

P/036/61/000/012/002/002  
D002/D101

Mechanical properties ....

silicon content of not more than 0.15%, and an iron-to-silicon ratio of more than 1 and less than or equal to 1.5. The tensile strength of weld joints is 5 - 10% less than that of base material. It is suggested that the Instytut Metali Lekkich (Institute of Light Metals) ensure the supply of proper alloys. There are 6 tables and 7 figures.

ASSOCIATION: Instytut Spawalnictwa (Institute of Welding)

Card 2/2

BRYŚ, Stanisław, mgr., inż.

Mechanical properties of "TIG" welds on hydronalium. Przegł spaw 13  
no.12:312-319 '61.

1. Instytut Spawalnictwa, Gliwice.

I. I. BRYSHNIKOV

✓ The action of some derivatives of phenamine on the central nervous system. I. I. Bryshnikov (S. M. Kirov Military Med. Acad., Leningrad). *Fiziol. Zhur. S.S.S.R.* 41, 680-5 (1955).—In the series PhCH<sub>2</sub>CHMeNH<sub>2</sub>, PhCHMeCHMeNH<sub>2</sub>, PhCHPrCHMeNH<sub>2</sub>, PhCHBuCHMeNH<sub>2</sub>, and Ph<sub>2</sub>CHCHMeNH<sub>2</sub>, administered to cats, the substituted derivs. show less hypertensive effect than the unsubstituted compd; if the substituent is Pr or greater, the sympathomimetic properties are absent. The Ph deriv. has appreciable antinarcotic activity which is greater than that of the alkyl derivs. G. M. Kosolapoff

62

BRYSIEWICZ, Karol; DOWGIRD, Adam

Pneumonectomy with vital indications in pregnant woman with tuberculosis. Gruzlica 25 no.1:51-55 Jan 57.

1. Z Kliniki Gruźlicy Płuc Akademii Medycznej w Białymstoku  
Kierownik: prof. dr. T. Jankowski. Adres: Białystok, ul. Piwna  
16.

(TUBERCULOSIS, PULMONARY, in pregn.  
surg., pneumonectomy (Pol))

(PREGNANCY, in var. dis.  
tuberc., pulm., surg., pneumonectomy, indic. (Pol))

BRYVIN, A.; UL'YANKIN, I.

Tractors

Setting up windmills with the aid of tractors. Kolkh. proizv. 12 No. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 195~~3~~<sup>2</sup>, Uncl.

BRY SIN. A.

"Hole digger." Kolkh. proizv. 12, No 4, 1952.

BRY SIN, A., and MANIN, K.

Tractor-drawn scraper for leveling the surface of irrigated fields.  
Tekhsov. MTS 13, No 29, 1952.

B. REBIN, A. H.

1/5  
741.2  
.29

Sel'skiye izobretateli; sbornik ratsionalizatorskikh predlozheniy  
(Agricultural inventors; a collection of inventions) Rostov-na-Donu,  
Rostovskoye Knizhnoye izd-vo, 1954.  
109 p. diagrs.



*BRYVIN, A.N.*

BRYVIN, A.N.; SAPOZHNIKOV, M.B., red.; GLOTOVA, M.I., tekhn.red.

[Rural inventors] Sel'skie izobretnateli; sbornik ratsionalizator-  
skikh predlozhenii. Sost. i opisal A.N.Bryvin. Rostov-na-Donu,  
Rostovskoe knizhnoe izd-vo, 1954, 109 p. (MIRA 11:2)  
(Agricultural machinery)

BRY SIN, A.N.

Mechanizing the heating of water and the removal of silage from the  
silo. Zhivotnovodstvo 20 no.4:77-79 Ap '58. (MIRA 11:3)

1. Glavnyy inzhener - inspektor Tsentral'noy zony Rostovskogo obl'sel'-  
khozupravleniya.

(Farm equipment)

BRYVIN, A.N., inzh. (Rostovskaya oblast').

Initiative of local efficiency promoters. Zhivotnovodstvo 20 no.6:  
34 Je '58. (MIRA 11:6)

(Harvesting machinery)

AUTHOR: Brysin, N.A., Engineer;

28-58-3-34/39

TITLE: The Needs of a Base Department of Standardization and Normalization. (Nuzhdy bazovogo otdela standartizatsii i normalizatsii)

PERIODICAL: Standartizatsiya, 1958, Nr 3, pp 85-86 (USSR)

ABSTRACT: The author describes the plight of the Otravlevoy bazovyy otdel standartizatsii i normalizatsii tyazh'elogo dizelestroyeniya (Branch Base-Department of Standardization and Normalization in Heavy Diesel-Building) which was organized two years ago at the Kolomna Plant imeni Kuybyshev. The plant administrators transferred 4 engineers from the Chief Designer's Bureau to the subject new department into the work-rate control section, i.e. placed the staff of four designers into this office which had no reference to standardization. This other office is still in a crowded room which handicaps the designers. The author asks why it was necessary to move the four designers out of the designing office, saying that other plants and organizations keep out of the standardization work. He mentions the example of the Leningradskiy zavod imeni Kirova (Leningrad Plant imeni Kirov) where the normalization and unification for the branch of turbine building is included into the work plan of the plant's Designing Department. He says that the Base Department of Standardization

Card 1/2

28.58.3-34/39

The Needs of a Base Department of Standardization and Normalization

and Normalization of Heavy Diesel Building needs practical help from the Directors of the Plant imeni Kuybyshev, the Moscow Oblast' Sovnarkhoz and the Committee of Standards, Measures and Measuring Devices.

ASSOCIATION: Kolomenskiy zavod imeni V.V. Kuybysheva (Kolomna Plant imeni V.V. Kuybyshev)

Card 2/2

1. Standardization

BRYGIN, S.F., aspirant

Over-all mechanization of operations in ice plants. Trudy  
KHIIT no.34:101-106 '59. (MIRA 13:1)  
(Refrigerator cars)

PASTERNAK, N.I. (Andizhanskaya oblast'); BRYVIN, V.G. (Andizhanskaya oblast')

Pollen allergy in animals. Veterinariia 42 no.7:68-69 JI '65.  
(MIRA 18:9)

83703

17-4312

15-8107 also 2209

S/190/60/002/006/008/012  
B015/B064

AUTHORS: Fedotova, O. Ya., Losev, I. P., Brysin, Yu. P.,  
Pugachevskaya, N. F.

TITLE: Synthesis and Investigation of Aromatic Polyamides

PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960. Vol. 2, No. 6,  
pp. 899-903

TEXT: Aromatic cycles in the molecule of polyamides are known to increase strength, hardness, and heat resistance. In this connection it was tried to synthesize polyamides with a maximum number of aromatic cycles in the molecule. For this purpose diamines of the benzidine- and diamino diphenyl methane series and the dimethylterephthalate were used. The use of the latter is of interest since the aromatic cycle in this ester lies in the same plane as that of the diamines used, i.e., of benzidine, toluidine, 4,4'-diaminodiphenyl methane and 4,4'-diamino-3,3'-dimethyl diphenyl methane. By slowly heating the diamine melt with dimethylterephthalate in two steps (1) to 190-200°C in the inert gas current at normal pressure, and 2) at a residual pressure of 2-3 mm

Card 1/2



Synthesis and Investigation of Aromatic  
Polyamides

83703  
S/190/60/002/006/008/012  
B015/B064

under temperature increase) it was possible to produce some new polyamides: polydiphenyl terephthalamide, poly-3,3'-dimethyl diphenylterephthalamide, polydiphenyl methaneterephthalamide, and poly-3,3'-dimethyl diphenyl methaneterephthalamide. The polyamides have a linear structure, the one mentioned before the last is amorphous, the others crystalline. They have a high mechanical strength (according to Brinell 17-25 kg/mm<sup>2</sup>), their melting point lies between 380°-500°C, and the values of the dependence of deformation on temperature (Fig. 3), determined with the Zhurkov device show a thermal stability of 200°-500°C. The molecular weight, that was viscosimetrically determined, amounts to 10000-14000. The polymers are not soluble in ordinary solvents, apart from trisresol and sulfuric acid. The individual data, structural formulas, and the production technique are given. There are 3 figures and 4 Soviet references. X

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskii institut im.  
D. I. Mendel'ev (Moscow Institute of Chemical Technology  
imeni D. I. Mendel'ev)

SUBMITTED: February 24, 1960

Card 2/2

FEDOTOVA, O.Ya.; BRYINA, S.P.

Synthesis and study of unsaturated polyamides. *Vysokom.soced.* 2  
no.6:875-878 Je '60. (MIRA 13:6)

1. Moskovskiy khimiko-tekhnologicheskij institut imeni D.I.Mendele-  
yeva.

(Polyamides)

BRYSKIN, YU. E.

4

Wettable DDT and hexachlorocyclohexane powders.  
S. P. Bezugly, B. A. Akimov, V. Ya. Moinot, and Yu. E.  
Bryskin, U.S.S.R. 105,559, July 25, 1957. To obtain  
insecticide powders which form stable suspensions, the in-  
secticide is ground in the presence of 5% sulfite liquor al-  
lees. To prevent caking of the finely ground powders, to the  
mass being ground is added 5% of a surface-active substance  
such as phenyl ethers of polyethylene glycol, sulfonates, sul-  
fonated high-mol. alcoh., or Na alkyl-naphthalene sulfonates  
are used. Techn. DDT, tech. or enriched hexachlorocyclo-  
hexane contg. not less than 23% of the  $\gamma$ -isomer, its tech.  
 $\gamma$ -isomer, or a mixt. of DDT with hexachlorocyclohexane is  
used as the insecticide. M. Hosh

BEZUGLIY, S.F.; AKIMOV, B.A.; MOMOT, V.Ya.; BRYSKIN, Yu.Ye.

Wetting powders of DDT (30 per cent) and principles of their production. [Trudy] NIUIF no.165:9-14 '59. (MIRA 13:8)

1. Predpriyatiye khimicheskoy promyshlennosti (for Momot, Bryskin).
2. Nauchnyy institut po udobreniyam i insektofungitsidam im. Ya.V. Samoylova (for Bezuglyy, Akimov).  
(DDT (Insecticide))

AL'BITSKAYA, V.M.; BRYSKOVSKAYA, A.V.

Chemistry of organic  $\alpha$ -oxides. Part 24: Reaction of unsaturated  
 $\alpha$ -oxides with acetylide and sodium vinylacetylide. Zhur.org.khim.  
1 no.3:429-433 Mr '65. (MIRA 18:4)

1. Leningradskiy tekhnologicheskii institut im. Lensoвета.

*BRYSENEVA L.A.*

B-5

USSR/Physical Chemistry - Crystals

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 3591

Author : Zhdanov V.A., Brysneva L.A.  
Inst : Sibirian Physico-Technological Institute at Tomsk  
University

Title : Contribution to the Theory of Crystal Lattices of  $\text{Cu}_3\text{N}$ ,  
 $\text{Cu}_2\text{O}$  and  $\text{CuF}$  type.

Orig Pub : Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te, 1955,  
No 34, 255-271.

Abstract : Investigated were the mechanical characteristics and the conditions of existence of lattices of the types  $\text{Cu}_3\text{N}$  (I),  $\text{Cu}_2\text{O}$  (II) and  $\text{CuF}$  (III). The structures under study are a part of that series of structures which is derived from cubic, face-centered, lattice by successive filling of its octahedral and tetrahedral voids (interpoints). They appertain to binary systems of  $\text{A}_p\text{B}_q$  type, wherein A are particles located at cubic, face-centered lattice

Card 1/3

- 31 -

USSR/Physical Chemistry - Crystals

B-5

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 3591

points, and B are particles at its interpoints. The instance is considered, when lattice particles are bound by non-ionic forces and effective energy of their interaction is  $\psi_{kk} = [n_m \psi_{kk}^0 / (n-m)] [-(\psi_{kk}^0 / r_{kk}^0)^m + (\psi_{kk}^0 / r_{kk}^0)^n]$ , wherein  $r_{kk}^0$  is distance between particles,  $n, m, \psi_{kk}^0$  and  $r_{kk}^0$  are parameters. It is assumed that  $r_{BB}^0 = \alpha r_{AA}^0$  and  $r_{AB}^0 = r_{AA}^0 (1 + \alpha) / 2$ , where the parameter  $\alpha$  reflects the "geometrical" differences between A and B.

Stability of all lattices depends practically only upon  $\alpha$  and  $\gamma_2 = \psi_{AB}^0 / \psi_{AA}^0$ . Region of stability of I is fairly wide and narrows only with  $\alpha \approx 1$ , when I is stable only with small values of  $\gamma_2$ . Stability of I is retained also when the lattice degenerates into a face-centered defective lattice. Conditions of existence of II are more exacting, and those of III are so much more

Card 2/3

- 32 -

USSR/Physical Chemistry - Crystals

B-5

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 3591

so that it is doubtful that they ever exist in real lattices. For the existence of III a type of bonding is needed between particles, that differs from the one assumed in the calculations. Apparently ionic bondage must be taken into account.

Card 3/3

- 33 -



ZHDANOV, V.A.; BRYSENEVA, L.A.

Theory of the structure of binary crystals of the wurtzite type.  
Izv.vys.ucheb.zav.; fiz. no.3:95-102 '61. (MIRA 14:8)

1. Sibirskiy fiziko-tehnicheskii Institut pri Tomskom  
gosudarstvennom universitete im. V.V.Kuybysheva.  
(Crystal lattices) (Wurtzite)

BRYNEVA, L.A.

Theory of elasticity moduli of wurtzite type crystals. Izv.  
vys. ucheb. zav.; fiz. no. 3:174-175 '64. (MIRA 17:9)

1. Sibirskiy fiziko-tehnicheskii institut pri Tomskom gosudarstvennom  
universitete imeni Kuybysheva.

ZHDANOV, V.A.; BRYSENEVA, L.A.

Moduli of elasticity in crystals having a sphalerite or  
wurtzite structure. Kristallografiia 6 no.4:639-641 JI-Ag '61.  
(MIRA 14:8)

1. Sibirskiy fiziko-tekhnicheskii institut pri Tomskom gosudarstvennom  
universitete imeni V.V.Kuybysheva.  
(Sphalerite) (Wurtzite) (Crystal lattices)

ZHDANOV, V.A.; BRYSENEVA, L.A.

Elasticity moduli for crystals of the wurtzite type. Izv. vys.  
ucheb. zav.; fiz no.6:95-103 '61. (MIRA 15:1)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni Kuybysheva.  
(Elasticity) (Wurtzite)

BRYSOV, N.S.

Effect of growth-promoting substances on tomato yields in green-  
houses. Sbor. bot. rab. Bel. otd. VBO no.2:178-181 '60.  
(MIRA 15:1)

(Growth-promoting substances) (Tomatoes)

BRYSOV, N.S.

Age and time of transplantation of cucumber seedlings outdoors.  
Bot.; issl. Bel. otd. VBO no.5:164-167 '63. (MIRA 17:5)

BRYSOV, N.S.

Effect of trace elements on flax yield. Bot.; issl. Bel. otd. VBO  
no. 7:210-212 '65. (MIRA 18:12)

GUSACHENKO, Ye.P.; BRYSOV, P.I.; LIBENZON, A.S.; MILEYKO, B.L.

"Technical production standards in the rubber industry" by I.I.  
Zaitsev, A.V. Myshkis. Reviewed by E.P. Gusachenko and others.  
Kauch.i rez. 21 no.8:62-64 Ag '62. (MIRA 16:5)  
(Rubber industry--Production standards)  
(Zaitsev, I.I.): (Myshkis, A.V.)



BRYSOV, P.I.; MILEYKO, B.L.

Individual reports of the workday made by all the workers  
at the Kursk Rubber Goods Factory. Kauch.i rez. 21 no.9:47-48  
S '62. (MIRA 15:11)

1. Kurskiy zavod rezino-tekhnicheskikh izdeliy.  
(Kursk--Rubber industry)  
(Labor productivity)

BRYSOV, V.

In the State Committee on Ferrous and Nonferrous Metallurgy  
Attached to the State Planning Commission. Koks i khim. no.2:58  
'64. (MIRA 17:4)

1. Gosudarstvennyy komitet po chernoy i tsvetnoy metallurgii  
pri Gosplane SSSR.

BRYSOV, V.I.

Committee on ferrous and nonferrous metallurgy in the State  
Planning Commission of the U.S.S.R. Ogneupory 28 no.12:  
536-537 '63. (MIRA 16:12)

BRYSOV, V.

Organization of the Scientific and Technical Council of the Committee  
on Ferrous and Nonferrous Metallurgy in the State Planning Commission.  
TSvet. met. 36 no.12:81 D '63. (MIRA 17:2)

BRYSOV, V.I.

In the State Committee for ferrous and non-ferrous metallurgy  
under the State Planning Commission of the U.S.S.R. Met. i  
gornorud. prom. no.1:75 Ja-F '64. (MIRA 17:10)

ZINOV'YEV, A.S.; KOVALENKO, V.L.; MOLODYKH, D.N.; BRYSOVA, L.I.

False aneurysm of the aorta in pulmonary tuberculosis. Probl.  
tub. 42 no.10:83-84 '64. (MIRA 18:11)

1. Kafedra patologicheskoy anatomii (zav.- prof. I.S. Novitskiy)  
Omskogo meditsinskogo instituta.

BRYSOVA, L. P.

"The Forest Characteristics of Urdia Sands." Cand Biol Sci, Moscow  
State U, Moscow, 1953. (RZhBiol, No 1, Sep 54)

SO: Sum 432, 20 Mar 55

BRYSOVA, L.P. & GAYEL, A.G.

Materials on the evaluation of moisture in the sandy soils of  
pine strip forests in the Irtysh Valley. Vest. Mosk. un. Ser.  
6: Biol., pochv. 17 no.1:65-74 Ja-F '62. (MIRA 15:1)

1. Institut lesa AN SSSR.  
(Irtysh Valley--Pine)  
(Soil moisture)



IL'INSKAYA, S.A.; BRYSOVA, L.P.; P'YAVCHENKO, N.I., otv.red.

[Forests in the Zeya area of the Amur Valley] Lesa  
Zeiskogo Priamur'ia. Moskva, Nauka, 1965. 208 p.  
(MIRA 18:11)

ZYAIN, N.G.; BELITSINA, G.D.; BRYSOVA, N.P.

Concentration of trace elements of the iron family in some soils  
of the U.S.S.R. Vest. Mosk. un. Ser. 6: Biol., pochv. 16 no.5:  
59-71 s-0 '61. (MIRA 14:10)

1. Kafedra pochvovedeniya Moskovskogo gosudarstvennogo universiteta.  
(TRACE ELEMENTS) (MINERALS IN SOIL)

YUR'YEV, Yu.K.; MAGDESIYEVA, N.N.; BRYSOVA, V.P.

Chemistry of selenophene. Part 47: Synthesis and alkylation of  
 $\beta$ -diketones of the selenophene series. Zhur. ob. khim. 33  
no.8:2578-2581 Ag. '63. (MIRA 16:11)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

BRYSTROV, V.F.; KOSTYANOVSKIY, R.G.; PAN'SHIN, O.A.; STEPANYANTS, A.U.;  
UZHAKOVA, O.A.

Three-membered rings. Part 1. Opt. i spektr. 19 no.2:  
217-228 Ag '65. (MIRA 18:8)

BRYSZ, Adam, (Lodz, ul. Piotrkowska 228 m. 4.)

Leptomeningitis of the base of the brain simulating intracranial tumor. Neur. &c. polska 7 no.1:53-78 Jan-Feb 57.

1. Z Kliniki Neurochirurgii A. M. w Lodzi. Kierownik: prof. dr. med. L. Stepien.

(MENINGITIS, differential diagnosis,  
leptomeningitis, from brain tumor (Pol))  
(BRAIN NEOPLASMS, differential diagnosis,  
leptomeningitis (Pol))

BRYSZEWSKI, J.

Establishing new land evidence. p. 293,  
Vol 11, no. 9, Sept, 1955. PRZEGLAD GEODEZYJNY. Warsaw, Poland

So: Eastern European Accession. Vol 5, no. 4, April 1956

BRYSZEWski, J.

Keeping accounts of land control. p. 7.  
Vol 12, no. 1, Jan 1956. PRZEGLAD GEODEZYJNY, Warsaw, Poland.

So: Eastern European Accession. Vol 5, no. 4, April 1956

BRYSZEWski, J.

BRYSZEWski, J. Inventory and classification of geodetic documents. P. 456..  
Vol. 12, no. 12, Dec. 1956. PRZEGLAD GEODEZYJNY.  
Warszawa, Poland.

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4--April 1957



BRYZEWski, J.

(9)

Warsaw, Prace Geograficzne, Vol. 33, No. 9, September 1961

1. "Land Registry and its Importance for the National Economy," Prace Instytutu Geograficznego pp 224-225.
2. "Problems of the New Land Registry," Prace Instytutu Geograficznego pp 225-229.
3. "Technical Problems in Establishing and Keeping Out Land Registry," Prace Instytutu Geograficznego pp 230-232.
4. "An Air Survey with Greater Forward Overlap Instead of Forward Vision Survey," Prace Instytutu Geograficznego pp 232-235.
5. "Technical Underground Installations, Part II," Prace Instytutu Geograficznego pp 315-340.
6. "The Use of Old Geometrical Plans on the Territory of the Silesian Coal Basin," Prace Instytutu Geograficznego and Prace Instytutu Geograficznego pp 340-341.
7. "Estimating the Quality of Geodetic Work," Prace Instytutu Geograficznego pp 341-342.

BRYCZEWSKI, Jozef, mgr., inz.

Problems connected with the new land register. Przegl geod 33 no.9:  
325-329 '61.

BRYSZEWSKI, Jozef

Poland

Magister Inzynier

Member of Programming Council of Przeglad Geodezyiny

Warsaw, Przeglad Geodezyiny, Vol 34, No 11, Nov  
1962, pp 468-69.

"Actualization of Land Inventory in Czechoslovakia".

BYSZEWSKI, Jozef, mgr inz.

Actualization of the cadastre in Czechoslovakia. Przegl geod 34  
no.11:468-469 N '62.

BYSZEWSKI, Jozef, mgr inz.

Land recording as evidence of real property rights. Przegł  
geod 36 no.10:395-398 0 '64.

S/048/63/027/003/025/025  
B106/B238

AUTHORS: Lukirskiy, A. P., Brytov, I. A., and Yershov, O. A.

TITLE: Proportional counter tube for soft X-rays

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya,  
v. 27, no. 3, 1963, 446-451

TEXT: The authors studied possible uses for a flow proportional counter they had described previously (Ref. 3: Izv. AN SSSR. Ser. fiz., 27, no. 6 (1963)). One drawback to this counter tube was the long preparation time before filling. A much simpler filling process using a thicker, stronger terylene. The gas mixture flows from the reservoir where it is stored under pressure past a needle valve into the counter tube. The gas issuing from the counter passes through an oil trap and escapes into the air. A calcium purifier connected to the pressure reservoir is heated to 250 - 300° C during operation. The mixture is made up of argon and methane. It takes 45 - 60 min after the needle valve has been

Card 1/3

S/048/63/027/003/025/025  
B106/B238

Proportional counter ...

opened until the characteristics of the counter tube reach steady values. The apparatus is then practically ready for use. This simple, reliable filling process is recommended for flow proportional counters in general. The characteristics of the tube remain constant for a flow rate of 1 bubble per 1 - 3 sec in the oil trap. 1 bubble per second corresponds to a gas consumption of about 50 ccl per hr. The gas reservoir lasts about 200 hours. The counter tube can be used to record radiation between 1.54 and 13.3 Å. The maximum gas amplification, which is within the range where the resolution is proportional to the voltage, depends on the counting rate. The limit of the proportionality range is the product  $ANC_Z$ , where A is the gas amplification factor, N the primary ionization, and  $C_Z$  the counting rate. The maximum value of the product is estimated at  $5 \cdot 10^9$ . The "plateau" reaches up to 220 v and is practically level (observed with the broad window from Ref. 3). Increasing the area of the window to 1 mm did not decrease the resolution of the counter tube. For

Card 2/3

S/048/63/027/003/025/025  
B106/B238

Proportional counter ...

soft rays with wavelengths up to c. 20 Å, the terylene window is replaced by a more transmissive window made of cellulose nitro acetate, and a lower internal pressure is recommended. The operational range of the counter tube can probably be extended by using a thinner terylene window. There are 7 figures.

ASSOCIATION: Fizicheskiy fakul'tet Leningradskogo gos. universiteta im. A. A. Zhdanova (Physics Branch of Leningrad State University imeni A. A. Zhdanov)  
Spetsial'noye konstruktorskoye byuro rentgenovskoy apparatury (Special Design Office for X-ray Apparatus)

Card 3/3



L 9834-63  
Pr-4--RM/WW/MAY

EWA(h)/EPF(c)/EWT(1)/EWT(m)/BDS--AFFTC/ASD/ESD-3/AFWL/AFCL-2--

ACCESSION NR: AP3001360

S/0048/63/027/006/0806/0816

AUTHOR: Lukirskiy, A. P.; Yershov, O. A.; Bry\*<sup>9</sup>tov, I. A.

73  
70

TITLE: Operation of proportional counters in the ultrasoft x-ray region [Report of the Sixth Conference on X-Ray Spectroscopy held in Odessa from 2 to 16 July 1962]

SOURCE: AN SSSR. Izv. Seriya fizicheskaya, v. 27, no. 6, 1963, 806-816

TOPIC TAGS: proportional counters, x-ray detectors

ABSTRACT: A proportional counter was used for the first time for detecting ultrasoft x-radiation in 1960 by J. E. Holliday (Rev. Sci. Instr., 31, 891, 1960 and Philos. Mag., 6, 801, 1961); the counter had an appreciable background and its operation was not studied. The purpose of the present work was to investigate proportional counters as detectors of ultrasoft x-rays and to evaluate their potentialities for this purpose. The test set-up consisted of the proportional counter, a power supply, a preamplifier, a main amplifier, an integral

Card 1/2

L 9834-63  
ACCESSION NR: AP3001360

3

discriminator, a differential discriminator and two recorders, as well as an oscillograph. The counter was a cylindrical one with provision for metered gas admission. The gases used were pure methane (and argon-methane mixtures. Pulse height distributions for different wavelengths were determined (typical curves are reproduced). In tests of the proportional counter as a radiation detector the intrinsic background of the counter did not exceed 10 pulses per min. It is concluded that proportional counters filled with methane or argon-methane can be used as detectors of x-rays at counting rates of up to tens of thousands of pulses per second. Some design recommendations are given. Orig. art. has: 16 equations, 10 figures and 3 tables.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova, Spetsial'noye konstruktorskoye by rentgenovskoy apparatury\* (Leningrad State University; Special X-Ray Apparatus Design Bureau)

SUBMITTED: 00      DATE ACQ: 01Jul63      ENCL: 00  
SUB CODE: PH,SD      NR REF SOV: 003      OTHER: 013

ja/ee  
Card 2/2

ACCESSION NR: AP1011735

S/0181/64/006/001/0013/0053

AUTHORS: Lukirskiy, A. P.; Brywtov, I. A.

TITLE: Investigation of the energy structure of Be and BeO by ultralongwave x-ray spectroscopy

SOURCE: Fizika tverdogo tela, v. 6, no. 1, 1964, 43-53

TOPIC TAGS: energy structure, Be, BeO, x ray spectroscopy, ultralongwave spectroscopy, emission spectrum, absorption spectrum, metallic Be, covalent bond electron, forbidden band, allowed band, valence band

ABSTRACT: The authors have obtained emission and absorption spectra on an x-ray spectrometer for metallic Be, Be in BeO, and O in BeO. For Be the 60-140 Å interval was examined, for O the 17-25 Å interval. The results of their measurements and interpretations are summarized in Figs. 1-7 of the Enclosures. On the emission spectrum metallic Be is defined by the width of the filled part of the valence band. The authors suggest that the filled band in Be is formed by covalent-bond electrons. The K level in BeO is displaced relative to the corresponding level in Be. In seeking to find a connection between quantum yield and absorption

Card 1/97

ACCESSION NR: APL011735

spectra, the authors conclude that the quantum yield in the wavelength interval investigated is sensitive to the formation of an oxide film on a substance and that this method of preparing the film is therefore inapplicable. Orig. art. has: 9 figures and 3 tables.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University)

SUBMITTED: 22Jun63

DATE ACQ: 14Feb64

ENCL: 07

SUB CODE: PH

NO REF SOV: 011

OTHER: 014

Card 2/12

BRYTOV, I.A.; LUKIRSKIY, A.P.

Photoionization cross section of absorption in beryllium. Opt. 1  
spektr. 16 no.2:363 F '64. (MIRA 17:4)

ACCESSION NR: AP4032874

S/0051/64/016/004/0688/0694

AUTHOR: Lukirskiy, A.P.; Zimkina, T.M.; Bry\*stov, I.A.

TITLE: Investigation of x-ray spectra in the wavelength region above 15 Angstrom by means of a spectrometer with a gold coated diffraction grating

SOURCE: Optika i spektroskopiya, v.16, no.4, 1964, 688-694

TOPIC TAGS: x-ray spectroscopy, x-ray diffraction, diffraction grating, coated optics

ABSTRACT: In view of the importance in x-ray spectroscopy of the wavelength region below 40 Å, the present study was devoted to investigation of the distorting effect of a gold coating on an echelette grating. The echelette had 600 lines per mm and a blaze angle of 1°15'; it was coated with a 300 Å thick gold layer and installed in a recording spectrometer, wherein the angle of incidence was 5°30'. This grating had previously been tested by recording monochromatic lines in the 23.6 to 113 Å region (A.P.Lukirskiy, Ye.P.Savinov and Yu.F.Shepelev, Opt.1 spektro.15,543,1963). Particular attention was devoted to determining the distorting effect in the region of the absorption edges of gold. The tests and comparisons show that, except in the 33

Card 1/2

ACCESSION NR: AP4032374

to 38 Å region, the absorption edges of gold introduce virtually no noticeable distortion, i.e., that a gold coated echelette can be used for investigating the shape of spectrum lines. In fact, in addition to enhancing the contrast, a gold coating extends the working range of the grating at 5°30' incidence down to about 15 Å. For test purposes some of the emission lines of oxygen and nitrogen in MgO and BN were recorded in the third order; the degree of contrast is excellent. There were also recorded the M<sub>γ</sub> lines of cadmium and silver; as recorded these lines have the classical dispersion shape. Their widths taken from the spectrometer curves are 10.2 and 8.8 eV, which is in agreement with the data in the literature. Orig.art.has: 8 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 24Jun63

DATE ACQ: 07May64

ENCL: 00

SUB CODE: OP

NR REF SOV: 007

OTHER: 004

Card 2/2

KUKIRSKIY, A.P.; ZIMKINA, T.M.; BRYTOV, I.A.

Fine structure of X-ray M-absorption edges of krypton and  
N-absorption edges of xenon. Izv. AN SSSR.Ser.fiz. 28 no. 5:  
772-779 My '64. (MIRA 17:6)

1. Fizicheskiy fakul'tet Leningradskogo gosudarstvennogo  
universiteta.



ACCESSION NR: AP4038776

S/0048/64/028/005/0841/0852

AUTHOR: Lukirskiy, A.P.; Bry\*~~stov~~, I.A.

TTTLE: L Emission spectra of titanium, titanium dioxide, chromium and chromic oxide [Report, Seventh Conference on X-Ray Spectroscopy held in Yerevan 23 Sep to 1 Oct 1963]

SOURCE: AN SSSR. Izvestiya. Seriy fizicheskaya, v.28, no.5, 1964, 841-852

TOPIC TAGS: x-ray spectrum, x-ray emission, titanium, titanium oxide, chromium, chromium oxide

ABSTRACT: The L emission spectra of Ti and Cr were recorded by means of a diffraction grating spectrometer described elsewhere (A.P.Lukirskiy, Izv.AN SSSR,Ser.fiz. 25,913,1961). The spectrometer was calibrated (first order accuracy, 0.1 Å) with reference to oxygen and nitrogen lines. The wavelength variation of the luminosity was examined with tungsten bremsstrahlung, and the relative line intensities were corrected accordingly. In addition to the spectra of the metals, the spectra of their oxides were recorded to provide intensity calibration for estimating the oxygen contamination of the anodes. The oxide spectra could not be obtained in high resolution.

Card 1/3

ACCESSION NR: AP4038776

because of low intensity, and they are not discussed in detail. The anodes were heated by electron bombardment to the onset of vaporization and were then held for some time at a somewhat lower temperature. The final spectra showed slight oxygen and carbon contamination, but no nitrogen nor other contaminants were perceived. The contamination was less than 5% (considerably less in the case of Ti) and the anodes are regarded as sufficiently pure. The spectra of the metals and their oxides were recorded in the first order with a resolution of  $0.08 \text{ \AA}$ . In addition, the Ti spectrum was recorded in the fourth order with a resolution of  $0.02 \text{ \AA}$  and the Cr spectrum was recorded again in the first order but with a narrow slit that afforded a resolution of  $0.04 \text{ \AA}$ . The relative intensities of the lines were measured and the results are tabulated. The widths of the  $L_{\beta}$  lines were measured and corrected for instrumental broadening. A previously unreported weak broad line was observed on the long wavelength side of  $L_{\beta}$  in each metal; it is designated  $L_{\beta}'$ . This line is tentatively ascribed to a  $L_{\text{III}}-M_{\text{I}}$  transition with the simultaneous excitation of a plasmon, since its separation from  $L_{\beta}$  (about 20 eV in both metals) corresponds, according to J.L. Robbins and J.B. Swan (Proc. Phys. Soc. 76, 857, 1960), to a prominent maximum in the electron loss for both metals. The width of the 4s-3d band was determined from the width of the  $L_{\text{III}}$  emission. For this purpose the long wavelength tail was eliminated by linear extrapolation since the  $E^{1/2}$  law did not fit the data. The

Card<sup>2/3</sup>

ACCESSION NR: AP4038776

width obtained for the Cr 4s-3d band agreed with the results of H.W.B.Skinner, T.G. Bullen and J.E.Johnston (Philos.Mag.45,1070,1954) and V.V.Nemoshkalenko (Doklad.AN SSSR 148,78,1963), but the Ti 4s-3d band was found to be considerably narrower. This result may be due to the linear extrapolation; it is also possible that the spectrum was that of the  $\beta$ -phase rather than the  $\alpha$ -phase, for the anode temperature exceeded the transition temperature. The  $I_{\beta_1}/I_{\alpha_{1,2}}$  intensity ratio in both Ti and Cr agreed with the findings of Skinner et al.(loc.cit.), and not with those of J.E. Holliday (J.Appl.Phys.33,3259,1962), although the anodes were prepared similarly to Holliday's. The  $L_{\eta}/L_{\zeta}$  intensity ratio did not agree with the  $I_{\beta_1}/I_{\alpha_{1,2}}$  ratio. The discrepancy is ascribed to  $L_{II} \rightarrow L_{III} M_{IV, V}$  Auger transitions. The  $I_{\alpha_{1,2}}/L_{\zeta}$  intensity ratio was measured for the oxides, and it is discussed briefly. This ratio is sensitive to the chemical bonding. Orig.art.has: 3 formulas, 6 figures and 3 tables

ASSOCIATION: Fizicheskiy fakul'tet Leningradskogo gosudarstvennogo universiteta  
(Physics Department, Leningrad State University)

SUBMITTED: 00

DATE ACQ: 12Jun64

ENCL: 00

SUB CODE: OP

NR REF SOV: 006

OTHER:004

Card 3/3

ACCESSION NR: AP4038780

S/0048/64/028/005/0866/0871

AUTHOR: Lukirskiy, A.P.; Savinov, Ye.P.; Bry\*~~st~~ov, I.A.; Shepelev, Yu.F.

TITLE: Efficiency of secondary electron multipliers with Au, LiF, MgF<sub>2</sub>, SrF<sub>2</sub>, BeO, KCl and CsI photocathodes in the 23.6 to 113 Angstrom region [Report, Seventh Conference on X-Ray Spectroscopy held in Yerevan 23 Sep to 1 Oct 1963]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.5, 1964, 866-871

TOPIC TAGS: x-ray detection, radiation detector, electron multiplier, photocathode, photocathode efficiency

ABSTRACT: The quantum efficiency of Au, LiF, MgF<sub>2</sub>, SrF<sub>2</sub>, BeO, KCl and CsI photocathodes were measured in secondary electron multipliers throughout the ultrasoft x-ray region from 23.6 to 113 A and at grazing angles from 4° to 40° (angles of incidence from 50° to 86°). An absolute accuracy of 15% is claimed for the measurements, and the data presented (except those for the BeO photocathodes, which were not reproducible) are recommended for absolute x-ray intensity measurements to this accuracy. The gold photocathodes were included for comparison, and the other materials were selected as the most efficient photocathodes that are not poisoned by air. The

Card 1/3

ACCESSION NR: AP4038780

LiF, MgF<sub>2</sub>, SrF<sub>2</sub>, KCl and CsI photocathodes were vacuum deposited on Al films on glass. The BeO photocathodes were prepared by oxidizing a film of Be, vacuum deposited on W or Mo. The BeO photocathodes prepared in this way were not reproducible, however, and only the data for the most efficient BeO photocathode are given. The thickness of the photocathodes was determined interferometrically. The thickness of the Au cathode was 1000 Å; that of the CsI cathode, 5500 Å; and the remaining photocathodes were 2500 Å thick. These thicknesses are greater than the depth from which the photoelectrons can emerge. Tungsten bremsstrahlung was employed for the measurements. The x-ray intensity was measured with an alcohol-argon Geiger counter and a methane proportional counter. The efficiencies of the counters were determined from absorption measurements, data of A.P.Lukirskiy and T.M.Zimkina (Izv.AN SSSR, Ser.fiz.27,104,1963) being employed for the alcohol-argon counter. Curves are presented showing the quantum efficiency of each photocathode at several selected wavelengths as a function of the grazing angle. Most of these curves have a rather sharp maximum at some small grazing angle and are otherwise smooth. Curves are also presented showing the quantum efficiency of each photocathode at 20° grazing angle as a function of the wavelength. These curves show marked fine structure near the absorption edges of the cathode materials but are reasonably smooth between. It is recommended that for any specific application a photocathode be selected for which the

Card 2/3

ACCESSION NR: AP4038780

fine structure lies outside the wavelength region of interest. Orig.art.has: 5 figures and 1 table.

ASSOCIATION: Fizicheskiy fakul'tet Leningradskogo gosudarstvennogo universiteta  
(Physics Department, Leningrad State University)

SUBMITTED: OO

DATE ACQ: 12Jun64

ENCL: OO

SUB CODE: OP,EC

NR REF SOV: 010

OTHER:OOO

Card 3/3

L 10674265 EWT(m)/EPP(c)/EPP(n)-2/EPR/EWP(j)/EWP(b) Pc-4/Pr-4/PS-4/Pu-4  
RAEM(a)/AS(mp)-2/RAEM(i)/ASD(a)-5/ESD(gs)/ESD(t)/RAEM(t) JD/RM

ACCESSION NR: AP4044858

S/0051/64/017/003/0438/0445

AUTHOR: Lukirskiy, A. P.; Bry\*tov, I. A.; Zimkina, T. M.

TITLE: Photoionization absorption of He, Kr, Xe, and methane in methylal in the wavelength range 23.6 to 250 Angstrom B

SOURCE: Optika i spektroskopiya, v. 17, no. 3, 1964, 438-445

TOPIC TAGS: absorption coefficient, photoionization, bremsstrahlung, x-ray spectrum, helium, krypton, xenon, methane, methylal

ABSTRACT: The absorption coefficients were determined from the x-ray characteristics of the lines in the bremsstrahlung spectrum with an aim at checking the applicability of various theoretical calculations to the ultralong wave x-ray spectrum, and as a check on the correctness of the choice of the wave functions. The spectra of helium, xenon, krypton, and methane are of interest from the theoretical point of view and also in connection with their practical use in gas-discharge detectors. Methylal is of interest only for practical purposes. The procedure for determining the absorption in the gases was described elsewhere (Izv. AN SSSR ser. fiz. v. 27, 817, 1963). The experimental  
Card 1/2

L 10674-65

ACCESSION NR: AP4044858 0

data for methane and helium were compared with the experimental data for the short-wave ultraviolet region of the spectrum and with the theoretical calculations. In the case of krypton and xenon, a complicated spectral variation of the absorption coefficient was observed, and the data were found to be comparable with those for neon and argon. It was found that all gases have the same structure of the external electron shell, and each displays a spectral dependence that becomes more complicated with increasing atomic number, and the 'anomalous' absorption extends into the short-wave section of the spectrum. Plots are given for the absorption coefficients of all gases. In the case of methane and methylal, the wavelength variation of the absorption coefficient (in a log-log scale) is linear, so that empirical expressions could be written for them. Orig. art. has: 6 figures and 2 tables.

ASSOCIATION: None

SUBMITTED: 14Aug63

ENC: 00

SUB CODE: OP

NR REF SOV: 004

OTHER: 012

Card 2/2



L 20221-65 EWT(m)/EPE(c)/EPF(n)-2/EPR/EMP(t)/EMP(b) Pr-4/Ps-4/Pu-4 IJ9(c)/  
ACCESSION NR: AP4038760 ESD(gs) JD S/0048/64/028/005/0772/0779

AUTHOR: Lukirskiy, A.P.; Zimkina, T.M.; Bry\*tov, I.A.

TITLE: Fine structure of the M absorption edges of krypton and the N-absorption edges of xenon Report, Seventh Conference on X-Ray Spectroscopy held in Yerevan 23 Sept to 1 Oct 1963

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.5, 1964, 772-779

TOPIC TAGS: x-ray absorption, x-ray spectrum, inert gas, xenon, krypton

ABSTRACT: Whereas the K absorption spectra of the inert gases have been extensively investigated and are susceptible of relatively simple interpretation based on comparison with the spectra of atoms (with Z one unit greater than that of the absorbing inert gas atom) and the L absorption spectra have also been studied and can be interpreted in similar fashion, the M and N absorption spectra have not been investigated (there is reason to assume, however, that their interpretation and calculation should be similar, but taking into account the high values of the effective quantum numbers). Accordingly, the present work was concerned with investigation of the N absorption spectrum of xenon and the M spectrum of krypton. The experimental

Card 1/3

L 20221-65

ACCESSION NR: AP4038760

procedure was similar to that described earlier (A.P. Lukirskiy and T.M. Zimkina, *Izv. AN SSSR, Ser. fiz.* 27, 325, 1963), except that the absorption was measured by the transmission method. Preliminary measurements were made at different pressures of the gas in the cell for different wavelength ranges, but for the final, detailed investigation there was chosen in each case the optimum pressure for obtaining the best contrast of the fine structure. The radiation was recorded by means of a Geiger counter, employing automatic recording. There were obtained the following values for the absorption discontinuities S: Kr  $M_{IV}$  &  $M_{V}$  and Xe  $N_{IV}$  &  $N_{V}$  -  $1.6 \pm 0.15$ ; Xe  $N_{III}$  -  $1.23 \pm 0.03$ . The other edges were not observed, apparently, owing to the fact that with an increase in the azimuthal quantum number of the shell the magnitude of the jump decreases and the natural level width increases. The recorded absorption spectra in the regions of the respective edges are reproduced in figures, and the results of interpretation on the basis of the hydrogen-like model are tabulated. It is inferred that the natural level widths increase with a decrease in the azimuthal quantum number. In the  $N_{III}$ ,  $N_{IV}$  and  $N_{V}$  spectra of Xe and the  $M_{IV}$  and  $M_{V}$  spectra of Kr the probability for  $\ell \rightarrow \ell - 1$  transitions appears to be substantially higher than the probability for  $\ell \rightarrow \ell + 1$  transitions. Orig. art. has: 3 figures and 1 table.

Card 2/3

L 20221-65

ACCESSION NR: AP4038760

ASSOCIATION: Fizicheskiy fakultet Leningradskogo gosudarstvennogo universiteta  
(Physics Department, Leningrad State University)

SUBMITTED: 00

ENCL: 00

SUB CODE: OP, IC

NR REF SOV: 009

OTHER: 002

3/3  
Card

L 18755-66 EWT(m)/EWP(t) IJP(c) JD

ACC NR: AP6003767

SOURCE CODE: UR/0181/66/008/001/0095/0102

AUTHORS: Lukirskiy, A. P. (deceased); Brytov, I. A.; Fomichev, V.A.

ORG: Leningrad State University (Leningradskiy gosudarstvennyy universitet)

TITLE: New emission bands of Re<sup>1</sup>, W<sup>1</sup>, Ta<sup>1</sup>, Te<sup>1</sup>, Sb<sup>1</sup>, Pd<sup>1</sup>, Mo<sup>1</sup>, Nb<sup>1</sup>, and Tl in the ultrasoft x-ray region of the spectrum

48  
46  
8

SOURCE: Fizika tverdogo tela, v. 8, no. 1, 1966, 95-102

TOPIC TAGS: x ray emission, x ray diffraction study, spectral line, line width, line shift, x ray spectroscopy

ABSTRACT: The purpose of the experiment was to obtain additional experimental data on the density of the electronic states in the valence band. The new lines were obtained in the spectral region 70 -- 450 A with the aid of a diffraction-grating x-ray spectrometer. The use of effective detectors and reflecting mirrors to filter out the radiation has made it possible to detect the new lines. The

Card 1/2

Z

L 18755-66

ACC NR: AP6003767

2

spectrometer was described by one of the authors earlier (Lukirskiy, Izv. AN SSSR ser. fiz. v. 25, 913, 1961). An identification for the observed emission bands is proposed and the widths of the levels participating in the transitions are determined. The shape of the emission bands and the widths are not discussed in detail, in view of the lack of data on the detector efficiency and on the spectral dependence of the diffraction-grating reflection coefficient. The observed shape of the emission line of W is compared qualitatively with the theoretical distribution of the energy density of the electronic states of the 5d6s band. Further improvement in the results is expected when the resolution of the spectrometer is increased and when absorption spectra of the same elements become available for the investigated region of spectrum. The authors thank M. A. Rumsh and T. M. Zimkina for useful remarks. Orig. art. has: 8 figures and 3 tables.

SUB CODE: 20/ SUBM DATE: 29Jun65/ ORIG REF: 007/ OTH REF: 007

Card

2/25M

L 17804-66 EWT(m)/EWP(j)/T RM

ACC NR: AP6007024

SOURCE CODE: UR/0051/66/020/002/0368/0369

AUTHOR: Lukirskiy, A. P.; Brytov, I. A.; Gribovskiy, S. A.

ORG: none

TITLE: Photoionizing absorption of Ar, Xe, alcohol, and dimethoxymethane in the 7-44 Å wavelength range

SOURCE: Optika i spektroskopiya, v. 20, no. 2, 1966, 368-369

TOPIC TAGS: x ray absorption, x ray absorption spectrum, absorption coefficient

ABSTRACT: The coefficients of photoionizing absorption of x-radiation in Ar, Xe, alcohol, and dimethoxymethane were measured. The coefficients for Ar in the spectral region from 8 to 23 Å may be found by extrapolation according to data from Lukirskiy and Zimkina (Izv. AN SSSR, ser. fiz. 27, 817, 1963) and Wuilleumier (C. R. Acad. Sci. 257, 855, 1963). For Xe the absorption coefficients were measured up to 23 Å from the long-wave side of the spectrum. The spectral range from 7 to 23 Å was not studied. For Xe the dependence of  $\lg \mu$  on  $\lg \lambda$  was found to be nonlinear. Breaks were found in the experimental dependence of  $\lg \mu$  on  $\lg \lambda$  which were attributed to absorption discontinuities. For dimethoxymethane and alcohol, the average values of the absorption discontinuities (the oxygen discontinuity  $S_{Ox}$ ) were 2.4 and 2.3, respectively. Both gases, apparently, have a region of fine Kronig structure from the short-wave side of the edge, although this structure on the bremsstrahlung

Card 1/2

UDC: 535.34:537.531

30  
B

L 17804-66

ACC NR: AP6007024

spectrum was not investigated. Experimental values of absorption coefficients plotted on a logarithmic scale with regard to wavelength can be expressed as: for alcohol  $8 \text{ \AA} < \lambda < 20 \text{ \AA}$ ,  $\mu = 0.004314 \cdot \lambda^{2.35}$ ;  $23 \text{ \AA} < \lambda < 36 \text{ \AA}$   $\mu = 0.00412 \cdot \lambda^{2.55}$ ; for dimethoxymethane  $7 \text{ \AA} < \lambda < 20 \text{ \AA}$ ,  $\mu = 0.0111 \cdot \lambda^{2.68}$ ;  $24 \text{ \AA} < \lambda < 36 \text{ \AA}$   $\mu = 0.00102 \cdot \lambda^{2.4}$ ; where  $\mu$  is in reciprocal centimeters,  $\lambda$  in angstroms for  $0^\circ\text{C}$ , and  $p = 760 \text{ mm Hg}$ .  
Orig. art. has: 1 figure and 1 table. [JA]

SUB CODE: 20/ SUBM DATE: 29Jun65/ OTH REF: 002/ ATD PRESS: 4211

Card

2/2

LUKIRSKIY, A.P.; BRYTOV, I.A.

Use of gas counters in recording ultrasoft X-radiation.  
Prib. i tekhn. eksp. 10 no. 5:66-70 S-O '65.

(MIRA 19:1)

1. Leningradskiy gosudarstvennyy universitet. Submitted  
July 13, 1964.



L 24282-66 EWT(m)/EWP(j)/EWA(h)/EWA(l) RM

ACC NR: AF6007023

SOURCE CODE: UR/0051/66/020/002/0366/0368

AUTHOR: Lukirskiy, A. P. (deceased); Fomichev, V. A.; Brytov, I. A. 46

ORG: none B

TITLE: Absorption coefficients of nitrocellulose and polystyrene in the 8--410 Å region of the ultrasoft x-radiation

SOURCE: Optika i spektroskopiya, v. 20, no. 2, 1966, 366-368

TOPIC TAGS: absorption coefficient, polystyrene, nitrocellulose, radiation detector, x ray filter

ABSTRACT: This is a continuation of earlier work (Opt. i spektr. v. 17, 438, 1964) on the efficiency of gas-filled radiation detectors. Whereas the absorption coefficients of the gas and vapor used in these detectors were measured earlier, the nitrocellulose used for the detector window was not investigated before. The measurement procedure was the same as in the earlier work. The preparation of the transparent films is briefly described. Films close to optimal thickness for each wavelength were used. The numerical values of the absorption coefficients are listed in a table for the different wavelengths in the case of nitrocellulose and plotted in the case of polystyrene. In the case of polystyrene, a considerable jump occurs in the absorption coefficient in the vicinity of the carbon line and it is noted that polystyrene can serve because of this anomaly as an effective filter for ultrasoft x-radiation. Orig. art. has: 1 figure, 1 formula, and 1 table.

SUB CODE: 20/ SUBM DATE: 29Jun65/ ORIG REF: 003/ OTH REF: 003

Card 1/1 PV

UDC: 535.34: 537.351 2

L 28038-66 EWA(h)/EWT(m)/T IJP(c)

ACC NR: AP5027008

SOURCE CODE: UR/0120/65/000/005/0066/0070

AUTHOR: Lukirskiy, A. P. (Deceased); Brytov, I. A.

ORG: Leningrad State University (Leningradskiy gosudarstvennyy universitet)

TITLE: The use of <sup>19</sup>gas-filled counters for measurements of ultra-soft X-rays <sup>28</sup><sub>B</sub>

SOURCE: Pribory i tekhnika eksperimenta, no. 5, 1965, 66-70

X TOPIC TAGS: x ray, x ray measurement, Geiger counter, proportional counter, gas discharge counter

ABSTRACT: The use of Geiger and proportional counters for measuring X-rays of 23.6 to 200 angstrom is discussed. The discussion is based on the results and data already published. The use of very thin counter windows made of nitrocellulose is recommended on the basis of the preceding research. The properties of nitrocellulose window (soft X-ray passage and absorption) were graphically characterized. It was also recommended to use counters with a low gas pressure. Thus, a careful selection of appropriate gases or their mixtures is required to ensure a good counter performance. The performance effectiveness of gas filled

Card 1/2

UDC: 539.1.074.23:537.531

L 28038-66

ACC NR: AP5027008

counters is explained with numerous references to the author's preceding investigations. Formulas were cited and absorption factors for nitro-cellulose windows and various gases were presented. The operating characteristics of argon-alcohol and argon-methane Geiger counters were briefly reviewed. The argon-alcohol counters have a better plateau and work well even at a pressure of 10 tor. However, Geiger counters have a long dead time reaching  $5 \times 10^{-4}$  sec. The proportional counters with methane and argon-methane fillings were also reviewed. Their gas-amplification factor must be rather high in case of ultra-soft X-rays. Various factor values (from  $5.10^5$  to  $3.10^5$ ) were mentioned. The plateau lengths and gas-amplification factors were graphically shown as function of applied voltage for various pressures of methane gas. It was recommended to use methane counters at pressures greater than 60 tor and for wave lengths less than 150 angstrom. The proportional counters filled with methylal were also studied and their plateau lengths and gas-amplification factors were graphically illustrated. The results disclosed that the methylal filled proportional counters are particularly well suited to measure the entire range of ultra-soft X-rays. Orig. art. has: 4 graphs and 2 tables.

SUB CODE: 18 / SUBM DATE: 13July64 / ORIG REF: 006 / OTH REF: 001

Card 2/2 CC

BRYTSEV, A. V., Physician

"Rapid Serological Reactions and Their Practical Value in Mass Examination of Patients Under Investigation." Sub 7 Apr 47, Second Moscow State Medical Institute I. V. Stalin

Dissertations presented for degrees in science and engineering in Moscow in 1947

SO: Sum No. 457, 18 Apr 55

DAVYDOV, Pavel Semenovich; CHERNYSHEV, Valeriy Olegovich; VORONTSOV,  
A.Ye., inzh., retsenzent; VILENKIN, B.I., nauchn. red.;  
BRYTSINA, I.M., red.; KRYAKOVA, D.M., tekhn. red.

[True motion indicator in a ship's radar] Indikator istin-  
nogo dvizheniia sudovykh RLS. Leningrad, Sudpromgiz, 1963.  
163 p. (MIRA 17:3)

*B7A*  
Brytus, F.

6858 Evaluation of Properties of Blast-Furnace Coke. F. Brytus, Henry Bratcher, Translation No. 2802, 4 pages. (Condensed from *Hutek*, v. 17, July-Aug. 1950, p. 183-189.) Previously abstracted from original.

BRYTUS, F.

*(W) "Zuil's"*

1/264

032.74.001.5

Czyzewski M., Byrtus F., Kling Z. Flame Coal as a Leaning Factor in Refined Coal Blends.

Polish Technical Abst.  
No. 1 1954  
Mining

„Węgle płomienne jako środek odchudzający uszlach „flame” mieszan-  
ki węglowe”. (Prace Inst. Metalurgii No. 6), Katowice, 1953, PWT, 16.5  
pp., 12 figs., 11 tabs.

Determination of the effect of blends leaned, by adding flame  
coal, on the quality and mechanical properties of coke. Method used  
in the investigations, and the authors' own experiments over degrading  
flame coal, blend coal, and blends used in coking tests: laboratory and  
box coking tests of blends to which flame coal was added. It was  
ascertained that flame coal, which yields large quantities of tar at the  
end of the plasticity period is the most suitable for leaning blends.

L 38672-66 EWT(1) SCTB DD

ACC NR: AP6014702

SOURCE CODE: UR/0238/65/011/005/0583/0589

AUTHOR: Brytvan, Ya. M. — Britvan, Ya. M.

26  
B

ORG: Vinnitsa Medical Institute (Vinnyts'kiy medychnyy instytut)

TITLE: Contribution of the higher divisions of the central nervous system to interaction between the respiratory and vasomotor centers during development of hemic hypoxia and restoration of normal functions

SOURCE: <sup>v</sup> Fiziolohichnyy zhurnal, v. 11, no. 5, 1965. 583-589

TOPIC TAGS: hypoxia, central nervous system, rabbit, bioelectric phenomenon, respiratory system, cerebral cortex

ABSTRACT: The author studies the relationship between respiratory and vasomotor centers in hemic hypoxia. The experimental equipment and methods are discussed. The interaction between respiratory and vasomotor centers during hemic hypoxia depends on the rate, intensity and duration of the hypoxia. Rapid and massive loss of blood results in acute vascular insufficiency, intense respiratory stimulation and excessive inhibition of the cerebral cortex. Experiments were done on rabbits. In one series, blood was taken from the non-anesthetized intestine through the carotid, the amount being 5% of the body weight. In a second series blood was taken every 15 minutes in the amount of 0.7% of the body weight. In rabbits which received 5 mg/kg of aminazene

Card 1/2



L 38672-66

ACC NR: AP6014702

40 minutes after the first blood loss, breathing was not restored and arterial blood pressure was noticeably reduced. It was found that arterial blood pressure falls gradually during slow development of hemic hypoxia due to fractional hemorrhage or poisoning with methenoglobin-formers. The initial phase of respiratory excitation is most often attended by intensification of the electrical activity of the cerebral cortex. Dissimilar ratios were found between the biocurrents for the cortex and the thalamus. In some cases parallel intensification of biopotentials was noted, in others, a positive induction of the thalamus. An increase in hypoxia caused synchronization between the cortical and thalamic rhythms, as well as a gradual reduction in the frequency and amplitude of the slow rhythms. In the transition state of hypoxia, vascular pressure decreases even further and high-amplitude waves of the third order are often noticeable in the arterial blood pressure as well as synchronous fluctuations in Cheyne-Stokes respiration and further inhibition of the cerebral cortex. In the final stage of hypoxia, waves of the third order disappear together with inhibition of the cerebral cortex. The experimental data show that a change in the initial functional state of the nervous system due to anesthesia, aminazine, phenamine and disconnection of the blood pressure regulators has a definite effect on the interaction between the respiratory and vasomotor centers in hemic hypoxia. Orig. art. has: 2 figures.

SUB CODE: 06/ SUBM DATE: 22Oct64/ ORIG REF: 015/ OTH REF: 004

Card 2/2 vmb

ZHOROVA, Liliana Pavlovna; KURGANOV, Georgiy Vladimirovich;  
FEDIN, Boris Vladimirovich; FISHER, A.Ya., red.;  
BRYUKHACHEVA, V.V., ved. red.

[Modern niobium alloys, the technology of their production and use; review of foreign techniques] Sovremennye niobievye splavy, tekhnologiya ikh proizvodstva i primeneniye; obzor zarubezhnoi tekhniki. Moskva, GOSINTI, 1962. 27 p. (MIRA 17:5)

BRYUKH NENKO, A. N.

Bee Culture

New success in feeding bees with milk Pchelovodstvo 29, no. 4, April 1952.

9. Monthly List of Russian Accessions, Library of Congress, August 195<sup>2</sup>/<sub>3</sub>, Uncl.

BRYUKHANENKO, A. N.

Pasechnye raboty v razlichnykh zonakh SSSR [Apiary work in the various regions of the U.S.S.R.]. Moskva, Sel'khozgiz, 1953. 200 p.

SO: Monthly List of Russian Accessions, Vol. 7 No. 1 April 1954.

~~BRYUKHANENKO, B.A.~~

Possibilities of increasing the output of rolling mills. Stal' 15  
832-838 S'55. (MIRA 8:12)

1. Moskovskiy inzhenerno-ekonomicheskiy institut  
(Rolling mills)

SOV/137-57-11-21343 D

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 11, p 101 (USSR)

AUTHOR: Bryukhanenko, B.A.

TITLE: Problems of Method in Discovering Additional Output-capacity Possibilities in Rolling Mills (Based on Data from the Zaporozhstal', Azovstal', im. Dzerzhinskiy, and "Serp i Molot" Plants) [ Voprosy metodiki vyyavleniya rezervov proizvoditel'nosti prokatnykh stanov (po materialam zavodov. "Zaporozhstal'", "Azovstal'", im Dzerzhinskogo i "Serp i Molot'')]

ABSTRACT: Bibliographic entry on the Author's dissertation for the degree of Candidate of Economical Sciences, presented to the Mosk. inzh.-ekon. in-t (Moscow Engineering-economy Institute), Moscow, 1957

ASSOCIATION: Mosk. inzh.-ekon. in-t (Moscow Engineering-economy Institute), Moscow

Card 1/1

BRYUKHANEKO, B.A.

Establishment of technical norms in ferrous metallurgy. Sots. trud  
no. 7:66-75 J1 '58. (MIRA 11:8)  
(Steel industry--Production standards)

S/194/62/000/006/025/232  
D413/D308

AUTHOR: Bryukhanenko, B.A.

TITLE: Ways of improving operational planning and analysis in profile-rolling production by means of analytical computers (taking the "Serp i Molot" works as an example)

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 6, 1962, abstract 6-1-142 yu (V sb. Matem. metody i schetn. tekhn. v organiz. i planirovanii proiz-va na metallurg. predpriyatii, M., Metallurgizdat, 1961, 67-81) ✓

TEXT: The paper considers the general problems of operational planning in rolling production. It gives a list of recommendations for the improvement of operational planning, derived from investigations carried out at the "Serp i Molot" works. It is pointed out that the use of analytical computers makes it possible to prepare all the required standard data for planning; and also to compute criteria for statistical stock taking. It is observed that the  
Card 1/2



Ways of improving operational ...

S/194/62/000/006/025/232  
D413/D308

fundamental problem of operational planning - selection of the rolling sequence for individual lots of metal as a function of concrete conditions - requires logical analysis and can only be solved by the application of linear programming techniques and electronic computers. A description is given of the content of a mechanization project for operational planning within the limits of the work that can be carried out on analytical computers. A model is given of a standardizing card taking into account the difficulty coefficient and the form of the tabulagrams for the classification of orders according to types of steel and rolling profile dimensions. 1 figure. [Abstracter's note: Complete translation.]

Card 2/2

BRYUKHANENKO, B. A.

(40)

PHASE I BOOK EXPLOITATION SOV/6044

Rokotyan, Ye. S., Doctor of Technical Sciences, Ed.

Proklatnoye proizvodstvo; spravochnik (Rolling Industry; Handbook)  
v. 2. Moscow, Metallurgizdat, 1962. 685 p. 8500 copies  
printed.

Authors: P. A. Aleksandrov, Doctor of Technical Sciences;  
V. P. Anisiforov, Candidate of Technical Sciences; V. I. Bayrakov,  
Candidate of Technical Sciences; H. V. Barbarich, Candidate  
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Card 1/14

40

Rolling Industry; Handbook

SOV/6044

Sciences; V. I. Meleshko, Candidate of Technical Sciences; N. V. Melchov, Engineer; A. K. Ninburg, Candidate of Technical Sciences; V. D. Nosov, Engineer; B. I. Panchenko, Engineer; O. A. Plyatskovskiy, Candidate of Technical Sciences; I. S. Pobedin, Candidate of Technical Sciences; I. A. Priymak, Professor, Doctor of Technical Sciences [deceased]; A. A. Protasov, Engineer; M. M. Saf'yan, Candidate of Technical Sciences; N. M. Fedosov, Professor; S. N. Filipov, Engineer [deceased]; I. N. Filippov, Candidate of Technical Sciences; I. A. Pomichev, Doctor of Technical Sciences; M. Yu. Shifrin, Candidate of Technical Sciences; E. R. Shor, Candidate of Technical Sciences; M. M. Shternov, Candidate of Technical Sciences; M. V. Shuralev, Engineer; I. A. Yukhvets, Candidate of Technical Sciences; Eds. of Publishing House: V. M. Gorobinchenko, R. M. Golubchik, and V. A. Rymov; Tech. Ed.: L. V. Dobuzhinskaya.

PURPOSE: This handbook is intended for engineering personnel of metallurgical and machine-building plants, scientific research  
Card 2/14

(40)

Rolling Industry; Handbook

SOV/6044

Institutes, and planning and design organizations. It may also be used by students at schools of higher education.

COVERACE: Volume 2 of the handbook reviews problems connected with the preparation of metal for rolling, the quality and quality control of rolled products, and designs of roll passes in merchant mills. The following topics are discussed: processes of manufacturing semifinished and finished rolled products (the rolling of blooms, billets, shapes, beams, rails, strips, wire, plates, sheets, and the drawing of steel wire), hot-dipped tin plates, lacquered plates, floor plates, tubes made by different methods, and special types of rolled products. Problems of the organization of rolling operations are reviewed, and types of rolled products manufactured in the USSR are shown. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:[Abridged]:

Card 3/14