"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

S/120/62/000/001/021/061
E140/E463

21.6000

AUTHORS: Vorob'yev, A.A., Vorob'yev, G.A., Mesyats, G.A., Golynskiy, A.I.

TITLE: High-voltage nanosecond pulse generator

PERIODICAL: Pribory i tekhnika eksperimenta, no.1, 1962, 96-98

TEXT: A generator based on two spark gaps is described, for obtaining isolated 15 kV pulses with rise-times less than 1 ns and durations between 10 and 40 ns. A pulse-shaping cable, coaxial multielectrode switching gap, transmission line and coaxial pulse sharpening gap comprise the generator. The generator is triggered by a pushbutton. There are 4 figures.

B

ASSOCIATION: Nauchno-issledovatel'skiy-institut yadernoy fiziki, elektroniki i avtomatiki Tomskogo politekhnicheskogo instituta (Scientific Research Institute of Nuclear Physics, Electronics and Automation of the Tomsk Polytechnical Institute)

SUBMITTED: May 27, 1961

Card 1/1

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

37726
S/139/62/000/002/025/028
E039/E435

24.3500

AUTHOR: Vorob'yev, A.A.

TITLE: Supplementary optical absorption, fluorescent spectra and energy bonds in ionic crystals

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Fizika, no.2, 1962, 165-170

TEXT: In this paper the results from thirteen earlier papers are used to present a reasonably coherent picture of the effect of admixtures and exposure to X-rays on the absorption and fluorescent spectra of ionic crystals. The main points extracted are as follows: The position of the maxima of the secondary absorption bands, arising in alkali-halide crystals containing colour centres, is displaced to longer wavelengths with the transition to compounds with a lower lattice energy or by the weakening of bonds between particles when the temperature is increased. The introduction of certain admixtures as activators in ionic crystals is accompanied by the formation of new electron or hole centres and their corresponding absorption bands, additional to those observed in the pure crystals. The bands

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in the fluorescent spectra of the alkali-halide phosphors, activated by admixtures, show a displacement to longer wavelengths with decreasing lattice energy. The quantum energy in the absorption band maximum is defined by the interaction energy of the ions of the basic material with the admixture ions

$$h\nu d^2 = aR - bR^2$$

where d is the lattice parameter of the basic material; R is the radius of the admixture ion; a = 27.77 eV and b = 8.96 eV. Electron and hole centres, determined by additional absorption, are connected with the increase in defects in the crystal lattice produced by exposure to radiation.
There are 3 figures and 3 tables.

ASSOCIATION: Tomskiy politekhnicheskiy institut imeni S.M.Kirova (Tomsk Polytechnical Instituto imeni S.M.Kirov)

SUBMITTED: April 7, 1961

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

L 04040-67 EWT(1) IJP(c) GG

ACC NR: AR6010502 SOURCE CODE: UR/0196/65/000/010/B006/B006

AUTHOR: Vorob'yev, A. A.; Vorob'yev, G. A.

49

48

B

TITLE: Some quantitative relationships of electrical breakdown of solid dielectrics

SOURCE: Ref. zh. Elektrotekhnika i energetika, Abs. 10B39

REF SOURCE: Sb. Proboy dielektrikov i poluprovodnikov. M.-L., Energiya, 1964, 10-21

TOPIC TAGS: dielectric breakdown, solid dielectric, impact ionization, dielectric strength

ABSTRACT: The following problems are considered: 1) the dependence of electric strength upon the thickness of the dielectric; 2) discharge propagation; 3) the dependence of the discharge time upon the thickness of the dielectric; 4) the diagram of the development of the discharge; 5) estimate of the coefficient of impact ionization; 6) two breakdown mechanisms; and 7) the breakdown stages. It is demonstrated that many analogies exist in the breakdown mechanism of solid dielectrics and the air. It should be considered proven that electrical breakdown of solid dielectrics is caused by electron impact ionization. It is indicated that for a better understanding of the processes occurring in electrical breakdown of solid dielectrics, it is necessary to gain a deeper understanding of the effect of the solid structure on the development of the electron avalanche, and the processes of diffusion and recombination. From this stand-

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ACC NR: AR6010502

point, ascertaining the role of point defects and dislocations in the process of breakdown is of interest. It is also important, by means of direct measurements, to estimate the autoelectronic emission from the cathode, multiplication of electrons, velocities of the electron avalanche, and the streamer. [Translation of abstract] 13 illustrations, 3 tables, and bibliography of 54 titles. [Tomsk Poltechnical Institute im. S. M. Kirov (Tomskiy politekhnich. in-t)]

A. Petrashko

SUB CODE: 20

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Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

L 04041-67 EWT(1) IJP(c) GG

ACC NR: AR6010501 SOURCE CODE: UR/0196/65/000/010/B006/B006

61
60
B

AUTHOR: Vorob'yev, A. A.

TITLE: On the theoretical strength of solid dielectrics in electric breakdown

SOURCE: Ref. zh. Elektrotekhnika i energetika, Abs. 10B38

REF SOURCE: Sb. Proboy dielektrikov i poluprovodnikov. M.-L., Energiya, 1964, 106-108

TOPIC TAGS: solid dielectric, dielectric breakdown, dielectric strength, crystal lattice, impact ionization,

ABSTRACT: From the condition of a break in the lattice by the forces of the electrostatic field or destruction of the lattice by electrons in impact ionization in an electric field, expressions have been obtained for the theoretical strength of solid dielectrics in electric breakdown

$$E_{br} = (cmU)^{1/2} (e\tau)^{-1}$$

(c, m, and τ are, respectively, the charge, mass, and time of free motion of the electron, c is a constant depending upon the number of interactions of the conductivity electrons with a unit of the lattice, after which its breakdown occurs) and the crystal electric strength as a function of composition and structure

$$E_{br} = \varepsilon^{-1} F_{MAX} = \varepsilon^{-1} (r_0^{-1} E U_i)^{1/2}$$

Card 1/2 UDC: 621.315:61:548.0:537

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L 04041-67

ACC NR: AR6010501

(r_0 is the lattice parameter, E is the modulus of elasticity, F is the mechanical tensilestrength, U_s is the surface energy of the body). [Translation of abstract] Bibliography of 5 titles. [Tomsk Polytechnical Institute im. S. M. Kirov (Tomskiy politekhnich. in-t)] A. Petrashko

SUB CODE: 20

kh

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

L 04261-67 EWT(1)/EWP(m) IJP(c) WW/GG

ACC NR: AR6010505 SOURCE CODE: UR/0196/65/000/010/B007/B007

70

69

B

AUTHOR: Vorob'yev, A. A.

TITLE: Loss of electric strength by dielectrics at a compression shock-wave front and the use of this phenomenon for one-time or repeated one-time commutation in electric circuits

SOURCE: Ref. zh. Elektrotekhnika i energetika, Abs. 10B42

REF SOURCE: Sb. Proboy dielektrikov i poluprovodnikov. M.-L., Energiya, 1964, 108-109

TOPIC TAGS: dielectric property, commutator, circuit breaker, compression shock wave, dielectric loss, shock wave front, dielectric strength

ABSTRACT: Data are studied which testify to an increase in the electrical conductivity of dielectrics and strength losses in strong compression. The loss of electric strength by a dielectric at a shock-wave compression front and the origin of high electrical conductivity in it may be applied for one-time or multiple commutation in electric circuits. For example, in electric-current circuits for lightning-protection installations, a shield may be used in which, in normal operation of the installation, the circuit to the ground is switched off by a dielectric gap. Through this dielectric, synchronously with the excess voltage wave being bled away, a detonation compression wave passes, originating in the explosion of an explosive charge or a power-

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ACC NR: AR6010505

ful discharge by a pulsed-current generator. The duration of the compression wave is so selected as to cover the pulse of the excess voltage wave being corrected. After the passage of the compression wave, the resistance of the dielectric is restored. [Translation of abstract] 1 illustration and bibliography of 4 titles. [Tomsk Polytechnical Institute im. S. M. Kirov (Tomskiy politekhnich in-t)] A. Petrashko

SUB CODE: 11,20

Card 2/2 fv

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.; BEZMATERNYKH, L.N.; DUDENKO, A.N.; LISITSYN, A.I.; OL'SHANSKIY, A.P.

Dielectric laminated coatings with large reflection coefficients. Izv. vys. ucheb. zav. radiofiz. 7 no.2:338-342 '64 (MIRA 18:1)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.

Radiation stability of alkali halide crystals. Izv. AN SSSR. Ser. fiz. 29 no.3:361-365 Mr '65. (MIRA 18:4)

1. Tomskiy politekhnicheskiy institut.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A. A.

Displacement of complementary absorption bands in glasses of different chemical composition. Izv. vys. uch. zav.; fiz. 3: 140-144 '62. (MIRA 15:10)

1. Tomskiy politekhnicheskiy institut imeni S. M. Kirova.

(Glass—Spectra) (Crystallography)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

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39544
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E194/E455

4,7800

AUTHORS: Vorob'yev, A.A., Vorob'yev, G.A., Kostrygin, V.A. (Tomsk)

TITLE: The mechanism of electric breakdown of thin layers of solid dielectric

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Energetika i avtomatika, no.4, 1962, 66-68.

TEXT: The breakdown of thin (10^{-3} cm and less) specimens of salt has been explained by the electron avalanche theory due to F. Seitz (Phys. Rev., v.76, 1949, 1376) and by what is here termed the multiple avalanche streamer mechanism. In the avalanche streamer method of discharge with thicknesses greater than 10^{-3} cm, the positive space charge remaining at the anodes due to an avalanche is sufficient to form a streamer. When the thickness is less than 10^{-3} cm, the space charge of the anode necessary to originate a streamer accumulates by attraction to the anode area of several electron avalanches. According to the Seitz mechanism, the discharge time should depend on the area of

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the cathode and according to the proposed mechanism it should be practically independent. Accordingly, rock salt specimens 10 microns thick were prepared in two forms, having cross sections of 0.45 mm and 1.2 mm. Probability plots of breakdown time show that these are respectively 5.5 and 5 microseconds, the difference being within the limits of experimental error. This result supports the hypothesis of multi-avalanche streamer breakdown mechanism. There are 3 figures.

SUBMITTED: March 15, 1962

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.; VOROB'YEV, G.A.; MURASHKO, L.T.

Breakdown voltage of solid dielectrics as dependent on thickness in the range of low thickness values. Izv. vys. ucheb. zav.; fiz. no.5:174 '62. (MIRA 15:12)

1. Nauchno-issledovatel'skiy institut pri Tomskom politekhnicheskom institute imeni Kirova.
(Breakdown, Electric)
(Dielectrics)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

S/181/62/004/007/032/037
B178/B104

AUTHORS: Vorob'yev, A. A., Vorob'yev, G. A., and Murashko, L. T.

TITLE: Anisotropy in the electric strength of rock salt

PERIODICAL: Fizika tverdogo tela, v. 4, no. 7, 1962, 1967-1968

TEXT: The direction [110] along the chain of positive ions in the crystal lattice of the NaCl type is the favored direction of electron acceleration. As the interionic distance in the direction [111] is larger than in the direction [100], preference is given to the former. A. Hippel (Phys. Rev., 57, 156, 1940) got the following ratio for the electric strength in the directions [100], [110], and [111]: $E_{100}:E_{110}:E_{111} = 1.41:1:1.23$. In the present investigation, the values obtained for the electric strength in the various directions did not differ within the limits of error. It is assumed that the anisotropy in electric strength can be proved only if electrodes with a small diameter are used, since otherwise the discharge may take place in another direction with lower strength. Using electrodes with a small diameter one obtains $E_{100}:E_{110}:E_{111} = 1.43:1:1.21$. There is

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Anisotropy in the electric ...

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B178/B104

1 figure.

ASSOCIATION: Tomskiy politekhnicheskiy institut imeni S. M. Kirova (Tomsk Polytechnic Institute imeni S. M. Kirov)

SUBMITTED: March 22, 1962

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APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.; VOROB'YEV, G.A.; MESYATS, G.A.; GOLYNSKIY, A.I.

Generator of high-voltage pulses with millimicrosecond duration, Prib.i tekh.eksp. 7 no.1:96-98 Ja-F '62. (MIRA 15:3)

1. Nauchno-issledovatel'skiy institut yadernoy fiziki, elektroniki i avtomatiki Tomskogo politekhnicheskogo instituta.
(Pulse techniques(Electronics))

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.; VOROB'YEV, G.A.

Problem concerning the electric breakdown of solid dielectrics. Radiotekh. i elektron. 7 no.9:1523-1528 S '62. (MIRA 15:9)
(Dielectrics)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

L 16149-63 EWT(1)/EWT(m)/BDS/ES(w)-2 AFFTC/ASD/ESD-3/AFWL/IJP(C)/SSD

ACCESSION NR: AP3005[illegible] Pab-4 S/0058/63/000/006/A039/A039

SOURCE: RZh. Fizika, Abs. 6 A327

AUTHORS: Vorob'yev, A. A.; Didenko, A. N.; Kovalenko, Ye. S.

TITLE: Waveguide electronic cyclic accelerator 19

CITED SOURCE: Izv. Tomskogo politekhn. in-ta, v. 100, 1962, 162-169

TOPIC TAGS: accelerator, cyclic, waveguide

TRANSLATION: Results are presented of an investigation of a waveguide cyclic accelerator with external (controlling) magnetic field; the motion of the particles in the common high-frequency field (RZhFiz, 1961, 4B45), the behavior of the waveguide in the alternating magnetic field, the electrodynamics of bent corrugated iris-loaded waveguides (RZhFiz, 1961, 6Zh423; 11Zh363), and similar problems are briefly considered. The high efficiency of such an accelerating system is noted. A. Fateyev.

DATE ACQ: 15Jul63 SUB CODE: PH ENCL: 00

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

33971
S/089/62/012/003/009/013
B102/B108

24.6730

AUTHORS: Vorob'yev, A. A., Didenko, A. N.

TITLE: Possibility of using "collapsible-whip" slowing-down systems in accelerator engineering

PERIODICAL: Atomnaya energiya, v. 12, no. 3, 1962, 242 - 243

TEXT: The authors (Atomnaya energiya, 8, no. 5, 459 (1960)); 10, no. 1, 69 (1961)) have suggested to use closed diaphragm waveguides of square cross section as accelerating systems in large electron synchrotrons. They are far more effective than cavity systems, but they have some disadvantages: The maximum critical wavelength is only about twice the waveguide height. The wavelength cannot be changed without changing the gap. The ratio of the interaction radius a to the wavelength λ has to be large ($a/\lambda \approx 0.5$-0.7); thus, at a phase velocity $\sim c$ the field in the center of the interaction region will become much weaker than the field at the diaphragm. To overcome some of the difficulties, small slowing-down systems operating at long waves are needed, such as collapsible-whip systems. The efficiency of such systems depends on the shunt per unit of length, given by $r_{sh} = E_z^2/P$ for

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travelling waves. E_z is the longitudinal field component, P are the losses per unit of length. Some numerical calculations were carried out for a waveguide system with a "collapsible-whip" slowing-down arrangement as shown in the Fig. The system was designed for TEM-waves with $\lambda \approx 10$ cm. When p = 2.5 cm, q = 0.5 cm, $h_1 = h_2 = 1$cm, a = 2cm, b = 0.2 cm, W_1 = 1.893 cm, W_2 = 0.473 cm, the zeroth harmonic of a synphased symmetrical TEM-wave will propagate with a phase velocity equal to c and r_{sh} in the center (III) will be 0.155 megohm/cm. For a = 3 cm, r_{sh} will be 0.11 megohm/cm. The power attenuation factor will be $4 \cdot 10^{-4}$ cm^{-1} for the zeroth harmonic of a synphased symmetrical TEM-wave (p = 2.5 cm, q = 0.5 cm, a = 2 cm). In this case the power sources may be mounted far from each other. Such stepladder slowing-down systems are apt to increase the wavelength in iron-free systems. There are 1 figure and 3 Soviet references.

SUBMITTED: September 4, 1961

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.; VOROB'YEV, G.A.; KOSTRYGIN, V.A.

Estimation of the impact ionization coefficient in crystals. Izb.vys. ucheb.zav.;fiz.no.2:174-175 '63. (MIRA 16:5)

1. Tomskiy politekhnicheskiy institut imeni Kirova.
(Ionization) (Breakdown, Electric)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

ACCESSION NR: AR4042157 S/0196/64/000/005/B008/B008

SOURCE: Ref. zh. Elektrotekhnika i energetika, Abs. 5B38

AUTHOR: Vorob'yev, A. A.; Vorob'yev, G. A.; Zavadovskaya, Ye. K.; Savintsev, P. A.

TITLE: Some results of investigation of properties of ionic dielectrics

CITED SOURCE: Izv. Leningr. elektrotekhn. in-ta, vy*p. 51, 1963, 171-178

TOPIC TAGS: ionic dielectric, ionic crystal, lattice parameter, dielectric property

TRANSLATION: On the basis of analysis of experimental results, a connection is established between the physical-chemical properties of ionic crystals and alloys with lattice energy U, lattice parameters, molecular concentration, and number of particles in a unit cell. Hardness E_{limit}, thermal and chemical stability of crystals increases with increase of U. Properties of solid solutions are determined by composition and defectiveness of lattice of alloys. Aging of alloys is accompanied

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by change of defectiveness of lattice and heat of formation Q. Number of particles in a unit cell of hard alloys NaCl - NaBr, KCl - KBr, KCl - RbCl is less, and temperature coefficient of expansion is more, than for pure crystals. The values of Q, tan δ, temperature coefficient of expansion, and Debye temperature of alloys have a maximum, while ρ and E_{limit} - a minimum in the region of average concentrations of components, which is indicated by the smaller bond of ions and large defectiveness of the lattice of alloys. Measurements of Q of hard alloys established that eutectic alloys are not a mechanical mixture of components. The melting point at the contact of two heterogeneous crystals is lower than the melting point of components by tens and hundreds of degrees; there is observed a mutual dissolution of components. The value of E_{limit} of crystals depends on the polarity of the point, gauge of the sensor, and temperature. With a gauge of several microns, E_{limit} increases with an increase of gauge. The experimental results are presented which indicat the ionization character of breakdown of crystals with the help of the mechanism of impact ionization. Two illustrations. Bibliography: 11 references. [Tomsk Polytechnical Institute im. S. M. Kirov].

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

ACCESSION NR: AT4016319 S/0000/62/000/000/0361/0364

AUTHOR: Vorob'yev, A. A.; Vorob'yev, G. A.

TITLE: Ionization processes during electrical breakdown in alkali halide crystals

SOURCE: Vses. soveshch. po fiz. shchelochnogaloidn. kristallov, 2d, Riga. 1961. Trudy*. Fiz. shchelochnogaloidn. kristallov (Physics of alkali halide crystals). Riga, 1962 1962, 361-364

TOPIC TAGS: alkali halide, alkali halide crystal, electrical breakdown, ionization, alkali halide ionization, electric strength, crystal electric strength, discharge delay, dielectric, discharge propagation, Seitz theory, Townsend discharge

ABSTRACT: Using generators of the authors' design, capable of producing high voltage pulses of up to 10^{-10} sec. duration, the magnitude of the discharge delay and the mean propagation velocity of the discharge during a breakdown were measured in NaCl-, KBr-, KCl- and KI-crystals. The electric strength of a crystal was found to be a function of the interelectrode distance rather than a physical constant of the crystal as previously believed. It is concluded from the tests that crystal breakdown is initiated by impact ionization and that avalanche and multiavalanche mechanisms, respectively are involved

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in the discharge when the crystal thickness is greater or smaller than 10^{-3} cm in a uniform field. The Seitz theory of solid dielectric breakdown and the Townsend discharge are extensively discussed. Orig. art. has: 3 formulas.

ASSOCIATION: None

SUBMITTED: 00 DATE ACQ: 06Mar64 ENCL: 00

SUB CODE: SS NO REF SOV: 008 OTHER: 003

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APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.; VASIL'YEV, N.N.; SHEVELEV, V.M.; VORONOVA, Z.A.; PETROVA, Ye.K.; BAZHENOVA, G.A.; ANDROSHCHUK, S.M.

Study of botulin anatoxins. Report No.6: Type D botulin anatoxin. Zhur. mikrobiol., epid. i immun. 40 no.9:87-92 S'63.
(MIRA 17:5)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.

Selective destruction of a mechanically stronger component under compression or tension exerted by acoustic waves on a composition o materials of different strength. Izv. vys. ucheb. zav.; fiz. no. 2:168-169 '64. (MIRA 17:6)

1. Tomskiy politekhnicheskiy institut imeni Kirova.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

ACCESSION NR: AT4016311 S/0000/62/000/000/0304/0318

AUTHOR: Vorob'yev, A. A.

TITLE: Radiation changes and alkali halide crystal stability

SOURCE: Vses. soveshch. po fiz. shchelochnogaloidn. kristallov. 2d, Riga, 1961. Trudy*. Fiz. shchelochnogaloidn. kristallov (Physics of alkali halide crystals). Riga, 1962, 304-318, and the insert following p. 318

TOPIC TAGS: radiation, alkali halide crystal, radiation defect, optical absorption, color center, crystallography, crystal stability, lattice energy, neutron irradiation, crystal physical property

ABSTRACT: In a review of work on radiation effects in alkali halide crystals the author discusses: 1) dependence of the color center formation and disintegration rates on the radiation dose, chemical composition of the crystal, and radiation conditions; 2) relations between the lattice energy and the coefficient of electron absorption, the coefficient of x-ray attentuation and the vacancy activation energy; 3) electron energy losses; 4) optical absorption in reactor-irradiated ionic crystals; 5) spontaneous formation of color centers and rehabilitation of properties in irradiated crystals after and during annealing, respectively; 6) change in hardness and plastic properties; 7) change in electrical conductivity

Card 1/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

ACCESSION NR: AT4016311

during x-ray or neutron irradiation; and 8) irradiation effect on electrical strength. The major points of his conclusions may be summarized as follows: The activation energy of ion vacancy migration, the mechanical and electrical strength, and the thermal and chemical stability increase, while the electron mobility decreases with an increase in the lattice energy of alkali halide crystals. Under the influence of radiation microdefects occurring in the lattice structure tend to increase as the coefficient of radiation absorption increases. The stability of color centers is susceptible to a variety of often counteracting factors: first, temperature, illumination, and radiation dose; second, a lower lattice energy which tends to foster the growth and intensity and to increase the coefficient of x-ray absorption of these micro-defects. The author identifies the establishment of connections between the properties of a solid on the one hand and micro-defects of the lattice on the other as one of the major trends of modern solid physics. Orig. art. has: 1 table, 3 formulas and 8 photographs.

ASSOCIATION: Tomskiy politekhnicheskiy institut (Tomsk Polytechnical Institute)

SUBMITTED: 00 DATE ACQ: 06Mar64 ENCL: 00

SUB CODE: SS NO REF SOV: 013 OTHER: 008

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

ACCESSION NR: AP4034951 S/0181/64/006/005/1560/1562

AUTHORS: Vorob'yev, A. A.; Vorob'yev, G. A.; Koncherbayev, T. K.; Kostry*gin, V. A.; Nekrasova, L. G.

TITLE: Influence of the electrodes and the structure of dielectric crystals on their dielectric strength

SOURCE: Fizika tverdogo tela, v. 6, no. 5, 1964, 1560-1562

TOPIC TAGS: alkali halide, dielectric material, dielectric strength, annealing, potassium compound

ABSTRACT: The dielectric strength of a number of alkali-halide crystals was measured by using several types of electrodes. Use of metallic electrodes produced nearly equal values which were about 45% lower than the values obtained using a saturated NaCl solution as the electrodes. Further investigation using combinations of liquid and graphite electrodes showed that, regardless of the anode material, the value of the dielectric strength was much lower with graphite as the cathode than when the electrolyte was the cathode. It is concluded that cold emission from the cathode has a significant effect on the value of the

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

ACCESSION NR: AP4034951

dielectric strength. The effect of annealing the crystals was also investigated. The dielectric strengths of alkali-halide monocrystals of the potassium series were measured with both unannealed and annealed crystals. It was found that the dielectric strength of the unannealed crystal was always larger than that of the annealed crystal. The difference between the two values increased with decreasing lattice energy, ranging from about 10% for KCl to about 40% for KI. It was also noted that the dispersion of experimental values was significantly less for the annealed crystals. Thus, mechanical stresses and dislocations in the unannealed crystal play an essential role in scattering electrons, increasing the dielectric strength. Orig. art. has: 1 diagram and 2 tables.

ASSOCIATION: Tomskiy politekhnicheskiy institute im. S. M. Kirova (Tomsk Polytechnic Institute)

SUBMITTED: 13Aug63 DATE ACQ: 20May64 ENCL: 00

SUB CODE: SS NO REF SOV: 006 OTHER: 005

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

LAVRENT'YEV, A.M., akademik; RABOTNOV, Yu.N., akademik; RZHANOV, A.V.; VOROB'YEV, A.A., prof.; KUZNETSOV, Yu.A.; SOKOLOV, V.A., prof.

Vladimir Dmitrievich Kuznetsov, 1887-1963; an obituary. Izv. SO AN SSSR no.2. Ser. tekh. nauk no.1:142-143 '64. (MIRA 17:8)

1. Chleny-korrespondenty AN SSSR (for Rzhanov, Kuznetsov).

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.; DIDENKO, A.N.

Design of wave-guide type cyclic accelerators. Izv. vys. ucheb. zav.; fiz. no.5:111-114 '64. (MIRA 17:11)

1. Tomskiy politekhnicheskiy institut imeni Kirova.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

LUKIN, Ye.P.; VASIL'YEV, N.N.; VOROB'YEV, A.A.; MALINA, V.P.

Immunological properties of a soluble Rickettsia prowazekii antigen. Report No.1: Antigenic structure of Rickettsia prowazekii based on data of chromatographic analysis on diethylaminoethyl cellulose. Zhur.mikrobiol., epid. i immun. 42 no.4:41-47 Ap '65.

(MIRA 18:5)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, Aleksandr Akimovich, doktor fiziko-matematicheskikh nauk;
MOSKALEV, Vladilen Aleksandrovich, prof. kand. tekhn. nauk, dotsent

Development and use of betatrons in socialist countries. Izv. vys. ucheb. zav.; elektromekh. 8 no.4:480-481 '65. (MIRA 18:5)

1. Tomskiy politekhnicheskiy institut.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'EVA, A.A.; MOSKALEV, V.A.; FILIPPOV, M.F.; VOROB'YEV, V.A.

International Colloquium on Betatrons. Atom. energ. 18 no.2: 192-193 F '65. (MIRA 18:3)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

ALKHAZOV, G.D.; VOROB'YEV, A.A.; KOROLEV, V.A.; SELIVERSTOV, D.M.

Simple circuit of the counting unit for a slow-acting multichannel analyzer. Prib. i tekh. eksp. 9 no.2: 69-71 Mr-Ap'64. (MIRA 17:5)

1. Fiziko-tekhnicheskiy institut AN SSSR.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

L 15368-66 EWT(1)/ETC(m)-6 IJP(c) WW

ACC NR: AP6004187 SOURCE CODE: UR/0048/66/030/001/0167/0174

AUTHOR: Belostotskiy, S.L.; Vorob'yev, A.A.; Seliverstov, D.M.

ORG: none

58
B

21,44,55

TITLE: Use of magnetic focusing in precision flight-time spectrometers for heavy charged particles /Transactions of the Fifteenth Annual Conference on Nuclear Spectroscopy and Nuclear Structure, held at Minsk, 25 January to 2 February, 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.30, no. 1, 1966, 167-174

TOPIC TAGS: electron optics, magnetic quadrupole lens, spectrometer, ion beam, ion beam focusing

ABSTRACT: The authors have used the matrix technique of M.Birk, A.Kerns, and R. Tusting (IEEE Trans., NS-11, 3, 120 (1964)) and A.Sternglass (IEEE Trans.,NS-11,3, 87 (1964)) to calculate the characteristics of a flight-time spectrometer employing a double focusing triplet quadrupole magnetic lens. The use of focusing in a flight-time spectrometer greatly increases the solid angle of acceptance but reduces the resolving power, since the focused ions can reach the detector by different paths. The calculations were performed for a specific spectrometer having an 11.4 meter base and the calculated characteristics are compared with experimental values. With an 11.4 meter base and a quadrupole triplet with an aperture of 16 cm it is possible to achieve an energy resolution of 0.015% with an acceptance angle of $6 \times 10^{-5}/4\pi$ sterad.

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APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

L 15368-66

ACC NR: AP6004487

By simultaneously increasing the base length and the lens aperture it is possible to increase the resolution while keeping the acceptance angle constant. With a photomultiplier having a resolving time of 2-3 x 10^{-10} sec as detector and an 11 m base the instrumental half-width of a 5 MeV α-particle line is 3-4 keV, and that of a 5 MeV proton line is 6-8 keV. It is concluded that focused flight-time spectrometers can be usefully employed for precision measurements, particularly with low-energy heavy particles. Orig. art. has: 11 formulas, 9 figures, and 1 table.

SUB CODE: 20 SUBM DATE: 00 ORIG. REF: 000 OTH REF: 003

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

L 15505-66 EWT(1)/T/EWA(h) IJP(c) UR/0048/66/030/001/0135/0137

ACC NR: AP6004486

AUTHOR: Vorob'yev, A.A.; Dotsenko, Yu.V.; Seliverstov, D.M.; Tsarenkov, B.V.

ORG: none

57
B

TITLE: Use of semiconductor light sources to investigate the time resolution of photomultipliers /Transactions of the Fifteenth Annual Conference on Nuclear Spectroscopy and Nuclear Structure held at Minsk 25 January to 2 February, 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 1, 1966, 135-137

TOPIC TAGS: photomultiplier, time measurement, semiconductor diode, flash lamp

ABSTRACT: The resolving times of three photomultipliers (types K14FS-50, FEU-36 and FEU-30) were measured using a gallium phosphide diode as light source. Part of the purpose of the present paper is to point out the usefulness and convenience of semiconductor light sources for such measurements and for other measurements in nuclear physics. Gallium arsenide diodes produce short flashes with very little scatter in the delay between pulse arrival and flash, but the wavelength of the light is outside the sensitive range of present photomultipliers. The gallium phosphide diode used in the present work was excited by a 10-20 nanosec 70 V pulse from a pulse generator and produced a 100 nanosec flash in the green with an amplitude equal to that excited in a stilbene scintillator by a Co^{60} gamma ray. The pulse produced as a result of this flash in the 5 kilohm load resistor of the photomultiplier under test was shaped to

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

L 15505-66

ACC NR: AP6004486

30 nanosec and 2.0 V and brought, together with the attenuated and delayed pulse from the pulse generator, to a time to pulse height converter with a resolution of 0.15 nanosec. The output pulses from the converter were recorded in a 100-channel pulse height analyzer. There was thus obtained a curve representing the scatter of the delay times between the initiating pulse and the pulse from the photomultiplier. The half-width of this curve, which represents the resolving time of the photomultiplier increased by the scatter introduced by the light source, was plotted for each photomultiplier tube against the potential applied to the dynodes. In each case the resolving time was minimum for a certain optimum dynode potential. The minimum resolving time of 0.14 nanosec obtained for the K14FS-50 photomultiplier is in good agreement with the value 0.134 nanosec found by M.Bonitz, W.Meiling, and F.Stary (Nucl. Instr. and Meth., 29, 309 (1964)) using a hydrogen lamp. It is concluded that the scatter of the delay between pulse and flash in the gallium phosphide diode is not greater than in the hydrogen discharge tube. The effect of varying the intensity of the flash on the resolving time of the K14FS-50 photomultiplier was also investigated. The resolving time increased rapidly when the flash intensity was reduced below that of a Co^{60} gamma-ray scintillation in stilbene, and decreased only slowly when the flash intensity was increased above that value. Orig. art. has: 3 figures.

SUB CODE: 20 SUBM DATE: 00 ORIG REF: 000 OTH REF: 008

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

BELOSTOTSKIY, S.L.; VOROB'YEV, A.A.; SELIVERSTOV, D.M.

Use of a magnetic focusing system in precision flight-time spectrometers for charged heavy particles. Izv. AN SSSR. Ser.fiz. 30 no.1:167-174 Ja '66. (MIRA 19:1)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

L 22272-66 EWT(1)

ACC NR: AR6005186 SOURCE CODE: UR/0058/65/000/009/G017/G017

AUTHORS: Vorob'yev, A. A.; Kalyatskiy, I. I.; Krivko, V. V.; Chepikov, A. T. 64 B

TITLE: Pulsed electric breakdown of air and water vapor at increased pressures 21

SOURCE: Ref. zh. Fizika, Abs. 9G143

REF. SOURCE: Sb. Proboy dielektrikov i poluprovodnikov. M.-L., Energiya, 1964, 103-106

TOPIC TAGS: dielectric breakdown, electric discharge, gas discharge, water vapor, pressure

TRANSLATION: Experimental volt-second characteristics are obtained of the electric breakdown of air and water vapor at different pressures (1 -- 4 atm) for application times in the range (2 -- 20) x 10^{-7} sec. Pulses of positive and negative polarity with amplitudes up to 400 kv were applied on a point secured at a distance 4 -- 20 mm

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APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

L 22272-66

ACC NR: AR6005186

from a grounded plane. The time of action of the pulse voltage was measured from the oscillograms. It is established that the pulsed strength of dry water vapor at increased pressure exceeds the strength of air, especially for pulses of negative polarity. For water vapor, no reduction was observed in the dielectric strength of the gap in the pressure region 10 -- 20 atm, such as is characteristic of breakdown in air. I. Popov

SUB CODE: 20

Card 2/2 nst

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

L 20716-66 EWA(h)/EWT(1)

ACC NR: AP6007821 SOURCE CODE: UR/0120/66/000/001/0123/0124

AUTHOR: Alkhazov, G. D.; Vorobiyev, A. A.

ORG: Physico-Technical Institute, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Stable pulsed amplifier

SOURCE: Pribory i tekhnika eksperimenta, no. 1, 1966, 123-124

TOPIC TAGS: amplifier design, electronic amplifier, pulse amplifier

ABSTRACT: The new amplifier is designed to operate on positive signals derived from an ionization-chamber preamplifier with a gain of 10--20. The amplifier comprises two amplifying units, RC shaping circuits, a divider, and a White output stage (a principal circuit diagram is shown). These amplifier parameters are given: gain 2200-6300; dynamic range, -70 +110 v; gain linearity, 0.05% for output signals within +20 +100 v; gain variation, 0.1% for a heater-voltage variation of 20%, or an anode-voltage variation of 3%, or an ambient-temperature variation of ± 10C; gain variation upon replacement of all amplifier tubes, 0.3--0.5%; gain intrinsic drift after a few dozen hours of continuous operation, 0.1%; gain variation upon turning off and on the amplifier, 0.02%; noise referred to the input, 3 microvolts; 50-cps ripple at the amplifier output due to the a-c heater supply, 0.05 v. The amplifier is designed for a maximum load of a few hundred pulses per sec. Orig. art. has: 2 figures, 2 formulas, and 2 tables. [03]

Card 1/2 UDC: 621.375.018.756

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

L 20716-66

ACC NR: AP6007821

0

SUB CODE: 09 / SUBM DATE: 08Jan65 / ORIG REF: 003/ ATD PRESS: 4223

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

MARKOVICH, A.V.; [illegible]

Determination of the activity of partly purified tetanus anatoxin by graphic analysis of the curves of salting-out of protein antigen. Doklady Akad. Nauk S.S.S.R. 87,461-4 '52. (MLRA 5:11)
(CA 47 no.13:6526 '53)

1. Naval Med. Acad.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

MARKOVICH, A.V.:VOROB'YEV, A. A.

Relation of dosage of tetanus anatoxin to the extent of immunity in white mice. Doklady Akad. nauk SSSR 87 no. 4:665-668 1 Dec 1952. (CLML 23:5)

1. Presented by Academician K. M. Bykov 19 July 1952. 2. Naval Medical Academy.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A. A.

USSR/Medicine - Immunology FD-556

Card 1/1 Pub. 148 - 19/23

Author : Vorob'yev, A.A.

Title : A comparison of statistical methods for computing LD_{50} as an index of the strength of immunity in animals.

Periodical : Zhur. mikrobiol. epid. i immun. 6, 61-64, Jun 54

Abstract : After a discussion of two statistical methods for determining the LD_{50} of tetamous antitoxin, the Reed-Mench method and the " probit" method, the conclusion is reached that both methods give approximately the same results. Other Soviet workers in the same field are mentioned. The text is illustrated by a graph and a chart. No references are cited.

Institution : --

Submitted : February 22, 1954

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.

Combined immunization of animals with purified adsorbed tetanus anatoxin and tetravaccine. Zhur.mikrobiol.epid.i immun. no.8: 59-63 Ag '54. (MLRA 7:9)

1. Iz Voyenno-morskoy meditsinskoy akademii.
(TETANUS, prevention and control,
*anatoxin & tetravaccine, in animals)
(VACCINES AND VACCINATION,
*tetravaccine, prev. of tetanus in animals, with anatoxin)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

FD-2267

USSR/Medicine - Immunology

Card 1/1 Pub 17-18/20

Author : Vorob'yev, A. A.

Title : Immunogenicity of deposited anatoxin in relation to the degree of sorption of antigen

Periodical : Byul. eksp. biol. i med. 3, 70-73, Mar 1955

Abstract : Investigated the dependence of the immunogenicity of a tetanus antitoxin preparation (purified and sorbed on aluminum hydroxide), developed by the author (Byul. eksp. biol. i med. 9, 43-47, 1952 and Dok. AN SSSR. 4, 665-668, 1952), on its content of depositing substance. Tables; graphs. Four references; all USSR, all since 1940.

Institution: Naval Medical Academy

Submitted : June 24, 1954 by P. F. Zdrodovskiy, Member of the Academy of Medical Sciences USSR

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.

USSR/Medicine - Immunology FD-2562

Card 1/1 Pub. 17-15/23

Author : Markovich, A. V.; Vorob'yev, A. A.

Title : Relation of the degree of immunity to the dosage of antigen in repeated immunization

Periodical : Byul. eksp. biol. i med. 5, 53-56, May 1955

Abstract : Gives an equation expressing the degree of immunity of white mice to tetanus toxin in relation to the size of the immunizing dose of antigen and investigates the reliability of this equation when applied to other types of antigen. Tables; graphs. Two references, both USSR (since 1940).

Institution : Naval Medical Academy

Submitted : February 3, 1954 by P. F. Zdrodovskiy, Member of the Academy of Medical Sciences USSR

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.

Sorption on aluminum hydroxide of the specific tetanus anatoxin antigen in various degrees of purity. Zhur.mikrobiol. epid. i immun. no.7:8-10 Jl '55. (MLRA 8:9)

1.Iz Voyenmo-morskoy meditsinskoy akademii
(TETANUS,
anatoxin, sorption on aluminum hydroxide of antigens in various degrees of purification)
(ANTACIDS,
aluminum hydroxide, sorption of tetanus anatoxin antigens in various degrees of purification)
(ANTIGENS AND ANTIBODIES,
tetanus anatoxin antigens, sorption on aluminum hydroxide in various degrees of purification)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.

VOROB'YEV, A.A.

Immunologic features of double immunization with deposited tetanus anatoxin. Zhur.mikrobiol.epid. i immun. no.8:76-80 Ag '55. (MLRA 8:11)

1. Iz Voyenno-morskoy meditsinskoy akademii.
(TETANUS, immunology,
vacc., immunol.response in double immun. with deposited anatoxin)
(VACCINES AND VACCINATION,
tetanus, immunol.response in double immun. with deposited anatoxin)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.; BRON, O.B.; RODYAKINA, V.Ya.

Effectiveness of various programs for immunizing people with purified adsorbed tetanus anatoxin. Zhur.mikrobiol.epid. i immun. 27 no.7: 79-86 Jy '56. (MLRA 9:9)

1. Iz Voyenno-morskoy meditsinskoy akademii i Leningradskoy gorodskoy stantsii perelivaniya krovi.
(TETANUS, immunol. prev. and control
one-stage & repeated vacc. with purified adsorbed tetanus anatoxin)
(VACCINES AND VACCINATION
tetanus vacc., one-stage & repeated, with purified adsorbed tetanus anatoxin)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

MARKOVICH, A.V.; VOROB'YEV, A.A.

Quantitative features of the dynamics of immunity in a single vaccination with absorbed antigen. Zhur.mikrobiol.epid. i immun. 27 no.11:93-97 N '56. (MLRA 10:1)

1. Iz Voyenno-morskoy meditsinskoy akademii.
(VACCINES AND VACCINATION,
quantitative rules of dynamics of immunity in single vacc. with absorbed antigen (Rus))

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

USSR / Microbiology. Anaerobic Bacilli. F-6

Abs Jour: Ref Zhur-Biol., No 16, 1958, 72192.

Author : Markovich, A. V.; Vorob'yev, A. A.
Inst : Not given.
Title : Rational Principles of Conservation of Deposited Tetanus Anatoxin.

Orig Pub: S sb.; Anaerobnyye infektsii, Kiyev, Gosmedizdat USSR, 1957, 24-30.

Abstract: No abstract.

Card 1/1

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

USSR / Microbiology. Anaerobic Bacilli. F-6

Abs Jour: Ref Zhur-Biol., No 16, 1958, 72193.

Author : Vorob'yev, A. A.
Inst : Not given.
Title : Immunogenic Properties of Purified Sorbed Tetanus Anatoxin.

Orig Pub: V sb.; Anaerobnyye infektsii, Kiyev, Gosmedizdat USSR, 1957, 31-37.

Abstract: No abstract.

Card 1/1

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROBEV, A. A.

EXCERPTA MEDICA Sec.4 Vol.11/4 Med.Microb. etc. April 58

1029. THE INTERRELATION BETWEEN THE LEVEL OF SPECIFIC ANTIBODY IN THE BLOOD AND THE DEGREE OF IMMUNITY TO TETANUS TOXIN IN WHITE MICE IMMUNIZED WITH ADSORBED TETANUS TOXOID (Russian text) - Vorobev A. A., Goncharov B. S., Lubyanskii L. P. and Markovich A. V. Army and Navy Med. Acad., Leningrad - BIULL. EKSPER. BIOL. MED. 1957, 2 (63-66)

White mice were immunized with various doses of adsorbed tetanus toxoid. The content of antitoxin (in Antitoxic Units, AU) in the blood of the animals was determined periodically, and 21 days after immunization their resistance to tetanus toxin (LD_{50}) was tested. It was shown that, when the dose of antigen was doubled, the LD_{50} increased 4-fold and the AU 3-fold; when the dose of antigen was increased by 20 times (from 0.005 to 0.1 ml.) the LD_{50} increased by 1780 times but the AU only by 29.6 times. The same kind of relationship was noted when the rate of increase of immunity was tested 7, 14, 22 and 28 days after immunization, but the relationship between the respective rates of growth of LD_{50} and of AU varied and hence the relation between the LD_{50} and the AU varied also. The longer the period which had elapsed after the injection of antigen, the higher was the level of antitoxic units in the blood which corresponded to any given LD_{50}. Hence the relationship between the degree of immunity to toxin and the level of specific antitoxin in the blood varies with the dose of antigen and with the interval after immunization. References 6.

Kaulen - Moscow (S)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

F-6

USSR / Microbiology. Anaerobic Bacilli.

Abs Jour: Ref Zhur-Biol., No 16, 1958, 72191.

Author : Vorob'yev, A. A.
Inst : Not given.
Title : Change in Immunogenicity of Purified Sorbed Tetanus Anatoxin During Storage.

Orig Pub: Zh. mikrobiol., epidemiol. i immunobiologii, 1957, No 4, 31-34.

Abstract: The immunogenicity of purified tetanus anatoxin sorbed in aluminum hydroxide, during the preparation of which rational principles of conservation were observed (high degree of purity and full sorbtion of antigen in an optimal quantity of sorbent), increased significantly during storage, as verified on mice and guinea pigs. Thus, if immediately after obtaining the preparations of ana-

Mil Naval Med Acad

Card 1/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

Vorob'yev, A. A.

VOROB'YEV, A.A.; ASHKINAZI, L.I.; RODYAKINA, V.Ya.; RAFAL'SON, D.I.; EHON, O.B.

Change in the blood as an index of the general reaction of the organism to the administration of precipitated anatoxin. Zhur. mikrobiol.epid. i immun. 28 no.1:84-89 Ja '57. (MLRA 10:3)

1. Iz Leningradskoy gorodskoy stantsii perelivaniya krovi i Voyenno-morskoy meditsinskoy akademii.

(CLOSTRIDIUM TETANI,
toxin, eff. on blood (Rus))
(BLOOD,
eff. of Clostridium tetani toxin (Rus))

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

USSR / Microbiology. Microorganisms Pathogenic to Humans and Animals. F-5

Abs Jour : Ref Zhur - Biol., No 20, 1958, No. 90905

Author : ~~Vorobiyov, A. A.~~; Bron, L. B.
Inst : Not given
Title : Combined Immunization with a Purified Adsorbed Tetanus Toxoid and a Tetravaccine

Orig Pub : Zh. mikrobiol., epidemiol. i immunobiologii, 1957, 28, No 7, 77-84

Abstract : Results are reported on a combined immunization with a purified adsorption in aluminum hydroxide of tetanus toxoid (TT) and a tetravaccine (typhoid-para-typhoid B, Flexner and Sonne dysentery) compared with crude TT in the same combination. Introduction into the combined vaccine of the adsorbed TT instead of the crude did not increase the reactivity of the preparation. The antitoxic

Mil. Med. Acad. im S. M. Kirov

Card 1/2

46

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A., Doc Med Sci —(diss) "Rationally constructed sorbed anatoxins and laws of immunogenesis in their use." Mos, 1958. 26 pp (Acad Med Sci USSR). 200 copies. List of author's works, pp 24-26 (36 titles)

(KL, 46-58, 142)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

USSR / General Problems of Pathology. Immunity. U

Abs Jour: Ref Zhur-Biol., No 22, 1958, 102398.

Author : Peysel', Z. G.; Yarmolenko, A. G.; Vorob'yev, A. A.
Inst : Not given.
Title : The Influence of Nonspecific Stimuli on the Production of Diphtherial and Tetanus Antitoxin.

Orig Pub: Zh. mikrobiol., epidemiol. i immunobiol., No 2, 121-122, 1958.

Abstract: Rabbits were immunized by diphtherial anatoxin. Prior to immunization, they had 0.0005 active units in 1 ml. After the 3rd immunization, both in those receiving pilocarpine (I;0.5 mg/kg) and in control rabbits, after a small decrease, the titer active unit reached the maximum (0.06 and 0.04) towards the 48th hour. With introduction

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

USSR / General Problems of Pathology. Immunity. U

Abs Jour: Ref Zhur-Biol., No 22, 1958, 102398.

Abstract: of protoanemonin (II; 1 ml/kg) the titer, after 48 hours, exceeded the indexes of control rabbits by 12 times. After 2 months, after the decrease of the titer of active units, the introduction of I led to an increase of titer by 5 times; in introduction of II, by 3 times. In immunization of rabbits with tetanus antitoxin, the introduction of I also increased the titer of antibodies.

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.

Therapeutic effect of certain preparations of tetanus anatoxin and its relation to the method of administration. Zhur.mikrobiol.epid. i immun. 29 no.3:97-102 Mr '58. (MIRA 11:4)

1. Iz Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.
(TETANUS, immunology,
anatoxin, relation of eff. to mode of admin. (Rus)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROP'YEV, A.A.; BRON, O.B.

Comparative effectiveness of precipitated and native tetanus anatoxins in the revaccination of human subjects. Zhur. mikrobiol. epid. i immun. 29 no.10:117-121 O '58. MIRA 11:12)
(TETANUS, prev. & control,
revacc. with adsorbed & native anatoxins, comparison (Rus))

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VYGODCHIKOV, G.V.; VOROB'YEV, A.A.; SALTYKOV, R.A.; LARINA, I.A.; ANAN'YEVA, Ye.P.; SHEVELEV, V.M.

Experimental study of the immunogenic properties of associated anerobic toxoids. Report No.1: Study of the immunological effectiveness of sentatoxoids in primary immunization of animals. Zhur.mikrobiol.epid.i immun. 32 no.1:28-32 Ja '61. (MIRA 14:6)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

(TOXINS AND ANTITOXINS)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.; VASIL'YEV, N.N.

Sorption on aluminum hydroxide of botulin anatoxins type A and B of various degrees of purification. Zhur. mikrobiol. epid. i immun. 32 no.6:78-82 Je '61. (MIRA 15:5)
(TOXINS AND ANTITOXINS) (BOTULISM) (ALUMINUM HYDROXIDE)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VYGODCHIKOV, G.V.; VOROB'YEV, A.A.; SALTYKOV, R.A.; LARINA, I.A.; SHEVELEV, V.M.

Experimental study of immunogenic properties of associated anaerobic anatoxins. Report No.2:Study of the immunological effectiveness of a sexta-anatoxin following late re-immunization. Zhur. mikrobiol. epid. i immun. 32 no.7:74-77 Je '61; (MIRA 15:5)
(TOXINS AND ANTITOXINS)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.; LABINSKIY, A.P.

Evaluation of the interrelationships between the antigens in botulin penta-anatoxin on the basis of a study of various immunity indices in animals. Biul.eksp.biol.i med. 53 no.6:55-59 Je '62. (MIRA 15:10)

1. Predstavlena deystvitel'nym chlenom AMN SSSR G.V.Vygodchikovym.
(ANTIGENS AND ANTIBODIES) (BOTULISM)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VASIL'YEV, N.N.; VOROB'YEV, A.A.

Physicochemical and electron microscope characteristics of aluminum hydroxide as a depositing substance prepared by various methods. Zhur. mikrobiol., epid. i immun. 33 no.2:73-77 F '62. (MIRA 15:3)

(VACCINES) (ALUMINUM HYDROXIDE)
(MICROSCOPE)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.; KOROBOV, A.M.; POYARKOVA, M.A.; KORNEV, I.S.; ANDROSHCHUK, S.M.; prinimali uchastiye: MORDUYEVA, A.A.; IGONINA, Yu.A.; CHERNOVA, Yu.S.; NIKOLAYENKO, Yu.P.; MAKAROVA, V.A.

Method for preparing sorbed tetanus anatoxin from a purified and concentrated toxin. Zhur.mikrobiol., epid.i immun. 33 no.8:107-112 Ag '62. (MIRA 15:10)

(TOXINS AND ANTITOXINS) (TETANUS)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VYGODCHIKOV, G.V.; VOROB'YEV, A.A.; LARINA, I.A.; LABINSKIY, A.P.; GEKKER, V.D.; SHEVELEV, V.M.; SERGEYEVA, N.S.

Experimental study of the immunogenic properties of combined anaerobic toxoids. Report No.5: Immunogenic properties of combined polytoxoid in primary immunization of animals. Zhur. mikrobiol., epid. i immun. 40 no.10:51-58 O '63.

(MIRA 17:6)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

ACCESSION NR: AP4043755 S/0016/64/000/008/0041/0045

AUTHOR: Vorob'yev, A. A.; Pautov, V. N.

TITLE: Experimental study of live-vaccine enteral immunization against Q-fever

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 8, 1964, 41-45

TOPIC TAGS: Q fever, immunization, live vaccine, Rickettsia burnetii

ABSTRACT: A study was made of the effectiveness of enterally administered M-strain Rickettsia burnetii as a live vaccine against Q-fever in guinea pigs. Various doses of M-strain Rickettsia burnetii in skim milk were introduced into the esophagus of guinea pigs through a special tube. It was established that a dose of 60 IU_{50} sufficed to induce complement-fixing antibodies in 50% of the guinea pigs. On the other hand, up to 60 days after peroral administration of 1 ml of killed Rickettsia burnetii vaccine (250 x 10^6 cells), no antibodies could be observed, and the guinea pigs were still sensitive to virulent

Card 1/2

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

ACCESSION NR: AP4043755

Rickettsia burnetii cultures. Subcutaneous and enteral administration of live vaccine produced average antibody titers of 1:64 and 1:40, respectively, after 30 days. The sensitivity of 83 guinea pigs to a virulent culture of Rickettsia burnetii 60 to 90 days after enteral immunization with live vaccine was studied. All 65 of the guinea pigs whose serum contained antibodies 20 to 30 days after immunization were immune to 10^5 IU_{50} of virulent R. burnetii, regardless of the vaccine dose which had been used for immunization. On the other hand, all 18 of the guinea pigs in whose serum no antibodies were produced by immunization developed severe cases of Q-fever after artificial infection, similar to that seen in the 16 control animals (not immunized). The results indicate that the efficacy of live-vaccine enteral immunization of human beings against Q-fever should be studied. Orig. art. has: 4 tables.

ASSOCIATION: none

SUBMITTED: 21Dec63 ENCL: 00

SUB CODE: LS, CB NO REF SOV: 009 OTHER: 010

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.; LUKIN, Yu.F.

Soluble antigens of viruses and Rickettsia and prospects of their use in vaccinal prophylaxis; a review. Zhur. mikrobiol., epid. i imm. 41 no. 2:21-24 F '64. (MIRA 17:9)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.; VASIL'YEV, N.N.; YENICHEV, V.M.; PATRIKEYEV, G.T.; SHEVELEV, V.M.; ZYMIN, V.D.; KORNEV, I.S.; ANAN'YEVA, Ye.P. Prinimali uchastiye: ANDROSHCHUK, S.M.; NIKOLAYENKO, Yu.P.; MAKAROVA, V.A.; CHERNOVA, Yu.S.; POYARKOVA, M.A.; IGONINA, Yu.A.; MORDUYEVA, A.A.

Study of botulin anatoxins. Report No.2: Botulin anatoxin type B. Zhur.mikrobiol., epid. i immun. 32 no.10:68-72 O '61. (MIRA 14:10)
(CLOSTRIDIUM BOTULINUM) (TOXINS AND ANTITOXINS)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.; VASIL'YEV, N.N.; PATRIKEYEV, G.T.; ZYBIN, V.D.; KORNEV, I.S.; ANAN'YEVA, Ye.P.; Prinimali uchastiye: ANDROSHCHUK, S.M.; IGONINA, Yu.S.; SHMELEV, V.M.; MORDUIEVA, A.A.; NIKOLAYENKO, Yu.P.; MAKAROVA, V.A.; CHERNOVA, Ye.S.; POPAKOVA, M.A.

Study of botulin anatoxins. Report No.1: Botulin anatoxin type A. Zhur. mikrobiol., epid. i immun. 32 no.9:31-36 S '61. (MIRA 15:2)
(CLOSTRIDIUM BOTULINUM) (TOXINS AND ANTITOXINS)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.; VASIL'YEV, N.N.; SAMORODOV, L.M.; VORONTSOV, I.V.; PATRIKEYEV, G.T.; MAKARENKO, M.M.; Prinimali uchastiye: ANDROSHCHUK, S.M.; ZYBIN, V.D.; KORNEV, I.S.; NIKOLAYENKO, Yu.P.; CHERNOVA, V.A.; IGONINA, Yu.A.; MORDUYEVA, A.A.

Study of botulin anatoxins. Report No.4: Botulin anatoxin type E. Zhur. mikrobiol., epid. i immun. 33 no.1:72-79 Ja '62. (MIRA 15:3)

(CLOSTRIDIUM BOTULINUM) (TOXINS AND ANTITOXINS)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.; LUKIN, Ye.P.; SAMORODOV, L.M.

Determination of the immunogenic properties of sorbed botulin anatoxins types C and E on white mice. Zhur.mikrobiol., epid. i immun. 33 no.3: 123-127 Mr '62. (MIRA 15:4)
(CLOSTRIDIUM BOTULINUM) (TOXINS AND ANTITOXINS)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

L 11070-66 EWT(1)/EWA(m)-2/EWA(h)

ACC NR: AT6001397 SOURCE CODE: UR/3160/64/009/000/0142/0146

69
B+1

AUTHOR: Vorob'yev, A. A.; Vorob'yev, G. A.; Kasyata, G. A.

ORG: none

TITLE: Utilization of certain properties of a gas discharge for producing high voltage nanosecond pulses

SOURCE: AN SSSR. Komissiya po nauchnoy fotografii i kinematografii. Uspekhi nauchnoy fotografii, v. 9, 1964. Vysokoskorostnaya fotografiya i kinematografiya (High-speed photography and cinematography), 142-146 and insert facing page 113

TOPIC TAGS: gas discharge, pulse generator, plasma diagnostics, high speed photography

ABSTRACT: High voltage pulses of nanosecond duration are used for controlling the Kerr cell and the image converter with an electronic shutter. By utilizing certain properties of spark dischargers, the authors obtained stable pulses with a front duration of about 10^{-9} sec and achieved a smooth and stable control of the pulse duration. They also were able to produce series of short pulses with constant time intervals between the pulses such as are employed in high speed stop motion photography. High voltage pulse generators using the short time of commutation of spark discharg-

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

ACC NR: AT6001397

ers and devices using the time of formation of the discharge are described. Orig. art. has: 6 figures, 2 formulas.

SUB CODE: 14, 20 SUBM DATE: 00/ ORIG REF: 007/ OTH REF: 002

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

ACC NR: AT5001403 SOURCE CODE: UR/3180/64/009/000/0171/0172

AUTHOR: Vorob'yev, A. A.; Moskalev, V. A.

ORG: None

30
12+1

TITLE: An x-ray source for high-speed photography of various processes

SOURCE: AN SSSR. Komissiya po nauchnoy fotografii i kinematografii. Uspekhi nauchnoy fotografii, v. 9, 1964. Vysokoskorostnaya fotografiya i kinematografiya (High-speed photography and cinematography), 171-172

TOPIC TAGS: x ray photography, high speed photography, stereoscopic photography

ABSTRACT: The authors describe a 25-Mev high-current stereobetatron for studying high-speed processes. The device produces two bremsstrahlung beams which intersect at a given point. The beams may be emitted simultaneously or with a time spacing of up to 50 μsec. Pulse duration ≤ 0.2 μsec. The betatron accelerates an electron charge of 10^{-7} coulomb, which is $(5-6) \cdot 10^{11}$ electrons per cycle. A 0.2 μsec pulse penetrates 140 mm of lead. The size of the focal spot is 1 x 3 mm. Preliminary studies show possibilities for an increase in the accelerated charge and a reduction in the dimensions of the focal spot. The unit may be used for stereo x-ray photography of processes lasting less than 10^{-6} second. Non-simultaneous beam generation may be used for photographing a process from two points of view with various time lapses between frames. There are possibilities for developing

Card 1/2

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

L 13040-66

ACC NR: AT6001403

a stereobetatron for operation at 1000 cycles per second. Orig. art. has: 1 figure. [08]

SUB CODE: 14/ SUBM DATE: none/ ORIG REF: 001/ ATD PRESS: 4181

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.; GORBUNOV, V.I.; VOROB'YEV, V.A.; TITOV, G.V.; KALYUZHNAYA, T.P., red.

[Betatron defectoscopy of materials and articles] Betatronnaia defektoskopiia materialov i izdelii. Moskva, Atomizdat, 1965. 177 p. (MIRA 18:10)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

BOGORODITSKIY, Nikolay Petrovich; VOLOKOBINSKIY, Yuriy Mikhaylovich; VOROB'YEV, Aleksandr Akimovich; TAREYEV, Boris Mikhaylovich; RENNE, V.T., retsenzent; VOLOP'YANOV, K.K., retsenzent; KAZARNOVSKIY, D.M., nauchn. red.; PAVLOVA, L.S., red.

[Theory of dielectrics] Teoriia dieloktrikov. Moskva, Energiia, 1965. 344 p. (MIRA 18:12)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

L 42827-66 EWT(1)/EWT(m)/T/EWP(t)/ETI IJP(c) JD/GG

ACC NR: AR6010508 SOURCE CODE: UR/0196/65/000/010/B007/B007

52
B

AUTHOR: Vorob'yev, A. A.

TITLE: Analogies and differences in the temperature, mechanical, thermal, and electrical breakdowns of solid dielectrics

SOURCE: Ref. zh. Elektrotekhnika i energetika, Abs. 10B45

REF SOURCE: Sb. Proboy dielektrikov i poluprovodnikov. M.-L., Energiya, 1964, 109-117

TOPIC TAGS: dielectric breakdown, dielectric material, dielectric property, dielectric strength

ABSTRACT: An analysis is presented of the dependence of the breakdown time of a solid on the tensile stress and the temperature, the time and temperature dependence of the electrical strength of crystals, and the dependence of the time of vaporization of a solid on the temperature. [Translation of abstract] 9 illustrations and bibliography of 15 titles. [Tomsk Polytechnic Institute im. S. M. Kirov (Tomskiy politekhnich. in-t)] A. Petrashko

SUB CODE: 11, 09, 20

Card 1/1 UDC: 621.315.61:548.0.537

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

1. VOROBYEV, A., ENG.

2. USSR (600)

4. Coal Mines and Mining

7. Effective method of popularizing advanced experience. Mast. u l. 1, no. 9, 1952.

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

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.A.

SKABALLANOVICH, I.A.; KRIVOKO, S.A., otvetstvennyy redaktor; SLOVOROSOV, A.Kh., redaktor; VOROB'YEV, A.A., redaktor; PROZOROVSKAYA, V.L., tekhnicheskiy redaktor; ALADOVA, Ye.I., tekhnicheskiy redaktor.

[Hydrogeological computations of the movement of underground waters] Gidrogeologicheskie raschety po dinamike podzemnykh vod. Moskva, Ugletekhizdat, 1954. 388 p. (MIRA 8:1)
(Water, Underground)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A., inzhener; YEREMIN, V., inzhener.

Training machine operators for the coal industry. Mast. ugl. 3 no.6:3-4 Je '54. (MLRA 7:7)
(Coal mines and mining) (Mining engineering--Study and teaching)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV, A.

Schools for advanced work methods in the coal mining industry. Prof.-tekh.obr. 11 no.3:27-28 '54. (MLRA 7:8)

1. Zamestitel' nachal'nika otdela podgotovki kadrov Ministerstva ugol'noy promyshlennosti.
(Coal mines and mining) (Technical education)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

VOROB'YEV A.A.

KERKIS, Yevgeniy Yefimovich; ABRAMOV, S.K., redaktor; VOROB'YEV, A.A., redaktor; PROZOROVSKAYA, V.L., tekhnicheskiy redaktor.

[Determining the effective radius in calculating water inflow] Opredelenie radiusa vliianiia pri raschete vodopritokov, Moskva, Ugletekhizdat, 1955. 99 p. (MLRA 8:8)
(Water, Underground) (Mine water)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001860820001-5

SIMAKOV, S.N.; KLEYNBERG, V.G.; VOROB'YEV, A.A.; ZAPRUDSKAYA, M.A.; NARIZHNAYA, V.Ye.; POYARKOVA, Z.N.; KHUTOROV, A.M.; VASILENKO, V.K., red.; DAYEV, G.A., vedushchiy red.; GENNAD'YEVA, I.M., tekhn. red.

[Geological structure and oil potential of Fergana] Geologicheskoe stroenie i neftenosnost' Fergany. Leningrad. Gos. nauchn. tekhn. izd-vo neft. i gorno-tiplivnoi lit-ry, 1957. 605 p. (Leningrad. Vsesoiuznyi neftianoi nauchno-issledovatel'skii geologo-razvedochnyi institut. Trudy, no.110). (MIRA 11:6)
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VOROB'YEV, A.A.

ABRAMOV, S.K., kand.tekhn.nauk; AVERSHIN, S.G., prof., doktor tekhn.nauk; AMMOSOV, I.I., doktor geol.-min.nauk; ANDRIYEVSKIY, V.D., inzh.; ANTROPOV, A.N., inzh.; AFANAS'YEV, B.L., inzh.; BERGMAN, Ya.V., inzh.; BLOKHA, Ye.Ye., inzh.; BOGACHEVA, Ye.N., inzh.; BUKRINSKIY, V.A., kand.tekhn.nauk; VASIL'YEV, P.V., doktor geol.-min.nauk; VINOGRADOV, B.G., inzh.; GOLUBEV, S.A., inzh.; GORDIYENKO, P.D., inzh.; GUSEV, N.A., kand.tekhn.nauk; DOROKHIN, I.V., kand.geol.-min.nauk; KALMYKOV, G.S., inzh.; KASATOCHKIN, V.I., doktor khim.nauk; KOROLEV, I.V., inzh.; KOSTLIVTSEV, A.A., inzh.; KRATKOVSKIY, L.F., inzh.; KRASHENINNIKOV, G.F., prof., doktor geol.-min.nauk; KRIKUNOV, L.A., inzh.; LEVIT, D.Ye., inzh.; LISITSA, I.G., kand.tekhn.nauk; LUSHNIKOV, V.A., inzh.; MATVEYEV, A.K., dots., kand.geol.-min.nauk; MEPURISHVILI, G.Ye., inzh.; MIRONOV, K.V., inzh.; MOLCHANOV, I.I., inzh.; NAUMOVA, S.N., starshiy nauchnyy sotrudnik; NEKIPELOV, V.Ye., inzh., PAVLOV, F.F., doktor tekhn.nauk; PANYUKOV, P.N., doktor geol.-min.nauk; POPOV, V.S., inzh.; PYATLIN, M.P., kand.tekhn. nauk; RASHKOVSKIY, Ya.Z., inzh.; ROMANOV, V.A., prof., doktor tekhn. nauk; RYZHOV, P.A., prof., doktor tekhn.nauk; SELYATITSKIY, G.A., inzh.; SPERANSKIY, M.A., inzh.; TERENT'YEV, Ye.V., inzh.; TITOV, N.G., doktor khim.nauk; GOKAREV, I.F., inzh.; TROYANSKIY, S.V., prof., doktor geol.-min.nauk; FEDOROV, B.D., dots., kand.tekhn.nauk; FEDOROV, V.S., inzh. [deceased]; KHOMENTOVSKIY, A.S., prof., doktor geol.-min.nauk; TROYANOVSKIY, S.V., otvetstvennyy red.; TERPIGOREV, A.M., red.; KRIKUNOV, L.A., red.; KUZNETSOV, I.A., red.; MIRONOV, K.V., red.; AVERSHIN, S.G., red.; BURTSEV, M.P., red.; VASIL'YEV, P.V., red.; MOLCHANOV, I.I., red.; RYZHOV, P.A., red.; BALANDIN, V.V., inzh., red.; BLOKH, I.M., kand. tekhn.nauk, red.; BUKRINSKIY, V.A., kand.tekhn.nauk, red.; VOLKOV, K.Yu., inzh., red.; VOROB'YEV, A.A., inzh., red.; ZVONAREV, K.A., prof. doktor tekhn.nauk, red.

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ABRAMOV, S.K.--- (continued) Card 2.

ZDANOVICH, V.G., prof.,doktor tekhn.nauk,red.; IVANOV, G.A., doktor geol.-min.nauk, red.; KARAVAYEV, N.M., red.; KOROTKOV, G.V., kand.geol.-min.nauk, red.; KOROTKOV, M.V., kand.tekhn.nauk, red.; MAKKAVEYEV, A.A., doktor geol.-min.nauk, red.; OMEL'CHENKO, A.N.,kand.tekhn.nauk,red.; SEMDERZON, E.M.,kand.geol.-min.nauk, red.; USHAKOV, I.N., dots., kand. tekhn.nauk, red.; YABLOKOV, V.S., kand.geol.-min.nauk,red.; KOROLEVA, T.I., red.izd-va; KACHALKINA, Z.I., red.izd-va; PROZOROVSKAYA, F.L., tekhn.red.; NADEINSKAYA, A.A., tekhn.red.

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Study on the reactogenicity of botulin anatoxins of the A, B, C, D and E types. Vak. i syv. no.1:40-47 '63. (MIRA 18:8)

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