequencies of the observed lines are tabulated and the various transitions responsible for the lines are identified. The number of lines in the spectrum is larger than

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L 61672-65

ACCESSION NR: AP501115

expected when account is taken of the maximum splitting of the levels and of the overlap of transition from the two excited electronic levels $5D_0$ and $5D_1$ to the $7F_n$ levels, and that almost each band of the spectrum is doublet. The doublet nature can be attributed to the presence of two luminescence centers, the details of which will be dealt with in the second part of the article. Orig. art. has: 2 figures

ASSOCIATION: None

SUBMITTED: 20 Jul 64

ENCL: 00

SUB CODE: OP IC

REF REF BUY: 004

OTHER: 002

IC
Card 2/2

ACCESSION NR: AP4017397

S/0185/64/009/002/0192/0195

AUTHOR: Voloshy*n, V. A.; Goryushko, G. G.; Kul'chy*ts'ky*y, V. O.

TITLE: Energy States of Benzoylacetate rare-earth complexes in a polymethylmethacrylate host.

SOURCE: Ukrayins'ky*y fizy*chny*y zhurnal, v. 9, no. 2, 1964, 192-195

TOPIC TAGS: rare-earth chealate, chealate luminescence, organic laser material, luminescence europium benzoylacetate, terbium benzoylacetate, europium chealate, terbium chealate, polymethylmethacrylate chealate host, copolymerization, rare-earth-organic complex

ABSTRACT: Brightly luminescing polycrystalline europium benzoylacetate (EBA) in a polymethylmethacrylate (PMM) host luminesces just as brightly as without the host. The basic characteristics of the luminescence spectrum are unchanged, and likewise for the absorption spectra. These were studied between 2800 and 3700 A. Luminescence spectra were taken at room temperature and at liquid nitrogen, hydrogen and helium temperatures with ISP-51 and STR-1 instruments.

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ACCESSION NR: AP4017397

Absorption spectra were taken at room temperature only on a SF-4 apparatus. Terbium benzoylacetate (TBA), in contrast to EBA, ceases luminescing in a PMM host, and its absorption spectrum changes sharply. The comparison is shown in Figures 1 and 2 of Enclosure 01. The conclusion is that EBA dissolves in PMM, while TBA copolymerizes. "The authors, in conclusion, consider it their pleasant duty to thank their colleagues at the Institute of Physics of the Ukrainian Academy of Sciences, D. F. Sheka and G. V. Kly*masheviy for their assistance and helpful discussions." Orig. art. has 2 figures

ASSOCIATION: Fizy*kotekhnichny*y insty-tut, AN URSR, Kharkov
(Physico-Technical Institute, AN URSR)

SUBMITTED: 22Jul63

DATE ACQ: 19Mar64

ENCL: 02

SUB CODE: PH

NO REF SOV: 001

OTHER: 002

Card 2/4 2

GORYUSHKO, V.Ya. [Horiushko, V.IE.]; MIKHAYLOV, V.F. [Mykhailov, V.F.];
POTRASHKOV, V.I., kand. tekhn. nauk; TKACH, G.A. [Tkach, H.A.],
kand. tekhn. nauk

Control of carbonization and settling columns in the soda
industry. Khim. prom. [Ukr.] no.4:42-45 O-D'63.

(MIRA 17:6)

~~GORYUSHKO, V.Ye. [Horiushko, V.IE.]; TRACHUK, S.V., kand. tekhn. nauk;~~
~~MEKINYAN, Yu.G. [Mekinian, IU.H.]~~

Application of calculating machines in some fields of the chemical
industry. Khim. prom. [Ukr.] no.3:50-53 J1-S '64.

(MIRA 17:12)

GORYUSHKO, V.Ye. [Horiushko, V.IE.]; TRACHUK, S.V., kand.tekhn.nauk;
IVITSKAYA, T.A. [Ivyta'ka, T.A.]

Methodology for studying the reactor for acetylene hydrochlori-
nation as an object of regulation. Khim. prom.[Ukr.] no.1:61-63
Ja-Mr '65. (MIRA 18:4)

GORUYEV, M.G.

Rod for installing vibrators in steam curing chambers. Suggested
by M.G. Goriuev. Rats. predl. no. 41:849 '59. (MIRA 14:1)
(Vibrators)

CORZ, A.

New views on systems of frequency modulation.

P. 4. (RADIOAMATOR) (Warszawa, Poland) Vol. 7, no. 9, Sept. 1957

SO: Monthly Index of East European Accessions (EEAI) LC Vol. 7, No. 5. 1958

EXCERPTA MEDICA Sec 5 Vol. 10/8 Pathology Aug 57

2338. GÓRZ-KARDASZEWICZ S. *Zmiany morfologiczne wierzchniej warstwy nabłonka jamy ustnej w przebiegu niedokrwistości Addisona Biermera. Morphological changes in the superficial epithelial layer in the buccal cavity in Addison-Biermer anaemia PATOL. POL. 1956, 7/4 (373-381) Graphs 1 Tables 1 Illus. 8

In 32 anaemic patients, 22 of whom were suffering from Addison-Biermer's disease, the upper layer of the buccal epithelium was examined several times. The smears were fixed in a mixture of absolute alcohol with ether, in the ratio of 50:50, and stained with haemotoxylin and eosin. The changes as compared with the normal pictures consisted in the appearance of cells with several (up to 9) nuclei, and having dimensions much greater than those of the epithelium cells; all cells (of various dimensions) showed an increase in diameter of their nuclei. After improvement of the blood picture of the patients, the epithelial cells returned nearly to normal.

Karlńska - Warsaw (V, 6*)

GORZ-KARDASZEWICZ, Stefania

Morphology of the oral mucosa in leukemias. Pol. med. wewnet. 32
no.7:857-860 '62.

1. Z I Kliniki Chorob Wewnętrznych Śląskiej AM Kierownik: prof. dr
med. J. Japa.

(LEUKEMIA) (MOUTH) (MUCOUS MEMBRANES)

GORZECHOWSKI, Maciej

The Polish Academy of Sciences taking part in preparations on the reformation of the educational system. Nauka Polska 9 no.3:233-238 '61.

1. Polska Akademia Nauk, Biuro Prezydialne.

GORZECHOWSKI, Maciej

Recent resolutions of the Scientific Secretariat, Polish Academy of Sciences concerning the training of educational personnel. Nauka Polska 9 no.3:239-248 '61.

1. Polska Akademia Nauk, Biuro Prezydialne.

GORZECHOWSKI, Maciej

Studies for the doctor degree at centres of the Polish Academy of Sciences during the year 1961. Nauka polska 10 no.2:183-189 '62.

1. ~~Polish~~ Akademia Nauk, Biuro Prezydialne, Warszawa

GORZECZOWSKI, Maciej

Charters of the scientific posts of the Polish Academy of Sciences
and establishment of new posts and scientific committees of the
Academy. Nauka polska 11 no.1:159-168 Ja-F '63.

1. Polska Akademia Nauk, Biuro Prezydialne, Warszawa.

GORZECZOWSKI, Maciej

Appointments of heads of the scientific centers of the Polish
Academy of Sciences. Nauka polska 11 no.2:170-174 Mr-Ap '63.

1. Biuro Prezydialne, Polska Akademia Nauk, Warszawa.

GORZECBOWSKI, Zdzislaw, inz.

Problems connected with the regulation and conservation of rivers on the territory of the Upper Silesian Industrial District. Gosp wodna 22 no. 3:89-92. Mr '62.

GORZELAK, E.

GORZELAK, E. Attempt at determining the labor productivity on privately owned peasant farms. P. 3.

No. 2, 1956

ZAGADNIENIA EKONOMIKI ROLNEJ

AGRICULTURE

Warszawa, Poland

So: East European Accession, Vol. 6, no. 3, March 1957

GORZELAK, E.: KOBYLINSKI, S.

Certain economic index numbers used for evaluation of the possible
increase of production in individual farms utilizing light soils.

p. 97 ZAGADNIENIA EKONOMIKI ROLNEJ. Warszawa. Vol 5, No. 1, Jan 1956

SOURCE: East European Accession List (EEAL) LC Vol 5, No. 3, March 1956

DRYL, Lucjan; GORZELAK, Eugeniusz; PRAZMOWSKI, Wladyslaw

A milk-borne epidemic of typhoid fever in Zgierz and Lodz in 1950.
Przegl. epidem. 15 no.1:33-40 '61.

1. Z Filii Panstwowego Zakladu Higieny w Lodzi Kierownik: dr
Wl. Prazmowski.
(TYPHOID epiemiol) (MILK microbiol.)

GORZELAK, M.

Is the Jaskolka Z a Commercial or a racing glider? p. 14.

SKRZELATA POLSKA. (Liga Lotnicza) Warszawa, Poland.
Vol.11, no.30, July 1955.

Monthly list of East European Accessions (EEAI) LC, Vol.9, no.1, Jan. 1959.

Uncl.

GORZEWA, Z.

SZYDŁOWSKI, S.; GORZEWA, Z.; GOSCICKI, J.; ROLICKA, M.

Studies on bacteriocidal properties on newly synthesised compounds
from the group of aromatic chloramines. Med. dozw. mikrob. 5 no.3:
310-311 1953. (CML 25:5)

1. Lodz.

ZABLOCKI, Bernard; SZYDLOWSKI, Stanislaw; GORZELAK, Zofia

Viscosity of solutions of hyaluronic acid and accelerating properties in blood sedimentation; standardisation of hyaluronic acid for determination of hyaluronidase titer. Med. dosw. mikrob. 6 no.2:151-160 1954.

1. Z Katedry Mikrobiologii Szczegolwej Uniwersytetu Lodskiego.

(BLOOD SEDIMENTATION,

*relation to viscosity of hyaluronic acid)

(HYALURONIC ACID,

*viscosity, relation to blood sedimentation)

PSTRAGOWSKA, Walentyna; GORZELAK, Zofia

Anti-pertussis vaccination of newborn infants. *Pediat. pol.*
38 no.7:619-626 J1 '63.

1. Z Kliniki Chorob Zakaznych Wieku Dzieciecego AM w Warszawie
Kierownik: prof. dr med. J. Bogdanowicz.
(PERTUSSIS VACCINE)

GORZEIANCZYK, B., inż. (Sopot)

Experimental quay wall tightening in Kuznica. Tech gosp morska
13 no.10:306-309 0 '63.

GORZELANY, W.

Conference on Chemistry and Technology of Chlorine and Chlorine
Compounds. Wiad chem 16 no.10:637-638 0 '62.

GORZELANY, W., doc. dr.

A Conference on the Chemistry and Technology of Chlorine and Chlorine
Compounds. Przem chem 41 no.1:8 Ja '62.

1. Politechnika, Szczecin.

GORZELANY, Wiktor, doc. dr

History of the unification of atomic scales. Wiad chem 17
no. 5: 289-302 My '63.

1. Kierownik Katedry Chemii Nieorganicznej, Politechnika,
Szczecin (for Gorzelany) * Katedra Chemii Nieorganicznej,
Politechnika, Szczecin, (for Osten).

JUSZKIEWICZ, T.; MADEJSKI, Z.; GORZELEWSKA, K.; GRUNDBOEXK, M. (Pulawy)

Studies on certain therapeutic and pharmacological properties of chlorpromazine hydrochloride in domestic animals. Rocznik nauki wet 70 no.1/4:114-115 '60. (HEAI 10:9)

(Domestic animals) (Chlorodimethylaminopropylphenathiazine)

MATOUSHEK, Iozef [Matousek, Josef]; CHUTA, Ya. [Guta, J.] tekhnicheskiy sotrudnik; GLAZROVA, Z. [Glasrova, Z.], tekhnicheskiy sotrudnik; GORZHAKOVA, I. [Horzakova, I.], tekhnicheskiy sotrudnik; MATOUSHKOVA, V. [Matouskova, V.]; tekhnicheskiy sotrudnik; SHAKHOVA, G. [Sachova, G.], tekhnicheskiy sotrudnik

Preparation of immune serums for determining the group antigens in the blood of red and white cattle. Zhur. ob. biol. 24 no.1:50-63 Ja-F'63 (MIRA 16:11)

1. Laboratoriya biologii razmnozheniya sel'skokhozyaystvennykh zhivotnykh Chekhoslovatskaya akademiya sel'skokhozyaystvennykh nauk, Lubekhov, Chekhoslovatskaya Sotsialisticheskaya Republika.

*

A A GORZHANOVA and L V CHURMANTEYEVA

"Methods for Chemical Analysis of Refractory Metal Carbides and Lanthanum and Cerium Borides" from Annotations of Works Completed in 1955 at the State Union Sci. Res. Inst. Min. of Radio Engineering Ind.

So: B-3,080,964

SMOLYARENKO, D.A.; MATYUSHINA, N.V.; KAPLAN, A.S.; GORZHEVSKAYA, A.V.;
Prinimali uchastiye: ULINSKAYA, Ye.I.; BARYSHEVA, I.V.; ROMAS,
F.D.. AVRUTSKAYA, R.F., red.izd-va; ISLENT'YEVA, P.G., tekhn.
red.

[List of specifications in effect for products of ferrous metallurgy] Perechen' deistvuushchikh tekhnicheskikh uslovii na produktainu chernoi metallurgii; po sostoianliu na 1 ianvaria 1959 g. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1959. 115 p. (MIRA 13:2)

1. Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. 2. Laboratoriya standartizatsii Tsentral'nogo nauchno-issledovatel'skogo instituta chernoy metallurgii (for Smolyarenko, Matyushina, Kaplan, Gorzhevskaya). 3. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut (for Ulinskaya). 4. Nauchno-issledovatel'skiy institut metiznoy promyshlennosti (for Barysheva). 5. Ukrainskiy institut metallov (for Romas).
(Iron--Specifications) (Steel--Specifications)

BALAKINA, I.A.; BOCHKAREVA, A.I.; GORZHEVSKAYA, A.V.; KAPLAN, A.S.;
SMOLYARENKO, D.A., kand. tekhn.nauk; TEREENT'YEV, Ye.A.; SOTS,
G.A.; TREMBITSKIY, Ya.V.; ULINSKAYA, Ye.I.; KHUTORSKAYA, Ye.S.,
red. izd-va; KLEYNMAN, M.R., tekhn. red.

[Technical specifications in effect on products of ferrous metal-
lurgy; list as of October 1, 1961] Deistvuiushchie tekhnicheskie
usloviia na produktsiiu chernoi metallurgii; perechen' po
sostoiianiiu na 1 oktiabria 1961 g. Moskva, Metallurgizdat,
1962. 141 p. (MIRA 15:5)

1. Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy
metallurgii.

(Iron industry--Tables and ready-reckoners)

(Steel industry--Tables and ready-reckoners)

ACC NR: AP6009132 EWT(d)/EWT(m)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(l)/EWA(h)/ETC(m)-6

IJP(c) JD/HW

SOURCE CODE: UR/0028/65/000/009/0063/0063

AUTHOR: Balakina, I. I.; Boshkareva, A. I.; Gorzhevskaya, A. V.

ORG: none

TITLE: Standard specifications for high-alloy steel ingots for pipe manufacture

SOURCE: Standartizatsiya, no. 9, 1965, 63

TOPIC TAGS: plasticity, steel, high alloy steel, hot rolling, pipe, solid mechanical property, metal heat treatment / OKh19N10T steel, Kh19N10T steel, OKh19N12T steel, Kh19N12T steel

ABSTRACT: The authors presented a general review of the new, revised standard specifications (ChMTU/TsNIICHM-1345-65) for high-alloy steel ingots used for pipe manufacture. The specifications were revised and adopted (some of them only tentatively) by the Central Scientific Research Institute of Ferrous Metallurgy and were intended to replace the previous standards ChMTU/TsNIICHM-700-62 and TU-752. It was specified that ingot diameters of 80 to 270 mm are to be used for seamless pipes. In this connection, it was mentioned that the Soviet metallurgical mills cannot produce high-alloy steel ingots greater than 200 mm. Chemical compositions of steels were specified in accordance with GOST-940-62, GOST-9941-62 and GOST-5632-61. In order to diminish the effect

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ACC NR: AP6009132

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of embrittlement at hot rolling, the alloy min. - max. percentages in certain steels were limited. Mechanical properties (tensile strength, etc.) of hot-rolled ingots were adopted in accordance with the standards for hot-rolled pipes without precisising however the conditions of heat treatment. The diameters of ingot samples used for macrostructure tests were extended up to 120 mm. Alpha-phase numbers must not exceed 2 for steels OKh18N10T, Kh18N10T, OKh18N12T and Kh18N12T. A number 2.5 is allowed only upon mutual agreement. It was recommended to test ingots for plasticity by using the method of hot torsion. Finish allowance for ingot surfaces was accepted in accordance with the GOST-2789-59 standards.

SUB CODE: 11/3 / SUBM DATE: None / ORIG REF: 000 OTH REF: 000

Card 2/2 MPT

GORZEVSKAYA, E. G.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1941
AUTHOR GORZEVSKAJA, E.G., PANOVA, N.M.
TITLE The Photoproduction of Slow Negative Pions on Complicated Nuclei.
PERIODICAL Dokl. Akad. Nauk 111, fasc. 6, 1205-1208 (1956)
Issued: 2 / 1957

The present work is intended as an investigation of the mechanism of this photoproduction. Above all it is intended to find out whether the photoproduction of mesons in complicated nuclei takes place on a single nucleon or whether this process is more complicated. Furthermore, data concerning the interaction between a slow meson and the trunk of the nucleus are sought.

The experiment: NIKFI photoemulsions of the type "P" were irradiated on the synchrotron of the Physical Institute of the Academy of Science by a photon bundle with $E_{\max} = 250$ MeV. As the photoemulsions were saturated with heavy water, it was thus possible at the same time to study the photoproduction of negative pions on deuterium. The carrying out of the experiment is discussed in short.

Measuring results: On an emulsion surface of 830 cm^2 , 262 mesons, which had come to a standstill in the emulsion, were discovered. Of these 75 and 163 were assigned to the production of negative pions on a light and on a heavy nucleus respectively. In 24 cases the nucleus, on which the meson was produced, could not be identified. The cross section of the production of negative pions with energies of up to 4 MeV on the light and heavy nuclei of the emulsion amounts (after the necessary corrections have been taken into account) to $(2,2 \pm 0,33) \cdot 10^{-29} \text{ cm}^2$ and $(8,8 \pm 0,9) \cdot 10^{-29} \text{ cm}^2$. A graph and a table illustrate

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PA - 1941

the distribution of stars according to the number of their beams; the traces of mesons and recoil nuclei are not counted on this occasion. A great part of two-beam stars and practically all stars with more than two beams belong to the light nuclei. In many cases only one proton is emitted on the occasion of the production of a slow negative pion. The angular distribution of these protons in the laboratory system has a marked maximum in the direction of the photon bundle and when photon energy was increased the maximum became even more marked.

Discussion of results: The angular distribution of the protons originating from heavy nuclei and from deuterium (in which negative pions with less than 10 MeV are produced) have the same character, but in the angular distribution of the protons originating from deuterium the maximum is more marked. This difference indicates a considerable influence exercised by the motion of the nucleons in the nucleus. At least in 30% of the cases investigated the photon produces a meson by interaction with one of the nucleons of the nucleus, on which occasion the momentum of the photon is transferred essentially to that nucleon on which the meson is produced. The results found here are a good illustration and proof of the single-nucleon model.

INSTITUTION: Physical Institute "P.N. LEBEDEV" of the Academy of Science in the USSR.

GORZHEVSKAYA, E.G.; POPOVA, V.M.; YAGUDINA, F.R.

Photoproduction of π^+ -mesons on hydrogen near the threshold.
Zhur. eksp. i teor. fiz. 38 no.1:276-278 Jan '60. (MIRA 14:9)

1. Fizicheskiy institut im. P.N.Lebedeva AN SSSR.
(Mesons) (Photonuclear reactions) (Hydrogen)

ADAMOVICH, M.I.; GORZHEVSKAYA, E.G.; POPOVA, V.M.; YAGUDINA, F.R.

Method for measuring the photoproduction cross section of
 π^+ -mesons on hydrogen near the threshold. Zhur. eksp. i teor.
fiz. 40 no.3:974-976 Mr '61. (MIRA 14:8)

1. Fizicheskiy institut im. P.N. Levedeva Akademii nauk SSSR.
(Mesons) (Ionization chamber) (Photonuclear reactions)

S/056/61/041/006/023/054
B102/B138

AUTHORS: Adamtvidh, M. I., Gorzhevskaya, E. G., Larionova, V. G.,
Panova, N. M., Popova, V. M., Kharlamov, S. F., Yagudina, F.R.

TITLE: The energy dependence of the photoproduction cross section of
 π^+ mesons on hydrogen near the threshold

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 41,
no. 6(12), 1961, 1811-1817

TEXT: The paper gives results of π^+ photoproduction cross section
measurements made in the photon energy range from 167 to 212 Mev at an
angle $\theta = \arccos(k - 0.93)/kq$, i. e. the angle in the c. m. s. at the
contribution of the non-physical region to the dispersion integral
vanishes. k denotes the photon momentum, 0.93 is its threshold, q and ω
are momentum and total energy of the pion, θ the angle of emission of the
meson; $\eta = c = \mu = 1$. The energy range was chosen so as to satisfy the
relation $k\omega - kq \cos \theta = 0.93$; it holds exactly for 195-Mev photons, for
167 and 212 Mev it is 0.88 and 0.99, which are both close to the threshold
value. The photon ray from the synchrotron of the FIAN with a maximum
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S/056/61/041/006/023/054
B102/B138

The energy dependence of the ...

energy of 250 Mev was collimated and directed on to the hydrogen target, a brass cylinder of 17 μ wall thickness, placed in a vacuum chamber. The detector was a stack of 50 layers of NIKFI BK-400 (NIKFI BK-400) emulsion plates. It was placed between two 2cm-thick emulsion blocks and fixed so that the mesons struck its end. The emulsions were evaluated as usual, by MBH-1 (MBI-1) microscopes. All π - μ decay events were selected. An area of 340 cm² yielded 3322 π - μ decays and 64 π^- decays. The differential photoproduction cross sections were plotted after applying corrections for energy loss, scattering meson decay and background (Fig. 3). The results are in good agreement with dispersion theory, where the imaginary part of the resonance amplitude is determined empirically. The experimental results were treated by the method of least squares to find the threshold value of the matrix element of π^+ photoproduction $\chi^{-1} d\sigma/d\Omega$ and its dependence on q^2 ;

$\chi = (q/k)(1+v/M)^{-2}$, M - nucleon mass. For $0.17 < q^2 < 0.74$

$$\frac{1}{\chi} \frac{d\sigma}{d\Omega} \left[10^{-20} \frac{\text{cm}^2}{\text{cmepad}} \right] = (1,90 \pm 0,15) - (0,34 \pm 0,22) q^2, \quad (5)$$

$$\frac{1}{\chi} \frac{d\sigma}{d\Omega} \left[10^{-20} \frac{\text{cm}^2}{\text{cmepad}} \right] = (2,39 \pm 0,21) - (2,87 \pm 0,93) q^2 + (2,80 \pm 1,0) q^4, \quad (6)$$

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The energy dependence of the ...

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was found. The threshold value was determined from power expansions of the squares of the matrix elements, $a_0 = (1.90 \pm 0.15) \cdot 10^{-29} \text{ cm}^2/\text{steradian}$, which is in good agreement with the theoretical value, $a_0 = 2.04 \cdot 10^{-29} \text{ cm}^2/\text{sterad}$. Experimentally, $\sigma^-/\sigma^+ = 1.34 \pm 0.11$ was found. Using the theoretical a_0 value, the calculated value is $\sigma^-/\sigma^+ = 1.28$. The pion photoproduction cross section as a function of the photoproduction amplitudes is given by

$$\frac{d\sigma/d\Omega}{\sigma} = (q/k) \{ |F_1|^2 + |F_2|^2 - 2\text{Re} F_1^* F_2 \cos \theta + \frac{1}{2} \sin^2 \theta [|F_3|^2 + |F_4|^2 + 2\text{Re} F_3^* F_4 + 2\text{Re} F_1^* F_4 + 2\text{Re} F_2^* F_4 \cos \theta] \} \quad (9)$$

with

$$\begin{aligned} F_1 &= \sqrt{2}F_{10} - \sqrt{2}F_{11} \cos \theta, & F_2 &= \sqrt{2}F_{20}, \\ F_3 &= \sqrt{2}F_{30} + \sqrt{2}F_{31}/(1 - \beta \cos \theta), & F_4 &= \sqrt{2}F_{41}/(1 - \beta \cos \theta); \end{aligned}$$

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The energy dependence of the ...

S/056/61/041/006/023/054
B102/B138

β denotes pion velocity. From experimental data for 15 and 165° in the c. m. s. the amplitudes were calculated for 185-Mev photons:

$$\begin{aligned} ((F_{10})_1 &= (1,81 \pm 0,034) \cdot 10^{-2}, & (F_{11} + F_{30})_1 &= -(0,105 \pm 0,034) \cdot 10^{-2}, \\ (F_{10})_2 &= -(1,81 \pm 0,034) \cdot 10^{-2}, & (F_{11} + F_{30})_2 &= (0,105 \pm 0,034) \cdot 10^{-2}. \end{aligned}$$

The authors thank Professor P. A. Cherenkov for help, A. M. Baldin and A. I. Lebedev for discussions and A. A. Svetlov, Engineer, for assistance. There are 5 figures, 2 tables, and 15 references: 3 Soviet and 12 non-Soviet. The four most recent references to English-language publications read as follows: J. Hamilton, W. S. Woolcock. Phys. Rev. 118, 291, 1960; N. P. Samios. Phys. Rev. Lett., 4, 470, 1960; M. Derrick et al. Phys. Rev. Lett., 5, 230, 1960; A. F. Dunaitsev et al. Proc. 1960 Ann. Intern. conf. on high energy physics at Rochester, Publ. Univ. Rochester 1961, p. 181.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR
(Physics Institute imeni P. N. Lebedev of the Academy of Sciences USSR)

SUBMITTED: July 31, 1961
Card 4/4

ADAMOVICH, M. I.; GOREZNEVSKAYA, E. G.; KHARLAMOV, S. P.; LARIONOVA, V. G.;
YAGUDINA, F. R. (14)

"Photoproduction of Positive Pions from Hydrogen near Threshold"

report presented at the 11th Intl. Conference on High Energy Physics,
Geneva, 4-11 July 1962

S/C56/62/043/003/057/063
B104/B102

AUTHORS: Adamovich, M. I., Gorzhevskaya, E. G., Yagudina, F. R.
TITLE: The production of π^+ -photomesons at angles of $25-36^\circ$ in the energy range 152-162 Mev
PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 3(9), 1962, 1113-1116

TEXT: This study was directed to establishing the differential photo-production cross section of π^+ -mesons when the momentum transfer $k\omega - kq \cos \theta$ is close to its threshold value of 0.93, k and q being respectively the momenta of photon and pion, and ω the total ion energy in the c.m.s. The mesons emitted by a thin polyethylene film at an angle of about 30° from the photon beam were examined by a method described previously (M. I. Adamovich et al., ZhETF, 40, 974, 1961). $E_{\gamma \max}$ was 175 Mev. All $\pi-\mu$ decay events were recorded. The ends of the pion and muon traces were established for checking. The results (Table) are in good agreement with the calculations. The threshold value of $(1/\chi)d\sigma/d\Omega$ is $(2.18 \pm 0.37) \cdot 10^{-29}$ cm²/sterad. The threshold value calculated from
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The production of π^+ -photomesons at...

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Panov's formula is $1.99 \cdot 10^{-29} \text{ cm}^2/\text{sterad}$. The mean values of $d\sigma/d\Omega$ and $(1/\chi)d\sigma/d\Omega$ agree well with the values for $k\omega - kq \cos \theta = 0.93$ as extrapolated from experimental data. There are 2 figures and 1 table.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR
(Physics Institute imeni P. N. Lebedev of the Academy of Sciences USSR)

SUBMITTED: July 3, 1962

Table. Results of measurements.

Legend: E_γ - mean photon energy, laboratory system;
 E_π - mean pion energy in the energy interval of the photons; M - proton mass;

$$\chi = (q/k)(1 + \omega/M)^2.$$

E_γ , MeV	E_π , MeV	q^*	$k\omega - kq \cos \theta$	$\frac{d\sigma}{d\Omega},$ $10^{29} \text{ cm}^2/\text{sterad}$	$\frac{1}{\chi} \frac{d\sigma}{d\Omega},$ $10^{29} \text{ cm}^2/\text{sterad}$
153,4	3,8	0,023	0,01	$0,32 \pm 0,054$	$2,70 \pm 0,46$
155,7	7,3	0,048	0,86	$0,39 \pm 0,070$	$2,26 \pm 0,41$
157,6	9,7	0,069	0,84	$0,43 \pm 0,077$	$2,12 \pm 0,38$
159,3	11,6	0,088	0,83	$0,40 \pm 0,076$	$1,77 \pm 0,34$
160,8	13,3	0,104	0,82	$0,39 \pm 0,097$	$1,59 \pm 0,40$

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GORZHEVSKAYA, S.A.

Varieties of Smithsonite. Min.sbor. no.5:324-329 '51. (MLRA 9:12)

1. Vsesoyuznyy institut mineral'noye syr'ya, Moskva.
(Smithsonite)

GORZHEVSKAYA, S. A.

Dissertation: "Application of Methods of Descriptive Mineralogy to the Investigation of Oxidized Ore, For Example, Certain Polymetallic Deposits." Cand Geol-Min Sci, Inst of Geological Sci, Acad Sci USSR, 8 May 54. (Vechernyaya Moskva, Moscow, 29 Apr 54)

SO: SUM 243, 19 Oct 1954

GORZHEVSKAYA, S.A.

GORZHEVSKAYA, S.A.

Development of hypogenic ore-forming process in the Nikolayevskoye deposit in the Altai Mountains. Trudy VAGT no.2:60-68 '56.

(MLRA 10:5)

(Altai Mountains--Ore deposits)

GORZHEVSKAYA, S.A.

Mineralogical characteristics of complex metal deposits in the Rudnyy
Altai. Trudy VAGT no.3:162-171 '57. (MIRA 11:3)
(Altai Mountains--Ore deposits)

GORZHEVSKAYA, S. A.

ГОРЗХЕВСКАЯ, С. А.

"Element-Impurities in Polymetal Deposits of the Rudnyy Altai";

report delivered in the Petrographic Section, 4 April to 7 June 1957.

Chronicle of the Activity of the Petrography Section, Byulleten' Moskovskogo
Obshchestva Ispytateley Prirody, Otdel Geologicheskoy, 1957, No. 6, pp. 118-122, 1957.

GORZHEVSKAYA, S. A.

AUTHOR: Gorzhevskaya S. A.

5-6-29/42

TITLE: Element -Impurities in Polymetal Deposits of the Rudnyy Altay (Elementy-primesi v polimetallicheskikh mestorozhdeniyakh Rudnogo Altaya)

PERIODICAL: Byulleten' Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskii, 1957, # 6, pp 142-143 (USSR)

ABSTRACT: Vol. 32
Altay ores are typical polymetal deposits of low-temperature stage which originated under hypabyssal conditions. This conclusion is confirmed by the presence in the Altay ores of Te, Se and Hg.

The investigations carried out as to distribution of element-impurities in the single-mineral fractions and ores of the Altay deposits indicate that many rare and scattered elements of the Altay polymetal ores may be of practical importance. These are As, Sb, Cd, Te and Se, and possibly also In, Tl, Ge and Hg. At the present time, the data available are not sufficient to determine the industrial value of these elements.

AVAILABLE: Library of Congress

Card 1/1

AUTHORS: Ginzburg, A. I., Gorzhevskaya, S. A. SOV/7-58-5-10/15
Yerofeyeva, Ye. A., Sidorenko, G. A.

TITLE: On the Chemical Composition of the Cubic Titanium-Tantalum
Niobates (O khimicheskom sostave kubicheskikh titano-tantalo-
niobatov)

PERIODICAL: Geokhimiya, 1958, Nr 5, pp 486 - 500 (USSR)

ABSTRACT: The specific properties of the so-called mineral group are
described in detail in the beginning; then the division into
the perovskite type (ABX_3) and pyrochlorine type ($A_2B_2X_7$)
is discussed. 22 chemical and x-ray analyses (Table 3) are
the basis of this paper. A number of analyses are plotted in
several diagrams of ternary systems: Nb - Ti - Ta (Fig 1);
A - B - X (Fig 5); Nb - Ti, Zr - Ta (Fig 6); Ca - TR - U - Th
(Fig 7). The dependence of the lattice constant on the TiO_2
content in the perovskite group (Fig 2) and in the pyrochlorine
group (Fig 3) is also shown. The result of the paper is a
classification of the mineral groups investigated (Table 2).
The empiric formulae of minerals greatly differ from the

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On the Chemical Composition of the Cubic Titanium-
Tantalum Niobates

SOV/7-58-5-10/15

theoretical formulae generally adopted for them. A deficiency of cations in the group "A" was found. In connection herewith the formula $A_{n-x} B_p X_q$ is proposed where x denotes the value determining the deficiency in the atomic numbers of the group "A". For the pyrochloric type the formula then reads $A_{2-x} B_2 X_7$, and for the perovskite type $A_{1-x} B X_3$, or $A_{2-x} B_2 X_6$. The atomic proportion of the cations of the group "A" in the cubic titanium-tantalum niobates ranges from 2,0 to 0,5, a definite dependence between the extent of the cation deficiency in the group "A" and the content of titanium, zirconium, uranium, thorium and water in minerals having been observed. The usual minerals with an increased cation deficiency in the group "A" are metamictic minerals. There are 9 figures, 3 tables, and 23 references, 15 of which are Soviet.

ASSOCIATION: Vsesoyuznyy institut mineral'nogo syr'ya, Moskva (All-Union Institute for Mineral Raw Materials, Moscow)

SUBMITTED: March 17, 1958
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On the Chemical Composition of the Cubic Titanium-
Tantalum Niobates

SOV/7-58-5-10/15

Card 3/3

GINZBURG, A.I.; GORZHEVSKAYA, S.A.; YEROFYEVA, Ye.A.; SIDORENKO, G.A.

Chemical composition of tetragonal titanium-tantalum-
niobates. *Geokhimiya* no.1:11-30 '60. (MIRA 13:6)
(Fergusonite)

S/081/62/000/010/028/085
B177/B144

AUTHORS: Ginzburg, A. I., Gorzhevskaya, S. A.

TITLE: Characteristics of titanium-tantalum-niobates

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 10, 1962, 108 - 109, abstract 10G61 (Sb. "Geol. mestorozhd. redk. elementov", no. 10, M., Gosgeoltekhizdat, 1960, 5 - 10)

TEXT: The composition of titanium-tantalum-niobates is conventionally represented by the formula $A_m B_p X_q$, where A and B combine cations of closely similar dimensions. In many of them, the group A cations are less strongly bound with oxygen than group B cations. Group A includes cations with large R_1 : Ca, Na, Y, TR, Th, U, and to a lesser extent K, Pb, Ba, Sr, Mn and others. Group B includes cations having relatively small R_1 : Ti, Nb, Ta, W and also Al, Si, P and others. For several titanium-tantalum-niobates, group A may usefully be subdivided into two sub-groups, A^1 and A^2 , whereof A^1 includes Ca, Na, U, Th, TR whilst A^2 includes Fe^{2+} .

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Characteristics of...

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Mn, Mg. In many cases a deficiency of cations exists in group A. In the minerals described, both isovalent and heterovalent substitutions are widely developed. It is observed that, as the ratio between atomic quantities of cations in group A and the atomic quantities of oxygen increases, the syngony of titanium-tantalum-niobates decreases. The variable composition of many minerals is governed by the different processes that change them, which mostly take place under hydrothermal conditions. Probably the processes of change are connected with the extraction of water and with the partial leaching of cations in group A besides others. [Abstracter's note: Complete translation.] ✓

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S/081/62/000/010/027/085
B177/B144

AUTHOR: Gorzhevskaya, S. A.
TITLE: Thermal investigations of titanium-tantalum-niobates
PERIODICAL: Referativnyy zhurnal. Khimiya, no. 10, 1962, 108, abstract 10G60 (Sb. "Geol. mestorozhd. redk. elementov", no. 10, M., Gosgeoltekhizdat, 1960, 32 - 41)

TEXT: Thermal analysis of titanium-tantalum-niobates makes it possible to trace the transition of these minerals from the metamict state to the crystalline as well as establishing the temperature of polymorphic conversions, and details of the oxidation processes that occur when the minerals are heated; also the character and temperature of water liberation. The thermal curves in the crystalline varieties may be related to the reactions of oxidation or liberation of water (both appearing as smooth bends). The metamict varieties are characterized by heating curves with conspicuous endothermal and exothermal effects. Exothermal reactions due to the transition from the metamict to the crystalline state, are observed over a narrow temperature range (400 - 800°). The sharpness of the peak testifies to the short duration of the transition. On reaching 7000c

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S/081/62/000/010/026/085
B177/M144

A
AUTHOR: *test*
Gorzhevskaya, S. A.

TITLE: The chemical composition of titanium-tantalum niobates

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 10, 1960, 108, abstract
10G59 (Sb. "Geol. mestorozhd. redk. elementov", no. 10, M.,
Gosgeoltekhizdat, 1960, 41 - 47)

TEXT: Results of conversions from collected chemical analyses are shown plotted in triangular diagrams to represent the interrelations between atomic quantities of groups A and B. These confirm the presence of a continuous isomorphic series between the Nb and Ta varieties of the same minerals and also the existence of a wide isomorphism between Nb and Ta, but continuous transitions from the Ti minerals to Ta are not established. A much close kinship is disclosed between Ta and Nb than between Ta and Ti. Minerals composed substantially of Ca are characterized by a relatively constant chemical composition. They are distinguished by a slight content of TR and by the appearance also of TR as the Ca content diminishes. Atomic quantities as high as 25% of Ca, and 20% atomic values

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of TR, are noted in the U varieties. All titanium-tantalum-niobates sub-
divide into several groups, according to the relationship of Ti and TR.
[Abstracter's note: Complete translation.]



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S/081/62/000/010/034/085
B177/B144AUTHORS: Sidorenko, G. A., Gorzhevskaya, S. A.

TITLE: Cubic titanium-tantalum-niobates. X-ray analysis.

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 10, 1962, 110, abstract
10G69 (Sb. "Geol. mestorozhd. redk. elementov", no. 10, M.,
Gosgeoltekhizdat, 1960, 64 - 71)

TEXT: Cubic titanium-tantalum-niobates crystallize in two structural types: perovskite and pyrochlore. Many minerals in the perovskite group are pseudo-cubic with a 7.64 - 7.68 kX. It is found that a regularly increases with increasing Nb content and with decreasing Ti content. This provides a possibility of determining the Nb content from the value of a. The effect of the dimensions of groups B and A cations on the dimensions of a unit cell is noted in the structural type of pyrochlore. An increased Ti content causes a reduction of a. In proportion to the substitution Nb ← Ti in group A, the following isomorphic substitutions occur: Ca and Na are replaced by TR, U and Th. The titanium-uranium-rare earths constitute minerals having elementary cells of reduced dimensions. The

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greatest cell dimensions are those typical of minerals in the tantalum and niobium series, which possess a more constant chemical composition (microclites and pyrochlores). With minerals having variable composition, containing Ti, U and TR, the dimensions of an elementary cell decrease. Minerals having a more constant chemical composition possess a crystalline structure, while those whose composition is complex are metamict. A definite relation exists between the chemical composition, structure and the state. [Abstracter's note: Complete translation.]

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S/081/62/000/010/030/085
B177/B144.

AUTHOR: Gorzhevskaya, S. A.

TITLE: Cubic titanium-tantalum niobates. Chemical composition

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 10, 1962, 109, abstract
10G64 (Sb. "Geol. mestorozhd. redk. elementov", no. 10, M.,
Gosgeoltekhizdat, 1960, 71 - 84)

TEXT: Cubic titanium-tantalum niobates are characterized by a complex and variable chemical composition. The minerals so described differ sharply as regards relationship between atomic quantities of group A and group X ions, with noticeably smaller variations of atomic quantities of group B cations. In minerals of the perovskite type a broad isomorphism is noted between Ti and Nb, with simultaneous replacement of Ca for TR, Na and Th in group A. A typical feature is the almost constant enrichment in Ti. Minerals of the pyrochlore type are characterized by their extremely inconstant chemical composition. Among them, minerals of the microlite group are distinguished by showing the least inconstancy and the lowest content of TR and U. In minerals having a variable composition, the additional constants characterizing the mineral varieties are
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Cubic titanium-tantalum...

the ratios $\text{CaO} : (\text{UO}_2 + \text{UO}_3)$ and $\text{Nb}_2\text{O}_5 : \text{Ta}_2\text{O}_5$. In accordance with these ratios, the mineral priazovite, described by Yurk, should be classed with blomstrandite. Three groups of minerals among the cubic titanium-niobates can be distinguished, according to their chemical composition, as varieties heavily enriched with Nb, Ti - Nb and varieties enriched with Ti. [Abstracter's note: Complete translation.]



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S/081/62/000/010/032/085
B177/B144

AUTHORS: Ginzburg, A. I., Gorzhevskaya, S. A.

TITLE: Cubic titanium-tantalum niobates. The composition of the rare-earth elements

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 10, 1962, 109, abstract 10066 (Sb. "Geol. mestorozhd. redk. elementov", no. 10, M., Gosgeoltekhizdat, 1960, 84 - 89)

TEXT: The minerals of the perovskite type related to ultrabasic alkaline intrusive complexes, are highly selective Ce minerals, though they also contain La, Nd, and some Sm. Pyrochlores from carbonatites, alkaline beds and their pegmatites possess a constant TR composition. There is a marked predominance in them of elements in the Ce group, with slight quantities of Gd and Dy. In pyrochlores from albitites, related to sub-alkaline granitoids, TR of the Y sub-group occur in slight quantities. In pyrochlore-type minerals encountered in granitic pegmatites, the TR content is very variable. A typical feature of them is the higher content of the middle members of the series TR - Sm, Gd, Dy, and sometimes Ce. [Abstracter's note: Complete translation.]
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S/081/62/000/010/031/085
B177/B144

AUTHOR: Gorzhevskaya, S. A.

TITLE: Conversions from the chemical analyses of cubic titanium-tantalum-niobates

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 10, 1962, 109, abstract 10G65 (Sb. "Geol. mestorozhd. redk. elementov", no. 10, M., Gosgeoltekhizdat, 1960, 100 - 107)

TEXT: The sum of the atomic quantities of groups A and B cations in cubic titanium-tantalum-niobates is calculated from the atomic quantities of elements therein. The quantity of cations in group B is known to vary only slightly, whereas that in group A is liable to extreme fluctuations. Atomic quantities of cations in group A vary from 2.0 to 0.5, i.e. the minerals are characterized by a certain deficiency of group-A cations. Minerals containing a considerable quantity of Ti and U are always characterized by a greater deficiency of group-A cations. Minerals with a considerable deficiency of group-A cations are always in a metamict state, whereas those having no such deficiency are usually crystalline.

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Conversions from the chemical...

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With a high deficiency of group-A cations, a high water content is also characteristic. A definite relation exists between this deficiency and the quantity of group X anions: $A_{2-z}B_2X_{7-z}$. A relation also exists between the deficiency and the quantity of water in the mineral (n). Its value is $n = z$ and $n = 2z$. The general formula for titanium-tantalum-niobates is $A_{2-z}B_2X_{7-z} \cdot nH_2O$. [Abstracter's note: Complete translation.]



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S/081/62/000/010/037/085
B177/B144

AUTHORS: Sidorenko, G. A., Gorzhevskaya, S. A.

TITLE: Tetragonal tantalum-niobates. X-ray structural analysis

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 10, 1962, 110, abstract
10G72 (Sb. "Geol. mestorozhd. redk. elementov", no. 10, M.,
Gosgeoltekhizdat, 1960, 129 - 136)

TEXT: Among all titanium-tantalum-niobates, the minerals which crystallize in tetragonal syngony belong to three structural types: fergusonite, rutile and tapiolite-mossite. Minerals of the fergusonite group are usually found in the metamict state. Tetragonal syngony of fergusonite (a , 5.15, c , 10.89 kX) has been established in a non-metamict specimen. It is isostructural with scheelite. Heating the mineral causes a reduction of syngony to monoclinic with parameters $a = 5.05$, $b = 10.89$, $c = 5.27$ kX, $\beta = 85^{\circ}30'$. The reduction of symmetry is possibly due to the ordering of Y and Nb ions. A natural monoclinic modification of fergusonite (a 5.12, b 10.89, c 5.20 kX, $\beta = 88^{\circ}10'$) was recently discovered among granites, in the highest-temperature mineral associations.

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S/081/62/000/010/036/085
B177/B144

AUTHOR: Gorzhevskaya, S. A.

TITLE: Tetragonal tantalum-niobates: their chemical composition and the conversion of their chemical analyses

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 10, 1962, 110, abstract 10G71 (Sb. "Geol. mestorozhd. redk. elementov", no. 10, M., Gosgeoltekhizdat, 1960, 140 - 144)

TEXT: Minerals of the fergusonite structural type belong by their chemical composition to the rare-earth tantalum-niobates having the general formula ABX_4 . By contrast with the cubic titanium-tantalum-niobates, the relation between group A and B cations and oxygen does not vary appreciably. All these minerals are substantially niobium-bearing; they contain Ti to 10 - 12% of atomic quantities. The Nb varieties are more widespread in nature than the Ta varieties. The existence of an almost continuous isomorphic series between $YNbO_4$ and $YTaO_4$ is noted. From the interrelation of the atomic quantities of Ca, TR, U + Th, it is

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established that all tetragonal tantalum-niobates are likewise rare earths, in which the TR elements predominate in group A (usually > 80%). The content of oxides of U and Th is very variable, fluctuating from 0.10 to 9.17% for U, and from traces to 6.8% for Th. Usually U > Th. Conversion of analyses of fergusonites leads to the following formula: (Y, Yb, Dy, Nd)(Nb, Ta, Ti)O₄. Spectral analysis always reveals the presence of Be and Ce; impurities include Al, Si, Zr, Fe, Mn, Mg and Pb; Sn is constantly present. [Abstracter's note: Complete translation.]

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B177/B144

A. I. Ginzburg
AUTHORS: Ginzburg, A. I., Gorzhevskaya, S. A.

TITLE: Tetragonal tantalum-niobates. Composition of rare-earth elements

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 10, 1962, 110, abstract 10G73 (Sb. "Geol. mestorozhd. redk. elementov". no. 10, M., Gosgeoltekhizdat, 1960, 144 - 152)

TEXT: Fergusonites are distinguished from other titanium-tantalum-niobates by their content of Y and TR Y sub-groups. The content of Y fluctuates from 40 to 70% of the entire TR content. Different genetic types of fergusonites are characterized by a specific TR composition. In some types of deposit, fergusonite is a substantially ytterbium-bearing mineral (unsubstituted granitic pegmatites); in others, dysprosium-ytterbium-bearing (accessory in granites); substantially dysprosium-bearing (quartz albitites connected with granosienites); cerium-dysprosium-bearing (alkaline pegmatites); neodymium-dysprosium-bearing (albitised alkaline beds and albitised granitic pegmatites). The ratios in

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fergusonites $\Sigma Y : \Sigma Ce, Yb : Dy$, and $Ce : Nd$ may be regarded as indicative, enabling one to judge the relation of fergusonites to various intrusive beds and to different genetic types of deposits. [Abstracter's note: Complete translation.]

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GINZBURG, A.I.; GORZHEVSKAYA, S.A.; YEROFEYEVA, Ye.A.; SIDORENKO, G.A.;
MALYSHEV, I.I., red.; POLYAKOV, M.V., red.; RODIONOV, G.G., red.;
STEPANOV, I.S., red.; TROKHACHEV, P.A., red.; FAGUTOV, V.P., red.;
KHRUSHCHOV, N.A., red.; CHERNOSVITOV, Yu.L., red.; SHMANENKOV, I.V.,
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Phase composition of ignition products of minerals
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GINZBURG, A.I., glavnyy red.; POLYAKOV, M.V., zamentitel' glavnogo
red.; APHEL'TSIN, F.R., red.; GRIGOR'YEV, V.M., red.; RODIONOV, G.G.,
red.; STEPANOV, I.S., red.; TROKHACHEV, P.A., red.; FAGUTOV, V.P.,
red.; CHERNOSVITOV, Yu.L., red.; SHMANENKOV, I.V., red.; SHCHERBINA,
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Submitted March 17, 1964.

GORZHEVSKIY, D. I.

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Gorzhevskiy, D. I.

USSR/Geology

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Pub. 22 - 39/52

Authors :

Gorzhevskiy, D. I.

Title :

The geological history of Rudnyi Altay in the Paleozoic era

Periodical :

Dok. AN SSSR 101/4,731-733, Apr 1, 1955

Abstract :

The basic traits are presented on the geological structure and geological history of the area known as Rudnyi Altay formed during the middle Paleozoic era. Six USSR references (1936-1953).

Institution :

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Presented by :

Academician N. S. Shatskiy, December 14, 1954