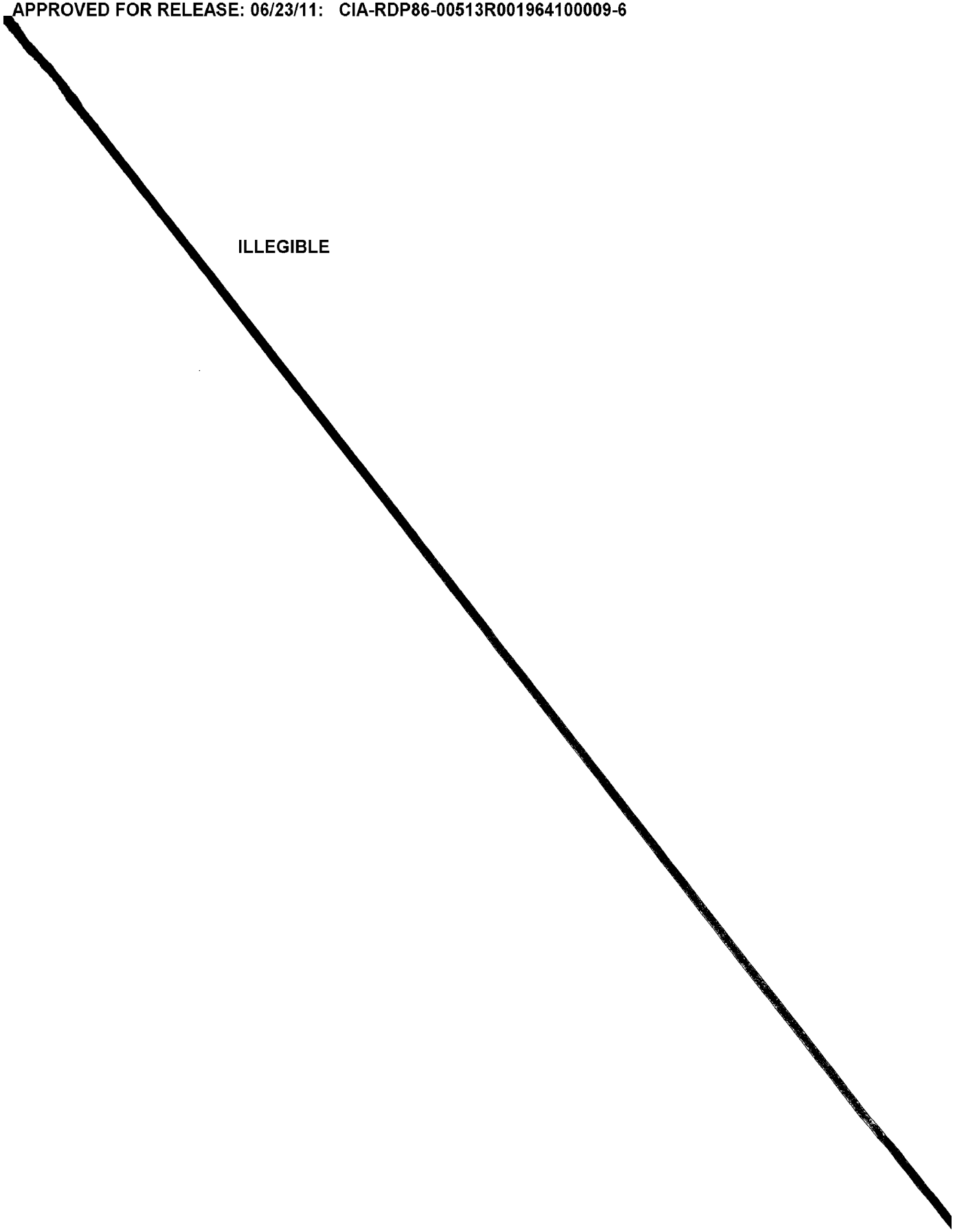
DMITROVSKIY, A.A.; ZAYTSEVA, N.I.; BALAKAYEV, B.B.; YEROFEYEVA, N.N.; NEVZGODINA, M.V.; BURLAKOV, A.F.

Stimulating effect of vitamin A on the function of the sexual glands in Karakul herd rams. Vit. res. i ikh isp. no.6:178-184 '63. (MIRA 17:1)

1. Institut biokhimii imeni A.N. Bakha AN SSSR i Turkmenskiy sel'skokhozyaystvennyy institut imeni M.I. Kalinina.

ILLEGIBLE



TSELLINSKAYA, T.F.; ZAYTSEVA, N.I.; GRIGOR'YEV, V.A.

Analysis of hydrocarbon solutions of cobalt carbonyl in a flow.
Zav.lab.26 no.10:1094-1095 '60. (MIRA 13:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhimicheskikh protsessov.

(Cobalt carbonyl)

TSELINSKAYA, N.I.; ZAYTSEVA, N.I.; CHESNAKOVA, Ye.V.

Gas-liquid chromatography of the liquid products obtained by carbonylation of propylene. Trudy VNIINeftekhim no.2:188-207 '60. (MIRA 14:2)

(Propene) (Carbonyl compounds)
(Chromatographic analysis)

GEL'MAN, N.S.; ZHUKOVA, I.G.; ZAYTSEVA, N.I.

Flavine nucleotides in the cytoplasmic membrane in *Micrococcus lysodeikticus*. Dokl.AN SSSR 145 no.1:206-208 Jl '62.
(MIRA 15:7)

1. Institut biokhimii imeni A.N.Bakha AN SSSR. Predstavleno akademikom A.I.Oparinym.

(RIBOFLAVINE PHOSPHATES) (MICROCOCCUS)

BYKHOVSKIY, V.Ya.; ZAYTSEVA, N.I.; MANTROVA, G.V.

Use of δ-aminolevulinic acid for vitamin B_{12} biosynthesis by resting cells of Propionibacterium shermanii. Dokl. AN SSSR 157 no.3:692-695 Jl '64. (MIRA 17:7)

1. Institut biokhimii imeni A.N. Bakha AN SSSR. Predstavleno akademikom A.I. Oparinym.

FRIDLYANDER, I.N.; ZAYTSEVA, N.I.; ARTEMOVA, M.S.

Effect of stepped aging on the properties of alloys in the system aluminum - zinc - magnesium. Metalloved. i term. obr. met. no.12:26-28 D'63. (MIRA 17:2)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100009-6

ACCESSION NR: AP4005828

comparison, tests were also run on an alloy containing 4.6% Zn, 1.5% Mg, 0.3% Mn, 0.12% Cr, and larger contents of Zn with respect to Mg. High mechanical properties and satisfactory stress corrosion resistance were achieved by aging at 100 C for 5 hours plus 150 C for 12-16 hours. Data are presented for both types of alloys detailing the trade-off of mechanical properties for corrosion resistance under various aging regimes. Orig. art. has: 4 tables.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 09Jan64 ENCL: 00

SUB CODE: ML, MA NO REF SOV: 000 OTHER: 000

Card 2/2

ACCESSION NR: AP4005828 S/0129/63/000/012/0026/0028

AUTHOR: Fridlyander, I. N.; Zaytseva, N. I.; Artemova, M. S.

TITLE: Effect of multistage aging on properties of alloys of aluminum-zinc-magnesium system

SOURCE: Metalloved. i. termich. obrab. metallov, no. 12, 1963, 26-28

TOPIC TAGS: manganese alloy, zinc alloy, magnesium alloy, V92 alloy, mechanical property, stress corrosion, corrosion resistance, artificial aging, natural aging, multistage aging, alloy aging, aluminum base alloy

ABSTRACT: Although V92 aluminum alloy has generally high corrosion resistance, it is susceptible to stress corrosion. Experiments were conducted to rectify this deficiency by two-stage aging while retaining adequate mechanical properties. Specimens containing 2.9% Zn, 4.4% Mg, and 0.7% Mn were subjected to various aging regimes and then to a 3% solution of NaCl. Specimen "life" was the time required for the formation of macroscopic cracks. The highest stress corrosion resistance (120 hours) was achieved with aging at 60 C for 24 hours followed by additional aging either at 180 C for 10 hours or at 200 C for 1, 3, and 10 hours. By way of

Card 1/2

C4

11D

Biosynthesis of riboflavin in wounded plants. K. L. Povolotskaya and N. I. Zaltseva (All-Union Vitamin Research Inst., Moscow). *Doklady Akad. Nauk S.S.S.R.* 77, 317-20 (1951).—Cotyledons of the pea show some 250% increase of the rate of biosynthesis of riboflavin when they are crushed, in comparison with the intact plant. Similar increase occurs in a sliced potato tuber with most activity being centered at the surfaces of the cuts. Intact pea forms largely the bound form of riboflavin, while crushed pea shows increase of the free substance with decline of the bound form. The results with potato tubers are analogous. Biosynthesis of riboflavin in crushed pea parallels biosynthesis of ascorbic acid and the respiration rate; potato gives a similar picture but its thiamine gradually declines, while that in a pea rises. Light does not appear to affect riboflavin or ascorbic acid biosynthesis in these cases. Oat or begonia leaves show a decline of riboflavin and ascorbic acid on incubation; results with cut cabbage leaves are similar, but a cut cabbage "heart" shows vigorous synthesis of both substances. G. M. Kosolapoff

1907

ZAYTSEVA, N. I.

Author: Povolotskaya, K. I. and Zaitseva, N. I.

Title: Biosyntheses of riboflavine in wounded plants.

Journal: Doklady Akademii Nauk SSSR, 1951, Vol. 77, No.2, P. 317

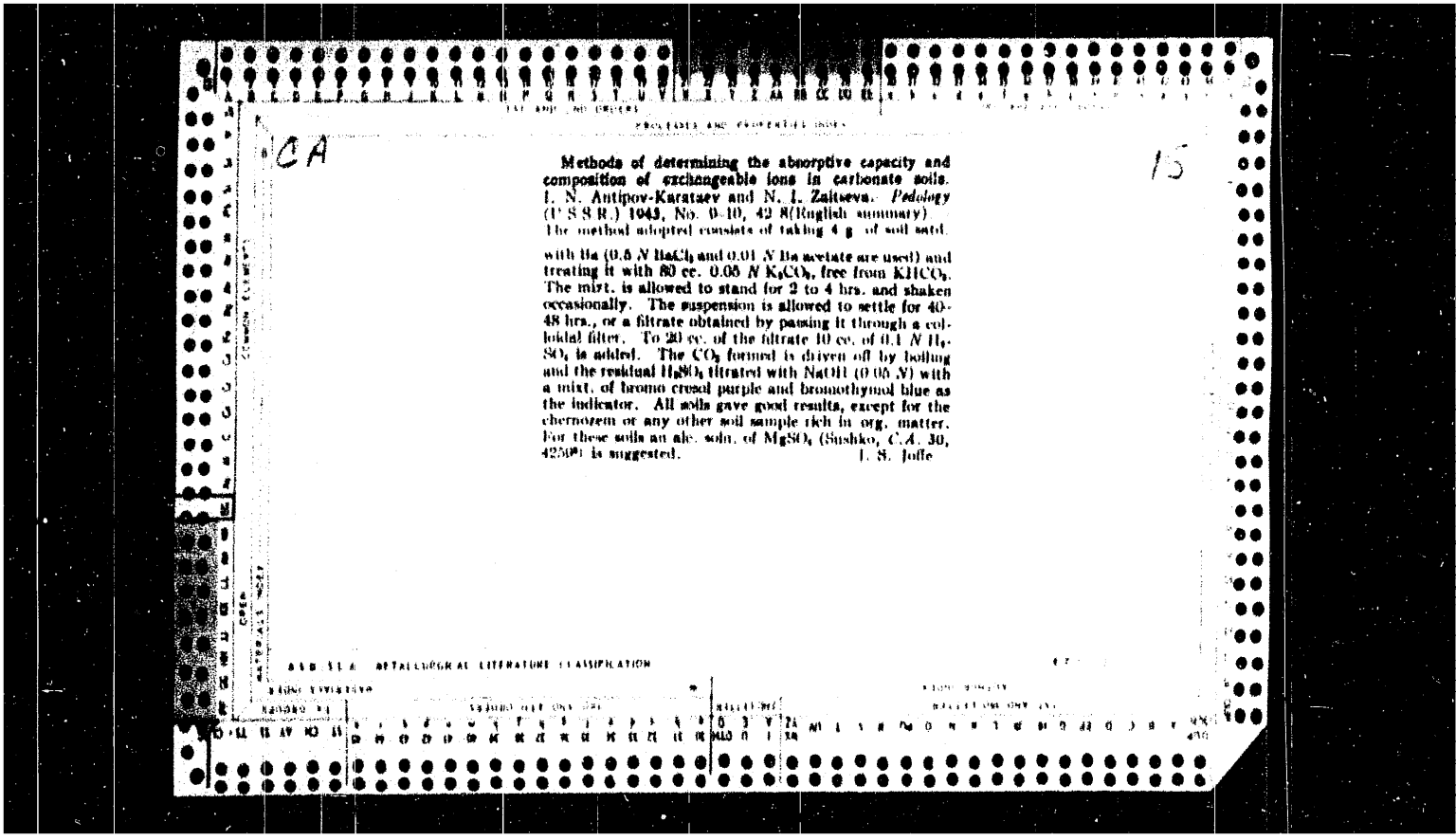
Subject: Biochemistry

From: D.S.I.R. Oct 51.

FRIDLYANDER, I.N.; KONSTANTINOV, V.A.; ZAYTSEVA, N.I.

Investigation of the lattice constants of aluminum-manganese alloys following various kinds of thermal treatment [with English summary in insert]. Zhur.fiz.khim. 30 no.7:1623-1625 Jl '56. (MLRA 9:11)

(Aliminum-manganese alloys)



CA

15

Methods of determining the absorptive capacity and composition of exchangeable ions in carbonate soils. I. N. Antipov-Karatsev and N. I. Zaitseva. *Pedology* (U.S.S.R.) **1943**, No. 9-10, 42-8(English summary)

The method adopted consists of taking 4 g. of soil satd. with Ba (0.5 *N* $BaCl_2$ and 0.01 *N* Ba acetate are used) and treating it with 80 cc. 0.05 *N* K_2CO_3, free from $KHCO_3$. The mixt. is allowed to stand for 2 to 4 hrs. and shaken occasionally. The suspension is allowed to settle for 40-48 hrs., or a filtrate obtained by passing it through a colloidal filter. To 20 cc. of the filtrate 10 cc. of 0.1 *N* H_2SO_4 is added. The CO_2 formed is driven off by boiling and the residual H_2SO_4 titrated with NaOH (0.05 *N*) with a mixt. of bromo cresol purple and bromothymol blue as the indicator. All soils gave good results, except for the chernozem or any other soil sample rich in org. matter. For these soils an alc. soln. of $MgSO_4$ (Sushko, *C.A.* 30, 4250[1] is suggested.

I. S. Joffe

DEMA, I.; ZAYTSEVA, N. G.

"The chemical forms of stabilized atoms of radioactive iodine formed on irradiation of Caesium chloride crystals with protons of 660 MeV energy."

report presented at IAEA Symp on Chemical Effects associated with Nuclear Reactions and Radioactive Transformations, Vienna, 7-11 Dec 64.

Nuclear Problems Lab, Joint Nuclear Res Inst USSR.

[redacted]

L 31403-66 EWT(m)/T

ACC NR: AP6022577 SOURCE CODE: UR/0048/66/030/003/0554/0559

AUTHOR: Dzhelepov, B. S.; Zaytseva, N. G.; Kraft, O. Ye.; Naumov, Yu. V.; Sigalov, V. M.

ORG: none

TITLE: Spin of sub 71 Lu sup 170 sub 99 [This paper was presented at the 16th Annual Conference on Nuclear Spectroscopy and Nuclear Structure held in Moscow 26 Jan-3 Feb 1966]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 3, 1966, 554-559

TOPIC TAGS: nuclear physics conference, nuclear spin, lutetium, beta decay, proton bombardment

ABSTRACT: The beta$^+$ gamma coincidence method is used to determine the spin of Lu^{170} which has a beta$^+$ decay to the lower rotational band of Yb^{170}. The Lu^{170} sample was obtained from Hf^{170}, with the usual bombardment of a tantalum target with 660 mev protons. The coincidences of ~1660 kev positrons and gamma radiation was studied in the range of 10 to ~250 kev. Coincidences were not observed at energies of 193 and 84 kev, nor were beta$^+$ transitions from the Lu^{170} ground state to the 2^+ and 4^+ levels of Yb^{170}. It is shown that the ground state spin of Lu^{170} is zero - a conclusion that is supported by theoretical arguments. Finally, the purity of the isotopic spin in the ground state of Lu^{170} is determined. The coefficient of impurity isospin (5×10^{-3}) determined theoretically is 20 times greater than the experimental value, which fact needs theoretical explanation. The authors thank L. A. Sliv, and Yu. I. Kharitonov for valuable discussions. Orig. art. has: 2 figures and 7 formulas. [JPRS]

Card 1/1 SUB CODE: 20/SUBM DATE: none/ ORIG REF: 009/ OTH REF: 008

0913 0591

L 19833-66

ACC NR: AP6002679

but coincidences were observed at 180°. The 510 keV line is accordingly ascribed to annihilation radiation. The decay of the annihilation radiation was complex, with half-lives of 23 ± 3 min and 3 ± 0.5 hr. The rhenium separated from the osmium source 38 min after beginning of accumulation decayed with two half-lives; 22 ± 3 min and 21 ± 2 hr. Associated with the short-lived activity there were observed gamma lines at 90, 135, 210, 260, 315, 440, 510, 600, 680, 760, 840, and 940 keV. Associated with the long-lived activity there was observed a gamma line at 365 keV; this activity is accordingly ascribed to Re^{181}. The present data are compared with the findings of Yu.Surkov, G.M.Chernov, A.K.Lavrukhina, and Z.V.Kromchenko (Izv. AN SSSR, Serv.fiz., 24, 119 (1960)), T.V.Malysheva, and B.A.Khotin (Izv. AN SSSR, Ser. Fiz., 25, 1256 (1961)), and I.S.Foster, I.W.Hilborn, and L.Yaffe (Canad. J. Phys.,36, 555 (1958)), and numerous points of agreement and disagreement are noted. The principal conclusion of the ensuing discussion is that the gamma spectrum of radioactive osmium is considerably more complex than was indicated by the findings of Surkov et al. (loc.cit.) and that further investigation of both the osmium and rhenium activities is necessary. The authors thank K.Ya.Gromov for discussing the results and T.M.Muminov for assisting with the measurements. Orig. art. has: 6 figures and 1 table.

SUB CODE: 18/ SUBM DATE: none ORIG. REF: 005 OTH REF: 001

Card 2/2

AUTHOR: Bedrosyan, P.; Bedike,T./ Demma,I./ Zaytseva,N.G./ Morozov,V.A.

TITLE: Gamma spectra of neutron deficient Os and Re isotopes/Transactions of the Fifteenth Annual Conference on Nuclear Spectroscopy and Nuclear Structure held at Minsk 25 January to 2 February 1965/

SOURCE: AN SSSR. Izvestiyal Seriya fizicheskaya. v.29, no. 12, 1965, 2225-2230

TOPIC TAGS: gamma spectrum, osmium, rhenium, beta decay,

ABSTRACT: Gamma spectra of short-lived Os^{191} and Re^{191} isotopes were investigated in order to improve or correct existing data. The instruments employed were a 40 x 40 mm NaI crystal scintillation spectrometer with a resolution of 10% at 662 keV and a fast-slow gamma-gamma coincidence spectrometer with a resolving time of 10 nanosec. The source was the osmium fraction from a gold target bombarded for 30 minutes with 660 MeV protons. Rhenium was repeatedly separated from the osmium source to serve as the rhenium source. Analysis of the osmium decay curve showed the presence of activities with half-lives of approximately 23 min, 90 min, and 23 hr. Gamma lines with half-lives less than 2 hr were observed at 120, 190, 240, 310, 510, 800, and 880 keV. It was not in general possible to assign definite half-lives to the different lines, but the decay of the intense 240 keV line was found to be complex with the two half-lives: ~30 min and 90 ± min. A gamma spectrum recorded 14 hours after separation of the osmium showed lines at 115, 180, 385, and 510 keV. Gamma-gamma coincidence measurements were undertaken in the 510 keV region. No coincidences were observed at 90°

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L 18145-63
ACCESSION NR: AP3004501

ASSOCIATION: Vsesoyuznyy elektrotekhnicheskiy institut im. V.I.Lenina (All-Union Electrical Engineering Institute)

SUBMITTED: 00 DATE ACQ: 26Aug63 ENCL: 01

SUB CODE: PH, SD NO REF SOV: 002 OTHER: 006

Card 3/4

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100009-6

collector 4 and are condensed on it; the amount of the condensate is determined by weighing, chemical analysis or from the radioactivity if tagged atoms are used. The total ionization coefficient is equal to the ratio of ionized to non-ionized atoms. Straightforward equations for calculating ionization coefficients and ionization cross sections for N-fold ionization are derived in the paper. The actual experimental tube is diagramed and described, and a photograph of a circular collector with a deposit is reproduced. Silver was chosen for the trial experiments for the following reasons: Ag has a sufficiently high vapor pressure at the realizable temperature (1300°K); it can readily be obtained in 99.99% pure form and is easily outgassed; it does not react with the crucible material; there exists the isotope Ag^{110} with a period of 225 days and conveniently detected β and γ radiations. Two experiments yielded values of 2.08×10^{-16} and 1.73×10^{-16} for the ionization cross section, and 1.05×10^{-8} and 0.94×10^{-8} for the ionization coefficient (accelerating potential 19 V, T = 980 and 1030°C, respectively); these values agree within 40% with the results of calculations by the formulas of Tompson and H.W.Drawin (Z.Physik,164, 513, 1961). The proposed procedure is deemed useful, but some suggestions for further improvements are made. "In conclusion, the authors express their gratitude to Z.I.Sinitsina for assistance in preparing the apparatus." Orig. art. has: 9 formulas, 3 figures and 1 table.

L 18145-63 EWT(l)/EWP(q)/EWT(m)/BDS/ES(w)-2 AFFTC/ASD/ESD-3/LJP(C)/SSD
ACCESSION NR: AP3004501 Pab-4 JD S/0048/63/027/008/1060/1064

AUTHOR: Lyubimov,A.P.; Pavlov,S.E.; Rakhovskiy,V.I.; Zaytseva,N.G.

TITLE: Procedure for measuring the ionization cross sections and ionizatinn coefficients of metal atoms /Report presented at the Second All-Union Conference on the Physics of Electronic and Atomic Collisions held in Uzhgorod 2-9 Oct 1962/

SOURCE: AN SSSR, Izvestiya, ser.fiz.,v.27, no.8, 1963, 1060-1064

TOPIC TAGS: ionization cross section , ionization coefficient , electron impact, Ag

ABSTRACT: Owing to the lack of reliable techniques for determining the ionization cross sections for metal ions - witness the minor number of experimental studies in the field - the present work was undertaken in order to develop a simple procedure for measuring ionization cross sections and ionization coefficients in electron impact. The basic experimental arrangement is diagramed in Fig.1 of the Enclosure. The atomic beam 1 of the investigated substance is ionized by the monoenergetic electron beam 2, perpendicular to it. The ions 3 formed as a result of impact are gathered by the collector 4. The ion current is amplified and measured by the electrometric amplifier 5. At the same time the non-ionized atoms also arrive at the

Card 1/4

Investigation of nuclear reactions of ...

Table 2

Реакция	E_p				
	120	200	300	480	660
$Te^{126}(p, 2p6n)Sb^{119}$	5,6	6,4	6,8	6,8	5,7
$Te^{125}(p, 2p5n)Sb^{119}$	0,1	—	6,8	5,1	6,8
$Te^{126}(p, 2p5n)Sb^{120}$	9,4	12,1	10,2	9,2	8,6
$Te^{12}(p, 2p4n)Sb^{120}$	10,6	—	7,6	6,8	10,2
$Te^{126}(p, 2p3n)Sb^{122}$	18,1	14,0	21,1	22,0	21,6
$Te^{125}(p, 2p2n)Sb^{122}$	20,0	—	17,6	15,4	22,1
$Te^{126}(p, 2pn)Sb^{124}$	11,6	12,7	15,0	18,2	18,0
$Te^{125}(p, 2p)Sb^{124}$	9,5	—	11,0	12,6	20,0
$Te^{126}(p, 4n)J^{123}$	15,6	5,5	2,2	2,0	1,8
$Te^{125}(p, 3n)J^{123}$	20,0	—	2,4	—	1,8
$Te^{126}(p, 3n)J^{124}$	15,4	5,5	2,8	1,9	2,2
$Te^{125}(p, 2n)J^{124}$	13,3	—	2,5	2,2	2,3
$Te^{126}(p, 2n)J^{126}$	13,0	4,6	2,3	1,2	1,8
$Te^{125}(p, n)J^{125}$	7,2	—	1,2	—	—
$Te^{126}(p, n)J^{126}$	8,5	~3,0	1,1	0,8	1,2
$Te^{125}(p, ?)J^{126}$	2,2	—	0,3	—	0,4
$\sigma(p, 2p)/\sigma(p, 2n)$ для Te^{126}	0,71	—	4,4	5,72	8,7

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110, 185, 1958). Likewise the considerations advanced by many other authors are discussed in connections with the energy dependence of the cross sections obtained. In the range 300-500 Mev the relation $\sigma[Te(p,2p)Sb]/2 \approx \sigma[Ce(p,2p)La]/8$ is valid (Phys. Rev. 121, 1815, 1961) but at lower energies, where the evaporation mechanism is assumed to play a great role, this does not hold. There are 3 tables.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: June 30, 1962

Table 2. Reaction cross sections in millibarn.

S/056/62/043/005/018/058
B102/B104

AUTHORS: Zaytseva, N. G., Kuznetsova, M. Ya., Min Nam Buk, Khalkin, V.A.

TITLE: Investigation of nuclear reactions of the type (p,xn) and (p,2pxn) on separated tellurium isotopes

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 5(11), 1962, 1672-1677

TEXT: In order to study the excitation functions of (p,xn) and (p,2pxn) reactions on Te^{125} and Te^{126}, pressed targets of 3% Te + 97% Al powder were irradiated at the synchrocyclotron of the OIYaI with protons of 120 - 660 Mev. The products of (p,xn) reactions, which are radioisotopes of I, were separated during 12 hrs after irradiation; the products of (p,2pxn) reactions, which are Sb radioisotopes, during 2-3 hrs after irradiation. Their activity was measured with a GM counter of type MCT-40 (MST-40), β and X rays were separated by a beryllium filter. The results obtained (Table 2) are discussed in detail and partly compared with estimates based either on Serber's cascade-evaporation mechanism (Phys. Rev. 72, 1114, 1947) or on that proposed by Metropolis et al. (Phys. Rev.

Card 1/3

ZAYTSEVA, N.G.; CHZHOU MO-LUN [Chou Mo-lung]

Radiochemical separation of hafnium without carrier. Radiokhimiia 4 no.6:738-739 '62. (MIRA 16:1)
(Hafnium--Isotopes) (Radiochemistry)

SELINOV, I.P.; VARTANOV, N.A.; KHULELIDZE, D.Ye.; BLIODZE, Yu.A.; ZAYTSEVA, N.G.; KHALKIN, V.A.

New isotope Te^{115}. Zhur.eksp.i teor.fiz. 38 no.5:1654 My '60. (MIRA 13:7)

(Tellurium--Isotopes)

ZAYTSEVA, N.G.; KUZNETSOVA, M.Ya.; LEVENBERG, I.Yu.; POKROVSKIY, V.N.; KHALKIN, V.A.

Existence of isomers of Te^{119}. Izv.AN SSSR.Ser.fiz. 24 no.9: 1083-1085 S '60. (MIRA 13:9)
(Tellurium)

Legend to table 8:

(1) Isotope composition of the various valency forms of radioactive iodine (in%)

(2) Compound

(3) Valency form of radioactive iodine

(4) I^{123}*

(5) I^{124}

(6) I^{126}

(7) I^{130}

Note: J in the table stands for I (iodine)

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Таблица 8

(1) Изотопный состав отдельных валентных форм радиоактивного йода (в %)

(2) Соединение	(3) Валентная форма радиоактивного йода	(4) J^{123}*	(5) J^{124}	(6) J^{126}	(7) J^{130}
	* J = I				
$H_2TeO_4 \cdot 2H_2O$	JO_4^-	16	24	52	8
	JO_3^-	12	36	47	5
	J^-	14	33	47	6
	ΣJ **	13	35	47	5
CsCl	JO_4^-	39	29	24	8
	JO_3^-	35	31	26	8
	J^-	30	33	33	4
	J_2	21	37	36	6
	ΣJ	33	35	29	3
$CsNO_3$	JO_4^-	20	45	31	4
	JO_3^-	23	41	30	6
	J^-	38	31	27	4
	J_2	25	40	29	6
	ΣJ	32	37	29	2

S/186/60/002/005/014/017
A051/A127

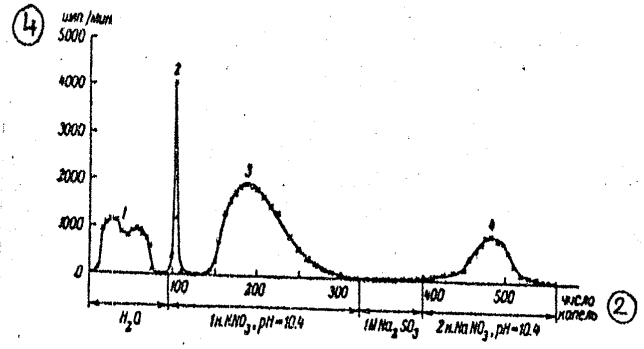
Legend to Figure 2:

(1) Chromatographic separation of iodine anions on the background of $H_2TeO_4 \cdot 2H_2O$

(2) Number of drops

(3) 1 - $I^{131}O_4^-$; 2 - $I^{131}O_3^-$; 3 - I^{131-}; 4 - I_2^{131}

(4) pulses/min.



(1) Рис. 2. Хроматографическое разделение анионов йода на фоне $H_2TeO_4 \cdot 2H_2O$.

(3) $1 - J^{131}O_4^-$; $2 - J^{131}O_3^-$; $3 - J^{131-}$; $4 - J_2^{131}$.

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A study of valency forms of radioactive...

Legend to Figure 1:

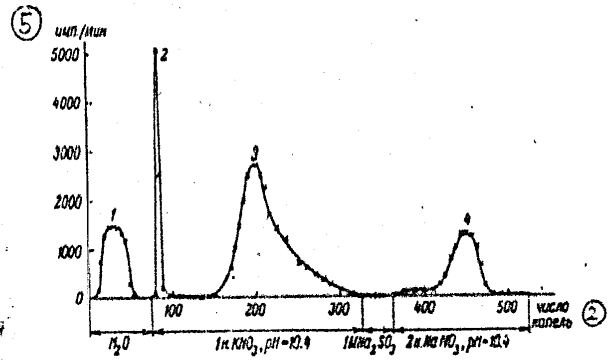
(1) Chromatographic separation of iodine anions

(2) Number of drops

(3) 1- $I^{131}O_4^-$; 2-$I^{131}O_3^-$; 3- I^{131-}; 4-I_2^{131};

(4) 1 M Na_2SO_3 was passed through the column to convert I^0 into I^-

(5) pulses/min.



(1) Рис. 1. Хроматографическое разделение анионов йода.

(3) 1 — $J^{131}O_4^-$; 2 — $J^{131}O_3^-$; 3 — J^{131-}; 4 — J_2^{131}.

(4) 1 М Na_2SO_3 пропускался через колонку для перевода J^0 в J^-.

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20654

S/186/60/002/005/014/017
A051/A127

A study of valency forms of radioactive.

active iodine was found to be the same. There are 8 tables, 2 graphs, 32 references: 5 Soviet, 27 non-Soviet-bloc. Four recent Engl.-l. publ.: D. E. Nelson, K. J. McCallum, Can. J. Chem., 36, 6, 979 /1958/; E. R. Johnson, J. Am. Chem. Soc. 80, 17, 4460,/1958/; D. Hall, G. N. Walton, J. Inorg. Nucl. Chem., 6, 4, 288, /1958/;J. Cunningham, H. G. Heal, Trans. Far. Soc., 54, 9, 1355, /1958/.

SUBMITTED: December 28, 1959

Card 6/9

degassing) and on the intensity of the proton stream. It was found that by reducing the intensity of the proton stream two or three times the iodine yield increased in the acidified state with moisture and oxygen from air being absent. The increase in the iodine content in the acidified state with the target irradiated by a dispersed stream of protons, as compared to the results obtained by a focused stream, is explained in the following manner: electrons, close to the F-centers of coloring in the crystal lattice are known to become free when heated, and part of these can be captured by the occurrence of positive ions of radioactive iodine, thus increasing the negative charge of iodine. Furthermore, it may be assumed that with an increased intensity rate of irradiation, the formation of radiative decay products of the target grow accordingly, with which the nascent radioactive iodine nuclei may react during both the motion of the "hot atom" inside the crystal and the time the target material dissolves in water. The isotope composition of the valency forms of the radioactive iodine formed through the fission of tellurium and cesium by fast protons is given in table 8. The isotope composition of all valency forms of radio-

ments. Carrier-free periodate and iodate were synthesized from NaI^{131}. Repeated tests on the separation of the artificial mixture of iodine anions showed that the position of the peak volume does not change. Possible losses of radioactive iodine during the chromatographic separation process were determined by the comparison of the sum of specific activities of iodine. Results indicated that no loss of radioactive iodine takes place. The valency forms of iodine were also determined by another method, i.e. by the analysis method of Coryell Ch. D., Sugarman N. (Ref. 24: Coll. Radiochemical Studies. The Fission Products. 1, 19, 1951). The relative yield of iodine in the various forms was determined by the specific activity of the PdI_2 residue obtained in each iodine fraction. The activity of the residues was measured with a frontal counter, and the radioactive iodine isotopes (I^{123}, I^{124}, I^{126}, I^{130}) in each target were identified by different half-life and irradiation types. Tabulated results on the various forms of stabilization of radioactive iodine isotopes are given. The data reveal that the relative yield of the valency forms depends on the experimental conditions, i.e. on the preliminary processing of the target (drying and

reactions will be determined by those variants in which they stabilize as a result of secondary reactions with ambient atoms and molecules in both the solid state and in the liquid state, i.e. when being dissolved in water. To prove this assumption, iodine has been selected as a very suitable element, since it has several stable valency forms (periodate, iodate, iodide, molecular iodine). Radioactive iodine obtained through fission has several long-lasting isotopes which are easy to identify. Protons with an energy of 660 Mev applied on the synchrocyclotron were used for the irradiation of chemically pure compounds of tellurium ($H_2TeO_4.2H_2O$), cesium (CsCl, $CsNO_3$) and iodine (KIO_4, KIO_3, KI). After having irradiated telluric acids and cesium compounds, which were first dried and degassed, radioactive iodine stabilized mostly in the lower valency forms (I_2, I^-). When traces of moisture and oxygen from air were present the yield of radioactive iodine isotopes increased in the acidified forms (IO_4^-, IO_3^-). The method of chromatographic division of IO_4^-, IO_3^- and I^- without a carrier, as described by M. L. Good et al. (Ref.22: J. Inorg. Nucl. Chem. 6, 1, 73, 1958) has been modified by the authors to suit their conditions of the experi-

3/186/60/002/005/014/017
A051/A127

A study of valency forms of radioactive...

$I_{53}(p, pxn)I_{53}$.

Experiments with 660 Mev protons showed that the chemical composition of the target, the intensity of the proton stream, the presence of the moisture and air in the irradiation chamber, do all affect the relative yield of the valency forms produced. Although the interaction of fast particles with a complex nucleus has been studied and is known to take place in two stages, Rudstam G. (Ref. 14: Svensk Kem. Tidskrift, 69, 8, 378 /1957/)the state of the atom, in the moment of its formation or nascent state is not known; however, based on material by Walton J. N., Bowls B., Kroll I. F. (Ref. 12: Material of the International Conference on the peaceful use of the atomic energy at Geneva 1955, 7, 196, Gosenergoizdat, M. 1956) it is assumed that the "hot atom" carries a high positive charge, and with slowing down of its motion, it takes on electrons, and the positive charge decreases. Referring to G. Rudstam's theory (Ref.: 17 Spallation of medium weight elements, 26, Upsala, 1956) the products of intense fission must form in the lower acidified states. The authors of this article, however, hold that the final chemical state of products obtained through nuclear

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AUTHORS: Zaytseva N. G., Lo-Ven-Chzhun

TITLE: A study of valency forms of radioactive isotopes of iodine produced through fission of tellurium, cesium and iodine with high-energy protons

PERIODICAL: Radiokhimiya, v. 2, no. 5, 1960, 614-623

TEXT: Compared to similar studies with low energies (not exceeding 20 Mev), with the exception of investigations made by G. A. Chackett and K. F. Chackett (Ref. 13: Nature, 174, 4422, 232/1954/), the authors conducted experiments on the valency forms of radioactive iodine isotopes with high-energy protons, using up to 660 Mev. Valency forms have been studied in which radioactive iodine isotopes stabilized after the dissolution of the irradiated target in water, obtained through fission of tellurium, cesium and iodine according to the reaction with high-energy protons

$$Te_{52}(p, xn)I_{53}$$
$$Cs_{55}(p, 3pxn)I_{53}$$

Card 1/9

ZAYTSEVA, N.G.; KUZNETSOVA, M.Ya.; LEVENBERG, I.Yu.; KHALKIN, V.A.

Light isotopes of iodine. Radiokhimiia 2 no.4:451-457 '60.
(MIRA 13:9)

(Iodine—Isotopes)

The Effect of Surface-Active Substances on the Crystallization of Hydrated Tricalcium Aluminate

than the speed of nuclei formation. There are 2 graphs, 3 photos, and 8 references, 6 of which are Soviet, 1 English, and 1 French.

ASSOCIATION: Institut fizicheskoy khimii AN SSSR, Otdel dispersnykh sistem, Moskva (Institute of Physical Chemistry of the USSR Academy of Sciences, Department of Dispersed Systems, Moscow)

SUBMITTED: June 9, 1957

1. Calcium aluminates--Crystallization 2. Wetting agents --Chemical reactions 3. Ion exchange 4. Calcium isotopes (Radioactive)--Applications

AUTHORS: Zaytseva, N.G., Smirnova, A.M. SOV-69-20-5-16/23

TITLE: The Effect of Surface-Active Substances on the Crystallization of Hydrated Tricalcium Aluminate (Vliyaniye poverkhnostno-aktivnykh veshchestv na protsess kristallizatsii trekhkal'tsiyevogo gidroalyuminata)

PERIODICAL: Kolloidnyy zhurnal, 1958, Vol XX, Nr 5, pp 656-659 (USSR)

ABSTRACT: The use of "marked" atoms for determining the specific surface of powder-like substances is difficult, because the surface is not clearly separated from deeper layers. The addition of surface-active substances, like saponin and lignosulfonates (SSB) to powder-like materials is here investigated. Ca^{45} in a calcium chloride solution was used as an indicator. Figure 1 shows that at first the ion exchange is very fast, which indicates an exchange on the surface. If the concentration of the additions is high, the formation of crystal nuclei is retarded. The degree of dispersion of the solid phase is also influenced by the addition of surface-active substances (Figure 2). The maximum of specific surface is reached with additives of high concentration. Figure 3 shows the crystal formations at different concentrations. It is evident that with small additions of surface-active substances, the speed of crystal growth is higher

Card 1/2

The Effect of Ionizing Radiation on Polymeric Glasses

in the formation of this kind of cracks. The authors discuss the effect that the gaseous products of the radiolysis of polymeric glasses have upon the process of radiation destruction of the latter, especially in connection with the formation of supersaturated solutions. The aggregate of data obtained as a result of studying the radiochemical change in plexiglass, concerning, in particular, the effect of temperature, attests to the fact that this process is irreversible. The pressure of the gases dissolved in the polymer has no effect upon the course of the process. (In-t fiz. khimii AN SSSR).

From the authors' résumé

SOV/58-59-9-20156

Translated from: Referativnyy Zhurnal Fizika, 1959, Nr 9, p 99 (USSR)

AUTHORS: Tsetlin, B.L., Zaytseva, N.G., Korbut, V.M., Kargin, V.A.

TITLE: The Effect of Ionizing Radiation on Polymeric Glasses

PERIODICAL: In the symposium: The Effect of Ionizing Radiation on Inorganic and Organic Systems. Moscow, AN SSSR, 1958, pp 363 - 375

ABSTRACT: The authors made an experimental study of the processes involved in the radiation destruction of some vitreous polymers. They investigated the changes which the thermomechanical characteristics and the endurance of the polymers undergo as a result of irradiation. They also studied the gas formation and development of dendritic cracks that irradiation causes in polymeric glasses. On the basis of the results obtained, the authors discuss some regularities in the influence that the chemical nature of the polymers exerts upon the direction and rate of the radiochemical changes they undergo. A study of the character of the dendritic cracks which develop in various organic glasses under the action of irradiation, permitted the authors to voice some considerations in support of the hypothesis advanced earlier concerning the adsorption mechanism involved

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resistance with an increase in the dose. The stabilizing effect of aromatic groups, and the increase in the probability of bond ruptures in the principal chains of the macromolecules at the presence of quarternary carbon atoms in them have been detected, as well as a decrease in the destruction rate with increasing sizes of the side groups in the polymethacrylate series. The character of the growth of the dendritic cracks has been studied in conformity with the adsorption mechanism proposed earlier by the authors (RZhKhim, 1957, Nr 22, 71846). It has been shown that the gas formation during radiolysis is closely connected with the formation of oversaturated solutions of gases in the polymer. It has been noted on polymethylmethacrylate plasticized with 6% dibutylphthalate that low-molecular admixtures accelerate the process of destruction. It has been shown that the process of radiolysis of polymer glass is irreversible.

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Translation from: Referativnyy zhurnal, Khimiya, 1959, Nr 21, pp 563 - 564 (USSR)

AUTHORS: Tsetlin, B.L., Zaytseva, N.G., Korbut, V.M., Kargin, V.A.

TITLE: The Action of Ionizing Radiation on Polymer Glass

PERIODICAL: V sb.: Deystviye ioniziruyushchikh izlucheniy na neorgan. i organ. sistemy, Moscow, AS USSR, 1958, pp 362 - 375

ABSTRACT: The effect of irradiation of polymers by fast electrons and X-rays on their thermomechanical properties and resistance has been investigated by experiment, and the process of formation of dendritic cracks and gas bubbles during irradiation has also been studied. The following samples were investigated: Polystyrene, non-plasticized polymethylmethacrylate, polymethylmethacrylate containing 6% dibutylphthalate, the copolymer of methylmethacrylate with isobornyl methacrylate, the copolymer of methylmethacrylate and methacrylic acid, poly- α - chloroacrylate, poly-n-dichlorostyrene and polytrifluorochloroethylene. It has been established that in polystyrene the process of structuralization takes place, whereas in all other polymers destruction is observed which is accompanied by the reduction of the flow temperature and the

Card 1/2

On Arboriform Cracks in Plexiglass, Developed Under the Action of Electronic Radiation.

20-2-39/67

ce of mechanical stresses. The latter can probably be traced back to 2 causes: 1) To the shrinking of plexiglass by its radiation-chemical decomposition, on which occasion a large quantity of gases develops. 2) To the accumulation of an electric surpluscharge. Here the low-molecular decomposition products of the polymer are very important which supersaturated solutions in the entire interior of the sample develop. These products can be absorbed in the apertures of the micro-cracks. Their molecules absorbed near the boundary of the material layer disrupted by fast electrons can have homonymous surplus-charges. The electrostatic interaction of these charges presumably causes the further growth of the cracks by which again new adsorption points develop.

(2 illustrations, among them 1 plate with 5 microphotographs, 2 citations from publications)

ASSOCIATION Institute for Physical Chemistry of the Academy of Science of the U.S.S.R.
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AVAILABLE Library of Congress
Card 3/3

that is able to disrupt the electron bundle, that is at least 1.7 - 2 mm. The inner cracks and tensions in the material are of no importance for its development. Only the position of the exterior injury and the intensity of the radiation dose determine the kind and velocity of the process. Samples that had been annealed and stretched before at a temperature of 130° and then cooled showed the same network of cracks. These cracks never leave the interior and do not appear on the surface. They are hollow, channel-like and serve as a way for escaping gases that develop on the occasion of irradiation of the plexiglass. Beginning from the original spot these cracks can easily be colored. With increasing temperature their velocity of growth decreases, so that relaxation processes can here be assumed. The formation process of arboriform cracks is common to all organic sorts of glass. The experimental results obtained are not yet sufficient for a final conclusion, therefore it is only provisionally concluded: Obviously these cracks are caused in consequence of developing interior tensions which cause the decomposition of the sample at the weakest points. These are the apertures of the micro-cracks in the spot of the mechanical injury. Their arboriform appearance develops vertically to the direction of the electron bundle. The development of cracks probably proceeds in consequen-

Zaytseva, N.G.

AUTHOR TSETLIN, B.L., ZAYTSEVA, N.G., KARGIN, V.A., Member of the Academy.

20-2-39/67

TITLE On Arboriform Cracks in plexiglass, Developed under the action of Electronic Radiation.
(O drevovidnikh treshchinakh, razvivayushikhaya v pleksiglase pod deystviyem elektronnogo izlucheniya - Russian)

PERIODICAL Doklady Akademii Nauk SSSR, 1957, Vol 113, Nr 2, pp 380-382, (U.S.S.R.)

Received 6/1957 Reviewed 7/1957

ABSTRACT Such cracks were investigated by the authors in the polymethyl acrylate (or plexiglass on this base respectively), where they develop under the action of an intense radiation energy. As this influence can be important for the adaptability of plexiglass in the domain of radioactive radiation, it attracted their attention. These cracks are a new phenomenon, dissimilar to any other crack--formation in synthetic materials. The arboriform crack originate and grow only from an existing or a caused injury. Its velocity of growth is propotional to the magnitude of the radiation dose. From the original spot they grow and gradually and steadily include the entire surface irradiated. Its branches do not intersect and grow through each other. The different "trees" are clearly marked off from each other. Only fast electrons effect this kind of cracks, X-ray irradiation does not produce this effect. They develop in plates of a suffient thickness, which must be larger than the one

Card 1/3

ZAYTSEVA, N.G. Cand Chem Sci -- (diss)"Analysis of the variation of the degree of dispersion of minerals in cement clinkers during their reaction with water by the method of radioactive isotopes." Mos,1957. 12 pp. (Acad Sci USSR. Inst of Phys Chemistry). 110 copies. (KL, 8-58, 104)

ZAYTSEVA, N.G.

ZAYTSEVA, N.G.

RADUSHKEVICH, L.V.

5(6) 3 PHASE I BOOK EXPLOITATION SOV/1308

Soveshchaniye po metodam issledovaniya struktury vysokodispersnykh i poristykh tel. 2d, Leningrad, 1956.

Metody issledovaniya struktury vysokodispersnykh i poristykh tel; trudy vtorogo soveshchaniya. (Methods of Investigating the Structure of Highly Disperse and Porous Bodies; Transactions of the Second Conference) Moscow, Izd-vo AN SSSR, 1958. 294 p. 2,000 copies printed.

Sponsoring Agencies: Akademiya nauk SSSR. Institut fizicheskoy khimii and Institut khimii silikatov.

Resp. Ed.: Dubinin, M.M., Academician; Ed. of Publishing House: Bargmova, L.L.; Tech. Ed.: Markovich, S.M.

PURPOSE: This book is intended for scientists, teachers and advanced students interested in the structural analysis of highly disperse and porous bodies.

COVERAGE: This collection contains reports by members of various Soviet institutions of higher education: Institute of Physical Chemistry, AS UkrSSR; Institute of Chemistry, AS Georgian SSR; Far Eastern Branch, AS USSR; Georgian Scientific Research Institute for Petroleum; State Optical Institute; Leningrad Technological Institute; Moscow and Leningrad State Universities; Far Eastern Polytechnic Institute; "Agrophysical" Institute, and others. Introductory remarks were made by Professor N.A. Toropov, Director of the Institute of Silicate Chemistry. Apart from reports under the four subject divisions (see Table of Contents), the collection includes discussions, considerations and proposals adopted at the close of the conference.

TABLE OF CONTENTS:

Card 5/9

ZAYTSEVA, N. G., KORBUT, V. M. KARGIN, V. A., and TSETLIN, B. L.

"Principles of the Disintegration of Vitreous Polymers by Radiation"

Truly Transactions of the First Conference on Radioaction Chemistry, Moscow,
Izd-vo AN SSSR, 1958. 330pp.
Conference -25-30 March 1957, Moscow

SMIRNOVA, A.M.; ZAYTSEVA, N.G.; REBINDER, P.A.

Study of the specific surface of individual components of portland cement by means of radioactive tracers. [with English summary in insert] Koll.zhur.18 no.1:93-100 Ja-F '56. (MLRA 9:6)

1.Institut fizicheskoy khimii AN SSSR, Moskva.
(Binding materials) (Radioactive tracers)

ZAYTSEVA, N.G.; LO VEN-CHZHUN [Lo Wêng-chung]

Study of the valence forms of radioactive iodine isotopes obtained in the fission of tellurium, cesium, and iodine induced by high-energy protons. Radiokhimiia 2 no.5:614-623 '60.
(MIRA 13:10)

(Iodine--Isotopes) (Tellurium) (Cesium)

GOLUBEVA, V.M., student III kursa; ZAYTSEVA, N.F., student II kursa

Microbiologic evaluation of the effectiveness of disinfection of hospitals with ultraviolet rays. Pediatriia 39 no.2:63-66 Mr-Ap '56. (MLRA 9:8)

1. Iz Ivanovskogo meditsinskogo instituta (dir. - prof. P.P.Yerofeyev)

(ULTRAVIOLET RAYS, effects,
hosp. disinfect. (Rus))
(HOSPITALS,
disinfect. with ultraviolet rays (Rus))
(ANTISEPSIS AND ASEPSIS
ultraviolet disinfect. of hosp. (Rus))

ZAYTSEVA, N.F.

Malignant mesothelioma of the pleura. Vrach. delo no.8:104-106 Ag '60. (MIRA 13:9)

1. Bol'nitsa No. 1 TSentral'nogo rayona g. Odessy (nauchnyy rukovoditel' raboty - prof. S.L. Barkagan).
(PLEURA—CANCER)

PARKHILOVSKIY, I.G., kand.tekhn.nauk; ZAYTSEVA, N.F.

Using an electronic analog computer in statistical investigations of motor-vehicle vibrations. Avt.prom. 30 no.1:9-14 Ja '64. (MIRA 17:3)

1. Gor'kovskiy sel'skokhozyaystvennyy institut i Gor'kovskiy avtozavod.

SHCHUKAREV, S.A.; VASIL'KOVA, I.V.; ZAYTSEVA, N.D.

Study of molybdenum halides, determination of the enthalpy of molybdenum tetrabromide formation. Vest LGU 16 no.22:127-129 '61. (MIRA 14:11)

(Molybdenum halides) (Heat of formation)

VASIL'KOVA, I.V.; ZAYTSEVA, N.D.; SVALOV, Yu.S.

Molybdenum halides. Determination of the enthalpy of molybdenum dioxydibromide. Vest LGU 16 no.16:140-142 '61. (MIRA 14:8)

(Molybdenum bromide)
(Enthalpy)

ACC NR: AP7001882

in the free atmosphere occur between 15° N and 15° S latitudes, and this zone needs special study, all round the world, on other oceans and on land. Orig. art. has: 5 figures and 9 tables.

SUB CODE: 04/ SUBM DATE: 07Apr66/ ORIG REF: 011/ OTH REF: 008

Card 2/2

ACC NR: AP7001882 (N) SOURCE CODE: UR/0362/66/002/012/1235/1252

AUTHORS: Zaytseva, N. A.; Kostyanoy, G. N.

ORG: Central Aerological Observatory (Tsentral'naya aerologicheskaya observatoriya)

TITLE: Meridional change in the long-wave field of radiation in the atmosphere above the Pacific Ocean (from weather-ship data)

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 2, no. 12, 1966, 1235-1252

TOPIC TAGS: heat radiation, research ship, atmospheric radiation

ABSTRACT: The authors have analyzed meridional cross sections of the long-wave radiation field, using data of radiometric soundings from the weather ships A. I. Voyeykov and Yu. M. Shokal'skiy during May and June 1965. Some aspects of the distribution of radiation currents in the free atmosphere above the Pacific Ocean are discussed. The data are tabulated and the distributions are represented in figures. These show that the meridional course of effective radiation here observed is in good agreement with previous determinations, except for a maximum near 2° S lat. at a height of 10 km. It is noted that there is a great difference in heat influx in the troposphere at latitudes 15--25° N from that at the equator: 0.175 versus 0.100 cal/cm^2 min. This causes radiation cooling of the troposphere of 1.1 and 0.6° per day, respectively. The sharpest changes in actinometric and aerological parameters

Card 1/2 UDC: 551.521.2

VASIL'KOVA, I.V.; ZAYTSEVA, N.D.; SHAPKIN, P.S.

Interaction of tungsten hexa- and pentachloride with sodium and potassium chlorides. Zhur. neorg. khim. 8 no.10:2360-2364 O '63. (MIRA 16:10)

(Tungsten chlorides) (Alkali metal chlorides)

ZAYTSEVA, N.D.

Synthesis and determination of the heats of formation of $KWCl_6$ and K_2WCl_7. Zhur. neorg. khim. 8 no.10:2365-2368 O '63. (MIRA 16:10)

(Potassium compounds) (Tungsten chlorides)
(Heat of formation)

VASIL'KOVA, I.V.; ZAYTSEVA, N.D.; PETROVA, V.A.

Systems RbCl - WCl_6, RbCl - WCl_5, CsCl - WCl_6, and CsCl - WCl_5.
Zhur. neorg. khim. 8 no.10:2369-2371 O '63. (MIRA 16:10)

(Tungsten chlorides) (Alkali metal chlorides) (Systems (Chemistry))

ZAYTSEVA, N. A.

"Organo-Tin Compounds of the p-Anisyl, p-Phenetyl and p-Biphenyl Series," Zhur. Obshch. Khim., 16, No. 6, 1946. Fbr., Lab., All-Union Inst. Exptl. Med., im. A. M. Gor'kiy, Moscow, -1945-.

ZAITSEVA, N D

OPREDELITEL' RAYONIROVCHIVYKH SORTOV KARTOFELYA (DETERMINATION OF TA [illegible] RESISTING SPECIES OF POTATOES) MOSKVA, SEL'KHOZGIZ, 1953.
147 P. ILLUS., DIAGRS., TABLES.

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KACHURIN, L.G.; ZAYTSEVA, N.A.; LOMANOVA, S.I.

Temperature limits of formation of ice particles in supersaturated water vapor. Izv.AN SSSR Ser.geofiz.no.7:857-861 Jl '56 (MIRA 9:9)

1.Leningradskiy gidrometeorologicheskiy institut.
(Ice) (Condensation)

D'YAKONOV, Yu.N. (Moskva); ZAYTSEVA, N.A. (Noginsk)

Supersonic flow of an ideal gas about a blunt body. Izv.AN SSSR.Otd.tekh.nauk.Mekh.i mashinostr. no.1:118-123 Ja-F '63. (MIRA 16:2)

(Aerodynamics, Supersonic)

ZAYTSEVA, N.A.; PANOV, Ye.M.; KOCHESHKOV, K.A.

Synthesis of fluorinated ketones by use of organolithium compounds and N, N-dialkylamides of fluorinated acids. Izv.AN SSSR.Otd.khim. nauk no.5:831-835 My '61. (MIRA 14:5)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova.
(Ketones) (Lithium organic compounds) (Amides)

ACC NR: AT7000568

radiation of ascending currents during clear nights and overcast days in the winter do not exceed ± 5--7%. In the troposphere, changes in the downward current do not exceed 10--15%. Furthermore, the effective radiation in the stratosphere changes within the limits of 20--30%. Finally, changes in humidity affect the radiation field in the stratosphere very strongly. Orig. art. has: 6 figures.

SUB CODE: 04/ SUBM DATE: 04Feb65/ ORIG REF: 001

Card 2/2

ACC NR: AT7000568 SOURCE CODE: UR/2789/66/000/070/0041/0057

AUTHORS: Zaytseva, N. A.; Kostyanoy, G. N.

ORG: none

TITLE: Change of the long wave radiation field in the free atmosphere during 7--10 hrs

SOURCE: Tsentral'naya aerologicheskaya observatoriya. Trudy, no. 70, 1966. Radiatsionno-opticheskiye i ozonometricheskiye issledovaniya atmosfery (Radiation-optical and ozonometric investigations of the atmosphere), 41-57

TOPIC TAGS: radiosonde, actinometry, atmospheric sounding, atmospheric cloud, atmospheric radiation

ABSTRACT: Changes in the long wave radiation of the earth's atmosphere during a 7--10 hr period are discussed on the basis of actinometric radiosonde data obtained over a series of seven observations at the TsAO Aerological Institute in Dolgoprudyy. The seven radiosonde series are divided into three general groups. The first recorded radiation field changes under cloudless conditions. The second was done under solid cloud cover. The third recorded changes in the radiation field when atmospheric conditions were changing rapidly during the observation. A number of time-plots are given showing the changes in the effective radiation field in the air up to an altitude of 20 km. From these results it is concluded that changes in the long wave

UDC: 551.552.32

Card 1/2

ZAYTSEVA, N. A.

"Organo-Tin Compounds of the p-Anisyl, p-Phenetyl and p-Biphenyl Series" by T. V. Talallaeva, N. A. Zaytzeva and K. A. Kocheshkow (p. 909)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1946, Volume 16, No. 6

GREBENYUK, A.D.; ZAYTSEVA, N.; LOGUNOVA, T.

Reactions of nitroolefins with aromatic compounds in the presence of acid catalysts. Part 3: Condensation of β-nitrostyrene with toluene in the presence of BF_3 and $BF_3 \cdot H_3PO_4$. Zhur. org. khim. 1 no.4:691-696 Ap '65. (MIRA 18:11)

1. Tashkentskiy gosudarstvennyy universitet.

SHEVERDINA, N.I.; PALEYEVA, I. Ye.; ZAYTSEVA, N.A.; KOCHESKHKOV, K.A.

Preparation of R_2Zn-type organozinc compounds in the aromatic, heterocyclic, and aliphatic-aromatic series by means of the Grignard reagent. Dokl. AN SSSR 155 no. 3:623-625 Mr '64. (MIRA 17:5)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova. 2. Chlen-korrespondent AN SSSR (for Kocheshkov).

KAYTSEVA, N.A.; USMANOV, R.F.

Vertical cross section of the atmosphere in the equatorial zone of the central part of the Pacific Ocean. Trudy TSIP no.137:83-93 '64. (MIRA 17:9)

ZAYTSEVA, N.; KORENEVSKAYA, N.; FREYMUNDT, Ye.

A book on statistical problems of the national econom's balance ("Problems of economic statistics; analysis of the structure of the national economy and the interrelationship of its elements" by T.V. Riabushkin. Reviewed by N. Zaitseva, N. Korenevskaia, E. Freimundt). Vop. ekon. no.10:111-114 O '59. (MIRA 12:12)
(Russia--Economic conditions)

ZAYTSEVA, N.

Construction of precast reinforced concrete tanks. Na stroi. Ros. 3 no.3:30-31 Mr '62. (MIRA 16:2)

1. Starshiy inzh. tekhnicheskogo otdela Angarskstroya.
(Tanks) (Precast concrete construction)

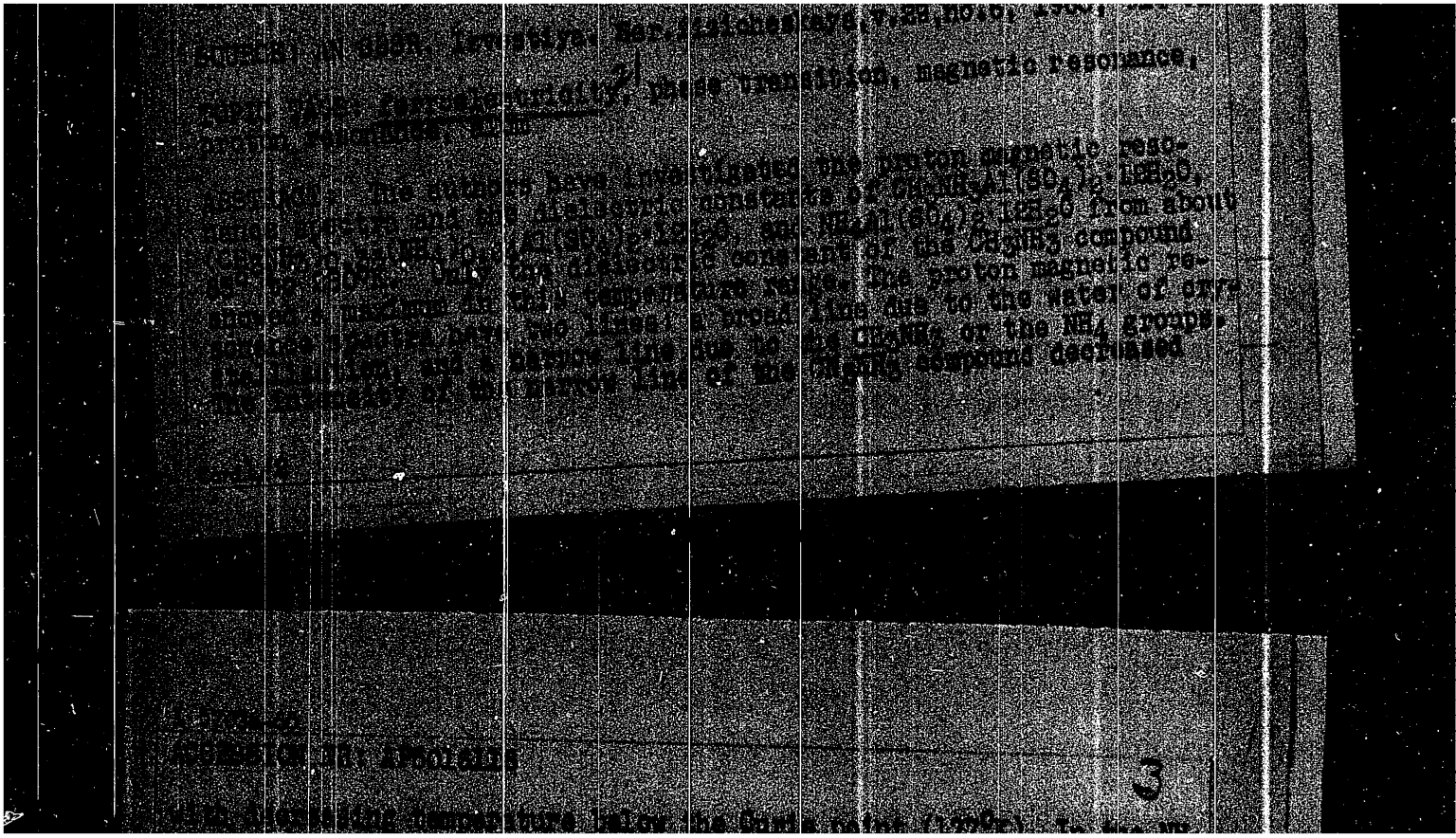
ZAYTSEVA, N., studentka; LARCHENKO, N., studentka

Accuracy of the solution of poorly conditioned systems of linear algebraic equations. Trudy MIIZ no.10:173-186 '60.
(MIRA 16:12)

1. Moskovskiy institut inzhenerov zemleustroystva.

YAKOVLEV, K., polkovnik; STEPIN, A., podpolkovnik; ZAYTSEV, N., [illegible] kovnik

Soldiers study the materials of the party congress. Voen. vest. 41 no.1:12-15 Ja '62. (MIRA 15:2)



ZAZIRNAYA, M.V.

After-fermentation of beer on yeast deposits formed in the main fermentation. Izv.vys.ucheb. zav. pishch.tekh. no.5:72-75 '60.
(MIRA 13:12)

1. Kiyevskiy tekhnologicheskiy institut pishchevoy promyshlennosti. Kafedra tekhnologii brodil'nykh proizvodstv.
(Beer) (Fermentation)

ZAYTSEVA, M.P., nauchnyy sotrudnik

First successes. Zdorov'e 7 no.12:8 D '61. (MIRA 14:12)

1. Nauchno-issledovatel'skiy institut revmatizma, Moskva.
(RHEUMATISM)

FOTCHENKOV, A.A.; ZAYTSEVA, M.P.

Reverse piezoelectric effect of triglycine sulfate. Kristallografiia 7 no.6:934-937 N-D '62. (MIRA 16:4)

1. Institut fiziki Sibirskogo otdeleniya AN SSSR.
(Piezoelectricity) (Glycine)

300 to 600 x 10^{-8} cgsu with a width of about 5°C at 44°C. The height of the peak depends on the polarizing field. The dependence of d22 on polarizing field (dc) is of the form of a hysteresis loop. Saturation does not occur until fields of above 1200 V/cm are applied. There are 3 figures.

ASSOCIATION: Institut fiziki Sibirskogo otdeleniya AN SSSR
(Institute of Physics, Siberian Section AS USSR)

SUBMITTED: February 28, 1962

S/070/62/007/006/014/020
E132/E435

AUTHORS: Fotchenkov, A.A., Zaytseva, M.P.

TITLE: The converse piezoelectric effect in triglycine sulphate (TGS)

PERIODICAL: Kristallografiya, v.7, no.6, 1962, 934-937

TEXT: In crystals of Y-cut TGS the dependence of the modulus d_{22} on the magnitude of the alternating field, the temperature (for various polarizations) and the magnitude of the polarizing field used in the process of repolarization was measured. The observations are due to the domain structure of TGS. It was found that almost all specimens of Y-cut TGS were unipolar. At 22°C, d_{22} was found to lie between 10 and 60 x 10^{-8} cgsu but the majority of specimens were between 20 and 26 x 10^{-8} cgsu: d_{23} was found to be 46 x 10^{-8} cgsu for an exciting a.c. field of 10 V/cm. The decrease in d_{22} found with increasing amplitude of applied a.c. field is due to the action of the field in changing the sign of some of the domains in the preferred direction which determine the piezoelectric effect. A graph is given of the temperature dependence of the d_{22} which shows a peak of about

ZAYTSEVA, M.P.; ZHELUDEV, I.S.; ZHEREBTSOVA, L.I.; FOTCHENKOV, A.A.

Intensity of an electric field required to bring about polarization equal to spontaneous polarization. Izv. AN SSSR. Ser. fiz. 29 no.6:948-950 Je '65. (MIRA 18:6)

1. Institut fiziki Sibirskogo otdeleniya AN SSSR i Institut kristallografii AN SSSR.

ZAYTSEVA, M.P.; ZHEREBTSOVA, L.I.; VINOGRADOVA, I.S.

Phase transitions in ferroelectric alums. Izv. AN SSSR. Ser. fiz. 29 no.6:914-926 Je '65. (MIRA 18:6)

FOTCHENKOV, A.A.; ZAYTSEVA, M.P.; CHEREPOVA, L.I.

Electrostriction of triglycine sulfate. Kristallografiia 8 no.5: 724-728 S-O '63. (MIRA 16:10)

1. Institut fiziki Sibirskogo otdeleniya AN SSSR.

25893
S/070/61/006/004/005/007
E032/E314

Electrostriction of ....

H.J. McSkimin - Phys. Rev., 82, 442, 1951;
Ref. 11 - A.H. Allsopp, D.F. Gibbs - Philos. Mag., 4, 39, 359-370, 1959.

ASSOCIATION: Institut fiziki Sibirskogo otdeleniya AN SSSR (Institute of Physics of the Siberian Branch of the AS USSR)
Institut kristallografii AN SSSR (Institute of Crystallography of the AS USSR)

SUBMITTED: January 9, 1960

Card 6/9

Electrostriction of ....

with $E_{\sim}$ = 110 V/cm; temperatures are indicated below the loops. Finally, Fig. 5 shows the temperature dependence of R_{11}, calculated from the data shown in Fig. 4 (Curves 1, 2 and 3 correspond to $E_{\sim}$ = 110, 90 and 70 V/cm, respectively). The general conclusion is that all the relationships obtained can be explained on the basis of the behaviour of the domain structure in an electric field. A schematic representation of the deformation of a ferroelectric in an alternating electric field is shown in Fig. 1, in which Curve 1 shows the applied field and Curve 2 the deformation as a function of time. The diagrams below the graphs illustrate the mechanism of the deformation of the crystal and the domain-reorientation process. Acknowledgments to I.M. Sil'vestrova and L.A. Skopina for carrying out the experiments.
There are 5 figures and 15 references: 8 Soviet and 7 non-Soviet. The four latest English-language references quoted are: Ref. 3 - W.P. Mason - Phys. Rev., 74, 1131-1147, 1948; Ref. 5 - M.E. Caspari, W.J. Merz - Phys. Rev., 80, 1082-1089, 1950; Ref. 7 - W.H. Bond, W.P. Mason and

Electrostriction of ....

The two coefficients are related by:

$$R_{11} = (\varepsilon_{11}^{t}/4\pi)^2 Q_{11}$$

where ε_{11}^{t} is the dielectric constant. It was found that with $E_{\sim}$ = 380 V/cm, ε_{11}^{t} = 160 . For the same field $R_{11} \simeq 0.07 \times 10^{-6}$ CGSE and hence $Q_{11} \approx 430 \times 10^{-2}$. This is greater by a factor of 5 than the value reported by Wood and Mason. It is stated that the discrepancy may be due to some unknown errors in the results of Wood and Mason, who measured the spontaneous polarisation from the hysteresis loops while the spontaneous deformation was measured in the polydomain state. Fig. 4 shows the temperature dependence (heating) of the electrostrictional deformation of Rochelle salt (X section) for different values of the alternating field (Curve 1 - $E_{\sim}$ = 110 V/cm; Curve 2 - $E_{\sim}$ = 90 V/cm; Curve 3 - $E_{\sim}$ = 70 V/cm). The traces on the right were obtained

Electrostriction of ....

The electrodes were in the form of silver foil and the deformation of the specimen was measured at twice the frequency of the applied sinusoidal voltage. Fig. 2 shows the dependence of the electrostriction of a Rochelle-salt specimen (X section) on the magnitude of the applied electric field (V/cm) at 600 kc/s and $T = 22\ ^{\circ}C$. The thickness of the specimen was 2 mm. Curve 1 shows the electrostrictional deformation r'_{11} and Curve 2 the electrostriction coefficient r_{11}. Fig. 3 shows the dependence of the electrostriction coefficient R_{11} for Rochelle salt as a function of a (constant) polarizing field (V/cm) with $E_{\sim} = 140$ V/cm and $T = 12\ ^{\circ}C$. Consideration of this figure shows that even small constant fields remove from the polarization reversal process a large fraction of the domains. A comparison is then made between the electrostriction coefficient R_{11} for Rochelle salt and the coefficient Q_{11} as reported by Mason (Ref. 2 - Piezoelectric Crystals and Their Application in Ultra-acoustics. Izd. IL, Moscow, 1952).

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Electrostriction of ....

from the relation between the deformation of the specimen and the square of the spontaneous polarisation. No account was taken of the effects due to the reorientation of the domains in the electric fields. The present authors define the electrostrictional deformation of ferroelectrics as the deformation which is proportional to the square of the electric field independently of the mechanism giving rise to the deformation. The apparatus described by the first of the present authors in Ref. 13 (Kristallografiya, 1957, Vol. 2, No. 5, pp. 653 - 657) has been used to carry out a detailed study of the electrostriction properties of Rochelle salt. Particular attention was paid to electrostrictional deformation due to reorientation in the domain structure. In the present work, the degree of polarization of Rochelle-salt specimens and their phase-transition temperature were controlled with the aid of the hysteresis loop obtained in the "usual way". The Rochelle-salt specimens (5 x 10 x 20 mm along the X, Y and Z axis) were placed in a thermostated crystal holder described by the first of the present authors (Ref. 14 - Kristallografiya, 1960, Vol. 5, No. 3, pp. 415 - 419).

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25893
S/070/61/006/004/003/007
E032/E314

9,2180 (1331, 1144, 1063)

AUTHORS: Fotchenkov, A.A., Zheludev, I.S. and Zaytseva, M.P.

TITLE: Electrostriction of Single Crystals of Rochelle Salt

PERIODICAL: Kristallografiya, 1961, Vol. 6, No. 4, pp. 576 - 581

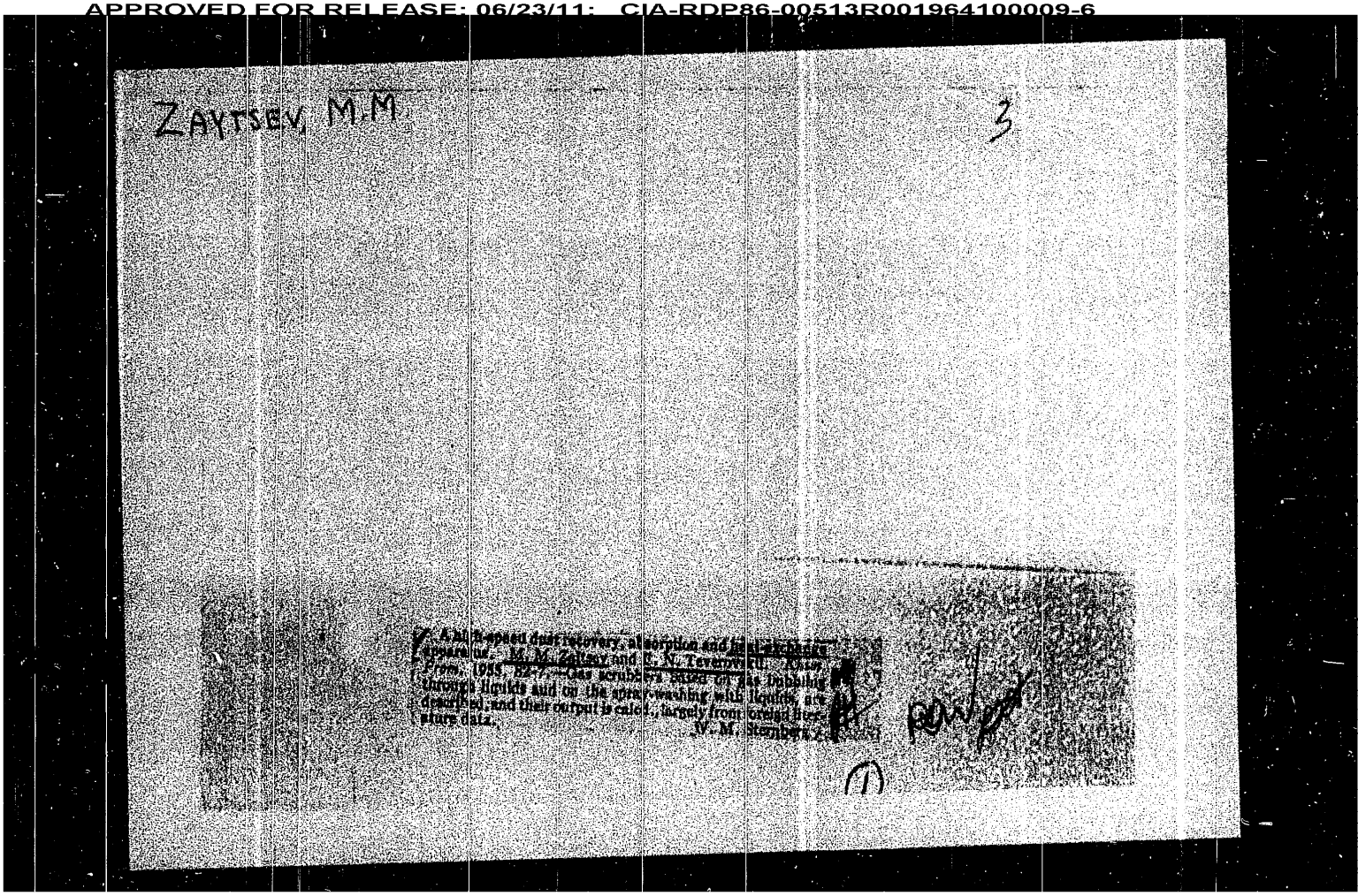
TEXT: In distinction to linear dielectrics (Ref. 1 - Fotchenkov and Zheludev - Kristallografiya, 1958, Vol. 3, No. 3, pp. 308-314) ferroelectrics exhibit a much greater electrostriction effect. Up to now, the electrostriction coefficients of ferroelectrics have been largely measured by indirect methods. Allsopp and Gibbs (Ref. 11 - Philos. Mag. 1959, Vol. 4, No. 39, pp. 359-370), G. Schmidt (Ref. 10 - Z. Physik, 1956, 145, pp. 534-542; Ref. 12 - Naturwissenschaften, 1958, Vol. 45, No. 1, pp. 8-9) are said to have been the first to determine the electrostriction coefficients of barium titanate by direct measurement of the deformation which appears under the action of an electric field. In previous work, the electrostriction coefficients were determined

Card 1/9

ZAYTSEVA, M. M.

20163 ZAYTSEVA, M. M. Aminostimulinoterapiya distrofil v rannem detskom vozraste. Vracheb. delo., 1949, No. 6, stb. 543-44.

SO: LETOPIS ZHURNAL STATEY, Vol. 27, Moskva, 1949.



ZAYTSEVA, M.I.

USSR/Engineering - Structural ceramics

Card 1/1 Pub. 104 - 2/8

Authors : Zaytseva, M. I. and Chaykovskaya, N. I.

Title : Zinc coating for ceramic goods

Periodical : Stek. i ker. 3, 4-7, Mar 1955

Abstract : Experiments showed that zinc glazings containing no Br and Sn offer an excellent enamel-like white, lustrous and/or dull coating for ceramic goods (structural materials). The chemical composition of the Zn-glazing is described. The thermal and technical properties of the glazing applied to structural materials normally exposed to various weather conditions are analyzed. One USSR reference (1933-1946). Tables; illustrations.

Institution : .....

Submitted : .....

ZAYTSEVA, M.I.

Ceramic sewer pipes from low-melting clay with leadless glaze. Steklo i Keram. 9, No.2, 12-13 '52. (MLRA 5:2)
(CA 47 no.19:10189 '53)

K.

USSR/Forestry - Forest Crops.

Abs Jour : Ref Zhur - Biol., No 15, 1958, 68030

Author : Zaytseva, M.I.

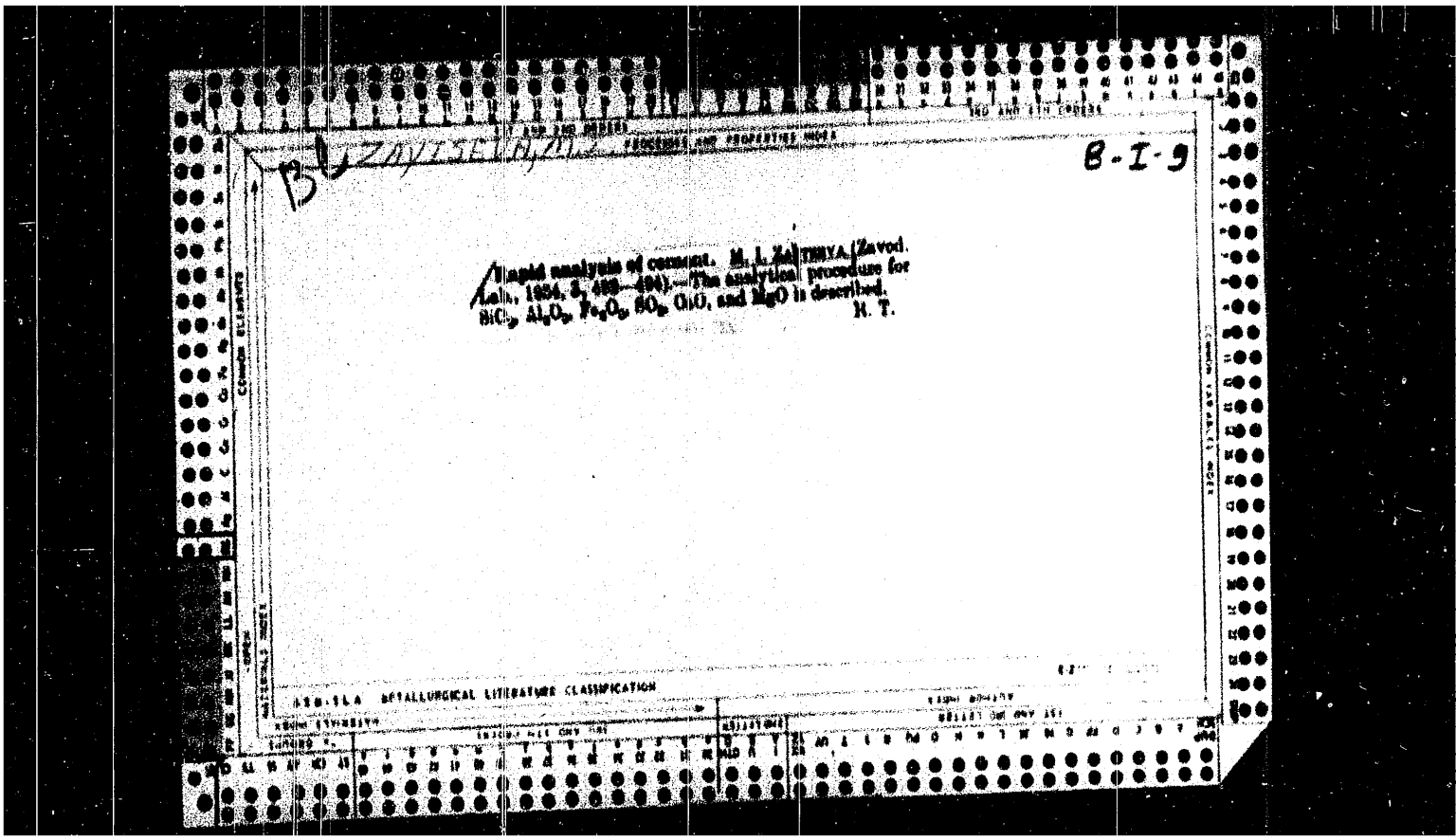
Inst : Gomel' State Pedagogical Institute.

Title : The Influence of the Geographical Derivation of Acorns on the Growth and Hardiness of Oak Seedlings.

Orig Pub : Uch. zap. Gomel'sk. gos. ped. in-t, 1956, No 3, 269-282.

Abstract : In 1950 and 1951 investigations were made of 113 forest protective belt areas which had been grown from seed in Saratov Oblast', Acorns of local, Northern Caucasian, Ukrainian, and Belorussian derivation had been used. Height was taken as the basic index of the condition of the seedlings. No differences sufficient to indicate the place of origin were discovered in the sowing qualities of the acorns. Nor was any difference noted in the

Card 1/2



ZAYTSEVA, M.I.

Mathematical Reviews
Vol. 14 No. 8
Sept. 1953
Algebra

8-10-54

Zaĭceva, M. I. On the set of ordered Abelian groups. Uspehi Matem. Nauk (N.S.) 8, no. 1(53), 135–137 (1953). (Russian)

Part of problem 102 in Birkhoff's "Lattice theory" [Amer. Math. Soc. Colloq. Publ., vol. 25, rev. ed., New York, 1948; these Rev. 10, 673] is to classify all (simple) orderings of a free abelian group with a finite number of generators. The author solves this problem. The question is first reduced to the archimedean case by observing that the group is a lexicographic direct sum of archimedean groups. The problem then comes to this: given two sets of rationally independent real numbers $a_1, \cdots, a_n$ and $b_1, \cdots, b_n$, when are the groups they generate order-isomorphic? The answer is that one must be able to pass from the a's to the b's by a unimodular matrix of integers, followed by multiplication by a non-zero real number. *I. Kaplansky.*

ZAYTSEV, M. I.

Dissertation: "Right-Ordered Groups." Cand Phys-Math Sci, Moscow Oblast Pedagogical Inst, Moscow, 1953. (Referativnyy Zhurnal--Matematika, Moscow, Apr 54)

SO: SUM 243, 19 Oct 1954