

L1060

S/058/62/000/008/051/134
A061/A101

24.3500,

AUTHORS: Kosman, M. S., Pettsol'd, E. G.

TITLE: Electroluminescence of zinc oxide with bismuth oxide impurity

PERIODICAL: Referativnyy zhurnal, Fizika, no. 8, 1962, 45, abstract 8V321
("Uch. zap. Leningr. gos. ped. in-ta im. A. I. Gertsena", 1961,
v. 207, 51 - 63)

TEXT: The electroluminescence of zinc oxide with bismuth oxide impurity was investigated by passing direct or alternating current through pressed samples. Two emission bands with maxima at 5,700 and 6,200 Å, related to two forms of luminescence centers at 0.08 and 0.2 eV depth, were established. The luminescence centers were formed by ions of the excess zinc. It is noted that the quantum yield in the samples increases with their dielectric constant. The appearance of luminescence is associated with the accumulation of space charge in the crystal section near the electrode. There are 37 references.

[Abstracter's note: Complete translation]

A. Burlakov

Card 1/1

KOSMAN, M.S.; ALEKSANDROVA, M.S.

Some characteristics of the photoconductivity of zinc oxide in regions near to the electrode. Uch.zap.Fed.inst.Gerts.no.207:65-69 '61.
(MIRA 16:5)

1. Leningradskiy gosudarstvennyy pedagogicheskiy institut imeni A.I. Gertsena.
(Zinc oxide) (Photoconductivity)

24.2600,

S/058/62/000/008/123/134
A160/A101

AUTHORS: Kosman, M. S., Izvozchikov, V. A.

TITLE: The relation of the intrinsic photoeffect in PbO to the phenomena near the electrodes

PERIODICAL: Referativnyy zhurnal, Fizika, no. 8, 1962, 40, abstract 8-3-79n ("Uch. zap. Leningr. gos. ped. in-ta im. A. I. Gertsena", 1961, 207, 81 - 91)

TEXT: Investigated were activated and non-activated photoresistors obtained by pressing yellow lead oxide which turned red under pressure: The relation between the distribution of the potential and illumination was measured. The measurements were conducted in fields up to 200 v/cm with the help of probes, and in more intense fields - with a string electrometer. One part of the measurements was carried out in gasoline to eliminate the effect of humidity on the conductivity. The relation between the potential jumps near the electrodes and the applied voltage and illumination was determined by tests. The character of the polarization phenomena observed during the closing of the electric circuit

√B

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The relation of the intrinsic photoeffect...

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or during a sudden reversal of the field was investigated. An investigation of the volt-ampere characteristics revealed that the Ohm's law becomes effective in weak fields only. The results obtained are explained as a result of storing space charges. There are 35 references.

VB

N. S.

[Abstracter's note: Complete translation]

Card 2/2

41226

S/194/62/000/007/081/160
D295/D308

9.4160

AUTHORS: Kosman, M.S., and Izvozchikov, V.A.

TITLE: Coloring of lead oxide under illumination in an electric field

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 7, 1962, abstract 7-5-3 e (Uch. zap. Leningr. gos. ped. in-ta, im. A.I. Gertsena, 207, 1961, 93 - 103)

TEXT: The coloring of PbO begins with field strengths of 10^3 V/cm near macro-defects and grain boundaries. Coloring is green or yellow PbO and blue on red PbO. As the field strength increases, the area and intensity of coloring increase and the color becomes grey. Coloring is affected by the field form but not by the material of the electrodes. In the presence of a monochromatic beam, coloring occurs on condition that the wavelength of the incident light corresponds to a region of high photo-sensitivity. Removal of moisture at a residual pressure of $\sim 10^{-3}$ mm Hg and at temperatures of 100 to 300°C resulted in increased photo-sensitivity and reduced coloring rate. Adsorbed moisture increases the susceptibility of PbO to
Card 1/2

Coloring of lead oxide under ...

S/194/62/000/007/081/160
D295/D308

coloring. By depositing a drop of H_2O on PbO blue coloring is observed near the drop and red coloring under it. Coloring modifies the optical properties of PbO . Annealing of colored PbO at a temperature of $300^{\circ}C$ removes coloring and the optical properties are recovered. The photoelectric properties of PbO vary after coloring. The current decrease due to coloring bears a unipolar character. The temperature dependence of electric conductivity also varies with coloring. In an alternating field no coloring is observed. 23 references. [Abstracter's note: Complete translation.]

X

Card 2/2

11028

S/058/62/000/009/069/069
A057/A101

247700'

AUTHORS: Kosman, M. S., Pettsol'd, E. G.

TITLE: On the possibility of production of symmetric zinc oxide varistors with bismuth oxide admixture

PERIODICAL: Referativnyy zhurnal, Fizika, no, 9, 1962, 25, abstract 9-4-49shch ("Uch. zap. Leningr. gos. ped. in-ta im. A. I. Gertsena", 1961, v. 207, 191 - 197)

TEXT: Investigating the Losev effect it was observed that ceramic samples (S) of zinc oxide with a bismuth oxide admixture have properties of a nonlinear symmetric resistance and are suitable for use at low currents and voltages. The technology of their production is simple and needs no complicated equipment; the mechanical mixture is pressed at a pressure of $5 \cdot 10^4$ kg/m² into discs of 1.5 mm thickness and 12 mm in diameter. The per cent content of the admixture is determined by weight and varies from 0.5 to 60%. The electrical properties of the S depend on the temperature and duration of the calcination of the mixture, the cooling rate and content of admixture. S can be prepared with an

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On the possibility of production of...

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A057/A101

electric conductance of $10^{-6} - 10^{-11} \text{ ohm}^{-1} \cdot \text{cm}^{-1}$. Investigations of the electrical properties were carried out at constant, alternating, and pulse voltages. The taken voltampere characteristics (VC) show that the VC can be approximately described, in a sufficiently wide range of constant and alternating voltages, by the equation $I = AV^{\alpha}$, where $\alpha = \frac{\log I_1/I_2}{\log V_1/V_2}$ is the coefficient of nonlinearity;

I = current; V = voltage. Measurements of the same sample in vacuum, air, and at liquid air temperature showed changes of α from 5 to 4 and 4.4 respectively. At a pulse voltage a sharp increase of the current passing through the S can be observed, which is related, apparently, with time factors of formation of space charges, effecting also a decrease of the current at an increase of the duration of pulses (at constant pulse repetition rate and voltage). The S has completely symmetric VC branches at alternating current. The increase in calcination temperature of the S with the same content of admixture and cooling rate effects, as a rule, an increase of the electric conductance. The latter was also observed at an increase of the cooling rate. The S with 5 - 15% admixture have the smallest electric conductance; the α -value depends upon the latter. An increase in the frequency of the alternating voltage effects the development of

Card 2/3

40896

S/181/62/004/009/036/045
B104/B186

24.7700
26 2430

AUTHORS: Kosman, M. S., and Nesmelova, L. I.

TITLE: Negative photoconductivity of cuprous oxide near a point contact

PERIODICAL: Fizika tverdogo tela, v. 4, no. 9, 1962, 2608 - 2610

TEXT: The processes taking place in polycrystalline cuprous oxides ($\rho = 10^3$ ohm·cm) near the electrodes and at a certain distance from them were studied separately. The experiments were made at room temperature, in normal air humidity, with one point electrode, and one plane electrode. The specimens were irradiated with pulses of white light. The current passing through them was kept constant. The changes in the potential distribution along the specimen under the action of the light pulses were measured. The potential distribution (Fig. 1) is highly nonlinear and the sign of photoconductivity changes along the specimen. In the region (ab) (Fig. 1) photoconductivity is negative and the relaxation time is in the range of 10^{-2} sec. A positive photoconductivity with a relaxation time

Card 1/12

41768

S/194/62/000/008/038/100
D295/D308

9.4160

AUTHOR: Kosman, M.S., and Izvozchikov, V.A.

TITLE: Connection of the internal photoelectric effect in PbO with phenomena near the electrode

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 8, 1962, abstract 8-3-79 n (Uch. zap. Leningr. gos. ped. in-ta im. A.I. Gertsena, no. 207, 1961, 81-91)

TEXT: The authors have investigated the activated and non-activated photo-resistances obtained by compacting yellow lead oxide which turned to red oxide under pressure. The dependence of the potential distribution on illuminance was measured; the measurement was carried out by means of probes in fields of up to 200 V/cm, and by means of a string electrometer in more intense fields. A part of the measurements was carried out in benzene in order to eliminate the influence of humidity on conductivity. The dependence of potential jumps near the electrode on the voltage applied and on illuminance was established. The nature of the polarization phenomena, observed when the electric circuit is closed or when the field direc-
Card 1/2

L1950

S/194/62/000/009/058/100
D295/D308

9.2150

AUTHORS: Kosman, M. S. and Pertsol'd, E. G.

TITLE: On the possibility of fabricating symmetrical varistors of zinc oxide with bismuth-oxide doping

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 9, 1962, 25, abstract 9-4-49 shch (Uch. zap. Leningr. gos. ped. in-ta im. A. I. Gertsena, no. 207, 1961, 191-197)

TEXT: It has been found, in investigating Losev's effect, that ceramic samples of zinc oxide with bismuth-oxide doping have properties of nonlinear symmetrical resistors and are suitable for use with small currents and voltages. The technology of their fabrication is simple and does not require complicated apparatus: A mechanical mixture is compacted under 5×10^4 kg/m² pressure into discs of 1.5 mm thickness and 12 mm diameter. The impurity percentage is determined according to weight and varies from 0.5 to 60%. X

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On the possibility of ...

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D295/D308

perature of samples with the same impurity content and cooling rate causes, as a rule, an increase of electrical conductivity. The latter is also observed at an increase of cooling rate. Samples with 5 - 15% impurity have the lowest electrical conductivity, α is completely determined by the latter. An increase of the frequency of the alternate voltage leads to the arising of a hysteresis loop, connected with an increase of reactance owing to the self-capacitance of the sample. The most probable explanation of the properties of nonlinear resistances is the hypothesis of the existence of thin barrier layers connected with the surface state of the sample, which is indicated by the modifications of the voltage-current characteristics in the presence of oxygen. In this connection surface energy levels are formed on the surface of grains of zinc oxide owing to the adsorption of oxygen, and occupied by conductivity electrons from the volume, thus modifying the electrical and optical properties of the grains. Apparently surface barriers are the cause of the symmetry of the current-voltage characteristics. Their influence is noticeable for a surface-to-volume ratio of 10^{-3} cm^{-1} or more.

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Since, according to data from the literature, the electrical resistance of baked zinc oxide increases at the places of fusion of grains, where the cross-section is considerably smaller than the cross-section of the grains themselves, then the surface-to-volume ratio is high and the surface state affects markedly the resistance of the sample. [Abstracter's note: Complete translation.]

Card ~~242~~ 24/24

KOSMAN, M.S.; NESMELOVA, L.I.

Negative photoconductivity of copper oxide near a point contact.
Fiz. tver. tela 4 no.9:2608-2610 S '62. (MIRA 15:9)

1. Leningradskiy gosudarstvennyy pedagogicheskiy institut imeni
A.I. Gertsena.
(Copper oxide) (Photoconductivity)

IZVOZCHIKOV, V.A.; KOSMAN, M.S.

Photoelectric and optical properties of lead oxide. Izv. vys. ucheb.
zav.; fiz. no.4:128-135 '63. (MIRA 16:9)

1. Leningradskiy pedagogicheskiy institut imeni A.I.Gertsena.
(Lead oxide—~~Photoelectric~~ properties)
(Lead oxide—~~Optical~~ properties)

ACCESSION NR: AP4041142

S/0020/64/156/004/0778/0780

AUTHOR: Kosman, M. S.; Sozina, A. N.; Alikhanov, A. I.

TITLE: Relaxation oscillations in dielectrics

SOURCE: AN SSSR. Doklady*, v. 156, no. 4, 1964, 778-780

TOPIC TAGS: dielectric relaxation oscillation, resistance variation, volume charge, barium titanate

ABSTRACT: The authors have found in a previous work (Fiz. tverd. tela 3, 2504, 1961) that current oscillations are produced in silicon upon application of a sufficiently high voltage. They find now a similar phenomenon in dielectrics such as polycrystalline barium titanate, and in many others. The oscillations are observed with an oscilloscope on a 1 mm thick sample, with one flat and one pointed electrode; the applied voltage is about 700 v. The current pulses are not strictly periodical. Higher "frequency" corresponds to a lower amplitude. The circuit resistance greatly influences the pattern. With 10^6 ohms, the current reaches the maximum in about 10^{-6} sec, the decrease is somewhat longer. It appears that while in the semiconductors the resistance changes during the oscillations only in the

Card 1/2

ACCESSION NR: AP4041142

layer near the surface, in the dielectric the resistance of the whole specimen is periodically changing. Orig. art. has: 3 figures.

ASSOCIATION: Leningradskiy gosudarstveiiy* pedagogicheskiy institut im. A. I. Gertsena (Leningrad State Pedagogical Institute)

SUBMITTED: 11Jan64

ENCL: 00

SUB CODE: EM

NO REF SOV: 003

OTHER: 002

Card 2/2

IZVOZCHIKOV, V.A.; KOSMAN, M.S.; CHERNYAVSKIY, K.A.

Photocurrent fluctuations in PbO photoresistors. Fiz. tver. tela
7 no.5:1552-1556 My '65. (MIRA 18:5)

1. Leningradskiy gosudarstvennyy pedagogicheskiy institut imeni
Gertsena i Muromskiy pedagogicheskiy institut.

BORDOVSKIY, G.A.; IZVOZCHIKOV, V.A.; KOSMAN, M.S., prof., nauchnyy rukovoditel' raboty

Temperature dependence of the kinetics of photoconductivity in lead oxide. Uch. zap. Ped. inst. Gerts. 239:53-56 '64. (MIRA 18:3)

L 00681-66 EPF(c)/EWT(m)/EWP(b)/EWP(t) IJP(c) JD

ACCESSION NR: AP5012575

UR/0181/65/007/005/1552/1556

AUTHOR: Izvozhikov, V. A.; Kosman, M. S.; Chernyavskiy, K. A.

TITLE: Fluctuations of the photocurrent in PbO photoresistors.

SOURCE: Fizika tverdogo tela, v. 7, no. 5, 1965, 1552-1556

TOPIC TAGS: lead oxide, photocurrent, photoresistor, volt ampere characteristic, oscillation

ABSTRACT: The authors observed pre-breakdown current oscillations on the super-linear section of the volt-ampere characteristic ($E \sim 10^4$ V/cm) of polycrystalline lead oxide. They were able to obtain fluctuations of the photocurrent at relatively low voltage (corresponding to the start of the sublinear dependence of the current on the voltage when the field exceeds 5×10^2 V/cm). These oscillations arise when the illumination is turned on and vanish when it is turned off. If the voltage is increased, the oscillations set in also in darkness if the circuit is closed, but their amplitude increases when the light is turned on. In the latter case therefore the oscillations exist only during the growth of the dc component of the photocurrent and stop when a certain current is reached. The higher the photoelectric sensitivity of the sample, the easier it was to obtain stable oscillations at lower voltages. It is concluded that the condition for the occurrence of oscilla-

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L.00681-66

ACCESSION NR: AP5012575

tions is the presence of a strong field and of excitation of the carriers by either light or a field. Coloring reduces the field intensity near the electrode. Similarities between this process and the current fluctuations observed in other semiconductors in strong fields and connected with the filling and depletion of surface traps are pointed out. Orig. art. has: 2 figures.

ASSOCIATION: Leningradskiy gosudarstvennyy pedagogicheskiy institut im. A. I. Gertsena (Leningrad State Pedagogical Institute); Muromskiy pedagogicheskiy institut (Muromsk Pedagogical Institute)

SUBMITTED: 15 Nov 64

ENCL: 00

SUB CODE: SS, OP

NR REF SOV: 012

OTHER: 004

98
Card 2/2

L 02225-67 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) JD/AT

ACC NR: AR6013676

SOURCE CODE: UR/0058/65/000/010/EO77/EO77

AUTHOR: Kosman, M. S.; Izvozchikov, V. A.

63
B

TITLE: Pre-breakdown oscillations of the dark current and light-induced breakdown and oscillations of photocurrent in lead oxide photoresistances

SOURCE: Ref. zh. Fizika, Abs. 10E629 ¹⁷ ¹⁷

REF. SOURCE: Sb. Fizika. Dokl. k XXIII Nauchn. konferentsii Leningr. inzh.-stroit. in-ta. L., 1965, 54

TOPIC TAGS: photoresistance, lead oxide, dielectric breakdown, oscillation

ABSTRACT: Periodic oscillations of the photocurrent were observed in polycrystalline samples of PbO at constant illumination in a constant field $E > 5 \times 10^2$ v/cm. The duration of the pulses was $< 1.5 \times 10^{-7}$ sec. The repetition frequency was $5 - 2.5 \times 10^2$ sec⁻¹. It is proposed that the occurrence of the oscillations is connected with a redistribution of the charge in the surface traps. At fields $10^3 - 10^4$ v/cm, light-induced breakdown is observed over the surface of the sample. [Translation of abstract]

SUB CODE: 20

Card 1/1 *LC*

USSR / Microbiology. Human and Animal Pathogens.
Corynebacteria.

F

Abs Jour: Ref Zhur-Biol., No 2, 1959, 5613.

Author : Rubinshteyn, I. S.; Vilenchik, G. Y.; Kosman-
del', R. K.

Inst : Not given.

Title : Laboratory Diagnosis of Diphtheria.

Orig Pub: Zdravookhr. Belorussii, 1958, No 1, 53-54.

Abstract: The diphtheria bacillus has a characteristic appearance when examined under the phase-difference microscope. Instead of phase-contrast illumination, which is not available in all laboratories, the authors suggest the following method: from a 24-48 hour culture on Loeffler's medium a drop is prepared in such a way that air bubbles appear under the cover glass. Bacterio-

Card 1/2

USSR / Microbiology. Human and Animal Pathogens.
Corynebacteria.

F

Abs Jour: Ref Zhur-Biol., No 2, 1959, 5613.

Abstract: scopy is conducted using the oil immersion objective with closed-down diaphragm and lowered condenser. By this technique the diphtheria bacilli can usually be seen in the air bubbles without mixture with other organisms. The view is similar to the one observed in the phase-difference microscope, differences in the refraction of light in the liquid and in air giving an effect similar to that which appears in phase contrast. -- M. A. Gruzman.

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53

05440

SOV/120-59-3-12/46

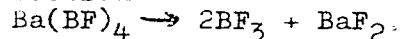
AUTHORS: Dmitriyev, A. B., Vorob'yev, M. G., Kosmarskaya, L.G.
and Chipurenko, N. I.

TITLE: The Construction of Boron Ionization Chambers
(Konstruktsiya bornykh ionizatsionnykh kamer)

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 3,
pp 59-62 (USSR)

ABSTRACT: A description is given of the following ionization chambers, all of which are designed to detect slow neutrons from the ionization due to the reaction $B^{10}(n,\alpha)Li^7$: the KN series (filled with BF_3), the KNT series (solid boron and argon gas) and the KNK series (compensated for the effect of the γ -background).
1) The KN-50 chamber. Fig 1 shows a photograph of this chamber. The electrodes consist of four coaxial tubes, 12, 22, 32 and 42 mm in diameter, made from nickel foil, 0.1 mm thick, and in electrical contact with each other. It is filled with BF_3 gas at 600 mm Hg, the working volume being 370 cm³. The gas is obtained from the reaction

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The Construction of Boron Ionization Chambers

Fig 3 gives the volt-ampere characteristics of the chamber when the latter was irradiated in the reactor channel. The saturation current at 500 V is $0.045 \mu\text{amp}/\text{cm}^2$.

2) The KNT-52 chamber. This chamber is in the form of a two-electrode system placed in a hermetically sealed steel cylinder. The cylinder is filled with argon at a pressure of 6 atm. Each electrode (Fig 4) consists of 30 discs, 43 mm in diameter, placed parallel to each other. The discs have slots through which supports for electrodes of opposite sign can be inserted. The distance between the plates of opposite signs is 1.6 mm and the disc thickness is 0.4 mm. Boron is deposited on either side of each disc (except for the end discs), the total area covered in this way being 950 cm^2 . The insulation of the terminals at 300°C is 10^9 Ohms. Amorphous boron is used. The argon gas is 0.001% pure. The electrical characteristics of the chamber were described by Dmitriyev (Ref 3). The working voltage is 500 V and the working current $350 \mu\text{amp}$. The absolute sensitivity of the chamber was found to be

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The Construction of Boron Ionization Chambers

as the working gas. The nitrogen enables the breakdown voltage to be increased to 2 kV. The sensitivity of γ -radiation is found to be 3.4×10^{-13} amp/r/hr, while the sensitivity to slow neutrons is 4×10^{-14} amp/neutron/cm² sec. Yu. G. Nikolayev suggested the KNK-52 chamber. The KNK-52 is very similar to the KNK-53 except for the fact that the distribution of the boron and the compensating cells is asymmetric so that the sensitivity of the electrode system to γ -radiation depends on the geometry of the radiation field. There are 7 figures and 3 Soviet references.

SUBMITTED: April 4, 1958

Card 4/4

KOSMARSKAYA, Ye.N.

Reaction of brain nerve cells to prolonged stimuli increase from the peripheral receptors. Biul. eksp. biol. i med. 53 no.6:88-91 Je '62. (MIRA 15:10)

1. Iz otdela razvitiya mozga (zav. - deystvitel'nyy chlen AMN SSSR prof. B.N.Klosovskiy) Instituta pediatrii (dir. - deystvitel'nyy chlen AMN SSSR O.D.Sokolova-Ponomareva) AMN SSSR, Moskva. Predstavelna deystvitel'nyy chlenom AMN SSSR O.D.Sokolovoy-Ponomarevoy.

(BRAIN--INNERVATION)

KOSMARS KAYA, Ye. N.; BALOSHOVA, Ye. G.

Peculiarities of the medulla oblongata blood supply. Vopr. neurokhir. 15 no. 6:50-56 Nov-Dec. 1951. (CIML 21:3)

1. Candidate Biological Sciences Kosmarskaya. 2. Of the Division for the Study of Brain Development (Head -- Prof. B. N. Klosovskiy), Order of the Red Banner of Labor Institute of Pediatrics (Director -- Prof. G. N. Speranskiy, Active Member of the Academy of Medical Sciences USSR.

KLOSOVSKIY, B.N.; KOSMARSKAYA, Ye.N.

New method of production of anemia of the medulla oblongata. *Fiziol. zh. SSSR* 38 no.3:356-361 May-June 1952. (GLML 23:2)

1. Division for the Study of Brain Development of the Order of the Red Banner of Labor Institute of Pediatrics, Academy of Medical Sciences USSR, Moscow.

1. KLOSOVSKIY, B. N., KOSMARSHAYA, E. N.
2. USSR (600)
4. Medulla Oblongata
7. Regulation of the activity of the vascular motor center in the medulla oblongata. B. N. Klosovskiy, E. N. Kosmakshaya. Zhur. nevr. i psikh. 53, No. 2, 1953.

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

KOSMARSKAYA, Ye.N.

Problem of collateral cerebral blood supply. Zh. nevropat. psikiat.,
Moskva 53 no.9:702-707 Sept 1953. (CLML 25:4)

1. Division for the Study of Brain Development of the Institute of
Pediatrics, Academy of Medical Sciences USSR.

KLOSOVSKIY, Boris Nikodimovich, professor, laureat Stalinskoy premii;
KOSMARSKAYA, Ye. N., redaktor; SHASHKOVA, K. I., redaktor izdatel'-
stva; ISLENT'YEVA, P. G., tekhnicheskiy redaktor.

[Physical development of a child's brain] Razvitie mozga rebenka.
Moskva, Izd-vo "Znanie," 1954. 47 p. (Vsesoyuznoe obshchestvo po
rasprostraneniu politicheskikh i nauchnykh znani, Ser. 3, no.33)
(MLRA 7:9)

1. Chlen-korrespondent AMN SSSR (for Klosovskiy).
(Brain)

KOSMARSKAYA, Ya.N.

Effect of extrauterine life on the formation of the structures
of the cerebellar cortex in premature infants. *Pediatria* no.4:
28-35 J1-Ag '55. (MLRA 8:12)

1. Iz otdeleniya razvitiya mozga (zav.-chlen-korrespondent AMN
SSSR prof. B.N.Klosovskiy) Instituta pediatrii AMN SSSR (dir.
prof. O.D.Sokolova--Ponomareva)
(CEREBELLAR CORTEX, physiology
in premature inf.)
(INFANT, PREMATURE,
cerebellar cortex develop. in)

KOSMARSKAYA, Ye. N.

KLOSOVSKIY, B.N.; KOSMARSKAYA, Ye.N.

Behavior of animals following total exclusion of visual, auditory, olfactory and vestibular receptors at an early age. *Biul.eksp.biol. i med.* 40 no.9:3-6 S '55 (MLRA 8:12)

1. Iz otdela izucheniya razvitiya mozga (rukovoditel'-chlen-korrespondent AMN SSSR prof. B.N.Klosovskiy) Instituta pediatrii (dir.-chlen-korrespondent AMN SSSR O.D.Sokolova-Ponomareva) AMN SSSR Moskva.

(EYE, physiology,
eff. of excis. of visual, auditory, olfactory & vestibular receptors in puppies on behavior in dogs)

(EARS, physiology,
same)

(SMELL,
same)

(VESTIBULAR APPARATUS, physiology,
same)

KLOVSKIY, B.N.; KOSMARSKAYA, Ye.N.

Cerebral changes following total exclusion of visual, auditory, vestibular, and olfactory receptors during early stages of development. Zhur.vys.nerv. deiat. 6 no.3:443-450 My-Je '56. (MIRA 9:11)

1. Otdel razvitiya mozga Instituta pediatrii AMN SSSR

(BRAIN, physiology,
eff. of total exclusion of auditory, olfactory,
vestibular & visual receptors (Rus))

(HEARING, physiology,
eff. of total exclusion of auditory, olfactory,
vestibular & visual receptors on brain in animals (Rus))

(SMELL, physiology
same)

(EQUILIBRIUM, physiology,
same)

(VISION, physiology,
same)

KLOSOVSKIY, B.N.; KOSMARSKAYA, Ye.N.

Method of total exclusion of visual, auditory, vestibular, and olfactory receptors. Fiziol. zhur. 42 no.2:242-244 F '56.

(MLRA 9:6)

1. Otdel razvitiya mozga Instituta pediatrii AMN SSSR, Moskva.

(VISION,

total exclusion of visual auditory, vestibular, & olfactory receptors in exper. animals (Rus))

(HEARING,

same)

(VESTIBULAR APPARATUS, surgery,

same)

(NERVES, OLFACTORY, surgery,

same)

KOSMARSKAYA, Ye N.

KOSMARSKAYA, Ye.N.

Effect of the conditions of intra-uterine life on the development
of the cortex of the visual analyzer (area 17) in premature infants.
Pediatriia no.11:27-33 N '57. (MIRA 11:2)

1. Iz otdeleniya razvitiya mozga (rukovoditel' - chlen-korrespondent
AMN SSSR prof. B.N.Klosovskiy) Instituta pediatrii AMN SSSR (dir. -
chlen-korrespondent AMN SSSR prof. O.D.Sokolova-Ponomareva)
(CEREBRAL CORTEX) (INFANTS (PREMATURE))
(OPTIC NERVE)

KOSMARSKAYA, Ye.N. (Moskva)

Effects of the postnatal life of a premature infant on the development of the vascular network of the lateral ventricles of the brain [with summary in English, p.88]. Arkh.pat. 19 no.4:32-35 '57.
(MLRA 10:6)

1. Iz otdela razvitiya mozga (rukovoditel'- chlen-korrespondent Akademii meditsinskikh nauk SSSR prof. B.N.Klosovskiy) Instituta pediatrii Akademii meditsinskikh nauk SSSR (dir. - chlen-korrespondent Akademii meditsinskikh nauk SSSR prof. O.D.Sokolova-Ponomareva).

(BRAIN, blood supply

eff. of postnatal life of premature inf. on develop. of vasc. network of lateral ventricles (Rus))

(INFANT, PREMATURE, physiol.

eff. of postnatal life on develop. of vasc. network of lateral ventricles of brain (Rus))

USSR/Human and Animal Physiology. Thermoregulation

T-3

Abs Jour : Ref Zhur - Biol., No 14, 1958, No 65070

Author : Kosmarskaya Ye.N. Purin V.I.

Inst : -

Title : The Change in the Temperature of the Brain and the Body
During Medically-Induced Sleep

Orig Pub : Fiziol. zh. SSSR, 1957, 43, No 1, 40-45

Abstract : One thermocouple was imbedded into the brain substance of an unanesthetized cat through an orifice drilled in the skull. A second thermocouple was placed on the surface of the brain or in the subarachnoid space. First a notation was made of the initial temperature of the brain substance, cerebrospinal fluid and body, and then a 3% solution of sodium amytal (60 mg/kg) was injected subcutaneously. Two types of change in the temperature of the brain substance were noted during barbiturate sleep, with a step-wise rise or fall in the temperature of the brain substance. In both cases the fluctuations in the temperature of the brain

Card : 1/2

USSR/Human and Animal Physiology - Nervous System.

T-10

Abs Jour : Ref Zhur - Biol., No 7, 1958, 32115

receptors in adult cats led to deep carotid retardation
broken only in the 1-2nd minute for urination and defeca-
tion.

Card 2/2

- 95 -

USSR/Human and Animal Physiology (Normal and Pathological) T
The Effect of Physical Factors. Ionizing Irradiation

Abs Jour : Ref Zhur Biol., No 6, 1959, 27198

lamina quadrigemina to anterior and posterior tubers was noted. With one and the same dose, the disturbance of B development was stronger the earlier was B irradiated. B of baby rat, irradiated on the day of birth and which survived for two weeks, approximately corresponded to B of normal, 6-day-old baby rat; the B of baby rat irradiated on the day of birth with the dose of 500 r on 33rd day corresponded to B of 7-9-day-old baby rat.

Card 2/2

KOSMARSKAYA, Ye. N. (Moskva, Novo-Kuznetskaya, d.20 kv.16)

Development of area 17 of the cerebral cortex in humans during
the second half of intrauterine life [with summary in English].
Arkhnat.gist. 1 embr. 35 no.2:30-38 Mr-Ap '58 (MIRA 11:5)

1. Otdel razvitiya mozga (rukovod. - chl.-korr. AMN SSSR prof.
B.N. Klosobskiy) Instituta pediatrii AMN SSSR.
(CEREBRAL CORTEX, anatomy & histology
area 17 develop. during second half of fetal life (Rus))

KOSMARSKAYA, Ye.N.; BARASHNEV, Yu.I.

Effect of a single roentgen irradiation on the growth of the cerebral capillaries [with summary in English]. Med.rad. 4 no.1:35-41 Ja '59. (MIRA 12:2)

1. Iz otdela razvitiya mozga (zav. - chlen-korrespondent AMN SSSR prof. B.N. Klosovskiy) Instituta pediatrii AMN SSSR.
(BRAIN, blood supply, capillaries, eff. of x-rays on postnatal develop. (Rus))
(ROENTGEN RAYS, effects, on brain capillaries postnatal develop. (Rus))

KLOSOVSKIY, B.N.; KOSMARSKAYA, Ye.N.

Changes in the nerve cells of the vasocapillary network in the brain of dogs deprived of vision, hearing, smell and vestibular stimulation in the early stages of development. Arkh.anat.gist. 1 embr. 37 no.8:12-23 Ag '59. (MIRA 12:11)

1. Otdel razvitiya mozga (zav. - chlen-korrespondent AMN SSSR prof.B.N.Klosovskiy) Instituta pediatrii AMN SSSR (Moskva, Ustinskiy proyezd, d.1/2, Institut pediatrii AMN SSSR, otdel razvitiya mozga).

(BRAIN blood supply)

(SENSATION physiol)

KOSMARSKAYA, Ye.N.; BARASHNEV, Yu.I.

Development of the brain in animals irradiated with roentgen rays at various stages of extrauterine life. *Pediatriia* 37 no.11:33-37 N 159. (MIRA 13:3)

1. Iz laboratorii izucheniya razvitiya mozga (zaveduyushchiy - chlen-korrespondent AMN SSSR prof. N.N. Klosovskiy) Instituta pediatrii AMN SSSR (direktor - chlen-korrespondent AMN SSSR prof. O.D. Sokolova-Ponomareva).

(BRAIN radiation effects)

KLOSOVSKIY, B.N. (Moskva, Begovaya ul., 11, kv.19); KOSMARSKAYA, Ye.N.
(Moskva, Novokuznetskaya ul., 20, kv.16)

"Development of the central nervous system," edited by S.A.Sarkisov
and N.S.Preobrazhenskaia. Reviewed by B.N.Klosovskii, E.N.Kosmarskaia.
Arkh.anat.gist.i embr. 39 no.11:116-119 N '60. (MIRA 14:5)
(NERVOUS SYSTEM) (SARKISOV, S.A.) (PREOBRAZHENSKAIA, N.S.)

KOLOSOVSKIY, Boris Nikodimovich; KOSMARSKAYA, Yelena Nikolayevna; CHERNUKH,
A.M., red.; ZUYEVA, N.K., tekhn. red.

[Active and inhibited state of the brain] Deiatel'noe i tormoznoe
sostoianie mozga. Moskva, Gos. izd-vo med. lit-ry Medgiz, 1961.
410 p. (MIRA 14:8)

(BRAIN)

KOSMARSKAYA, Y.O.N. (Moskva, Novo-Kuznetskaya ul., 20, kv.16)

Effect of vestibular stimulation on mitotic cell division in external granular layer of the cerebellar cortex in kittens and puppies. Arkh. anat. gist. i embr. 41 no.7:48-53 J. '61. (MIRA 15:2)

1. Otdeleniye razvitiya mozga (zav. - chlen-korrespondent AMN SSSR prof. B.N.Klosovskiy) Instituta pediatrii AMN SSSR.
(CEREBELLUM) (KARYOKINESIS)
(VESTIBULAR APPARATUS)

L 22279-66 EWT(1)

ACC NR: AR6005189

SOURCE CODE: UR/0058/65/000/009/G013/G013

AUTHORS: Kosmarskiy, L. A.; Shkol'nikova, Z. I.

TITLE: On the formation of breakdown in vacuum

SOURCE: Ref. zh. Fizika, Abs. 9G147

REF. SOURCE: Sb. Probov dielektrikov i poluprovodnikov. M.-L.,
Energiya, 1964, 82-86

TOPIC TAGS: dielectric breakdown, vacuum, electric discharge,
ionized plasma, glow discharge

TRANSLATION: Results are presented of high speed photography of
light phenomena accompanying the formation and flow of current during
breakdown of plane-parallel vacuum millimeter-size gaps. The break-
down occurs in two stages. During the initial stage conditions are
produced for the passage of large current (electron-ion exchange sets
in). This stage is characterized by strong fluctuations of the

Card 1/2

L 22279-66

ACC NR: AR6005189

current and by intermittent glow of the cathode. The second stage (stage of monotonic increase in the current) is characterized by propagation of anode matter in the form of desorbed gas and vapor. The interelectrode space is made up of two near-electrode regions, occupied by ionized vapor from the corresponding electrodes, and a vacuum gap with dark plasma. The complete formation of the breakdown is connected with the crossing of this gap by the anode material. N. Olendzkaya

SUB CODE: 20

Card

2/2 nst

L 23691-66 EWT(1)/EWT(m)/ETC(f)/EWG(m)/T DS

ACC NR: AR6005198 SOURCE CODE: UR/0058/65/000/009/D029/D029

AUTHORS: Kosmarskiy, L. A.; Shkol'nikova, Z. I. 54
53

TITLE: Concerning radiation occurring during breakdown in vacuum B

SOURCE: Ref. zh. Fizika, Abs. 9D234

REF. SOURCE: Sb. Probov dielektrikov i poluprovodnikov. M.-L.,
Energiya, 1964, 86-90

TOPIC TAGS: vacuum, dielectric breakdown, electric discharge
radiation, electric discharge, electrode

TRANSLATION: On the basis of analysis of the spectrograms of an
aperiodic controlled breakdown of vacuum gaps at residual-gas
pressure 10^{-5} mm Hg, and microphotographs of the surfaces of the
electrodes, it has been found that in order for the breakdown current
to flow, it is necessary for the anode material to evaporate. Pairs
of electrodes made of Fe, Mo, Ta, Ni, and Cu were investigated in

Card 1/2

L 23691-66

ACC NR: AR6005198

pairs at voltage 4.5 kev and gaps of 2 mm. Ignition was with the aid of an auxiliary electrode. It was found that the temperature of the discharge varies in proportion to the change in current (voltage). The density of the current at which one cathode spot can be passed in the vacuum breakdown is characteristic of arc discharge and amounts to approximately 10^5 a/cm². Bibliography, 11 titles. ✓
N. Olendzkaya.

SUB CODE: 20

Card

2/2 ✓

L 29553-66 EWT(1)/EWP(e)/EWT(m)/ETC(f)/T DS/WH

ACC NR: AR6004652

SOURCE CODE: UR/0275/65/000/010/A026/A026

AUTHOR: Kosmarskiy, L. A.; Shkol'nikova, Z. I.

20
B

TITLE: Problem of radiation during a breakdown in vacuum

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 10A184

REF SOURCE: Sb. Probov dielektrikov i poluprovodnikov. M.-L., Energiya, 1964, 86-90

TOPIC TAGS: electric breakdown, vacuum breakdown

ABSTRACT: An analysis of spectrograms of an aperiodic controlled breakdown of millimeter vacuum gaps at 10^{-5} torr and an examination of microphotographs of the electrodes involved permit to conclude that the anode-material vapor is necessary for the breakdown-current flow. The discharge spectra were investigated by an ISP-28 with quartz optics. Electrode pairs made from Fe, Mo, Ta, Ni, Cu were investigated. The breakdown conditions: anode voltage, 4.5 kv; anode-cathode distance, 2 mm. The discharge was fired by means of an axiliary electrode. Microphotographs of the working areas of the anode and cathode are shown. It is found that the discharge temperature is proportional to the variation of current (voltage). The current density of one cathode spot, in the vacuum breakdown, reveals an arc-type discharge; the density is about 10^5 amp/cm². Four figures. Bibliography of 11 titles.
N. O. [Translation of abstract]

SUB CODE: 09
Card 1/1 PV

UDC: 537.525

SOV/120-58-5-13/32

AUTHORS: Brish, A.A., Dmitriyev, A.B., Kosmarskiy, L.N., Sachkov, Yu.N., Sbitnev, Ye.A., Kheyfets, A.B., Tsitsiashvili, S.S., and Evg, L.S.

TITLE: A Vacuum Spark Switch (Vakuunnye iskrovyye rele)

PERIODICAL: Pribory i tekhnika eksperimenta, 1958, Nr 5, pp 53-58 (USSR)

ABSTRACT: The device consists of an evacuated glass envelope which contains 3 electrodes (see the general diagram of Fig.1). The principal discharge gap comprises a complex cathode consisting of two electrodes which form an auxiliary discharge gap. The two cathode electrodes are separated by means of a fine mica plate; when a triggering pulse is applied, a discharge is formed on the surface of the mica. Fig.2 shows 6 alternative solutions of the electrode systems of vacuum spark switches. Fig.3 shows photographs of actual switches (tubes 4, 5, 6 and 7) and photographs of 3 thyatrons (tubes 1, 2 and 3) for the purpose of comparison. The basic parameter of a switch is its anode voltage V_a , its operating current I and its triggering breakdown voltage V_{π} . The anode operating voltages up to 20 kV could be obtained with a discharge gap of 1 mm. The values of the

Card 1/3

30V/120-58-5-13/32

A Vacuum Spark Switch

discharge current are determined primarily by the external parameters of the circuit in which the switch is employed. The currents can be very high since the tube is "extinguished" at a current of about 20 A. The energy required for the initiation of the main-gap breakdown is very small. Thus the switch can be triggered by the energy stored in a capacitance of about $5 \mu\text{f}$, but the triggering voltage should be at least 1500 V. The switch is subject to some time delays. The overall delay is $T = t_1 + t_2 + t_3$, where t_1 is the time between the commencement of the triggering pulse and the inception of the trigger gap discharge; t_2 is the time lag between the commencement of the auxiliary discharge and the inception of the main-gap discharge, and t_3 is the formative time of the main gap discharge. These time delays are illustrated graphically in Fig.4. In actual tubes the formative times of the main discharge were of the order of 0.03 μs . The electrical characteristics of a spark

Card 2/3

SOV/120-58-5-13/32

A Vacuum Spark Switch

switch are affected by the number of switchings performed. This is illustrated in Fig.11, which shows the ignition voltage of the auxiliary gap as a function of the number of switchings N : it is seen that the voltage decreases with N . The paper contains 11 figures and no references.

SUBMITTED: November 15, 1957.

Card 3/3

L 28506-66 EWT(1)/EWT(m)/ETC(f)/EWG(m)/T DS

ACC NR: AR6004651

SOURCE CODE: UR/0275/65/000/010/A025/A025

AUTHOR: Kosmarskiy, L. N.; Shkol'nikova, Z. I. 58
B

TITLE: Formation of breakdown in vacuum

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 10A180

REF SOURCE: Sb. Probov dielektrikov i poluprovodnikov. M.-L., Energiya, 1964, 82-86

TOPIC TAGS: vacuum breakdown voltage, electric breakdown, electrovacuum, electric discharge, electric current, cathodoluminescence, electrode

ABSTRACT: The results are presented of high speed-photographing the luminous phenomena that accompany the formation of and current flow in the breakdown of flat-parallel millimeter gaps in vacuum. The formation of such a vacuum breakdown has two stages. In the initial stage, conditions are created for passing a heavy current (electron-ion exchange). This stage is characterized by wide current variations and by intermittent cathode luminescence. The second stage of a monotonous current buildup is characterized by propagation of anode desorbed gas and vapor. The rate of motion of this substance determines the rate of current buildup. Two near-electrode regions, in the interelectrode space, are occupied with the ionized electrode vapor; the vacuum gap contains a dark plasma. The complete breakdown formation takes place when the anode material occupies the entire discharge gap. Six figures. Bibliography of 1 title. N. O. [Translation of abstract].

SUB CODE: 09

Card 1/1 c.c.

UDC: 537.525

KADLUBOWSKI, R.; KOSMATKA, S.

Activity of liver succinic dehydrogenase in experimental poisoning
with aniline, p-aminophenol, p-phenyldiamine and chlorodinitrobenzene.
Acta physiol.polon. 11 no.5/6:752-753 '60.

1. Z Katedry Biologii i Parazytologii Lekarskiej A.M. w Lodzi

Kierownik: doc.dr R.Kadlubowski.

(ANILINE COMPOUNDS toxicol)

(PHENOLS toxicol)

(NITROBENZENES toxicol)

(DEHYDROGENASES metab)

(LIVER metab)

KADLUBOWSKI, R., KOSMATKA, S.

On the effect of anthelmintic drugs on succinic dehydrogenase
in *Ascaris lumbricoides* L. Acta physiol.polon. 11 no.5/6:
753-754 '60.

1. Z Katedry Biologii i Parazytologii Lekarskiej A.M.w Lodzi
Kierownik: doc.dr R.Kadlubowski.
(DEHYDROGENASES metab)
(ANTHELMINTICS pharmacol)
(ASCARIS metab)

KADLUBOWSKI, R.; KOSMATKA, S.; CHYZINSHA, U.

The effect of anthelmintics on succinic dehydrogenase activity of *Fasciola hepatica* L. in vitro. *Wiadomosci parazyt.* 7 no.2:351-353 '61.

1. Katedra Biologii i Parazytologii Lekarskiej Akademii Medycznej, Lodz.

(SUCCINIC DEHYDROGENASE pharmacol)
(FASCIOLA HEPATICA pharmacol)
(ANTHELMINTICS pharmacol)

KOSMATOV, F. F.

GURVICH, P.M., inzhener; KOSMATOV, F. F.

Narrow-gauge railroad ties of prestressed concrete. Torf.prom.
34 no.5:12-14 '57. (MIRA 10:10)

1. Gosudarstvennyy institut po proyektirovaniyu zavodov torfyanoy
promyshlennosti.

(Prestressed concrete) (Railroads--Ties, Concrete)

KOSMATOV; L., prof., zasluzhennyy deyatel' iskusstv RSFSR.

"Techniques and art of photography." by F. Dyko, E.Iofis.

Reviewed by L.Kosmatov. Sov. foto 21 no.2:39 F '61.

(Photography)

(Dyko, F.)

(Iofis, Ye)

(MIRA 14:2)

LYUBIMOV, Ye.I.; KOSMATOV, N.V.

Preserving the emulsion layer of films. Patent U.S.S.R. 77,395, Dec. 31, 1949.

(CA 47 no.19:9834 '53)

KOSMATOV, N.V.

TOKAREV, F.V., izobretatel', Geroy Sotsialisticheskogo Truda; SMIRNOV, I.V., izobretatel' v oblasti stroymaterialov; POKROVSKIY, G.I., professor, doktor tekhnicheskikh nauk; SHIRKOV, I.P., novator stroitel'noy industrii; CHIKIREV, N.S., novator; KOTOVA, S.A., novator, brigadir pryadil'shchits; LOGIN, M.I., izobretatel', inzhener; SLIVOGHKIN, F.P., ratsionalizator; MERKULOV, I.A., izobretatel', konstruktor dvigateley; KOSMATOV, N.V., izobretatel' v oblasti kino; KHLEBTSEVICH, Yu.S., izobretatel', kandidat tekhnicheskikh nauk; SHCHADILOV, V.I., ratsionalizator-naladchik.

"Inventor" has a proud ring to it! Tekh. mol. 25 no.3:1-3 Mr '57.

(MIRA 10:6)

1. Deputat Verkhovnogo Soveta SSSR (for Shirkov). 2. Nachal'nik tsekha zavoda imeni Sergo Ordzhonikidze (for Chikirev). 3. Fabrika imeni Kalinina (for Kotova). 4. Termitnostrelochnyy zavod (for Login). 5. Zavod "Kauchuk" (for Slivochkin).

(Inventions)

KOSMATIY, A.S.

Aerophagy simulating acute abdomen; abstract. A.S. Kosmatyi, Khirurgiia
34 no. 12-05 n 158. (MIRA 12:1)

1. Iz khirurgicheskogo otdeleniya Intinskoy gerodskoy bol'nitsy.
(AEROPHAGY)

KOSMATYY, A.S. (Inta, Komi ASSR, ul. Sotsialisticheskaya, d.10, kv.5)

Treatment of varicose veins of the lower extremities by A.N.
Khrustalev's method. Nov.khir,arkh. no.5:105-106 S-0 '59.

(MIRA 13:3)

1. Khirurgicheskoye otdeleniye Intinskoy gorodskoy bol'nitsy Komi
ASSR.

(EXTREMITIES, LOWER--DISEASES) (VARIX)

CA

15

Adsorption of manganese [in soil]. R. S. Kosmatii. *Osnovnye Voprosy Nauch.-Issledovatel. Rabot VNIS za 1937, 1939, 1940, No. 8, 44.*—
 The soils were satd. with Ca. Four g. of air-dry soil was covered with various concns. of $MnSO_4 \cdot 5H_2O$ solus. and the pH value was set at 3.0. After equil. was reached in the system salt soln.-soil, the suspension was filtered and the content of Mn detd. The increased adsorption of Mn is explained by (1) the sp. behavior of SO_4^{--} (from the $MnSO_4$ soln.), which is adsorbed directly on the cryst. lattice (this facilitates the displacement of the cations from the soil-colloidal complex) and the sepn. of Mn first in the form of $Mn(OH)_2$ and later as MnO_2 and (2) the chem. reaction of SO_4^{--} with the mobile forms of R_2O_3 producing insol. sulfates of Fe and Al. The increased adsorption is caused also by the formation of chem. compds. of Mn-type humates or by other insol. complex org. compds.
 W. R. Heim

ASME-SEA METALLURGICAL LITERATURE CLASSIFICATION

KOSMATIY, E.S.

VLASTYUK, P.A.; KOSMATIY, E.S.; KLIMOVITS'KA, Z.M.

Application of radioactive tracers in improving the system of
plant nutrition conditions. Visnyk AN URSSR 25 no.11:43-53
N '54. (MIRA 8:2)
(Plants--Nutrition)(Radioactive tracers)

KOSMATYY, Ye. S.

✓The significance of different forms of phosphates in plant nutrition. P. A. Vlasjuk, E. S. Kosmatyi, and Z. M. Kilmovitskaya (Inst. Plant and Agrochem., Acad. Sci. Ukr. S.S.R., Kiev). *Fiziol. Rastenii, Akad. Nauk S.S.S.R.* 2, 334-7(1955).—Expts. with N-P-K plant diet contg. P³¹ in superphosphate, Ca pyrophosphate, or Ca orthophosphate were performed on sugar beet, wheat, and clover. Sugar beet and clover utilize the P content of superphosphate most intensely, pyrophosphate is utilized less well, and orthophosphate the least. P, regardless of its source, is localized more in the constitutinal proteins than in protein reserves (storage proteins). In sugar-beet leaf in the 16-day plants (initial vegetative period) there are formed, in addition to inorg. P, glycerophosphate, glucose-1-phosphate, and fructose-1,6-diphosphate. At this age the roots show a considerable concn. of the inorg. P only. The best intake of P from superphosphate into sugar beet occurs when the fertilizer is introduced into the rows at planting. If the superphosphate is introduced some 5 cm. below the seeds the intake of P is considerably reduced. The meristematic young tissues of plants are richer in P than are the older tissues. G. M. Kosolapoff

(2)

KOSMATYY, Ye. S.

2860. Metabolism in clover plants treated with radioactive sulphur.
P. A. Ylatsuk, Ye. S. Kosmatyi, and Z. M. Klimovitskaya. *Nauch.
Trud. Inst. Fiziol. Rast. UzbSSR*, 1935, 9, 33-38; *Izvest.
Zh. biol. Khim.*, 1956. Abstr. No. 14693. — It is shown that by intro-
ducing $\text{Na}_2^{35}\text{SO}_4$ and gypsum into the soil that ^{35}S is rapidly absorbed
by clover plants and participates in the synthesis of S-containing
amino acids. ^{35}S mainly appears in the roots, less in stems and
leaves. By column chromatography it is demonstrated that ^{35}S

3

is incorporated into cystine and methionine by the third day, and into
protein by the sixth day, after introducing the $^{35}\text{SO}_4$ into the soil.
It is assumed that conversion of SO_4 in plant tissues proceeds accord-
ing to the scheme: $\text{SO}_4 \rightarrow$ cystine (cysteine) \rightarrow methionine \rightarrow
protein. (Russian) J. H. Broughton

KOSMATIY, Ye. S.

1957. Phosphorus metabolism
and E. S. Kosmatii *Nauch. Tr.*
1955, No. 9, 43-47; *Russk.*
1961. In the petioles and leaf
epididate that the most part
in the water sol. phosphates, 11
proteids. The very low intens
phytin remained unchanged. At
the leaf plastids the phosphorus
than in the petioles. (Russian)

in the sugar beet. P. A. Vlasuk
Inst. Fiziol. Rast. Ukrain. S.S.R.,
A. Biol. Khim., 1956, Abstr. No.
es of the sugar beet, studies with
es phosphorus metabolism goes on
in the phosphatides and nucleo
ty of phosphorus metabolism of
ing the growth of the plant. In
metabolism was markedly higher
T. R. PARSONS

mid
1
Ch

KOSMATIY, Ye. S.

✓ The influence of root phosphorus and calcium of sugar beets. P. A. V. M. Klimovitskaya. Dokl. Nank im. V. I. Lenina 20, to 10 kg. soil 5-10 micro increased the wt. of the root content by 0.3-0.8%. R. Na₂HPO₄ applied to the roots by 41%. All through more Ca in the leaves than

and foliar feeding of radioactive the growth and sugar content. yuk, E. S. Kosmatiy, and Z. ty Vsesoyuz. Akad. Sel'skokhoz. No. 6, 15-17(1955).—Supplying ric of radioactive Ca has increased leaves by 21% and the sugar phosphorus (in the form of stage has increased the wt. of the growing period there was the roots. J. S. Infc.

KOSMATYY, Ye. S.

med Conditions for the entry of carbon
 bicarbonates in the soil. P. A. Viaryukh
 Z. M. Klimovitskaya. *Doklady Yu.
 kes. Nank. in. V. I. Lening. 21, No.
 1, 1956.* Expts. with sugar beets, clover, spruce,
 tomato transplants (seedlings), will
 show that C from carbonates in the
 soil is metabolized through the roots
 into CO_2 . Radioactive C in Na $2CO_3$
 of 16 kg. of soil) mixed in the fer-
 tilizer for the plants if the soil had a pH of 8.

into the plant from soil
 H. S. Kosmatyi, and
 J. S. Joffe
*Tr. Akad. Sci. SSSR
 Ser. Biol. 1956, No. 4, 21-6 (1956).* Pot
 expts. with wheat, cabbage, and
 meadow podzol soils,
 show that C from carbonates in the
 soil is utilized by plants
 alongside with C from
 CO_2 (60 microcurie/pot
 fertilizer was taken up by
 plants).

KOSMATIY, Ye. S.

✓ 8147
EFFECTS OF SMALL DOSES OF IONIZING RADIATIONS ON OXIDATION-REDUCTION PROCESSES IN PLANTS. P. A. Viasyuk, Z. M. Klimovitskaya, and Ye. S. Kosmatiy (Ukraino Inst. of Plant Physiology and Agrochemistry). *Doklady Akad. Nauk S.S.S.R.*, 108, 731-4 (1956) Feb. 1. (in Russian)

Tracer studies of radioactive Ca^{45} (5 to 10 μ g per plant) effect on sugar beet yield and the effects of small doses of P^{32} , Ca^{45} , and S^{35} in the food supply of sugar beets and clover are tabulated and discussed. The studies established that in the early stages of growth of sugar beets the ionizing radiation increased the oxidation and lowered the reduction processes. Considerable increase of reduction processes over the oxidation which resulted in richer sugar beet yield were observed towards the end of the vegetative period.

Larger ionizing radiation doses in clover plants increased oxidation and suppressed the reduction processes. In clover plants small doses of radioactive P^{32} have intensified the oxidation, the tissue iodo-reducing properties, and the content of reducing forms of ascorbic acid. (R.V.J.)

MLL
3

USSR/Plant Physiology - Mineral Nutrition.

I.

Abs Jour : Ref Zhur - Biol., No 23, 1958, 104360

Author : Vlasyuk, P.A., Kosmatyy, Ye.S., and Klimovitskaya, N.M.

Inst : Institute of Plant Physiology and Agrochemistry, AS
Ukrainian SSR.

Title : The Effect of Nitrate-Ammoniacal, Nitrogenous and Manganous Nutrition on Sulfur Metabolism in the Sugar Beet.

Orig Pub : Fiziol. Rasteny, 4, No 5, 432-439, 1957.

Abstract : Under conditions of a soil culture and a NPK background, with respect to the sugar beet and wheat, it was established through introducing $\text{Na}_2\text{S}^{35}\text{O}_4$ (50 curies per 16 kg of soil) that, in contrast with P, more S enters into reserve proteins than into the constitutional proteins. Injection into the roots of the sugar beet of aqueous solutions of methionine or vitamin b_1 containing S^{35} caused

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USSR/Plant Physiology - Mineral Nutrition.

I.

Abs Jour : Ref Zhur - Biol., No 23, 1950, 104360

an intensive translocation of S into leaves, especially the younger leaves, in which connection a major part of S was also included in the reserve proteins. The rate of S metabolism (as determined according to its specific activity and the number of the individual forms of S) from methionine was higher than from vitamin B₁, especially with respect to the easily detached S fraction (by Shul'ts' method). A larger quantity of S entered into organic compounds than into mineral compounds. Compared with ammoniacal nutrition, the nitrate nutrition of the sugar beet favored an increase in the rate of S metabolism. Under the influence of Mn the rate of metabolism of the inorganic form of S changed little, while that of the organic and not easily detachable form of S decreased more so at nitrate nutrition than at ammoniacal nutrition. By means of the paper chromatography method it was established that the amino acid composition of the root

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I.

Abs Jour : Ref Zhur - Biol., No 23, 1950, 104360

system of young plants is more variegated (which attests to the participation of roots in the synthesis of amino acids), and also that composition remains unchanged at different forms of nitrogen nutrition, and that the number of amino acids decreases at inadequate nutrition. A maximal quantity of S was utilized for the synthesis of cystine, the quantity of which is directly related to the extent of admission of S into the plant. The study was executed in the Institute of Plant Physiology and Agrochemistry, Academy of Sciences Ukrainian SSR. -- B.Ye. Kravtsova.

Card 3/3

VLASYUK, Petr Antipovich, akademik; KOSMATYY, Yevdokim Stepanovich,
kand.khim.nauk; DMITRENKO, P.A., otv.red.; SKOL'ZNEVA, Ye.A.,
red.; MANOYLO, Z.T., khudosh.-tekhn.red.

[Tagged atom method in agricultural physiology] Metod mechenykh
atomov v agrofiziologii. Kiev, Izd-vo Ukrainskoi akad.sel'khoz.
nauk, 1959. 326 p. (MIRA 13:5)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I.
Lenina; AN USSR; Ukrainskaya Akademiya sel'skokhozyaystvennykh
nauk (for Vlasyuk). 2. Chlen-korrespondent Ukrainskoy akademi
sel'skokhozyaystvennykh nauk (for Dmitrenko).
(Tracers (Biology)) (Plant physiology--Research)

KOSMATYY, Ye.S.; SHLYAPAK, S.I.

New chromatopolarographic method for determining DDT in food products. Vop. pit. 22 no.5:83-89 S-0 '63.

(MIRA 17:1)

1. Iz Ukrainского nauchno-issledovatel'skogo instituta zashchity rasteniy, Kiyev.

L 33051-66 EWT(1) RO (N) SOURCE CODE: UR/0394/66/004/004/0064/0067
ACC NR: 76024123

32
B

AUTHOR: Kosmatyy, Ye. S.; Mironova, I. B.; Bugayenko, L. T.

ORG: Ukrainian Scientific Research Institute of Plant Protection (Ukrainsky nauchno-issledovatel'skiy institut zashchity rasteniy)

TITLE: Chromatopolarographic and polarographic determination of chlorophos in plants

SOURCE: Khimiya v sel'skom khozyaystve, v. 4, no. 4, 1966, 64-67

TOPIC TAGS: polarograph, paper chromatography, polarographic analysis, plant physiology, biochemistry/SGM-8 polarograph

ABSTRACT: To provide a method for studying the input and distribution of chlorophos in different organs of plants and also to establish its retentiveness in plants a method was developed for the qualitative and quantitative determination of chlorophos residues in fruits and vegetables using paper chromatography and polarography. The chromatographic process lasts 4-5 hours. The R_f value for chlorophos is 0.14 and for O,O-dimethyl-2,2-dichlorovinylphosphate (DDVP -- a degradation product of chlorophos) it is 0.76. Identical values were obtained using n-hexane saturated with methane, or petroleum ether saturated with methane as eluent. The reaction involving DDVP in a basic medium with resorcinol to form a red color was used to develop the paper chromatograms of both DDVP and chlorophos. It

UDC: 543.253/544:632.95
0915 7699

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Card 2/2 *pld*

5(4)

SOV/78-4-6-22/44

AUTHORS:

Golub, A. M., Kosmatyy, Yu. V.

TITLE:

The Potentiometric Investigation of Lead Selenium Cyanates
(Potentsiometricheskoye issledovaniye selenotsianatov svintsa)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 6, pp 1347-1351
(USSR)

ABSTRACT:

The lead selenium cyanate complexes were investigated in aqueous and mixed solutions. The potentiometric method was used for the determination of the stability and composition of these complexes. The composition of the complex is not changed in aqueous solution in the case of constant and changing ionic concentration of the solution. The complex has the composition $Pb(CNSe)_6^{4-}$. The dissociation constant, the complex formation reaction, and the thermal effect of this complex were detected at 20° and 30°. The dependence of the

$$\log \frac{[Pb(CNSe)_x]}{[Pb^{2+}]}$$

on the $\log [CNSe^-]$ in the aqueous solution is given in figure 1. The influence of the solvent on the formation of the lead selenium cyanate complexes was investigated and the results

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SOV/78-4-6-22/44

The Potentiometric Investigation of Lead Selenium Cyanates

of the mixed solutions are given in the tables 2 and 3. It was found that the stability of the complex is increased by the addition of acetone. The increase of the acetone concentration complicates the composition of the complex. It is possible that the complex $Pb(CNSe)_8^{6-}$ is formed by a higher acetone concentration. The dependence of the

$\log \frac{[Pb(CNSe)_x]}{[Pb^{2+}]}$ on $\log [CNSe^-]$ in the mixed aqueous-acetone

solution was investigated at 20° and given in figure 2. There are 2 figures, 3 tables, and 7 references, 5 of which are Soviet.

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet im. T. G. Shevchenko (Kiyev State University imeni T. G. Shevchenko). Kafedra neorganicheskoy khimii (Chair of Inorganic Chemistry)

SUBMITTED: March 25, 1958

Card 2/2

DELIMARSKIY, Yu.K.; PAVLENKO, I.G.; KOSMATYY, Yu.Ye.

Electrolytic refining of zinc in fused silicate electrolytes. Zhur.
prikl. khim. 33 no.8:1840-1843 Ag '60. (MIRA 13:9)
(Zinc) (Silicates) (Electrolysis)

DELIMARSKIY, Yu.K. [Delimars'kyi, IU.K.], akademik; KOSMATYY, Yu.Ye.
[Kosmatyi, IU.IE.]; KOLOMIY, A.A.

Platinum and platinum-glass reference electrodes for silicate-
chloride and chloride melts. Dop. AN URSR no.9:1192-1194 '64.
(MIRA 17:11)

1. AN UkrSSR (for Delimarskiy).

L 32019-65 EWT(m)/EWP(t)/EWR(b)/EWL(h) Pab IJP(o) JD
ACCESSION NR: AP5005088 8/0 73/45/031/002/0179/0181

AUTHOR: Delimarskiy, Yu. K.; Kosmatyy, Y. Ye.

15
14
8

TITLE: Anode yield in relation to current during the electrolysis of lead in a silicate-chloride melt

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 31, no. 2, 1965, 179-181

TOPIC TAGS: electrolytic refining, lead silicate, lead chloride, current density, silicate chloride electrolyte, lead refining, anode yield, lead antimonate

ABSTRACT: Earlier work showed that a satisfactory electrolyte for the electrolytic refining of lead is $PbSiO_3 + 1.27 PbO + PbCl_2$. The present study concerned anodic dissolution of lead in this melt. The electrolyte was prepared from the calculated quantities of PbO , $PbCl_2$ and ground quartz. Tests were conducted with lead antimonate as the anode at 600C in a corundum electrolyzer, the structure of which is illustrated. High current densities were applied (0.9218-2.0321 amps/cm²), simulating semi-manufacturing conditions. In all tests the anode yield considerably exceeded the theoretical yield calculated for the bivalent metal. Corrosion proceeded simultaneously with anode dissolution according to the equation $Pb + Pb^{2+} \rightarrow Pb^{+2}$.

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L 32079-65

ACCESSION NR: AP5006088

Tests were conducted to determine the amount of lead auto-dissolution in relation to the current and subsequently the proportions of uni- and bivalent lead. With increasing current density, the proportion of univalent ions increased, and the value of the mean valence decreased. This was explained by dissolution of lead in its oxide and chloride, representing additive chemical and electrochemical processes. The higher current density used in these experiments significantly increased the anode yield (from 115 to 155%).

art. has: 1 figure, 1 table and 3 formulas. Orig.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN UkrSSR (General and inorganic chemistry institute, AN UkrSSR)

icheskoy khimii AN UkrSSR (General and inorganic chemistry institute, AN UkrSSR)

SUBMITTED: 10Mar64

EN L: 00

SUB CODE: IC, MM

NO REF SOV: 016

OTHER: 000

Cord 2/2

KOSMICKI, Z.

Planning tasks for 1958 in the light of the performance in 1957 in the button and fancy-goods industry.

P. 19. (ODZIEZ) (Lodz, Poland) Vol. 9, no. 1, Jan. 1958

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

KOSMELJ, Blazenka, magistar ekonomskih znanosti (Ljubljana)

Application of linear programming in determining optimal quantities of anticipated inventory. *Automatika* 4 no. 5/6 314-322 '63.

KOSMENKO, A. S.

32574. Vodoyemy v Erodirovannykh Rayonakh Lesostepnoy i Stepnoy Zon Yevropeyskoy Chasti SSSP. *Les i Step'*, 1949, No. 3, s. 30-36

SO: *Letopis' Zhurnal'nykh Statey*, Vol 44, Moskva, 1949

KOSMIDER, B.

Thoraco-abdominal injuries with prolapse of the omentum. Polski
przegl.chir. 26 no.11 Suppl.:301-304 1954.

(OMENTUM, diseases,
prolapse, traum.)

(ABDOMEN, wounds and injuries,
causing prolapse of omentum)

(THORAX, wounds and injuries,
causing prolapse of omentum)

(WOUNDS AND INJURIES,
thoraco-abdom., with prolapse of omentum)

KOSMIDER, J.: COBEL, W.

The Cooperation of Trade-Unions with Technical Organizations, p. 257

PRZEGLAD MECHANICZNY (Stowarzyszenie Inzynierow i Technikow Mechanikow
Polskich)
Warszawa, Poland
Vol. 18, no. 9, May 1959.

Monthly List of East European Accessions Index (EEAI), LC, Vol. 8, No. 11,
November 1959
Uncl.

KOSMIDER, J.

307/98*

PHASE I BOOK EXPLOITATION

International symposium on macromolecular chemistry. Moscow, 1960. Mezhdunarodnyy simpozium po makromolekulyarnoy khimii SSSR, Moskva, 14-18 iyunya 1960 g.; gosizdatknizhgorfermaty, Sektzia III. (International Symposium on Macromolecular Chemistry Held in Moscow, June 14-18, 1960; Papers and Summaries) Section III. (Moscow, Izd-vo AN SSSR, 1960) 469 p. 35,000 copies printed.

Tech. Ed.: P. S. Kashina.

Sponsoring Agency: The International Union of Pure and Applied Chemistry. Commission on Macromolecular Chemistry.

PURPOSE: This book is intended for chemists interested in polymerization reactions and the synthesis of high molecular compounds.

COVERAGE: This is Section III of a multivolume work containing papers on macromolecular chemistry. The articles in general deal with the kinetics of polymerization reactions, the synthesis of special-purpose polymers, e.g., ion exchange resins, semiconductor materials, etc., methods of catalyzing polymerization reactions, properties and chemical interactions of high molecular materials, and the effects of various factors on polymerization and the degradation of high molecular compounds. No crystallites are mentioned. References given follow the articles.

Rabek, T. I., and J. Kosmider (Poland). Chlorination of Phenol-Formaldehyde Resins	27
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Yakovlevich, A. Ya., G. Ya. Gordon, L. I. Kabanovich, Ye. M. Gubman, A. I. Pecherkin, and M. I. Smolovskaya (USSR). Study of the Chemical Conversions of Polycarbonates	44
Dogadkin, B. A., M. S. Feldshtrayn, and E. M. Beliyazova (USSR). Chemical Interaction and Mechanism of the Activating Action of Double Systems of Vulcanization Accelerators	65
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Gendelikh, M. A., B. E. Davydov, B. A. Krasnol, I. M. Kuz'panovich, L. S. Polak, A. V. Popovtsev, and R. F. Zolotarev (USSR). The Production of Polymeric Materials which Exhibit Semiconductor Properties	85
Miksa, J. A., and L. I. Karics (Hungary). Chemical Properties of Bipolar Ion-Exchange Resins	93
Xabek, T. L., and J. Morawiec (Poland). Effect of the Structure of Organic Amino Compounds on the Properties of Anion Exchange Resins From Polystyrene	102
Shidzik, K. M. (USSR). The Problem of the Effect of the Structure of Ions on Ion-Exchange Processes Between Ionites and Electrolyte Solutions	107
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Trustranskaya, Ye. V., I. P. Losev, A. S. Tsel'nic, S. B. Kabanova, G. Z. Nedard, and Lu Hsin-lao (USSR). Chemical Conversions of Insoluble Copolymers of Styrene	124
Kandeman, J. (Poland). Thermal Stability of Strongly Basic Anion Exchange Resins	146 40

KOSMIDER, Jerzy

Inventiveness and rationalization in 1961. Przegl techn no.13:
3 Ap '62.

GAJEWSKI, D.; KOSMIDER, J.

Thousands of engineers and technicians participate in actions
before the 4th Congress of the Polish United Workers' Party.
Przegl techn 85 no. 24: 1,7 14 Je '64.

KOSMIDER, J.; SITEK, J.

Rationalization movement during the first half of 1962. Przegł
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GAJEWSKI, Dionizy; KOSMIDER, Jerzy

Technology and rationalization clubs have been developing the
mass movement of inventiveness for 15 years. Przegl techn
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Social examinations of the state of technology. Przegl
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GIESLINSKA, Krystyna, PLOTKOWIAK, Jerzy; KOSMIDER, Kazimierz

A case of infestation with *Opisthorchis felinus*. Pol. tyg. lek.
20 no.12:447-448 22 Mr '65

1. Z I Kliniki Chorob Wewnętrznych Pomorskiej Akademii Medycznej
w Szczecinie (Kierownik: doc. dr. med. Karol Gregorczyk) i z
Zakładu Biologii Pomorskiej Akademii Medycznej w Szczecinie
(Kierownik: prof. dr. Stanisław Zajaczk).

KOSMIDER, S.

Distribution of Leptospira in rats in the Silesia-Dabrowa basin.
Med. dosw. mikrob., Warsz. 4 no. 3:395-397 1952. (GIML 23:3)

1. Summary of work progress presented at 11th Congress of Polish
Microbiologists held in Krakow May 1951. 2. Rotitnica Bytomska.