

KOROL'KOV, V.I. (Leningrad); NIKITINA, G.V. (Leningrad); ROMANENKO, V.N.
(Leningrad)

Zone melting as an auxiliary method in the analysis of phase
diagrams. Izv. AN SSSR. Otd. tekhn. nauk. Met. i gor. delo no.4:
95-99 J1-Ag '63. (MIRA 16:10)

KOROL'KOV, V.I.; MIKHNEV, M.M.; RODRIGES, M.; KRUSHILIN, S.M.,
red.

[Short Russian-Spanish dictionary of terms in descriptive
geometry and drawing] Kratkii rusko-ispanskii slovar'
terminov po nachertatel'noi geometrii i chercheniiu. Mo-
skva, 1963. 32 p. (MIRA 17:7)

1. Moscow. Universitet druzhby narodov. Kafedra nacherta-
tel'noi geometrii i chercheniia.

KOROL'KOV, V. I.

29785

Frimartiny I ikh khozyaystvennoye znacheniye. Trudy Voronyezhsk. Zoovyetin-ta, T. XI, 1948, S. 5-16.- Bibliogr: 21 Nazv.

SO: LETCPIS' NO. 40

KOROL'KOV, V. I.

29784

Prodolzhityel'nost, odnoplodoy I mnogoplodnoy styel'nosti I svyaz'yeye S zhivym vyesom
Tyelyat Pri Rozhdyenii. Trudy Voronyezhsk. Zoovyetin-ta, T. XI, 1948, S. 17-26.-
Bibliogr: 14 Nazv.

SO: LETOPIS' NO. 40

YELYENYEVSKIY, S. S., KOROL'KOV, V.I., i BOLKHOVITINOV, N.Z.

29777

Opyt kormlyeniya loshadyey b yez grubogo korma. Trudy Voroiivye-shsk. Zooyetin-ta, T. XI, 1948, S. 27-30.

SO: LETOPSIS' No, 40

ACCESSION NR: AT4042689

S/0000/63/000/000/0253/0258

AUTHOR: Kovalenko, Ye. A.; Korol'kov, V. I.; Il'in, Ye. A.

TITLE: The effect of hypothermia on the course of oxygen starvation under conditions of high altitude

SOURCE: Konferentsiya po aviatsionnoy i kosmicheskoy meditsine, 1963. Aviatsonnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy* konferentsii. Moscow, 1963, 255-258

TOPIC TAGS: high altitude, hypothermia, artificial hibernation, oxygen starvation, oxygen lack, cerebral oxygenation

ABSTRACT: The authors recorded the EKG, pneumogram, electrocorticogram and electrothalamogram during oxygen deficiency in dogs in which platinum electrodes had been implanted into the cerebral tissue. In order to study the deoxygenation of the brain, a constant record of the pO_2 was made polarographically and the dogs were subjected to various degrees of hypothermia. The cooling was carried out in special thermo-chambers, and the animals were given barbamyI (50 mg/kg), hexonium and dimedrol (5 mg/kg) one hour before cooling. The experiments involved a rapid "ascent" in a pressure chamber from 4000 to 15000 m in 0.5 seconds, during respiration of pure oxygen, and from 12000 to 27000 m in the same time, with exclusion of
Card 1/3

ACCESSION NR: AT4042689

oxygen and respiration of only the surrounding air. In control animals, rapid elevation to 15000 m caused falling after 17-25 seconds, followed by convulsions after 23-25 seconds. The pO_2 in the cerebral cortex and subcortical thalamo-hypothalamic area decreased to 14-20% of the original level. Tachycardia of 226 beats/minute was also observed, changing into a bradycardia of 50 beats/minute. There were also changes in the EKG, and depression of bioelectric activity. Complete cessation of respiration occurred after 45-90 seconds and after 2-3 minutes the animals could not be revived. Experimental animals with a body temperature of 30-32C could not be maintained at the height of 15000 m for longer than 2 minutes without artificial respiration. The pO_2 decreased to 26% of the original level in the cortex and to 40% in the subcortex. The pulse rate increased to 141 beats/minute, followed by a bradycardia of 80 beats/minute. Convulsions were not observed. In another group of dogs cooled to 22-24C, respiration at a height of 15000 m continued for 2-5 minutes and cardiac activity continued for 3-7 minutes, but with marked changes in the EKG. However, the pO_2 in the brain decreased to 18-30% of the original level in the cortex and 10-52% in the subcortex. There were also initial increases in bioelectric activity, followed in a few minutes by complete cessation of bioelectric activity. At an altitude of 27,000 m, the pO_2 in the cerebral cortex of controls already fell to 16% of normal after 10 seconds, and to 10-13% in 40-50 seconds. Cessation of respiration occurred after 15-40 seconds, and tissue emphysema was noted. Cooling of the animals to 22-30C post-

Card 2/3

ACCESSION NR: AT4042689

poned the cessation of respiration only slightly at this altitude, and after 2 minutes the animals could not be revived. Most of the symptoms were the same as at 15000 m, although the emphysema was slightly less pronounced.

ASSOCIATION: none

SUBMITTED: 27Sep63

ENCL: 00

SUB CODE: LS

NO REF SOV: 000

OTHER: 000

Card 3/3

KOROL'KOV, V.I.; ROMANENKO, V.N.

Concentration dependence of the segregation coefficient of some
group III and V impurities in germanium. Fiz. tver. tela 5 no.
10:2908-2913 0 '63. (MIRA 16:11)

1. Fiziko-tekhnicheskij institut im. A.F. Ioffe AN SSSR, Lenin-
grad.

L 8749-65 EST(m)/ESP(b) ESD(gs) RIM/JD

ACCESSION NR: AP4043353

S/0181/64/006/008/2353/2357

AUTHOR: Alferov, Zh. I.; Korol'kov, V. I.; Mikhaylova-Mikheyeva, I. P.; Romanenko, V. N.; Tushkevich, V. M.

TITLE: Study of the growth of gallium¹ phosphide¹ and cadmium² telluride² films on the gallium arsenide substrate by gas transport reaction ²⁷

SOURCE: Fizika tverdogo tela, v. 6, no. 8, 1964, 2353-2357

TOPIC TAGS: gallium phosphide, cadmium telluride, gallium phosphide film, cadmium telluride film, thin film growing, film⁶ growing

ABSTRACT: The epitaxial gallium phosphide and cadmium telluride films were grown on the gallium arsenide substrate by using transport reaction in the gaseous state and iodine as the transporting medium in ampuls evacuated to approx 10 mm Hg. Almost all the films were single crystals with mirror-like surfaces. The rate of the film growth was found to depend on the source (gallium phosphide or cadmium telluride) temperature only (not on the substrate temperature) and to vary from 2 μ/hr at 1020K to 4.5 μ/hr at 1090K source temperature. The type of conductivity of the film was the same as that of the substrate. The

Card 1/3

L 8749-65

ACCESSION NR: AP4043353

p-n junctions between gallium arsenide substrate and gallium phosphide films were produced by alloying the gallium phosphide source with zinc. The volt-ampere characteristics of the junctions at 77, 295, and 397K are shown in Fig. 1 of the Enclosure. Orig. art. has: 8 figures, 8 formulas, and 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad (Institute of Engineering Physics, AN SSSR)

SUBMITTED: 22Feb64 ATD PRESS: 313 ENCL: 01

SUB CODE: SS, IC NO REF SOV: 002 OTHER: 004

Card 2/3

L 8749-65

ACCESSION NR: AP4043353

ENCLOSURE: 01

0

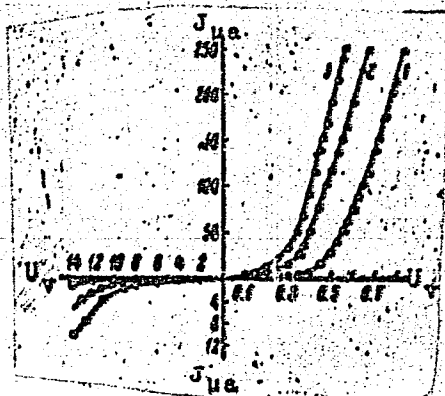


Fig. 1. Volt-ampere characteristics of p-n junctions between gallium phosphide and gallium arsenide

$N_d = 5 \cdot 10^{16} \text{ cm}^{-3}$, film thickness 10μ ; $N_d = 10^{16} \text{ cm}^{-3}$, substrate thickness 300μ ; 1 - 77K; 2 - 295K; 3 - 397K.

Card 3/3

KOROL'KOV, V. I. PROF.

Swine

Tissular stimulation of the growth of young pigs. Sov. zootekh. 8, No. 2, 1953.

Monthly List of Russian Accessions, Library of Congress
June 1953. UNCL.

KOROL'KOV, V.I., prof., doktor sei'skokhozyaystvennykh nauk

Tissue stimulation of growth and fattening in hogs. Veterinaria
35 no.12:58-59 D '58. (MIRA 11:12)

1. Voronezhskiy zooveterinarnyy institut.
(Tissue extracts) (Swine)

... .. K. V.

"Conserved tissue of little boar's testicle stimulates the additional weight of hogs."

Veterinariya Vol. 37, No. 3, 1960, p. 73

Korol'kov, Prog. - Voronezh Zoovet Inst.

KOTOV, P.F., kand.sel'skokhoz.nauk, glavnyy red.; ALEKSANDROV, N.P.,
kand.sel'skokhoz.nauk, red.; KARPENKO, V.P., red.; KVASNIKOV,
V.V., prof., doktor sel'skokhoz.nauk, red.; KOROL'KOV, V.I.,
prof., red.; PODGORNYY, P.I., prof., red.; SKACHKOV, I.A.,
kand.sel'skokhoz.nauk, red.; ZAPIVAKHIN, A.I., red.; KALASHNIKOVA,
V.S., red.; GUREVICH, M.M., tekhn.red.

[Farm management system in the Central Black Earth Region]
Sistema vedeniya sel'skogo khoziaistva v Tsentral'no-chno-
zemnoi polose. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1961.
470 p. (MIRA 14:4)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I.Lenina.
 2. Zamestitel' direktora Instituta sel'skogo khozyaystva imeni V.V.Dokuchayeva (for Kotov).
 3. Direktor filiala po Tsentral'no-chnozemnoy polose Vsesoyuznogo nauchno-issledovatel'skogo instituta ekonomiki sel'skogo khozyaystva (for Aleksandrov).
 4. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Kvasnikov).
 5. Voronezhskiy zoovetinstitut (for Korol'kov).
 6. Voronezhskiy sel'skokhozyaystvennyy institut (for Podgornyy).
 7. Direktor Nauchno-issledovatel'skogo instituta sel'skogo khozyaystva Tsentral'no-chnozemnoy polosy imeni V.V. Dokuchayeva (for Skachkov).
- (Central Black Earth Region--Agriculture)

KOROL'KOV, V.I., prof.; PETRISHIN, N.V., zootekhnik

Conserved tissue from young boars' testicles stimulates an increase
in weight in swine. Veterinariia 37 no.3:73-74 Mr '60.
(MIRA 16:6)

1. Voronezhskiy zooveterinarnyy institut.
(Tissue extracts) (Swine--Feeding and feeding stuffs)

KOVALENKO, Ye.A. (Moskva); KOROL'KOV, V.I. (Moskva)

Changes in the myocardial oxygen tension under the effect of altitude and acceleration. Fiziol. zhur. 51 no.8:966-973 Ag '65. (MIRA 18:7)

KOVALENKO, Ye.A.; KOROL'KOV, V.I. (Moskva)

Method of determining oxygen tension in the cardiac muscle in
a chronic experiment. Pat. fiziol. i eksp. terap. 8 no.6:82-84
N-D '64. (MIRA 18:6)

L 1437-66 ENT(1)/ENT(m)/ENP(i)/T/ENP(t)/ENP(b)/EWA(h) IJP(c) JD

ACCESSION NR: AP5019851

UR/0181/65/007/008/2370/2374

AUTHOR: ^{44.55}Alferov, Zh. I.; ^{44.55}Korol'kov, V. I.; ^{71 52 B}Trukan, M. K.; ^{44.55}Chashchin, S. P. #V.5TITLE: Production and electric properties of n-type epitaxial gallium-phosphide films 27 27

SOURCE: Fizika tverdogo tela, v. 7, no. 8, 1965, 2370-2374

TOPIC TAGS: epitaxial film, thin film, gallium compound, p n junction 21, 44.55

ABSTRACT: In view of the importance of epitaxial gallium phosphide films in the production of devices with ordinary and heterogeneous p-n junctions, the authors describe a procedure for obtaining such films and report the results of an investigation of some electric properties of p-type cadmium-doped epitaxial films. The single-crystal epitaxial layers (30--40 μ thick and 3 x 3 or 3 x 6 mm in area) were grown on single-crystal substrates of n-type gallium arsenide (300 μ thick), using gas-transport reactions in sealed quartz ampoules evacuated to 10^{-5} mm Hg. The doping cadmium concentration ranged from 10^{17} to 10^{19} cm^{-3} . The electric measurements were made in the temperature range 77--300K with a dc potentiometer method described by L. J. van der Pauw (Phil. Res. Rep. v. 13, 1, 1958), at voltages such that the shunting effect of the substrate did not come into play. Plots are presented of the temperature dependences of the conductivity, the carrier density, and

Card 1/2

L 1437-66

ACCESSION NR: AP5019851

19

the hole mobility, as well as of the Hall mobility vs. the carrier density. The results are interpreted as being due to the joint action of two scattering mechanisms, the impurity ions and the lattice vibrations, and are found to agree with the theory. The carrier mobility is found to be governed by the concentration of the doping impurities. "The authors thank A. S. Borshchevskiy and G. A. Kalyuzh-naya for supplying the high-purity GaP platelets used to grow the films, O. V. Yemel'yanenko and D. Z. Garbuzov for valuable remarks, and V. M. Tuchkevich for continuous interest in the work." ^{44.55} Orig. art. has: 5 figures and 1 formula. [02]

ASSOCIATION: Fiziko-tehnicheskii institut im. A. F. Ioffe AN SSSR, Leningrad
 (Physicotechnical Institute, AN SSSR) 44.55

SUBMITTED: 26Feb65

ENCL: 00

SUB CODE: SS,EM

NO REF SOV: 003

OTHER: 006

ATD PRESS: 4100

Card 2/2 DP

L 00980-66 EKG(j)/WT(1)/FS(v)-3/EKG(v) DD
ACCESSION NR: AP5019190

UR/0239/65/051/008/0966/0973
612.273+612.17

35
B

AUTHOR: Kovalenko, Ye. A. (Moscow); Korol'kov, V. I. (Moscow)

TITLE: Change in oxygen tension in the heart muscle at high altitude and during acceleration

SOURCE: Fiziologicheskij zhurnal SSSR, v. 51, no. 8, 1965, 966-973

TOPIC TAGS: heart muscle, oxygen tension, acceleration, high altitude, biological effect, dog, pressure chamber, centrifuge

ABSTRACT: The effect of high altitude and acceleration on the oxygen tension in the heart muscle of dogs was studied in chronic experiments. Polarographic electrodes had been implanted in the heart muscle. Experiments took place 10—12 days after the animals had been operated on. Along with a continuous record of oxygen tension (in relative units with 100% as a base under control conditions), EKG's and the depth and frequency of respiration were studied before and during the tests. A polarographic determination of oxygen tension in the heart muscle during chronic experiments necessitates a study of how the myocardium is supplied with oxygen during the development of various types of hypoxia. During short exposures to simulated

Card 1/2

L 00980-66

ACCESSION NR: AP5019190

altitudes of 2, 4, and 6 km, the oxygen tension in the heart muscle was 85.22 ± 3.8 , 72.98 ± 4.8 , and $63.68 \pm 4.5\%$, respectively. However, no severe hypoxic disruptions were noted, and EKG's changed little in character. During brief exposure to altitudes of 8 and 12 km, oxygen tension in the heart muscle was lowered at 48.15 ± 6.8 and $42.75 \pm 7.4\%$ respectively. Hypoxic disruptions and EKG variations were very evident under these conditions. When dogs were exposed to accelerations, there was an initial increase in pO_2 followed by a decrease. Transverse accelerations of 2 and 4 g for 3 min brought pO_2 back to its original level while at accelerations of 6, 8, 10, and 12 g, pO_2 fell to 87, 85.6, 72, and 63%, respectively. Head to tail accelerations of 6 and 12 g for 3 min sharply decreased pO_2 to 78.5% and 56.5%, respectively. Orig. art. has: 5 figures. [CD]

ASSOCIATION: none

SUBMITTED: 21Jan64

ENCL: 00

SUB CODE: LS

NO REF SOV: 008

OTHER: 004

ATD PRESS: 4068

Card 2/2

L 22783-66 EWT(1) SCTR DD/JKT(RML)
ACC NR: AP6008035

SOURCE CODE: UR/0239/66/052/002/0172/0178

AUTHOR: Kovalenko, Ye. A. (Moscow); Korol'kov, V. I. (Moscow)

16
B

ORG: none

TITLE: Oxygen and carbon dioxide tension in the blood during hypoxia, hypercapnia and hypocapnia

VSS

SOURCE: Fiziologicheskii zhurnal SSSR, v. 52, no. 2, 1966, 172-178

TOPIC TAGS: hypoxia, hypercapnia, hypocapnia

ABSTRACT: Blood samples were extracted from the femoral artery and atrium dextrum of dogs under barbamylnarcosis while blood from the brain was extracted from the *vena jugularis externa*. In a number of experiments, the concentration of CO₂ in the exhaled air was continuously recorded with an optico-acoustic CO₂ analyzer. Oxygen tension in the cerebral cortex and in the subcortex was also measured by a previously described method (Kovalenko, 1961). It was found that oxygen tension in venous blood flowing from the brain through the external jugular vein is higher than in mixed venous blood of the atrium dextrum under normal conditions as well as during hypoxia. During hypoxia, in addition to a lowering of pO₂ in the blood and tissues of the brain, there is also a lowering in the tension of carbon dioxide in the arterial and venous blood from the brain. When hypoxia gas mixtures are inhaled, the addition of carbon

UDC: 612.235 + 612.127

Card 1/2

L 22783-66

ACC NR: AP6008035

dioxide causes a rise in pO_2 in arterial and, especially, venous blood flowing from the brain; concurrently, pO_2 increases in the brain tissues. During hyperventilation, in addition to a sharp drop in pCO_2 an increase in pCO_2 is noted in the arterial blood; simultaneously, there is a considerable drop in pO_2 in venous blood flowing from the brain. The authors conclude by suggesting that the latter fact be taken into account in administering artificial respiration during anesthesia and surgery. [14]
Orig. art. has: 3 figures.

SUB CODE: 06/

SUBM DATE: 30Jan64/

ORIG REF: 006/

OTH REF: 008

ATD PRESS: 4229

Card 2/2 dda

ACC NR: AP7005836

SOURCE CODE: UR/0181/66/008/012/3513/3522

AUTHOR: Alferov, Zh. I.; Korol'kov, V. I.; Trukan, M. K.

ORG: Physicotechnical Institute im. A. F. Ioffe, AN SSSR, Leningrad (Fiziko-
tekhnicheskii institut AN SSSR)

TITLE: Electric properties of GaP-GaAs p-n heterojunctions

SOURCE: Fizika tverdogo tela, v. 8, no. 12, 1966, 3513-3522

TOPIC TAGS: pn junction, volt ampere characteristic, electric capacitance, epitaxial
growing, semiconductor band structure

ABSTRACT: The paper deals with the electric properties of GaP-GaAs heterojunctions, such as the volt-ampere characteristic, the capacitance-voltage characteristic, and the temperature and frequency dependences. It also deals with the interpretation of the current flow mechanism and of the fundamental parameters of the band model of the investigated heterojunctions on the basis of the experimental data. The junction were produced by epitaxial growing of GaP by the gas-transport method on single-crystal substrates of n-type GaAs oriented in the (111) plane. The GaAs was doped with tellurium. The single-crystal GaP films were doped during the growing with cadmium. The film thickness was 10 - 30 μ . The electric properties of the produced heterojunctions were measured from a large number of samples with different degrees of doping of both the substrates and the layers. The procedure for obtaining the epitaxial films and their electric properties were described earlier (FTT v. 7, 2370, 1965 and elsewhere).

Card 1/2

ACC NR: AP7005836

The volt-ampere and voltage-capacitance characteristics were investigated in a temperature range 77 - 400K. The dependence of the capacitance on the voltage offers evidence of the presence of a layer of increased impurity concentration inside the space-charge region. The causes of this layer are discussed. The results are interpreted within the framework of the band model proposed by R. Anderson (Sol. St. Electronics v. 5, 341, 1962) with allowance for the presence of this layer with increased concentration of deep donor centers. The gaps in the conduction and electron bands calculated on the basis of this model agree well with the experimentally determined quantities. The authors thank V. M. Tuchkevich and D. N. Nasledov for continuous interest in the work, D. Z. Garbuzov, A. A. Lebedev, Ye. L. Portnoy, and B. V. Tsarenkov for useful discussions, and Ye. A. Gamilko, A. N. Yermakov, and A. A. Yakovenko for help with preparing the samples and the measurements. Orig. art. has: 7 figures, 11 formulas, and 2 tables.

SUB CODE: 20,09/SUBM DATE: 15Apr66/ ORIG REF: 006/ OTH REF: 013

Card 2/2

Korol'kov, V. K.

USSR/General Problems - Problems of Teaching

A-3

Abst Journal : Referat Zhur - Fizika, No 12, 1956, 33611

Author : Dovgyallo, M. O., Korol'kov, V. K.

Institution : None

Title : Physical Practice in Eighth and Ninth Classes of Middle School

Original

Periodical : Rad'yanska Shkola, 1956, No 4, 32-41, Ukrainian

Abstract : None

Card 1/1

VOVK, O.F.; DOVGYALLO, M.O. [Dovhiallo, M.O.]; LUTSIK, I.S. [Lutsyk, I.S.];
KOROL'KOV, V.K.; PONKICH, M.Ye [Ponkych, M.IE.].

Practical studies of electric engineering in secondary schools; from
experience in teaching it. Nauk. zap. ChNPI 11:83-121 '57.
(Electric engineering--Study and teaching) (MIRA 11:5)

KOROL'KOV, V.M.

Coordinating conference on steeply dipping and inclined coal
seams. Ugol' 36 no.10:49-50 0 '61. (MIRA 14:12)

1. Gosudarstvennyy proyektno-konstruktorskiy i eksperimental'nyy
institut ugol'nogo mashinostroyeniya.
(Coal mines and mining)

KOROL'KOV, V.M.

Mechanization of stoping in steep mines of the Donets Basin.
Mul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i tekhn.
inform. no.1:11-16 '63. (MIRA 16:2)
(Donets Basin--Coal mines and mining--Technological innovations)

KOROL'KOV, V.P. (Irkutsk)

Transient characteristics of heat exchangers with independent heating. Izv. AN SSSR.Energ. 1 transp. no.3:121-131 My-Je '65.
(MIRA 18:12)

1. Submitted October 21, 1964.

AYZENBERG, Yu.B., inzh.; KOROL'KOV, V.S., inzh.

Lamps with mercury-vapor bulbs. Svetotekhnika 4 no.6:28-31 Je '58.
(MIRA 11:6)

(Electric lighting, Mercury vapor)

29831

S/042/61/016/005/003/005

C111/C444

16.4100

AUTHORS:

Korolyuk, V. S., Nitskaya, E. R.

TITLE:

Note on the algorithm for the construction of the boundary layer

PERIODICAL:

Uspekhi matematicheskikh nauk, V. 16, no. 5, 1961, 171 - 176

TEXT:

Let L_ε and L_k be linear differential operators

$$L_k u \equiv \sum_{j=0}^k a_j(x) \frac{d^j u}{dx^j}, \quad a_k(x) \neq 0 \text{ for } x \in [0, 1], \quad (1)$$

$$L_\varepsilon u \equiv L_k u + \sum_{r=1}^l \varepsilon^r a_{k+r}(x) \frac{d^{k+r} u}{dx^{k+r}}, \quad a_{k+r}(x) \neq 0 \text{ for } x \in [0, 1], \quad \varepsilon > 0. \quad (2)$$

Searched is the solution of the equation

$$L_\varepsilon u_\varepsilon(x) = u(x)$$

with the main boundary conditions

Card 1/3

X

Note on the algorithm ...

29831
S/042/61/016/005/003/005
C111/C444

$$\left. \frac{d^i u_\varepsilon}{dx^i} \right|_{x=0} = 0 \quad (i = 0, 1, \dots, k_0 - 1), \quad (3)$$

$$\left. \frac{d^j u_\varepsilon}{dx^j} \right|_{x=1} = 0 \quad (j = 0, 1, \dots, k_1 - 1; \quad k_1 = k - k_0) \quad (3')$$

and the additional conditions

$$\left. \frac{d^{k_0+r} u_\varepsilon}{dx^{k_0+r}} \right|_{x=0} = 0 \quad (r = 0, 1, \dots, l_0 - 1), \quad (4)$$

$$\left. \frac{d^{k_1+s} u_\varepsilon}{dx^{k_1+s}} \right|_{x=1} = 0 \quad (s = 0, 1, \dots, l_1 - 1; \quad l_1 = l - l_0). \quad (4')$$

M. J. Vishlik and L. A. Lynsternik (Ref1: *Regulyarnoye vyrozhdeniye i pogranchnyy sloy dlya lineynykh differentsial'nykh uravneniy s malym parametro* [Regular degeneration and boundary layer for linear differential equations with small parameter] *UMN* 12, vyp. 5 (77) (1957))

Card 2/3

KOROL'KOV, V.S.

Diamagnetic susceptibility of atoms. Dokl. AN BSSR 5 no.11:492-493 N '61. (MIRA 15:1)

1. Institut fiziki AN BSSR. Predstavleno akademikom AN BSSR M.A. Yel'yashevichem.

(Diamagnetism) (Atoms)

S/051/61/010/001/001/017
E201/E491

AUTHOR: Korol'kov, V.S.
TITLE: The Dependence of the Electron-Shell Dimensions on
the Atomic Number of an Atom

PERIODICAL: Optika i spektroskopiya, 1961, Vol.10, No.1, pp.3-7

TEXT: In approximate calculations of various atomic properties, one frequently uses the mean values of various powers (k) of the distance, $r(n, \ell)$, of an electron in a given shell from the nucleus; these mean distances are denoted by $\bar{r}^k(n, \ell)$. The present paper deals with the dependence of these mean distances on the atomic number (Z) and the degree of ionization, i.e. the author discusses the relative values of $\bar{r}^k(n, \ell)$ for all atoms and ions with the same n and ℓ . The dependences of some $\bar{r}^k(n, \ell)$ values on Z are shown in Fig.1 to 3. It was found that sufficiently accurate relative values of $\bar{r}^k(n, \ell)$ can be obtained by using self-consistent field wave-functions without exchange, if the configurational interaction is small; the relative values of $\bar{r}^k(n, \ell)$ were not greatly affected by the

Card 1/2

KOROL'KOV, V.S.

Calculation of the r^2 (n, l) values from the fine structure
of spectra. Opt. i spektr. 11 no.2:137-140 Ag '61.
(MIRA 14:8)

(Spectrum, Atomic)

24/300

12018
S/250/62/006/006/004/006
I046/I242

AUTHOR: Korol'kov, V.S.

TITLE: Calculation of the inner diamagnetic fields of atoms

PERIODICAL: Akademiya nauk Belorusskoy SSR. Doklady, v.6, no.6, 1962, 363-364

TEXT: The Larmour precession of electrons in a magnetic field produces, at the nucleus, a screening field that should be allowed for in resonance measurements of the nuclear magnetic moment. The author calculates the screening field for the semi-empirical model of the atom approximating the potential of the self-consistent field by

$$V(r) = \frac{Ze}{r} \frac{1}{(1 + Ax)^3} \quad (3)$$

where $x = 1.13 Z^{1/3} r$; $A = 0.45$ according to the experimental values of the spin-orbital splitting. Inserting the potential function into Lamb's formula for the ratio of the screening field to the ex-

Card 1/2

S/051/62/012/002/002/020
E032/E514

AUTHORS: Korol'kov, V.S. and Makhanyek, A.G.
TITLE: Electric field gradients produced by electrons at the sites of atomic nuclei

PERIODICAL: Optika i spektroskopiya, v.12, no.2, 1962, 163-170

TEXT: A knowledge of the electric field gradients $\partial^2 V / \partial z^2$ due to p, d and f electrons at the nucleus is necessary in the calculation of nuclear quadrupole moments. The aim of this work was to examine critically existing methods for the determination of the parameters $\langle r^{-3}(n, \ell) \rangle$, which determine the accuracy to which the quadrupole moments may be calculated, and to develop a more reliable and unified method which would give quadrupole moments of different nuclei with comparable accuracy. In the existing methods the parameters $\langle r^{-3}(n, \ell) \rangle$ are determined from (1) magnetic hyperfine splitting constant, (2) fine structure constants, and (3) radial wave functions calculated by the self-consistent field method. In a previous paper the first of the present authors (Ref.6: Opt. i spektr., 10, 3, 1961) put forward a method for the calculation of the relative values of the

Card 1/3

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-

Electric field gradients ...

S/051/62/012/002/002/020
E032/E514

the result becomes $Q = -0.64$ barn. Altogether theoretical quadrupole moments for 27 elements are reported. Acknowledgments are expressed to M. A. Yel'yashevich for advice. There are 5 tables.

SUBMITTED: February 10, 1961

ACCESSION NR: AT4041512

distribution of the electron density of a given shell by the sum of two hydrogen-like densities, $P_H(nl, Z_{eff})$, with different effective charges, Z_{eff} , and different weighting coefficients. Due to this approximation all moments, $\langle r^k(nl, Z) \rangle$, are defined in terms of three parameters: Z^* , which defines the characteristic scale, and α and β which define the deviation of the geometrical form of the radial distribution of the electron density in a multi-electron atom from that of a hydrogen-like atom. The three-parameter approximation can be used to determine the properties of the atom which cannot be easily measured, by application of the parameters Z^* , α and β which were evaluated from a measurable property. It can also be used for qualitative investigations of the nature of changes in radial distributions obtained by various other methods. An extensive example is given in which the diamagnetic susceptibility and the atomic polarizability of the isoelectronic helium atom are computed. The values obtained by the author are in excellent agreement with the most accurate data available in the literature. "I wish to express my sincere gratitude to M. A. Yel'yashevich for his attention and helpful suggestions". Orig. art. has: 19 equations, 4 tables and 1 figure.

ASSOCIATION: Institut fiziki Akademii nauk BSSR, Minsk (Institute of Physics, Academy of Sciences, Byelorussian SSR)

SUBMITTED: 00

ENCL: 00

Card

2/2

SUB CODE:

NP

NO REF SOV: 003

OTHER: 017

ACCESSION NR: AP 4020957

S/0051/64/016/003/0461/0466

AUTHOR: Korol'kov, V.S.; Potapovich, A.K.

TITLE: Analysis of the shape of the EPR signal from samples containing chaotically distributed paramagnetic centers

SOURCE: Optika i spektroskopiya, v.16, no.3, 1964, 461-466

TOPIC TAGS: EPR, EPR first derivative, EPR signal shape, EPR signal analysis, EPR of solids, potassium perchromate, ammonium copper chloride, copper chloride, strontium dithionate

ABSTRACT: The distribution (orientation) of paramagnetic centers in powders, glasses, viscous solutions and many biological specimens is generally chaotic. The EPR spectra of such samples are highly characteristic both in the case of axial symmetry and in the case of tri-axial anisotropy. However, by analysis of the observed shape of the first derivative of the absorption signal one can in many cases determine the principal values of the magnetic susceptibility tensor and the half-width of the absorption line associated with an individual center. There have been proposed and used several different methods for analysis of asymmetrical lines that

Card 1/2

ACCESSION NR: AP4020957

do not require calculation of the precise shape of the spectrum. In the present paper these analytic methods are evaluated, specifically, the methods based on the relative heights of the peaks and methods based on the positions of characteristic extremum and inflection points. There is proposed a relatively simple method of analytic description of the shape of the first derivative of the EPR spectrum. It is based on replacing the observed curve by a stepped line with conservation of the area in each strip. Illustrative analyses are performed for the EPR spectra of K_3CrO_8 , $(NH_4)_2 \cdot CuCl_4 \cdot 2H_2O$, $CuCl_2 \cdot 2H_2O$, and SrS_2O_6 in powder form. It is concluded that analysis with reference to the peak heights is applicable only in cases of pure axial symmetry; analysis with reference to characteristic points yields more reliable results. The possible uncertainties involved in the analyses are evaluated. "In conclusion, we take this opportunity to thank M.A.Yel'yashevich for discussion of the results of the work." Orig.art.has: 17 formulas and 2 figures.

ASSOCIATION: none

SUBMITTED: 18May63

DATE ACQ: 02Apr64

ENCL: 00

SUB CODE: PH

NR REF SOV: 002

OTHER: 005

Card 2/2

L 13801-66 EWT(m)/EWP(j) RM

ACC NR: AP5027669

SOURCE CODE: UR/0051/65/019/005/0764/0770

AUTHOR: Korol'kov, V. S.; Kuznetsova, V. V.

ORG: none

TITLE: The interpretation of the fine structure of spectra of type MX_3 Eu coordination compounds. Part 1. Theory. The spectrum of Eu benzoylacetate 7,44,55

SOURCE: Optika i spektroskopiya, v. 19, no. 5, 1965, 764-770

TOPIC TAGS: chelate compound, fine structure, molecular spectroscopy, spectrum analysis, luminescence spectrum, europium compound, rare earth element, acetate

ABSTRACT: The investigation of the peculiarities of the structure of chelate compounds of rare earth elements is of particular importance in connection with their possible practical uses. In particular, the study of the fine structure of the luminescence spectra of rare earth ions within the chelate compounds may prove useful for the elucidation of the character of the chemical bond between the organic molecules and the rare earth ions. The interpretation of the fine structure of such spectra is difficult because of the lack of data concerning the polarization of individual lines. The present authors began their study with the compounds of trivalent europium. This paper considers the derivation of the basic theoretical results

Card 1/3

UDC: 535.37:548.0.001.1

L 13801-66
 ACC NR: AP5027669

Table 1
 Luminescence spectrum of Eu benzoylacetate

Transition	λ m μ	ν , cm $^{-1}$	I, rel.
${}^5D_1-{}^7F_0$	527.0	18980 \pm 20	—
${}^5D_1-{}^7F_1$	535.3	18680 \pm 15	0.8
	537.0	18620 \pm 15	0.2
${}^5D_1-{}^7F_2$	552.2	18100 \pm 20	0.3
	555.5	18020 \pm 20	0.7
${}^5D_0-{}^7F_0$	580.5	17230 \pm 15	—
${}^5D_0-{}^7F_1$	583.4	17140 \pm 20	—
	584.4	17110 \pm 20	—
	586.8	17040 \pm 20	—
${}^5D_0-{}^7F_2$	591.0	16875 \pm 15	0.33
	592.6	16820 \pm 15	0.67
${}^5D_0-{}^7F_3$	611.0	16370 \pm 25	0.03
	612.0	16340 \pm 15	0.8
	615.1	16260 \pm 15	0.2
${}^5D_0-{}^7F_4$	651.2	15360 \pm 15	0.8
	654.0	15280 \pm 15	0.2
${}^5D_0-{}^7F_5$	703.5	14210 \pm 25	0.55
	709.0	14200 \pm 25	0.20
	697.0	14350 \pm 25	0.3
	691.0	14470 \pm 25	0.20

Card 2/3

L 13801-66

ACC NR: AP5027669

D

needed for the interpretation of the luminescence spectra of the MX_3 -type Eu coordination compound. Formulas needed for the calculation of the level splitting within the intercrystalline field of the Eu^{3+} ion are presented together with equations and tables needed for the calculation of the relative intensity of the 5D_0 - 7F_j lines. A discussion is given on the structure of such transitions, as well as the methodology for the analysis of such spectra. The newly developed theory is illustrated by the interpretation of the Eu benzoylacetate spectrum, and the results are summarized in Table 1. Orig. art. has: 22 formulas, 1 figure, and 4 tables. [08]

SUB CODE: 07, 20/ SUBM DATE: 20Jul64/ ORIG REF: 002 / OTH REF: 008 / ATD PRESS: 4/88

Card 3/3 FW

L 33484-66 ENT(m)/EWP(t)/ETI LJP(c) 10/36

ACC NR: AR6016210

SOURCE CODE: UR/0056/65/CGG/011/DO58/DO58

AUTHORS: Korol'kov, V. B.; Kuznetsova, V. V.

36
B

TITLE: Spectroscopic investigation of crystalline fields of intracomplex compounds of rare earth elements

SOURCE: Ref. zh. Fizika, Abs. 11D444

REF SOURCE: Tr. Komis. po spektroskopii. AN SSSR, t. 3, vyp. 1, 1964, 563-566

TOPIC TAGS: luminescence spectrum, line splitting, rare earth element

ABSTRACT: The parameters of the crystalline field of coordination compounds of rare-earth elements are calculated on the basis of an investigation of the picture of splitting in the luminescence spectra of rare earth ions. Certain conclusions are drawn with respect to the character of the coordination bonds. [Translation of abstract]

SUB CODE: 20, 07/

Card 1/1

92

ACC NR: AR6021256 ENT(l)/EWP(m)/EWP(t)/ETI LJP(c)

SOURCE CODE: UR/0051/66/021/003/0313/0310

AUTHOR: Makhanok, A. G.; Korol'kov, V. S.

41
B

ORG: none

TITLE: Crystal field screening effects for 4fⁿ shells of rare earth ions and nuclear moments

SOURCE: Optika i spektroskopiya, v. 21, no. 3, 1966, 313-318

TOPIC TAGS: electron shell, rare earth, nuclear magnetic moment

ABSTRACT: In calculating the interactions of an electric crystal field with unfilled shells such as the 4fⁿ shells of rare earth ions and multipole nuclear moments, it is necessary to consider the influence of screening due to the distortion of the filled shells. The purpose of the paper was to obtain the most general expressions possible for calculating such screening. Specific calculations applying to crystalline compounds of rare earth elements are performed. For the radial type of excitation, the constants of quadrupole antiscreening are calculated for the case of penetration of the outer charge into closed shells (e. g., in the case of polarization of closed shells by valence electrons). The angular type of excitation is also discussed. It is shown that by solving the perturbed Schrödinger equation in quadratures, one can obtain general expressions for screening constants of potentials of an arbitrary multipole order in the case of radial-type excitation, and in the case of angular-type

Card 1/2

UDC: 539.182+548.0

212 eq/v

LIZUNOV, V.A., inzh.; Primali uchastiye: SMIRNOV, Ye.K., kand.tekhn.
nauk; KOROL'KOV, V.V., mekhanik; KLEYMENOV, Ye.I., inzh.

Use of radiant heat in discharging highly viscous materials.
Vest.TSNII MFS 21 no.3:39-41 '62. (MIRA 15:5)
(Radiant heating) (Material handling)

KOROL'KOV, V.V., mashinist

Letter to the editor. Elek. i tepl.tiaga no.7:44 J1 '63.
(MIRA 16 :9)

1. Depo Lobnya Moskovskoy dorogi.
(No subject headings)

KOROL' KOV, Y. P.

Steam-heated hotbeds Moskva Moskovskii rabochii, 1953. 58 p.

KOROL'KOV, Ye. D.

Fuel Abstracts
May 1954
Industrial
Furnaces, Kilns,
Etc.: Combustion

①

✓ 3961. SOIL HEATING BY STEAM. Korol'kov, Ye. D. (Nauka i Zhizn
(Sci. & Life), Mar. 1953, vol. 20, 33).

KOROL'KOV, Ye.D., doktor sel'skokhoyaystvennykh nauk.

New system of heating the ground in order to raise early vegetables. Priroda
42 no.11:100-103 N '53. (MLBA 6:10)

1. Moskovskaya sel'skokhoyaystvennaya akademiya im. K.A.Timiryazeva.
(Hotbeds)

KOROL'KOV, Ye. S.

Utilizing industrial heat sources for heating greenhouses, hot beds and heated soils. Moskva, Znanie, 1954. 30 p. (Seriya 5. no. 14)

USSR/Cultivated Plants - Potatoes. Vegetables. Melons. etc.

M.

- Abs Jour : Ref Zhur - Biol., No 4, 1958, 15612
- Author : Ye. D. Korol'ko✓
Inst :
Title : ~~The Utilization of the Sun's Warmth in Raising Vegetables.~~
(Ispol'zovaniye solnechnogo obogreva dlya vyrashchivaniya ovoshchey).
- Orig Pub : Dokl. Mosk. s.-kh. akad. im. K.A. Timiryazeva, 1956, vyp 25, 115-118.
- Abstract : At the Vegetable Experimental Station of the Moscow "Order of Lenin" Agricultural Academy im. K.A. Timiryazev a new method of heating sheltered ground has been worked out which used the heat of solar radiations accumulating during the daylight hours in the hothouse or hotbed soil, from which it rises during the night hours to heat the air. A new hotbed or hothouse construction is proposed. Experiments at the testing

Card 1/2

70

KOROL'KOV, Yevgeniy Dmitriyevich, professor; KATSNEL'SON, S.M., redaktor;
GUBIN, M.I., tekhnicheskii redaktor.

[The use of industrial waste heat for vegetable gardening] Ispol'zovanie teplovykh otkhodov promyshlennosti dlia vyrashchivaniia oboshchei Moskva, Izd-vo "Znanie," 1957. 31 p. (Vsesoiuznoe obshchestvo po rasprostraneniuiu politicheskikh i nauchnykh znani. Ser.5 no.7)

(MIRA 10:5)

(Vegetable gardening) (Waste heat)

(A)L 8500-66 EWT(m)/EWP(j) RM

ACC NR: AP5028481

SOURCE CODE: UR/0286/65/000/020/0064/0065

AUTHORS: ^{44.5} Kamenskiy, N. V.; ^{44.5} Mamedov, F. V.; ^{44.5} Korol'kov, Yu. A.

32
B

ORG: none

TITLE: A method for obtaining resin. Class 39, No. 175647 ¹⁵

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 64-65

TOPIC TAGS: ^{44.55} resin, furfurole, amine, POLYCONDENSATION

ABSTRACT: This Author Certificate presents a method for obtaining a resin by polycondensation of furfurole and amine in 1 : 2 proportion. To broaden the assortment of furfurole resins, diethanolamine is used as the amine.

SUB CODE: 07, 11/ SUBM DATE: 12Feb64

BVX
Card 1/1

UDC: 678.683.2'375

L 1811-66 EPA(s)-2/EWT(m)/EPF(c)/EWP(j)/T/ETC(m) WW/RM

ACCESSION NR: AP5024500

UR/0191/65/000/010/0014/0015
678.643'42'5.06-419:677.521

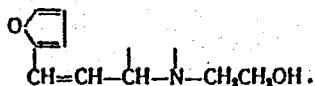
AUTHOR: ^{44,55} Kamenskiy, I. V.; ^{44,55} Mamedov, F. V.; ^{44,55} Korol'kov, Yu. A.

TITLE: Glass-reinforced plastics with epoxy [(furylacrolidene)amino]ethanol binder ^{15,44,55} 311 B

SOURCE: Plasticheskiye massy, no. 10, 1965, 14-15

TOPIC TAGS: epoxy plastic, reinforced plastic, heat resistant plastic, curing agent ¹⁵

ABSTRACT: An attempt has been made to raise the relatively low heat resistance of epoxy resins by hardening with a [(furylacrolidene)amino]ethanol oligomer (F-2F): ¹⁵



Experiments showed that the best ED-5 epoxy resin/oligomer ratio is 60/40. The components were mixed at room temperature to formation of a homogeneous mass. ¹⁵

Card 1/2

L 1811-66

ACCESSION NR: AP5024500

A glass-fabric reinforced plastic designated ST-2-64¹⁵ was prepared from the polymer-oligomer formulation at a molding temperature of 225—230C. The physical, mechanical, and dielectric properties of the reinforced plastic and chemical and thermal stability data for it are tabulated in the original article. Orig. art. has: 2 tables. [SM]

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MT

NO REF SOV: 005

OTHER: 004

ATD PRESS: 4/11

Card 2/2 *90*

GLUKHOV, V.K., kand. tekhn. nauk; SIDOROV, M.N., kand. tekhn. nauk;
KOROL'KOV, Iu.I., inzh.

Programming of the start operations of a 300 Mw. block
with a control computer. Energomashinostroenie 9 no.3:3-6
Mr'63. (MIRA 17:5)

ZAGARMISTR, A.M. [deceased]; VAN'YAN, L.L.; KOROL'KOV, Yu.S.; TEREKHIN, Ye.I.

Electric prospecting by the field production method. Izv. vys.
ucheb. zav.; geol. i razv. 6 no.9:120-132 S '63.

(MIRA 17:10)

- 1. Novosibirskiy institut geologii i geofiziki Sibirskogo
otdeleniya AN SSSR.

SOV/137-58-12-25492

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 12, p 198 (USSR)

AUTHORS: Tikhonov, A. S., Korol'kova, A. V.

TITLE: Rapid Method for Determining Nickel in Steels (Uskorennyy metod opredeleniya nikelya v stalyakh)

PERIODICAL: Sb. tr. Voronezhsk. otd. Vses. khim. o-va im. D. I. Mendeleyeva, 1957, Nr 1, pp 145-150

ABSTRACT: The authors made a critical examination of the cyanide and the colorimetric methods of determination of Ni. A cyanide method for determining Ni with murexide as an indicator is offered. 0.2 g of steel containing $\geq 2\%$ Ni and 1 g containing $< 2\%$ Ni are dissolved in 15 cc HNO_3 (1:3) or in other acids, depending on the composition. To an aliquot portion of the solution are added: 25 cc of 0.5 mole/liter solution of KNa tartarate, an ammoniacal buffer (pH 10) until the color changes from yellow-green to bluish, and the murexide; the whole is titrated with a KCN solution. The method was verified on standard specimens containing 3.09 - 53% Ni with $\pm 3\%$ relative error. Co is separated in the form of $\text{K}_3 [\text{Co}(\text{NO}_2)_6]$, and Cu in the form of CuS or with the aid of cupral. Bibliography: 10 references. Z. G.

Card 1/1

KOROL'KOVA, A. V. --"Value of Certain Principal Measures in the vegetative hybridization of Sunflowers in Selection." *(Dissertations for Degrees in Science and Engineering Defended at USSR Higher Educational Institutions) Inst of Higher Education USSR, Voronezh Agricultural Institute, Chair of Selection and Seed Production, Voronezh, 1955

SO: Knishnaya Letopis', No. 25, 18 Jun 55

* For Degree of Candidate in Agricultural Sciences

USSR/General Biology - Genetics

B-5

Abs Jour : Ref Zhur - Biol., No 2, 1958, No 4880

Author : Korol'kova, A.V.

Inst : Not Given

Title : Vegetative Hybridization of Sunflower Plant in Selection for Oil Production.

Orig Pub : Zap. Voronezhsk. s.-kh. in-ta, 1956, 26, No 2, 107-109

Abstract : Repeated reciprocal graftings of 2 varieties of sunflower plants were conducted: of Voronezhsky 709 (medium-ripening, fruitful, oily, thin-husked), and Karlik (very early ripening, comparatively unproductive, less oily, and thick-husked). The progeny of the seeds from the grafted plants were studied. The pollination of all generations was conducted by a pollen mixture obtained within the limits of the test variants. When Voronezhsky 709 was used as scion, the stock exerted no influence on its seed progeny. However, when Karlik was grafted on Voronezhsky 709, the progeny obtained from the

Card : 1/2

KOROL'KOVA, G.Ye.

Studying the effect of birds on the population of widespread
insects infesting oak forests. Trudy Inst.lesa 35:137-160 '57.

(MLRA 10:8)

(Forest insects) (Oak--Diseases and pests)

KOROL'KOVA, G.Ye.

Principal features of the activity of woodpeckers in oakwoods of
the Telleranskoye Tract and Starobel'sk steppes. Trudy Inst.
lesa 48:7-58 '60. (MIRA 14:3)

(Woodpeckers)

KOROL'KOVA, G.Ye.; DINESMAN, L.G., *otv. red.*

[Effect of birds on the abundance of injurious insects; based on studies in wooded-steppe oak forests] Vliianie ptits na chislennost' vrednykh nasekomykh; po issledovaniyam v leso-stepnykh dubravakh. Moskva, Izd-vo Akad. nauk SSSR, 1963. 184 p.
(MIRA 16:3)

(Insects, Injurious and beneficial)
(Borisoglebsk region (Voronezh Province))--Birds)

DOLETSKIY, S.Ya., prof.; KOROL'KOVA, I.A.

Hypospadias in children. Urologiia. 29 no.3:6-11 My-Je '64.
(MIRA 18:10)

1. Klinika detskoy khirurgii (zav.- prof. S.Ya. Doletskiy)
TSentral'nogo instituta usovershenstvovaniya vrachey, Moskva.

DOLETSKIY, S.Ya., prof.; KOROL'KOVA, I.A.

Plastic surgery in exstrophy of the bladder by Svenson's
method. Urologiia no.6:61-63'62. (MIRA 16:7)

1. Iz kliniki detskoy khirurgii (zav. - prof. S.Ya. Doletskiy)
TSentral'nogo instituta usovershenstvovaniya vrachey i Detskoy
bol'nitsy imeni Rusakova.

(BLADDER--DISPLACEMENT) (SURGERY, PLASTIC)

FLORINSKAYA, V.A.; CHERNEVA, E.F.; KOROL'KOVA, I.N.; SKAVRONSKAYA, I.F.

Crystallization of sodium silicate glasses at high temperatures. Zhur. fiz. khim. 38 no.2:472-477 F '64.

(MIRA 17:8)

KHOROSHAYA, Ye.S.; KOROL'KOVA, K.D.; KUZNETSOV, Yu.I.; ROYTMAN, Ye.A.

Infrared moisture meter. Zav.lab. 29 no.2:239 '63. (MIRA 16:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut plenochnykh materialov i iskusstvennoy kozhi.
(Moisture--Measurement)

KHORCHAYA, Ye.S.; KOROL'KOVA, K.D.; PAVLOVA, Z.S.; SUBBOTINA, P.V.

Determining the migratory stability of organic pigments
and lacquer in polyvinyl chloride films. Kozh.-obuv. prom.
6 no.4:32-33 Ap'64. (MIRA 17:5)

KHOROSHAYA, Ye.S.; KOROL'KOVA, K.D.; GEORGIYEVA, V.S.; PISARENKO, A.P.

Express method for determining the degree of acetalation of
rubber polyvinyl formal films. Kozh.-obuv. prom. 6 no.9:
19-20 S '64. (MIRA 17:12)

KHOROSHAYA, Ya.S., kand. khim. nauk; KOROL'KOVA, K.D., mladshiy nauchnyy
sotrudnik; ABRAMOVA, V.V., starshiy nauchnyy sotrudnik;
FREYDGEMY, K.I., mladshiy nauchnyy sotrudnik.

~~Rapid titration and refractometric method for determining moisture~~
content of NH_4HCO_3 . Nauch.-issl. trudy VNIPIK no.14:167-
170 '63. (MIRA 18:12)

KHOROSHAYA, Ye.S., kand. khim. nauk; KOROL'KOVA, K.D., mladshiy nauchnyy
sotrudnik; AL'TZITSER, V.S., mladshiy nauchnyy sotrudnik;
Prinimali uchastiye: YELISEYEVA, L.I.; ANYUTINA, N.S.; TUGOV,
I.I.; SHAKHNINA, L.V.

Rapid method for analyzing swollen rubber chips obtained in
the complex processing of worn-out tire treads. Nauch.-issl.
trudy VNIIPK no.14:170-177 '63. (MIRA 18:12)

S/724/61/000/000/017/020

AUTHORS: Al'tman, M. B., Stromskaya, N. P., Baykova, L. T., Korol'kova, L. M.

TITLE: The refining of cast Al alloys with trichloride of Boron.

SOURCE: Liteynyye alyuminiyevyye splavy; svoystva, tekhnologiya plavki, i
i termicheskoy obrabotki. Sbornik statey. Ed. by I. N. Fridlyander
and M. B. Al'tman. Moscow, Oborongiz, 1961, 144-149.

TEXT: The paper describes an experimental investigation of the refining of cast Al alloys by means of BCl_3 for the purpose of eliminating gaseous and solid nonmetallic inclusions comprising primarily H and oxides of Al and of other metals participating in an Al alloy. The investigation endeavors to obviate the shortcoming of $ZnCl_2$, $MnCl_2$, and $AlCl_3$, heretofore employed for this purpose, namely, the introduction by them of quantities of water which, as is known, constitutes the primary source of gaseous porosity of Al alloys. BCl_3 with its low temperature of vaporization ($18^\circ C$) appeared to be suitable. The Al alloys tested comprised the Al-Si system (alloy AL4), the Al-Cu system (alloys AL10-V and AL1), and the Al-Mg system (alloy AL8). The refining procedure of each of these alloys is described in detail. In summary, the BCl_3 refining of the four alloys produced a favorable effect on the density and the mechanical properties of the castings (tensile strength, Card 1/2

The refining of cast Al alloys with trichloride.... S/724/61/000/000/017/020

elongation, and H_B summarized in half-page table). Parts cast out of AL4, AL10-V, and AL8 alloys refined by means of BCl_3 exceeded ordinary parts by 1 to 2 scale grades in porosity; parts with a rough weight of 80 kg cast out of AL1 alloy refined with BCl_3 were equivalent in density and mechanical properties to similar castings cast in autoclave. The method of BCl_3 refining is recommended for the improvement of castings of alloys AL4, AL10V, AL1, and AL8 and, in some instances, to replace the casting of parts in the autoclave requiring a density of 2 to 3 on the conventional scale. There are 2 figures and 1 table; no references.

Card 2/2

S/724/61/000/000/018/020

AUTHORS: Al'tman, M. B., Baykova, L. T., Krysin, B. T., Korol'kova, L. M.,
Smirnova, T. I., Kitari, G. G., Shitov, M. I., Sharuda, V. F.,
Tyukin, I. T., Syromyatnikova, M. A.

TITLE: Vacuum refining of Aluminum alloys.

SOURCE: Liteynnye alyuminiyevyye splavy; svoystva, tekhnologiya plavki, lit'ya
i termicheskoy obrabotki. Sbornik statey. Ed. by I. N. Fridlyander
and M. B. Al'tman. Moscow, Oborongiz, 1961, 150-156.

TEXT: The paper describes the development of a method for the vacuum refining of Al alloys with the use of a flux, and the construction and development of a vacuum equipment for the refining of Al alloys capable of refining a melt of up to 300 kg. The refining method developed was intended to remove the various gaseous and solid nonmetallic impurities which enter into an Al alloy in the course of its smelting and to avoid, also, the difficulties encountered with method used heretofore, which consisted in the toxicity of the Cl and the chlorous and fluorous salts used to date. The basic concepts of the new method are the following: The impurities encountered in Al melts consist of H and oxides, primarily Al oxides. The H carries a positive charge (H^{1+}), whereas the Al oxides are charged negatively (O^{2-}).

Card 1/2

AUTHORS: Korol'kova, M. D., Krichevtsov, B. K. SOV/79-28-11-2/55

TITLES: Physico-Chemical Analysis of the Formic Acid - Dimethyl Formamide System (Fiziko-khimicheskiy analiz sistemy murav'**inaya** kislota - dimetilformamid)
Density, Viscosity, and Electric Conductivity in the Formic Acid - Dimethyl Formamide System (Plotnost', vyazkost' i elektroprovodnost' v sisteme murav'**inaya** kislota - dimetilformamid)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 11, pp 2915-2920 (USSR)

ABSTRACT: As is known, the acid amides have the capability of forming complex compounds primarily with organic and inorganic acids (Refs 1-5). For this reason the physico-chemical analysis of the double system consisting of formic acid and its most simple dialkyl substituted amide, the dimethyl formamide, is of both theoretical and practical interest. There are only contradicting references on this system in publications, i.e. that its components form azeotropes with maximum boiling temperatures (Refs 6,7). In the present paper the author aimed at investigating some physico-chemical properties of

Card 1/2

Physico-Chemical Analysis of the Formic Acid -
Dimethyl Formamide System. Density, Viscosity, and
Electric Conductivity in the Formic Acid - Dimethyl
Formamide System

SOV/79-28-11-2/55

the above-mentioned system, first of all density, viscosity, and electric conductivity insofar as the results obtained agreed with the present idea of the properties of such systems. Thus, density, viscosity, and electric conductivity in the dimethyl formamide - formic acid system were determined at 20, 25, 80, and 100°. The isothermal lines of viscosity and electric conductivity, the curves of the electric conductivity temperature coefficients as well as the cryoscopic determinations of the molecular weight tend to show the presence of the compound $\text{HCOOH} \cdot \text{HCON}(\text{CH}_3)_2$. Figures and tables illustrate the results in the experimental part. There are 2 figures, 5 tables, and 8 references, 4 of which are Soviet.

SUBMITTED: September 17, 1957

Card 2/2

KOROL'KOVA, M.D.; KRICHEVTSEV, B.K.

Dimethylformamide. Biul.tekh.-ekon.inform.no.2:10-12 ' 59.

(MIRA 12:3)

(Formamide)

number, p. 1.

USSR/Medicine - Viruses

Oct 53

"Specific Agglutination and Lysis of Viruses,"
M. A. Morozov, M. I. Korol'kova, Smallpox Div,
Inst of Epidemiol and Microbiol im Gamaleya, Acad Med
Sci USSR

Zhur Mikro Epid i Immun, No 10, pp 72-75

Lysis of elementary bodies of vaccinia virus takes
place as a result of the action of hyperimmune
serum. Best method of prepn of a purified sus-
pension of elementary bodies is by sedimentation,
without the use of ether. The virus subjected

266T24

to lysis loses capacity for infection. M. I.
Korol'kova obtained similar results with elemen-
tary bodies of A virus of influenza in 1951.

KOROL'KOVA, M. I., MOROZOV, M. A., KONSTANTINOVA, V. I.

"Concerning the Origin and Course of a Vaccination Process which is
Dependent on the Condition of the Nervous System." Proceedings of Inst.
Epidem and Microbiol im. Gamaleya 1954-56.

Variola Division, Morozov, M. A., head, Inst. Epidem and Microbiol. im.
Gamaleya AMS USSR.

SO:Sum 1186, 11 Jan 57.

KOROL'KOVA, M. I., and MOROZOV, M. A.

"On Obtaining a Highly Virulent Heat and Dryness Resistant Strain of Small Pox Vaccines." [paper read at a meeting of the institute's Scientific Council held during the first half of 1955.] Proceedings of Inst. Epidem and Microbiol im. Gamaleya 1954-56.

Variola Division, Morozov, M. A., head, Inst Epidem and Microbiol im. Gamaleya AMS USSR.

SO: Sum 1186, 11 Jan 57.

KOROL'KOVA
MOROZOV, M.A.; KONSTANTINOVA, V.I.; KOROL'KOVA, M.I.

Relation of the nervous system to the origin and course of the vaccination reaction. Zhur.mikrobiol.epid. i immun.no.11: 27-31 N '55. (MLRA 9:1)

1. Iz ospennogo otdela Instituta epidemiologii i mikrobiologii imeni N.F.Gamalei AN SSSR (dir.-prof. G.V.Vygodchikov)
(NERVOUS SYSTEM, physiology,
eff. on reaction to vacc. in rabbits)
(VACCINES AND VACCINATION,
eff. on nervous system physiol. in rabbits)

Korol'kova, M.I.

USSR/Virology - Human and Animal Viruses.

E-2

Abs Jour : Ref Zhur - *Biologiya*, No 1, 1957, 406

Author : M.A. Morozov and M.I. Korol'kova

Inst :

Title : Modification of the Virus of Smallpox.

Orig Pub : *Izmenchivost' mikroorganizmov*, M., Medgiz, 1956, 113-116

Abst : In order to establish the transformation of the virus of natural smallpox into a vaccine virus, two experiments were carried out on rabbits with the subsequent vaccination of calves with the vaccine. The initial virus of natural smallpox which possessed strong pathogenic and toxic properties, after each passage, was transformed into a good quality virus of smallpox vaccine, producing on vaccination of humans only local symptoms and serving as an excellent prophylactic agent against natural smallpox. By passages in animals, this new quality was strengthened and transmitted by heredity, providing valuable and high

Card 1/2

MOROZOV, M.A.; KOROL'KOVA, M.I.

Experimental model for titration of immunogenic properties of
smallpox vaccine. Zhur. mikrobiol. epid. i immun. 28 no.7:7-10
Jl '57. (MIRA 10:10)

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

(VACCINIA, virus,
immunogenic titration (Rus))

MORZKOVA, M.A.; KOROL'KOVA, M.I.

Experience in using selection in the preparation of smallpox vaccine.
Nauch. otn. proizv. bakt. prep. 10:16-19 '61. (MIRA 18:7)

1. Institut epidemiologii i mikrobiologii im. Gamalei AMN SSSR.

KRAYNOV, S.R.; KOROL'KOVA, M.Kh.

Characteristics of the distribution of some microelements in
carbonated waters of Armenia. Izv. AN Arm. SSR. Geol. i geog.
nauki 15 no.2:43-58 '62. (MIRA 15:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii
i inzhenernoy geologii, Moskva.
(Armenia--Trace elements) (Armenia--Mineral waters)

KRAYNOV, S.R.; KOROL'KOVA, M.Kh.

Basic principles of utilizing trace elements of carbonated waters in geochemical prospecting for ore deposits as revealed by the prospecting operations in the central part of the Lesser Caucasus. Geokhimiia no.5:453-463 '62. (MIRA 15:7)

1. All-Union Scientific Research Institute of Hydrology and Geological Engineering, Moscow.
(Caucasus--Mineral waters--Composition)
(Caucasus--Trace elements)

KREYNOV, S.R.: KOROL'KOVA, M. Zh.

Characteristics of the distribution of some microelements in
the mineral waters of the Lesser Caucasus. Trudy VSEGINCEO
no.9:72-93 '64. (MIRA 17:10)

BAKIYEVA, R.G.; VORONIN, K.V.; KOROL'KOVA, G.A.; MIRONOVA, T.A.

Effect of protracted pregnancy on the course of labor and the fetus.
Nauch. trudy Kaz. gos. med. inst. 14:359-361 '64. (MIRA 18:9)

1. 1-ya kafedra akusherstva i ginekologii (zav. - prof. R.G.
Bakiyeva, prof.-konsul'tant P.V.Maenkov) Kazanskogo meditsinskogo
instituta.

BAKIYEVA, R.G.; KOROL'KOVA, O.A.; MIRONOVA, T.A.

Average blood loss during the placental and early postnatal periods of labor and the factors influencing its. Nauch. trudy Kaz. gos. med. inst. 14:363-365 '64. (MIRA 18:9)

1. 1-ya akusherstva i ginekologii (zav. - prof. R.G.Bakiyeva, prof.-konsul'tant P.V.Manenkov) Kazanskogo meditsinskogo instituta.

SUTYUSHEVA, A.A., vrach; KOROL'KOVA, O.A., aspirant

Two cases of foreign bodies in the vagina of young girls.
Kaz.-med.zhur. 40 no.2:78 Mr-Ap '59. (MIRA 12:11)

1. Iz ginekologicheskogo kabineta polikliniki Respublikanskoy
klinicheskoy bol'nitsy Minsdrava Tatarskoy ASSR (glavvrach -
Sh.V.Bikchurin, nauchnyy rukovoditel' - prof.P.V.Manenkov).
(VAGINA--FOREIGN BODIES)

KOROL'KOVA, O. A., Cand Med Sci -- (diss) "Treatment of inflammatory processes in the mammary gland and subcutaneous tissues drawn off by punctures following the introduction of antibiotics." Kazan', 1960. 13 pp; (Ministry of Public Health RSFSR, Kazan State Med Inst, First Chair of Obstetrics and Gynecology and the Chair of Microbiology); 200 copies; price not given; (KL, 25-60, 139)

KOROL'KOVA, O.A., assistant; SAFINA, S.G., assistant

Two cases of congenital ichthyosis in newborn infants born of the same mother with the subsequent birth of a normal infant. Kaz.med. zhur. no.4:80-81 J1-Ag '62. (MIRA 15:8)

1. 1-ya kafedra akusherstva i ginekologii (zav. - prof. P.V. Manenkov) Kazanskogo meditsinskogo instituta i akushersko-ginekologicheskoye otdeleniye Respublikanskoy klinicheskoy bol'nitsy (glavnyy vrach - Sh.V.Bikchurin [deceased]).
(DEFORMITIES)

KOROL'KOVA, O.A., assistant; TREGULOVA, G.Sh.

Treatment of climacteric disorders with general restorative agents. Kaz. med. zhur. no.1:43-45 Ja-F'63.

(MIRA 16:8)

1. 1-ya kafedra akusherstva i ginekologii (zav. - prof. P.V. Manenkov) Kazanskogo meditsinskogo instituta i 2-ya zhenskaya konsul'tatsiya (zav. - T.G.Fayzullina) Kazanskogo meditsinskogo instituta.

(CLIMACTERIC)

DREIZIN, R.S.; PASHKEVICH, G.A.; PAKTORIS, H.A.; KOROLKOVA, O.I.;
KNYAZEVA, L.D.

The etiology of membranous conjunctivitis. Acta virol. Engl. Md..
3:193-200 0 '59.

1. Department of influenza and acute catarrhs of the respiratory tract and clinics of the Ivanovsky Institute of Virology, U.S.S.R. Academy of Medical Sciences; Children's infectious diseases clinic, 2nd Pirogov Moscow Medical Institute; Base of the Children's Municipal Hospital No.1, Moscow.
(CONJUNCTIVITIS etiol)

PASHKEVICH, G.A., kand.med.nauk; KOROL'KOVA, O.I.; DREYZIN, R.S.

Clinical aspects of membranous conjunctivitis of viral etiology.
Pediatriia 37 no.10:66-69 0 '59. (MIRA 13:2)

1. Iz kliniki detskikh infektsiy II Moskovskogo meditsinskogo instituta imeni N.I. Pirogova (zaveduyushchiy kafedroy - prof. D.D. Lebedev) na base 1-y Klinicheskoy gorodskoy detskoy bol'nitsy (glavnyy vrach - zasluzhennyy vrach RSFSR Ye.V. Prokhorovich) i laboratorii katarov verkhnikh dykhatel'nykh putey Instituta virusologii AMN SSSR (zaveduyushchiy - prof. V.M. Zhdanov).

(CONJUNCTIVITIS in inf. & child.)

(ADENOVIRUS INFECTIONS in inf. & child.)

KOROL KOVA, O. M.

B

9

Protective-Decorative Nickel Plating Without Subsequent Polishing. (In Russian.) N. T. Kudryavtsev, O. M. Korolkova, and V. V. Fedurkin. *Zhurnal Prikladnoi Khimii* (Journal of Applied Chemistry), v. 22, June 1949, p. 596-591.

It was found that the distinguishing characteristics of the electrolyte for bright nickel plating is the presence of a small amount of potassium or sodium salts of naphthalene disulfonic acid. Other components have the same purpose as in standard nickel plating. This electrolyte operates at a high pH (8.3) and in a wide temperature interval (20-45°C.) and range of current density. Optimum method of plating is described in detail. 10 ref.

ABSTRACTS
METALLURGICAL LITERATURE CLASSIFICATION
MATERIAL INDEX
COMMON ELEMENTS
ALUMINUM INDEX
STEEL INDEX

L 13296-66

ACC NR: AP6000331

SOURCE CODE: UR/0286/65/000/021/0020/0020

INVENTOR: Drapkina, D. A.; Brudz', V. G.; Terskoy, Ya. A.; Doroshina, N. I.; 27
Plitina, I. P.; Korol'kova, O. N. 8

ORG: none

TITLE: A method for producing a phosphorogen of red 630-(639)-5-(4'-diethylamino-benzylidene)-barbituric acid. Class 12, No. 175969 [announced by the All Union Scientific Research Institute of Chemical Reagents and Especially Pure Chemical Substances (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh reaktivov i osobo chistykh khimicheskikh Veshchestv)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 21, 1965, 20

TOPIC TAGS: phosphorescent material, luminescence, surface active agent

ABSTRACT: This Author's Certificate introduces a method for producing a phosphorogen of red 630-(639)-5-(4'-diethylaminobenzylidene)-barbituric acid by condensation of barbituric acid with 4-dimethylaminobenzaldehyde in the presence of an alkali. The luminescence intensity of the product is increased by conducting the

Card 1/2

UDC: 547.854.5.07

Korol'kova, O. N.

48-12-15/15

AUTHORS: Leyteyzen, L. G., Berkovskiy, A. G., Breydo, I. Ya., Glukhovskoy, B. M., Korol'kova, O. S., Tarasova, Ye. I.

TITLE: New Industrial Types of Photoelectron Multipliers (Novyye promyshlennyye tipy fotoelektronnykh umnozhitel'ey)

PERIODICAL: Izvestiya AN SSSR, Seriya Fizicheskaya, 1957, Vol. 21, Nr 12, pp. 1653 - 1659 (USSR)

ABSTRACT: At present the production and delivery of some new photoelectron-multipliers (FEV) worked out by the authors were begun on an industrial scale. They are shortly described here. 1.) The production of the special multiplier for the scintillation-spectrometers $\Phi \Xi \Upsilon$ -29 was recently begun. It has a good amplitude-dissolving power which is guaranteed by the comparatively high sensitivity of the cathodes of the device. The integral sensitivity is higher than $30 \mu \text{ A lm}^{-1}$, on the average $40 - 45 \mu \text{ A lm}^{-1}$, the "blue" one is higher than $6 \mu \text{ A ml}^{-1}$ which corresponds to a quantum discharge of more than 9% at $\lambda \approx 4000 \text{ \AA}$. Besides the electron-optics at the entrance of the multiplier guarantees a good taking over of the electrons from the cathode to the dynode, as well as minimum losses in the first cascades. The amplitude of the noise, measured in relation to the photopeak of $\text{Cs}^{137} \rightarrow \text{NaJ(Tl)}$ on the 50

Card 1/4

48-12-15/15

. New Industrial Types of Photoelectron Multipliers

variants a system was found which guarantees good focusing of the electrons and minimum scattering of the time of flight. The calculations of the maximum time-of-flight gradient in this multiplier system with grid yielded a quantity of $4,4 \cdot 10^{-10}$ sec (at a voltage of 100 V/cascade) which is 3 - 4 times less than in the multiplier-system H4646 (reference 3).

4.) The best ratio of the signal to the background in the wave-range of 5500 to 8000 Å is given by the bismuth-silver-caesium cathodes. The experimental samples of multipliers with such cathodes are produced in two sizes: that of the $\Phi \Xi \Upsilon$ -29 and in a smaller size. The multipliers have 11 cascades. Their integral sensitivity of the cathodes on the average is 45 - 50 μ A lm^{-1} . The amplification is of the order of magnitude 10^5 - 10^6 at a full supply-voltage of 1400 - 1600 V. The smaller multiplier is distinguished by a great vibration-strength.

5.) The miniature-FEV. At present a construction was worked out for an eight-cascade-miniature-multiplier $\Phi \Xi \Upsilon$ whose outside diameter is greater than 22,5 mm and whose height is 65 mm without peg. The flat, semi-transparent cathode of antimony-caesium has a working diameter of 18 mm. Its sensitivity is below 25 μ A lm^{-1} .

Card 3/4

48-12-15/15

. New Industrial Types of Photoelectron Multipliers

It guarantees an amplification up to 10^5 at a voltage of 900 - 100V. The dark currents are of the order of magnitude 10^{-8} A.

AVAILABLE:

There are 8 figures, and 3 references, 1 of which are Slavic.
Library of Congress

Card 4/4

On Some Characteristics of New Industrial Types of the FEU 48-22-5-5/22
(Data From the VIIIth All-Union Conference on Cathode Electronics, Leningrad,
October 17-24, 1957)

with a cathode of bismuth-silver-cesium is determined by the particularities of its spectral characteristic (fig.1). e) A miniature multiplier with a semitransparent cathode of antimony-cesium was worked out for the application in a portable device. f) A further multiplier with a massive antimony-cesium cathode has a lateral optical entrance (Ref 1). The types e) and f) are vibrationproof.

Finally the stability of the FEU is discussed, which was investigated by the authors. In the discussion of this abstract participated G. S. Vil'dgrube, and N. S. Khlebnikov. There are 4 figures, 1 table, and 1 reference, which is Soviet.

1. Electron multipliers---Properties
2. Electron multipliers
---Applications

Card 2/2

SOV/48-22-8-19/20

AUTHORS: Berkovskiy, A. G., Breydo, I. Ya., Glukhovskiy, B. M.,
Korol'kova, O. S., Leyteyzen, L. G., Tarasova, Ye. I.

TITLE: Data Concerning Industrial Photoelectronic Multipliers for
Scintillation Spectrometers (Novyye dannyye o promyshlennyykh
tipakh fotoelektronnykh umnozhitel' dlya atsintillyatsionnykh
spektrometrov)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, 1958,
Vol.22, Nr 8, pp. 1005 - 1008 (USSR)

ABSTRACT: At the 7th All Union Conference on Nuclear Spectroscopy the
basic features of new FEU (photoelectronic multiplier - FEM)
types for spectrometry were communicated (Ref 1). In this paper
the authors give new data on earlier developed FEM types, which
are already in industrial production, and on new FEM's the
development of which was terminated in 1957. In that year the
mass production of the basic type of the spectrometers, the
FEM-29 was started. As a result of the investigations, the
types were arranged according to the voltages in the first
cascades of the multipliers which guarantee a good amplitude

Card 1/3

SOV/46-22-6-19/20

Data Concerning Industrial Photoelectronic Multipliers for Scintillation Spectrometers

resolution. As the problem arose whether it would be possible to produce spectrometers FEM with a better resolution, it was attempted to produce spectrometers FEM with multialkali cathodes (as, for example Sb-Na-K or Sb-Na-K-Cs cathodes) (In figure 3 the characteristics of these cathodes are given). The FEM-24 went into series production in the last year (Ref 1). The authors carried out experiments with good prospects with a multiplying system with toroidal dynodes of Al-Mg-alloys. One of the new types of midget spectrometers FEM is described as follows: cathode diameter 25 mm, maximum socket diameter 34,5 mm, length 110 mm. For practical operation the multiplier is equipped with a high-resistance potentiometer. From the table can be seen that the resolution of these multipliers is of the same order as that of FEM-29. The basic features of the design of the FEM-31 are given in reference 3. The spectrometric resolution of the FEM-31 which was measured with a crystal with a diameter of 14 mm was within the limits of 8,5 - 11%. An FEM with a large cathode (diameter 300 mm) was developed for work with liquid synthetic scintillators. (Antimony-cesium cathode

Card 2/3