

SECRET 54

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R000826610005-3

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CIA-RDP86-00513R000826610005-3"

*KRIVORUCHKO, R.A.*

**AKIMOVA, R.H.; KRIVORUCHKO, R.A.**

Qualities of erythrocytes preserved in alcohol-glucose-citrate blood.  
Probl.gemat. i perel.krovi 1 no.2:45-48 Mr-Ap '56. (MIRA 10:1)

1. In L'vovskogo nauchno-issledovatel'skogo instituta perelivaniya  
krovi (dir. - dotsent D.G.Petrov)

(BLOOD BANKS,

erythrocyte mass preserv. in alcohol-glucose-citrate blood)

(ALCOHOL, ETHYL

alcohol-glucose-citrate solution for erythrocyte mass  
preserv.)

(GLUCOSE

same)

(CITRATES

same)

ARRIVED BY AIR

"Transfusion of Alcohol-Glucose-Citrate Blood in the System of Complex Treatment of Patients With Suppurative and Septic Diseases," by R. A. Krivoruchko, L'vov Scientific Research Institute of Blood Transfusion (director, Docent D. G. Petrov), Problemy Gematologii i Perelivaniya Krovi, Vol 2, No 2, Mar/Apr 57, pp 49-53

Transfusion of alcohol-glucose-citrate blood is effective in the complex treatment of patients affected with suppurative and septic processes. One of the advantages of alcohol-glucose-citrate-blood transfusion is the reduced frequency of posttransfusion reactions. Transfusion of alcohol-glucose-citrate-blood contributes to the building up of immunobiological forces in the organism, normalization of the composition of the peripheral blood, activation of phagocytosis, and a decrease of the virulence of microflora. Transfusion of the above blood does not disturb renal function. (U)

SUM. 1360

AKIMOVA, R.N.; KRIVORUCHKO, R.A.

Two-stage method of preparing an alcohol-glucose-sucrose-citrate suspension of erythrocytes. Probl.gemat. i perel.krovi 2 no.5: 51-55 S-O '57. (MIRA 11:1)

1. Iz L'vovskogo nauchno-issledovatel'skogo instituta perelivaniya krovi (dir. - dotsent D.G.Petrov)

(BLOOD TRANSFUSION

alcohol-glucose-saccharose-cytrate suspension of erythrocytes, two-stage method for prep.)

KRIVORUCHKO, R. A. , Cand Med Sci -- (diss) " Transfusion  
of alcohol-glucose-citrated blood in the ~~method~~ <sup>complex</sup>  
treatment of patients <sup>(afflicted)</sup> with suppurative and septic diseases."  
L'vov, 1958. 16 pp (L'vov State Med Inst) 200 copies.

(KL, 12-58, 102)

-93-

YAYES, S.B.; KUCHUK, A.P.; KRIVORUCHKO, R.A.; SHIMANSKAYA, B.M.

Transfusion of blood preserved with cation exchangers and its  
erythrocyte mass in hypoplastic states. Sbor. trud. L'vov.  
nauch.-issl. inst. perel. krovi i neotlozh. khir. no.4:  
155-161 '60 (MIRA 16:12)

YAYES, S.B.; NOVIKOVA-DANTSIGER, T.I.; AKIMOVA, R.N.; KRIVORUCHKO, R.A.

State of hemopoiesis and gases of the blood in transfusions  
of blood preserved with cation exchangers following hemorrhages.  
Sbor. trud. L'vov. nauch.-issl. inst. perel. krovi i neotlozh.  
khir.no.4:168-176 '60 (MIRA 16:12)



PETROV, D.G., dotsent; KRIVORUCHKO, R.A.; TURCHIN, V.L.; YEDKINA, V.D.

Centralized supply of flasks with factory produced blood preservatives. Probl.gemat.i perel.krovi no.7:50-53 '61.

1. Iz L'vovskogo nauchno-issledovatel'skogo instituta perolivaniya krovi (dir. - dotsent D.G. Petrov). (MIRA 14:9)  
(BLOOD--COLLECTION AND PRESERVATION)

PETROV, D.G., dotsent; KRIVORUCHKO, R.A.; MARUSENKO, V.I.

Method for individual bacteriological sterility control of preserved blood. Probl. gemat. i perel. krovi no.10:58-60 '62.

(MIRA 17:12)

1. Iz L'vovskogo nauchno-issledovatel'skogo instituta perelivaniya krovi (direktor - dotsent D.G. Petrov).

KRIVORUCHKO, R.A.

Amino acid composition of a placenta hydrolysate. Gemat. i perel.  
krovi 1:79-82 '65. (MIRA 18:10)

1. I'vovskiy Institut perelivaniya krovi.

ACCESSION NR: AT4036059

8/2781/63/000/003/0199/0206

AUTHORS: Volkov, Ya. F.; Tolok, V. T.; Krivoruchko, S. M.

TITLE: Plasma of Theta pinch in a magnetic grid

SOURCE: Konferentsiya po fizike plazmy\* i problemam upravlyayemogo termoyadernogo sinteza. 3d, Kharkov, 1962. Fizika plazmy\* i problemy\* upravlyayemogo termoyadernogo sinteza (Plasma physics and problems of controlled thermonuclear synthesis); doklady\* konferentsii, no. 3. Kiev, Izd-vo AN UkrSSR, 1963, 199-206

TOPIC TAGS: plasma pinch, plasma confinement, magnetic mirror, plasma stability, plasma decay, plasma physics

ABSTRACT: Experiments were set up to ascertain the confining ability of a magnetic grid without a longitudinal field, where the plasma is injected from the ends of the chamber. Another purpose of the experiment was to compare the stability and cleanliness of a

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ACCESSION NR: AT4036059

$\Theta$ -pinch plasma with a peripheral field and without it. The experimental setup and the procedure are described. Measurement of the lifetime of the plasma with density above  $6 \times 10^{13} \text{ cm}^{-3}$ , and of the intensity of the peripheral field  $B_{\phi}$  between neighboring conductors at zero longitudinal field, made at a constant pressure of  $13.3 \text{ n/m}^2$ , has shown that the confinement time increases from 20 to 70 microseconds as the field is increased from 0.5 to  $24 \times 10^4 \text{ A/m}$ . The existence is proportional to  $B_{\phi}^{2/3}$ . Superposition of the field of the magnetic grid on the  $\Theta$  pinch apparently decreases the instability; the particles are lost predominantly through the magnetic gaps. The amount of impurity (from the walls) in the discharge decreases with increasing  $B_{\phi}$ , and the amount of absorbed hydrogen released from the walls also increases. It is pointed out that the results of these experiments are still preliminary, in view of the small diameter of the chamber and the small values of the magnetic field. Orig. art. has: 6 figures.

Card 2/5

ACCESSION NR: AT4036059

ASSOCIATION: None

SUBMITTED: 00

DATE ACQ: 21May64

ENCL: 02

SUB CODE: ME

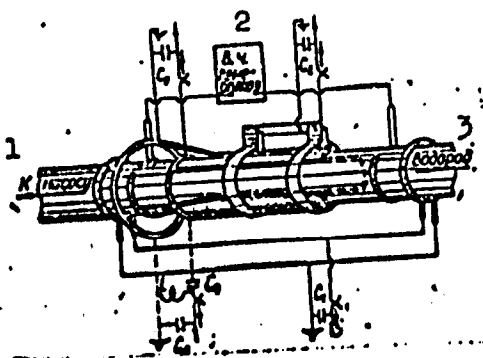
NR REF SOV: 005

OTHER: 003

Card 3/5

ENCLOSURE: 01

ACCESSION NR: AT4036059

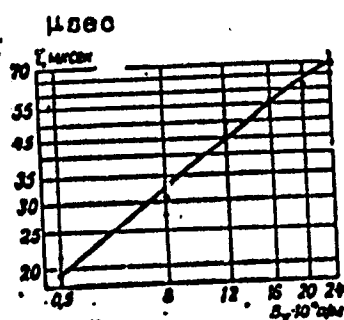


Theta-pinch plasma in a magnetic field

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ACCESSION NR: AT4036059

ENCLOSURE: 02



Dependence of plasma lifetime on the magnetic field intensity in the gap.

Card 5/5



VOLKOV, Ya.F.; TOLOK, V.T.; KRIVORUCHKO, S.M.

O-pinch plasma in a magnetic net. Zhur. tekhn. fiz. 33  
no.9:1093-1097 S '63. (MIRA 16:11)

KRIVORUCHKO, S.S.; VIROZUB, Ye.V., otvetstvennyy redaktor; ANDREYEV, S.P.,  
tekhnicheskiiy redaktor.

[Coke oven mechanic] Mashinist koksovykh pechei. 2-e izd. Khar'kov,  
Gos. nauchno-tekhn. izd-vo lit-ry po chernoii i tevetnoi metallurgii,  
1954. 256 p. (MLRA 8:1)  
(Coke industry)

KRIVORUCHKO, Semen Semenovich; DORFMAN, G.A., otv. red.; KAMINSKIY,  
L.N., red. izd-va; ANDREYEV, S.P., tekhn. red.

[Operator of a coke-pushing machine; manual for on-the-job  
training of qualified workers] Mashinist koksovytalkivatelia;  
uchebnik dlia podgotovki kvalifitsirovannykh rabochikh na  
proizvodatve. Khar'kov, Gos.nauchno-tekhn. izd-vo lit-ry po  
cherno i tsvetnoi metallurgii, 1961. 173 p. (MIRA 14:6)  
(Coke industry--Equipment and supplies)

KRIVORUCHKO, Semen Semenovich; VOL'FOVSKIY, G.M., otv. red.; LIBERMAN, S.S., red. izd-va; ANDREYEV, S.P., tekhn. red.

[Individual and crew training of the mason in the refractory laying of coke ovens] Kamenshchik ognepornoj kladki kokosovykh pechei; dlia individual'no-brigadnogo obucheniia rabochikh. Moskva, Metallurgizdat, 1963. 216 p. (MIRA 16:8)  
(Coke ovens)

EXCERPTA MEDICA SER 8 Vol 12/2 Neurology Feb 59

777. MUSCLE POWER IN PRE-SCHOOL AGES (Russian text) - Krivoruchko  
T. S. - UCH. ZAP. KALIN. PEDAGOG. INST. 1956, 5 (57-53)

It was sought to determine the characteristics of the muscular power in children under school age and to elaborate the conditional average group norms of muscular power whereby it would be possible to assess individually the degree of development of the muscular power of the hands of a child under school age. The results of investigations carried out in 127 children under school age who were in kindergartens during 1949-1950 are cited. The examination was made by means of a hand-dynamometer of a size to suit the child's clenched hand; the data obtained were elaborated statistically. Simultaneously other anthropometric investigations were carried out. The results of the investigations are tabulated. The muscular power of pre-school ages shows a steady increase, the increase with each year being rather greater in boys than in girls; training is of decided importance in the development of righthandedness. The author considers that by active inculcation of habits, physical training and teaching the muscular power of both hands can be adequately developed.

(S)

KRIVORUCHKO, V.

The brigade of Ivan Kremarenko. Stroitel' no.10:6-7 0 '57.  
(MIRA 10:11)

(Concrete construction)

(Blast furnaces)

KRIVORUCHKO, V.D.

Determining the speed of erythrocyte sedimentation. Lab. delo  
3 no.1:28-29 Ja-F '57 (MLHA 10:4)

1. Iz kafedry vtoroy gosital'noy khirurgii Voyenno-morskoy  
meditsinskoy akademii.  
(ERYTHROCYTES)

PAVLENKO, P.A.; KRIVORUCHKO, V.D.; KRYNSKAYA, N.B.

Blood sugar in gastric cancer patients. Sov.med. 26 no.8:63-67  
Ag '62. (MIRA 15:10)

1. Iz khirurgicheskoy kliniki usovershenstvovaniya vrachey No. 2  
(nachal'nik - prof. I.D.Zhitnyuk) Voenno-meditsinskoy ordena  
Lenina akademii imeni S.M.Kirova.  
(BLOOD SUGAR) (STOMACH--CANCER)



Pe-1/PC-4 13P(c)/SSD/

06/14/1985

Some peculiarities

metalloids, v. 17, no. 1

metal, silicon,

The authors investigate

saturated silicon vapors at low

of  $MoSi_2$

of time

is a limiting

where  $x$  is

on the outer boundary, and  $t$  is time

$Ta_5Si_3$  phase,  $Ta_5Si_3$  inclusions were found

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AF 142082

corrosion of siliconized tantalum. Siliconizing in a...  
uses the rate of siliconizing to determine...  
time...

14

OTHER

L 3434-66 EMT(m)/ETC/EPE(n)-2/EWG(m)/ENP(t)/EWP(b) (P)(c) JD/JG/GS

ACCESSION NR: AT5024871

UR/0000/65/000/000/0045/0055

85  
82  
8+1

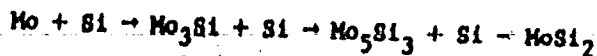
AUTHOR: Ivanov, V. Ye.; <sup>44,55</sup> Nechiporenko, Ye. P.; <sup>44,55</sup> Zmiy, V. I.; <sup>44,55</sup> Krivoruchko, V. M.

TITLE: On the vacuum <sup>27</sup> siliconizing of <sup>44,55</sup> refractory metals <sup>44,55</sup>

SOURCE: AN UkrSSR. Institut problem materialovedeniya. <sup>44,55</sup> Diffuzionnyye pokrytiya na metallakh (Diffusion coatings on metals). Kiev, Naukova dumka, 1965, 45-55

TOPIC TAGS: metal diffusion plating, silicon, refractory metal, silicide. <sup>27</sup>  
activation energy

ABSTRACT: The kinetics and mechanism of case-formation were investigated for Mo specimens measuring 40x10x1 mm vacuum-siliconized at  $1 \cdot 10^{-5}$  mm Hg by being covered with Si powder and heated at 1200-1350°C. Metallographic and radiographic examination established that the formation of molybdenum silicides occurs in the following sequence .:



at the corresponding phase interfaces, i.e. the formation of MoSi<sub>2</sub> is due to the

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L 3434-66

ACCESSION NR: AT5024871

3

lower silicides. Plotting of the curves of isothermal growth of the layers of  $\text{Mo}_5\text{Si}_3$  and  $\text{MoSi}_2$  at  $1250^\circ\text{C}$  revealed that the increase in their thickness with time follows a parabolic law. This was verified by vacuum-siliconizing specimens of  $\text{Mo}_5\text{Si}_3$  and  $\text{Ta}$  in saturated Si vapors. The resulting curves also proved to follow a parabolic law of growth in layer thickness as a function of time, thus confirming that the diffusion of Si is the determining factor in the rate of siliconizing. On this basis, the activation energies for the diffusion of Si in  $\text{Mo}_5\text{Si}_3$  and  $\text{MoSi}_2$  were calculated to be  $Q_{\text{Mo}_5\text{Si}_3} = (126,000 \pm 12,000)$  cal/mole and  $Q_{\text{MoSi}_2} = (57,600 \pm 6,000)$  cal/mole, respectively. Experiments to determine the effect of the presence of a temperature gradient between the box ( $1250^\circ\text{C}$ ) and the specimen ( $1200^\circ\text{C}$ ) on the growth rate of the  $\text{MoSi}_2$  layer (see Fig. 1 of the Enclosure) revealed that, if the metals are siliconized in a box with a temperature gradient, the siliconizing rate decreases with increase in temperature of the specimen and increases with decrease in this temperature as compared with the temperature of the box, while the growth in case-thickness follows a parabolic curve. Orig. art. has: 10 figures.

ASSOCIATION: none

Card 2/4

L 3434-66

ACCESSION NR: AT5024871

SUBMITTED: 00

ENCL: 01

SUB CODE: MM, IE

NR REF SOV: 006

OTHER: 003

Card 3/4

L 3434-66

ACCESSION NR: AT5024871

ENCLOSURE: 01

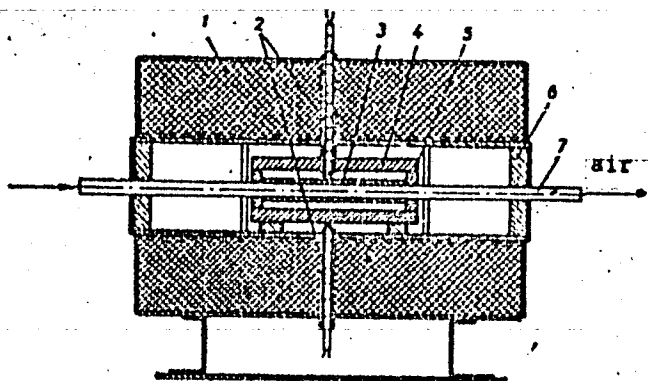


Fig. 1. Diagram of setup

1 - furnace; 2 - thermocouple; 3 - specimen; 4 - box; 5 - Al<sub>2</sub>O<sub>3</sub> ring;  
6 - furnace lid; 7 - stainless-steel cooling pipe

Card 4/4 *md*

L 15749 06 EWT(m)/ETC(f)/EPF(n)-2/EWG(m)/EWA(d)/EWP(t)/EWF(z)/EWP(b)  
 ACC NR: AT5027941 SOURCE CODE: UR/0000/65/000/000/0055/0058  
 IJP(c) JD/JG/GS  
 AUTHOR: Nechiporenko, Ye. P. (Doctor of technical sciences) ; Krivoruchko, V. M.;  
 Mitrofanov, A. S.; Poltavtsev, N. S.

ORG: none

TITLE: Siliconizing of refractory metals

SOURCE: Seminar po zharostoykim pokrytiam. Leningrad, 1964. Zharostoykiye  
 pokrytiya (Heat-resistant coatings); trudy seminara. Leningrad, Izd-vo Nauka,  
 1965, 55-58

TOPIC TAGS: molybdenum, tantalum, tungsten, heat diffusion

ABSTRACT: The kinetics and the mechanism of siliconizing of refractory metals in a vacuum under stabilized conditions (5-50 hrs) were studied previously by K. E. Ivanov and the authors (FMM, 17, 6, 862, 1964). The purpose of the present work was to study the initial stages of siliconizing and to determine the parameters controlling the rate of this complex process. A foil plate (0.1 x 10 x 20 mm) and cylindrical (0.5 mm diameter and 20 mm long) samples of Mo, Ta, and W were covered

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L 15749-66

ACC NR: AT5027941

by powdered (grain size  $5-10\mu$ ) silicon, containing (in %) 99.9206, Si, 0.0009 Fe, 0.02 Al, 0.004 Mg, 0.04 Ca, 0.004 Cu, 0.0012 Zn, 0.0012 Cr, 0.0001 Mn, 0.0013 Sn, and 0.0025 Pb, placed into a molybdenum vessel and carried into a preheated vacuum electrical furnace ( $1 \times 10^{-5}$  mm Hg) through a special forechamber. The study was made at 1200, 1250, and 1300C, which were registered by a Pt-PtRh thermocouple and an EPP-09-type automatic potentiometer. The increases in weight (in  $\text{mg km}^2$ ) of siliconized samples were determined after various exposures ( $t$  in minutes). The curves for weight increase versus time were plotted for 1200, 1250, and 1300C, and the samples were subjected to an X-ray diffraction study. During siliconizing of Mo at 1250C, the  $\text{Mo}_3\text{Si}$  phase was formed first, then (after 25 minutes) the  $\text{Mo}_5\text{Si}_5$  phase appeared, and the  $\text{MoSi}_2$  was formed after 150 minutes. The intervals between the formation of various phases decreased with increasing temperatures: the  $\text{Mo}_5\text{Si}_5$  phase at 1200C appeared after 110 minutes, at 1250C after 25 minutes, and the  $\text{MoSi}_2$  phase was formed at 1300C after 5-6 minutes. The process was a similar one during siliconizing of Ta and W except for the fact that some phases, which should have been present according to the phase diagram, did not appear at all. Only  $\text{Ta}_5\text{Si}_3$  and  $\text{TaSi}_2$  were formed during siliconizing of Ta ( $\text{Ta}_{4.5}\text{Si}$  and  $\text{Ta}_2\text{Si}$  were absent); the  $\text{W}_5\text{Si}_3$  phase appeared first and  $\text{WSi}_2$  later during the siliconizing of W. After establishing the phase equilibrium, the chemical composition of the layer

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ACC NR: AT5027941

did not change. The points of inflection on the curves indicated the formation of a subsequent, new, higher phase. The  $Mo_3Si$  and  $Mo_5Si_3$  phases grew according to the parabolic law. The rate of siliconizing was thus controlled by diffusion, even during the initial stages of the process. Orig. art. has: 2 figures.

SUB CODE: // SUBM DATE: 20Jul65/ ORIG REF: 009/ OTH REF: 001

3/3 Inc

L 12058-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG/WB  
ACC NR: AP6001302 SOURCE CODE: UR/0363/65/001/008/1354/1359

AUTHOR: <sup>55</sup> Ivanov, V. Ye.; <sup>55</sup> Nechiporenko, Ye. P.; <sup>55</sup> Zmiy, V. I.; <sup>55</sup> Krivoruchko, V. M.;  
<sup>55</sup> Verkhorojtn, L. F.; <sup>55</sup> Aleksandrov, O. M.; <sup>55</sup> Mitrofanov, A. S.; <sup>55</sup> Poltavtsev, N. S.

ORG: <sup>55</sup> Physicotechnical Institute, Academy of Sciences UkrSSR (Fiziko-tekhnicheskij  
institut Akademii nauk UkrSSR) <sup>55</sup>

TITLE: Study of the oxidation kinetics of molybdenum disilicide at 1500 - 1800C

SOURCE: AN SSSR. <sup>55, 27</sup> Izvestiya. <sup>27</sup> Neorganicheskiye materialy, v. 1, no. 8, 1965, 1354-1359

TOPIC TAGS: molybdenum compound, silicide, oxidation kinetics, silicon dioxide

ABSTRACT: Molybdenum disilicide samples (prepared by siliciding molybdenum at 1250, 1300, and 1350C) were oxidized for 10 hr at 1500 and 1600C and for 1 hr at 1700 - 1800C. The oxidation is represented as follows: (1)  $5\text{MoSi}_2 + 7\text{O}_2 \rightarrow \text{Mo}_5\text{Si}_3 + 7\text{SiO}_2$ , (2)  $2\text{MoSi}_2 + 7\text{O}_2 \rightarrow 2\text{MoO}_3 + 4\text{SiO}_2$ . X-ray analysis shows that reaction (1) predominates over (2); the latter is of decisive importance at the start, when the  $\text{SiO}_2$  film is formed. The increase in the oxidation rate is related to the orientation of the crystals. The structure of  $\text{MoSi}_2$  may be considered to consist of layers of silicon and molybdenum atoms alternating in the direction of axis c; if it is kept in mind that the bonding forces between like atoms in a layer are weaker than the forces between the layers, the layer orientation parallel to the surface ( $\text{MoSi}_2$

UDC: 646.77'281

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L 12058-66

ACC NR: AP6001302

samples obtained at 1250 and 1300C) will cause a lower oxidation rate than in samples where the layer orientation is perpendicular to the surface (silicides obtained at 1350C). It is concluded that the oxidation rate of  $\text{MoSi}_2$  is affected by many factors, but it has not been possible to determine which is the most important one. Orig. art. has: 2 figures.

SUB CODE: 07, 11 / SUBM DATE: 24May65 / ORIG REF: 006 / OTH REF: 007

OC  
Card 2/2

L 27562-66 EWT(m)/EWF(t) IJP(c) JD/JG/WB

ACC NR: AP6017688

SOURCE CODE: UR/0363/65/001/008/1360/1363

AUTHOR: Ivanov, V. Ye.; Nechiporenko, Ye. P.; Krivoruchko, V. M.; Zmiy, V. I.; 4/  
Metrofanov, A. S.; Aleksandrov, O. M. BORG: Physicotechnical Institute AN UkrSSR (Fiziko-tekhnicheskiy institut AN UkrSSR)TITLE: Oxidation of tungsten disilicide at 1500-1800°C temperaturesSOURCE: AN SSSR. <sup>18</sup> Izvestiya. <sup>27</sup> Neorganicheskiye materialy, v. 1, no. 8, 1965, 1360-1363

TOPIC TAGS: tungsten compound, silicide, oxidation kinetics, silicon, molybdenum compound

ABSTRACT: The authors carried out an investigation of the oxidation kinetics of tungsten disilicide over the temperature range 1500-1800°C. Tungsten of 99.95% purity and 99.999% pure silicon were used for the investigation. The oxidation kinetics curves are parabolas. The effects of preparation temperature and homogenization time of tungsten disilicide specimens on their oxidation rate was studied. It was shown that the oxidation rate of  $WSi_2$  at 1500-1700°C is approximately the same as that for  $MoSi_2$ . It is even somewhat lower than that for  $MoSi_2$  at 1800°C. Orig. art. has: 2 figures and 2 formulas. [JPRS]

SUB CODE: 07 / SUBM DATE: 24May65 / ORIG REF: 003 / OTH REF: 005

Card 1/1 *NC*

UDC: 546.78'281

L 27458-66 EWI(m)/EWP(t) IJP(c) JD/JG/WB

ACC NR: AP6017689

SOURCE CODE: UR/0363/65/001/008/1364/1367

AUTHOR: Ivanov, V. Ye.; Nechiporenko, Ye. P.; Krivoruchko, V. M.; Zmiy, V. I.; 36  
Mitrofanov, A. S.; Aleksandrov, O. M. BORG: Physicotechnical Institute AN UkrSSR (Fiziko-tehnicheskiy institut AN UkrSSR)TITLE: Oxidation of tantalum disilicide at 1400-1600°C temperaturesSOURCE: AN SSSR<sup>18</sup> Izvestiya<sup>27</sup> Neorganicheskiye materialy, v. 1, no. 8, 1965, 1364-1367

TOPIC TAGS: tantalum compound, silicide, oxidation kinetics, silicon

ABSTRACT: Up to the present day there are no systematic investigations on the oxidation kinetics of tantalum disilicide at high temperatures. The purpose of the present study was an examination of the oxidation kinetics of tantalum disilicide at 1400-1600°C temperatures. Tantalum of 99.95% purity and 99.99% pure silicon were used for the investigation. The effects of specimen preparation temperature and extent of their homogenization on the oxidation rate were established. The oxidation of TaSi<sub>2</sub> specimens in the initial stage conforms to a straight-line relationship. After some specific period of time a sharp rise in the specimen oxidation rate sets in, which leads to their failure. The fundamental feasibility of raising the tantalum disilicide's heat resistance up to 1600°C was demonstrated.

Orig. art. has: 3 figures. [JPRS]

SUB CODE: 07 / SUBM DATE: 24May65 / ORIG REF: 002 / OTH REF: 003

Card 1/1

UDC: 546.893'281

ACC NR: AP6001239 JD/JG/WB SOURCE CODE: UR/0363/65/001/012/2212/2218

AUTHOR: <sup>44.55</sup> Ivanov, V. Ye.; <sup>44.55</sup> Nechiporenko, Ye. P.; <sup>44.55</sup> Krivoruchko, V. M.; <sup>44.55</sup> Verkhorobin, L. F.; <sup>44.55</sup> Mitrofanov, A. S.; <sup>44.55</sup> Poltavtsev, N. S.

ORG: <sup>44.55</sup> Physicotechnical Institute, Academy of Sciences UkrSSR, Kharkov (Fiziko-tekhnicheskiiy institut Akademii nauk UkrSSR) <sup>44.55</sup>

TITLE: Effect of additives on the kinetics of the siliciding of molybdenum in vacuum <sup>16</sup> <sup>27</sup> <sup>198</sup> <sup>B</sup>

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 12, 1965, 2212-2218

TOPIC TAGS: <sup>27, 44.55</sup> refractory metal, refractory coating, molybdenum, silicon, molybdenum disilicide, oxidation resistance

ABSTRACT: Inasmuch as the coating of refractory metals with molybdenum disilicide is known as a prospective method for preventing high-temperature oxidation, the effect of some additives on the growth rate and the structure of the silicide layer on molybdenum was studied. It was noted that properties of the disilicide coating (including brittleness and an inadequate thermal stability) may depend on the preparative method and on the purity of the initial materials. In this study the silicide layer was produced on molybdenum sheet and wire 0.1 and 0.5 mm thick, respectively, in vacuum by heating at 1250C. Molybdenum of 99.95% purity, 99.999%-pure silicon and commer-

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UDC: 546.281

L 9447-66

ACC NR: AP6001239

9  
cial silicons KR-0 and KR-1, 99.0 and 98.0% pure, respectively, were used as initial materials for siliciding cells. The growth rate, structure and phase composition of the coatings obtained were studied by gravimetric, metallographic and x-ray methods. The effect of Al, Fe, Cu, Ti, and B used as additives, and of the residual gas pressure was studied. It was found that the presence of small amounts of Al (1-3%) in powdered silicon causes the formation of a ternary compound  $Mo(Si, Al)_2$  with a hexagonal structure, the growth of which is expressed as a linear dependence on time. The presence of the other additives studied, with the exception of Ti, results in a decrease in the growth rate of the  $MoSi_2$  layer and does not affect its structure. The residual gas pressure does not affect the silicide layer growth, if it is within  $1.10^{-6}$ — $1.10^{-4}$  mm Hg; at  $1.10^{-3}$  mm Hg, the rate slows down 3—4 times; at  $1.10^{-2}$  mm Hg, disilicide is not formed at all, and only the  $Mo_3Si$  phase is formed. Transition of the dark and opaque hexagonal disilicide into the silvery tetragonal form on prolonged heating was observed. Orig. art. has: 4 figures and 3 tables. [BN]

SUB CODE: 07, 11/ SUBM DATE: 10Apr65/ ORIG REF: 007/ OTH REF: 006/ ATD PRESS:

7156

Card 2/2/w

L 5321-66 SWP(m)/EWP(i)/ETC/EPF(n)-2/EMG(m)/EMF(t)/EMP(b) LJP(c) JD/JJ

ACC NR: AP5026274

UR/0226/65/000/010/0067/0070

AUTHOR: Nechiporenko, Ye. P., Krivoruchko, V. M.; Mitrofanov, A. S.

TITLE: Siliconizing of refractory metals under nonequilibrium conditions

SOURCE: Poroshkovaya metallurgiya, no. 10, 1965, 67-70

TOPIC TAGS: siliconizing, refractory metal, silicide, molybdenum compound, aluminum containing silicon, chemical bonding

ABSTRACT: The kinetics of the formation and growth of the silicides of refractory metals is a complex physicochemical process. In such cases, chemisorption is followed by growth of the layers of the products of the chemical reaction, with eventual rise of an equilibrium at the phase interfaces, i.e., constancy of the concentrations of the chemically bound components. This picture is markedly complicated when an insignificant amount of a third element takes part in the reaction or when the system of the layers that form is a multiphase system. In this connection the authors describe the results of an investigation of the kinetics of the vacuum siliconizing of molybdenum in the presence of a small amount (1.0-1.2 wt.%) of aluminum dispersed in the silicon. It is shown that in the absence of an equilibrium concentration of Si at the phase interfaces during the initial stage of siliconizing, the growth of the silicide layer in time obeys a rectilinear law, because Al, which

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L 5321-66

ACC NR: AP5026274

3  
has a higher vapor pressure than Si, interferes with the supply of Si to the reacting surface. This happens only in the initial stage of the process, since equilibrium conditions begin to set in as the layer thickness increases, and the Al is gradually eliminated under the conditions of vacuum siliconizing. It is further shown that this rectilinear law of growth prevails not only in the case of compact and sufficiently thick single-phase layers but also for multi-phase layers, also because of the absence of an equilibrium at the phase interfaces (i.e. because of the variability of the concentrations of reacting substances). In this case, too, as the thickness of each phase and of the entire layer increases, an equilibrium sets in and the rectilinear law of layer growth is superseded by the parabolic law. Orig. art. has: 4 figures.

ASSOCIATION: Fiziko-tehnicheskiy institut AN UkrSSR (Physico-Technical Institute of the AN UkrSSR)

SUBMITTED: 22Nov64

ENCL: 00

SUB CODE: MM, GC

NO REF SOV: 002

OTHER: 003

Card

2/2 *mb*

GOVOR, V.M., inzh.; ISMAILOV, I.M., kand.tekhn.nauk; YARMUKHAMEDOV, U.Z., inzh.;  
SOSNOVSKAYA, B.Ya., inzh.; KRIVORUCHKO, V.N., inzh.

Cooling of cottonseed oil cake prior to storage. Masl.-zhir.prom. 29 no.2:  
40-41 F '63. (MIRA 1614)

1. Upravleniye pishchevoy promyshlennosti Soveta narodnogo khozyaystva  
Uzbezkoy SSR (for Govor). 2. Sredneaziatskiy filial Vsesoyuznogo  
nauchno-issledovatel'skogo instituta zhirov (for Ismailov, Yarmukhamedov,  
Sosnovskaya). 3. Yangiyul'skiy maslozhirovoy kombinat (for  
Krivoruchko).

(Oil cake—Storage)

KRIVORUCHKOV, I.I.; GOSEH, K.Ya.

New system for arc heating of hot tops. Prem. energ. 13 no.7:49-30  
Jl '58. (MIRA 11:10)

1. Tyazhpromelektroproyekt.  
(Electric heating)

KRIVORUK, B.M.

Changes in the nervous system during dysentery. Trudy Izhev.  
gos.med.inst. 21:162-165 '64. (MIRA 1961)

1. Kafedra nervnykh bolezney (zav. - dotsent T.S.Osintseva)  
Izhevskogo meditsinskogo instituta.

1. KAIKORON, I.
2. USSR (600)
4. Telegraph
7. Finding out and eliminating the causes of waste, Sov. sviaz., No. 10, 1951.

9. Monthly List of Russian Accessions, Library of Congress, April, 1953, Uncl.

PAVLOV, M.F.; KRIVORUK, M.P.

Method of reconditioning the track shoes of the OM-201 excavator.  
Rats.i izobr.predl. v stroi. no.79:30-31 '54. (MIRA 8:4)  
(Excavating machinery)

MA'TVEYEV, M.S.; KRIVOHUKOV, M.K.

Operation data of sewage purification plants of the Novo-Gor'kovskiy  
Petroleum Refinery. Khim.i tekhn.topl.i masel 5 no.4:19-24  
Ap '60. (MIRA 13:6)

1. Novo-Gor'kovskiy neftepererabatyvayushchiy zavod.  
(Sewage--Purification)

MATVEYEV, M.S.; KRIVORUKOV, M.K.

Use of electric current in the purification of waste waters.  
Prom. energ. 16 no.8:32-33 Ag '61. (MIRA 14:9)  
(Sewage--Purification)



KRIVORUKOV, V.L., inzh.; ROZHANSKIY, Z.Ye., inzh.

Charge and discharge devices for conditioning alkaline storage batteries.  
Elektrotehnika 34 no.12:75 D '63. (MIRA 17:1)

ACCESSION NR: AT4026357

S/0000/62/000/000/0215/0221

AUTHOR: Briling, K. K.; Krivorutskiy, Yu. Kh.; Levinskiy, L. S.

TITLE: Construction of a large-capacity magnetic operating memory (MOZU)

SOURCE: Konferentsiya po obrabotke informatsii, mashinnomu perevodu i avtomaticheskomu chteniyu teksta. Moscow, 1961. Vy\*chislitel'naya i informatsionnaya tekhnika (Information processing and computer technology); sbornik materialov konferentsii. Moscow, 1962, 215-221

TOPIC TAGS: memory, addressing, circuit design, magnetic memory, switch, commutator

ABSTRACT: The article describes the construction of an address-selection system for a magnetic operational memory device of large capacity and medium speed, built on the "Z" system. The various ways in which this problem might be solved are discussed. The authors indicate as the preferred technique the switching of the currents from a single source over selected branches through the use of current commutation devices (switches). The work begun in 1957 at the Laboratoriya elektromodelirovaniya (Electro-simulation Laboratory) on the design of an operating magnetic memory with magnetic control led, in 1959, to the creation of the MOZU-1000. The experience acquired in this

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ACCESSION NR: AT4026357

work demonstrated the operability and reliability of magnetic control systems; in this connection, the decision was made to continue this work in the development of a large-capacity magnetic operating memory. In the matter of selecting the control system, the authors compare two versions of address commutators: 1) a commutator using magneto-diode keys; 2) a commutator using boundary transformers. Both versions are discussed and analyzed in the article. With regard to the magneto-diode key type switch it is shown that the power of this device is basically determined by the switching of unselected cores by switching and zero channels and depends on the cross section of these channels; in turn, the section is determined by the number of output windings. After reaching a certain optimum value, the section begins to increase as the number of output turns increases. The second version (using boundary transformers) is also shown to suffer from a substantial defect - high rate of power consumption - because of the presence of a large number of passive elements. As a result, it was decided to use a third version of the address commutator, with a semiconductor triode operating under saturation as the switching element. This technique is described in some detail and it is shown that the channel current source can be very substantially simplified - one GU-50 tube instead of the 10-12 needed in the other versions, with the feed voltage capable of being lowered to 300 v, instead of 700-900 v. Orig. art. has: 6 figures and 24 formulas.

ASSOCIATION: None

Card 2/3

MANGERON, D.; KRIVOSEIN, L.E.

Some methods for solving the contour problems of a new class of linear integrodifferential equations. Pt. 1. Bul St si Tehn Tim 8 no.1:19-35 Ja-Je '63.

1. Institutul politehnic, Iasi (for Mengeron). 2. Universitatea de State, Frunze, U.R.S.S. (for Krivosein).

L1703

S/044/62/000/010/012/042  
B180/B186

16.45

AUTHORS: Mangeron, D., Krivosein, L. E.

TITLE: Some problems in the solution of integro-differential equations

PERIODICAL: Referativnyy zhurnal. Matematika, no. 10, 1962, 54, abstract 10B249 (An. stiint. Univ. Iasi, sec. 1, v. 5, no. 3, supl. 1960, 605-616) ([summaries in Rum. and French])

TEXT: Let

$$L[y] \equiv y^{(n)}(x) + \sum_{k=1}^n a_k(x) y^{(n-k)}(x);$$

$$P[y] \equiv \sum_{i=1}^k b_i(x) D_i[y];$$

$$D_i[y] \equiv \sum_{m=1}^i c_m(x_i) y^{(m)}(x_i); \quad S[y] \equiv \sum_{m=1}^p d_m(t) y^{(m)}(t);$$

$\lambda$  is a parameter;  $x_i, x, t \in [c, d]$ ; the well-known functions  $a_k(x), b_i(x), c_m(x), d_m(t), K_i(x, t)$  are determined in the square  $x, t \in [c, d]$ ,

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S/044/62/000/010/012/042  
B180/B186

Some problems in the solution ...

$z_1(x), \dots, z_n(x)$  is an arbitrarily stipulated, linearly independent  $n$ -times differentiable system of functions, the Wronskian of which is non-vanishing at the segments  $[c;d]$ ;  $H(x,t)$  is a given function which has the property:

$$\left[ \frac{\partial^l H(x,t)}{\partial x^l} \right]_{t=x} = \begin{cases} 0, & l = 0, 1, \dots, n-2; \\ a(x), & l = n-1. \end{cases}$$

where  $a(x) \neq 0$  at  $x \in [c;d]$ . For the boundary problem

$$R_l[y] \equiv \int_c^d r_l(t) S[y] dt = \gamma_l \quad (l = 1, \dots, n), \quad (a)$$

(I)

$$L[y] = f(x) + P[y] + \lambda \int_a^u \sum_{k=0}^m K_k(x,t) y^{(k)}(t) dt, \quad (b)$$

where  $u = x$  or  $u = b$ , the following are expounded: (1) Methods of deriving a solution; (2) Methods of deriving approximate solutions; (3) Conditions for the unambiguous and ambiguous solvability of problem (I). We will only outline the method for obtaining a solution to problem (I) for the case  $u = x$ ;  $n \geq (m, p, z)$ . If the functions

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Some problems in the solution ...

S/044/62/000/010/012/042  
B180/B186

$$y(x) = \sum_{k=1}^n c_k z_k(x) + \int_a^x H(x, t) \varphi(t) dt, \quad (\text{II}),$$

where  $c_1, \dots, c_n$  are certain constants, are substituted in equation (b), an integral equation of the Volterra type will be obtained in respect of  $\varphi(t)$ . Having found  $\varphi(t)$  from this and then substituting it in (II), the following equality is obtained

$$y(x) = f_1(x, \lambda) + \sum_{i=1}^n c_i v_i(x, \lambda) + \sum_{l=1}^k \beta_l(x, \lambda) D_l[y]. \quad (\text{III}).$$

If the (III) functions are substituted in boundary conditions (a),

$$\sum_{l=1}^k c_l d_{lj}(\lambda) = \mu_j(\lambda) + \sum_{l=1}^k w_{lj}(\lambda) D_l[y] \quad (j=1, \dots, n). \quad (\text{IV}).$$

If the  $c_1, \dots, c_n$  solution of the (IV) system is substituted in (III),

$$y(x) = F(x, \lambda) + \sum_{l=1}^k u_l(x, \lambda) D_l[y]. \quad (\text{V}).$$

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Some problems in the solution ...

After applying the operators  $D_j[\cdot]$  ( $j = 1, \dots, k$ ), to (V) we get the system of equations

$$\sum_{i=1}^k a_{ij}(\lambda) D_i[y] = a_j(\lambda) \quad (j = 1, \dots, k).$$

J

Finding  $D_j[y]$  ( $j = 1, \dots, k$ ) from this, and then substituting it in (V), we shall get an explicit term for the solution to problem (I). Also studied is the case where

$$\det(\delta_{ij}(\lambda)) = 0; \det(a_{ij}(\lambda)) = 0.$$

[Abstracter's note: Complete translation.]



MANGERON, D.; KRIVOSEIN, L.E. [Krivosein, L.Ye.]

New methods of numerical calculation of solutions of the integrodifferential different systems concerning applied mechanics. Pt.1. Studii cerc mec apl 17 no.6:1345-1372 '64.

1. Polytechnic Institute, Iasi (for Mangeron). 2. Academy of Sciences, Kirghiz S.S.R. (for Krivosein). Submitted March 30, 1964.

KRIVOSEJEV, I.

KRIVOSEJEV, J.; LAANEP, E., red.; MITT, T., tekhn. red.

[Narva; excursion guide] Narva; ekskursioonijuht. Tallin,  
Eesti Riiklik Kirjastus, 1960. 104 p. (MIRA 15:1)  
(Narva--Description)

KRIVOSHAPKIN, A.A.; USMINSKIY, A.N.; POKIDKO, N.M., redaktor; SANDLER, N.V.,  
redaktor izdatel'stva; DOROZHINA, L.P., tekhnicheskiy redaktor

[Palleting and bundling freight; experience of Leningrad docks with  
seagoing goods] Paketnaya pererabotka gruzov; opyt Leningradskogo  
morskogo trgovogo porta. Leningrad, Izd-vo "Morskoi transport,"  
1956. 56 p. (MIRA 10:9)  
(Freight and freightage) (Containers)

BORISOV, A.A.; KOMAROV, A.A.; ~~KRIYOSHAPKIN~~, A.A.; SOROKIN, P.P., spetsredaktor;  
KUZNETSOV, A.D., redaktor izdatel'stva; DROZHZHINA, K.P., tekhnicheskiy  
redaktor

[Manual for longshoremen crew leaders] Uchebnoe posobie dlia brigadira  
gruzchikov morskogo flota. Leningrad, Izd-vo "Morskoi transport,"  
1957. 168 p. (MLRA 10:9)  
(Loading and unloading)

KRIVOSHAPKIN, A. A

Packing piece freight and lumber for shipment. Blok.agit.transp.no.2:  
28-36 Ja '57. (MLRA 10:2)  
1. Starshiy tehnolog Leningradskogo morskogo porta.  
(Packing for shipment)

ANDRONOV, Leonid Petrovich, dots., kand. tekhn.nauk; VARSHAVSKIY, D.A.,  
retsenzent; KRIVOSHAPKIN, A.A., retsenzent; PRIKHOD'KO, B.G.,  
retsenzent; ~~BERKO, G.S., red.~~; LAVRENOVA, N.B., tekhn. red.

[Cargo handling and storage calculations] Skladskie i shtividornye  
raschety. Moskva, Izd-vo "Morskoi transport," 1962. 250 p.  
(MIRA 15:6)

(Cargo handling) (Warehouses)

KRIVOSHAPKIN, A.A.

Pack transportation, loading and unloading of exportation pulpwood  
logs. Biul. tekh.-ekon. inform. Tekh. upr. Min. mor. flota 7  
no.3:46-51 '62. (MIRA 16:5)

1. Starshiy tekhnolog Leningradskogo porta.  
(Lumber--Transportation)  
(Unitized cargo systems)

KRIVOSHAPKIN, B.V.

Our method of curve alignment. Put' i put.khoz. 6 no.3:32-33  
Mr '62. (MIRA 15:3)

1. Starshiy dorozhnyy master, st. Kizema, Severnoy dorogi.  
(Railroads—Curves)



KRIVOSHAPKIN, L.A.; ZLOBIN, M.G.

Modernization of hydraulic presses. Mashinostroitel' no.12:12  
D '63. (MIRA 17:1)

KRIVOSHAPKIN, L. A.; ANTONOV, M. N.

Improving the feed mechanism of a semiautomatic lathe. Mashino-  
stroitel' no.12:17 D '62. (MIRA 16:1)

(Lathes) (Feed mechanisms)

KRIVOSHAPKIN, I.A.; ANTONOV, M.N.

Improving a grinding machine. Mashinostroitel' no.8:18 Ag '64.  
(MIRA 17:10)

DEMESHEVA, G.A.; IVANCHIKOVA, B.I.; KRIVOSHAPKIN, M.A.; LEYCHIK, V.M.;  
OVSYANKINA, V.I.; FEOKTISTOVA, V.P.; TSINMAN, M.Z.; BEKKULOVA, S.N.;  
SUBKHANBERDINA, K.Kh.; RUBAKOV, P.I., laureat Stalinskoy premii,  
spetsial'nyy redaktor; SALANINA, O.V., kandidat sel'skokhozyaystven-  
nykh nauk, spetsial'nyy redaktor; SAKHAROVA, V.M., spetsial'nyy  
redaktor; KOSLENKO, V.V., spetsial'nyy redaktor; ZHIZNEVSKIY, F.V.,  
otvetstvennyy redaktor; BURLACHENKO, L.A., redaktor; ALFEROVA, P.V.,  
tekhnicheskiiy redaktor

[Experience of agricultural leaders of Kazakhstan; an annotated  
bibliography] Opyt peredovikov sel'skogo khoz'yaistva Kazakhskoi SSR;  
annotirovannyi ukazatel' literatury. Alma-Ata, 1955. 290 p. (MLRA 9:12)

1. Akademiya nauk Kazakhskoy SSR, Alma-Ata. Tsentral'naya nauchnaya  
biblioteka. 2. Tsentral'naya nauchnaya biblioteka Akademii nauk  
Kazakhskoi SSR. (for Demesheva, Ivanchikova, Krivoshapkin, Leychik,  
Ovsyankina, Feoktistova, Tsинman)  
(Bibliography--Kazakhstan--Agriculture)

OSHPAPKIH, N. A.

Jul 53

USSR/Medicine - Veterinary, Foot-and Mouth Disease

"Experimental Prophylaxis of Cattle Against the Foot-and-Mouth Disease," N.A. Krivosbapkin, A.S. Red'ko, Vet Physicians

Veterinariya, Vol 30, No 7, pp 25-26

Describes exptl inoculation of cattle with AETsS (anti-epithelial-cytolytic serum) prepd on the principle of Acad Bogomolets's AEsS [antireticular cytotoxic serum]. Epithelial tissues of diseased cattle were used as antigen. A serum with a titer of 1:300 was obtained from hyperimmunized horses. The author concludes that the results

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of the expt were favorable. Animals inoculated with AETsS and then exptly infected with the natural virus of foot-and-mouth disease contracted it in a light form and recovered in 5-7 days. Further research and laboratory work on a larger scale are essential to determine the value of the new serum.

USSR / Microbiology. Antibiosis and Symbiosis.  
Antibiotics.

F-2

Abs Jour: Ref Zhur-Biol., 1958, No 17, 76707.

Author : Krivoshapkin, N. A.; Chernov, M. V.; Ivannikov, A. B.  
Inst : Veterinary Institute, Kazakh Franch, All-Union  
Academy of Agricultural Sciences imeni I. V. Lenin.

Title : Use of Antibiotics in Laboratory Practice.

Orig Pub: Tr. In-ta vet. Kazakhs. fil. VASKHNIL, 1957, 8,  
248-253.

Abstract: No abstract.

Card 1/1

18

KRIVOSHAPKIN, N.A., vet. vrach; BAGROVSKAYA, N.N., vet. vrach.

Using antibiotics for the preservation of blood. Veterinaria 34 no.10:  
72-73 0 '57. (MLRA 10:11)  
(ANTIBIOTICS) (BLOOD--COLLECTION AND PRESERVATION)

KUZ'MIN, A.I.; SKRIPIN, G.V.; KRIVOSHAPKIN, P.A.; KHIMSKIY, G.F.

Energy spectrum of the diurnal variation of cosmic rays and  
the diurnal temperature fluctuations at an altitude from 20  
to 40 km. Geomag. i aer. 3 no.5:830-834 S-0 '63.(MIRA 16:11)

1. Yakutskiy filial Sibirskogo otdeleniya AN SSSR.



ACC NR: AR6027539

SOURCE CODE: UR/0313/66/300/005/0044/0044

AUTHOR: Krymskiy, G. F.; Altukhov, A. M.; Krivoshapkin, P. A.; Kuz'min, A. I.; Skripin, G. V.

TITLE: A new method for investigating cosmic ray anisotropy

SOURCE: Ref. zh. Issledovaniye kosmicheskogo prostranstva, Abs. 5.62.298

REF SOURCE: Sb. Issled. po geomagnetizmu i aeron. M., Nauka, 1966, 105-110

TOPIC TAGS: cosmic ray anisotropy, linear equation, earth magnetic field, particle trajectory, radiation spectrum, variational problem

ABSTRACT: A method using the spherical analysis of data from a worldwide network of stations is suggested in order to obtain the instantaneous characteristics of cosmic ray anisotropy. The analysis can be reduced to solving a system of linear equations with four unknowns. The solution determines the isotropic intensity and three components of the anisotropy vector. Introduced is a calculation for the coefficients for the unknowns in the equations for each station. The effect of the earth's magnetic field on particle trajectories, as well as differences in the energy spectra for isotropic and anisotropic variations, is considered. Abstract. [Translation of abstract]

SUB CODE: 04

Card 1/1

ACC NR: AT6027220

SOURCE CODE: UP/0000/66/000/000/0105/0110

AUTHOR: Krymskiy, G. F. ; Almukhov, A. M. ; Skripin, G. V. ; Krivoshapkin, P. A. ; Kuz'min, A. I.

ORG: none

TITLE: New method for studying the anisotropy of cosmic rays ✓

SOURCE: AN SSSR, Sibirskoye otdeleniye. Sibirskiy institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln. Issledovaniya po geomagnetizmu i aeronomii (Studies in geomagnetism and aeronomy). Moscow, Izd-vo Nauka, 1966, 105-110

TOPIC TAGS: cosmic ray anisotropy, cosmic ray intensity, cosmic ray

ABSTRACT: A method is proposed for determining the instantaneous characteristics of the anisotropy of cosmic rays. The method will make it possible to obtain the anisotropy distribution in the meridional planes and to study the anisotropy of phenomena characterized by abrupt changes in the isotropic background (such as the Forbush decreases), all of which was not possible using the method of diurnal variations. The method proposed makes use of the fact that the world-wide network of stations established during the IGY makes it possible to determine the neutron component with an hourly statistical accuracy of 0.1% and, therefore,

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ACC NR: AT6027220

to determine the anisotropy characteristics over a 2-hr observational period, provided that its amplitude exceeds the mean amplitude by a factor of more than 2. A distinctive feature of the method is the representation of the distribution of cosmic-ray intensity over the celestial sphere in the form of a series in spherical functions and the use of the first spherical harmonic of the series. The expression for the first harmonic yields the amplitude of the anisotropy vector and an expression for the intensity in an arbitrary direction at an angle to the direction of the anisotropy vector. The spherical analysis reduces to the solution of a system of linear equations with four unknowns. The solution of the system determines the isotropic portion of cosmic-ray intensity as well as three components of the anisotropy vector. The coefficients at the unknowns are calculated and tabulated for 38 stations, taking into account the effect of the geomagnetic field on the charged-particle trajectories, and also the energy spectrum of the variations. Orig. art. has: 6 formulas and 1 table.

SUB CODE: 04/ SUBM DATE: 25Dec65/ ORIG REF: 012/ OTH REF: 002

Card 2/2 *eqh*

L. 0000-01 ENT(1)/ENT(2)/TCC LIT(1) GRAM

ACC NR: AT6027221

SOURCE CODE: UR/0000/66/000/000/0111/0118

AUTHOR: Kuz'min, A. I.; Krymskiy, G. F.; Krivoschapkin, P. A.; Skripin, G. V.; Chirkov, N. P.; Shafer, G. V.

SI  
BT1

ORG: none

19

TITLE: The nature of cosmic ray variations

SOURCE: AN SSSR. Sibirskoye otdeleniye, Sibirskiy institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln. Issledovaniya po geomagnetizmu i aeronomii (Studies in geomagnetism and aeronomy). Moscow, Izd-vo Nauka, 1966, 111-118

TOPIC TAGS: cosmic ray intensity, solar cycle, magnetic field

ABSTRACT: A brief survey is given of available data concerning the variation of cosmic ray intensity and the effect responsible for this variation. The effects of fluctuations of the magnetosphere and temperature fluctuations in the upper atmosphere on cosmic ray variations are examined. Cosmic ray flares with energies up to 10 Bev, and their association with Forbush decreases are discussed in relation to their effect on cosmic ray variations. The 11-year variations, 27-day variations, and solar diurnal and annual variations are shown to be closely interrelated, and to have modulation of galactic cosmic rays by the radial inter-

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Card 1/2

L 04887-67

ACC NR: AT6027221

planetary field as their common source. All existing observations on the variation of cosmic ray intensity are seen to indicate the existence of an external (with respect to the sun) radial interplanetary magnetic field and the predominant contribution of the dynamic effects of the field's disturbances to the modulation of galactic particles. An important feature of the field's configuration (deduced from observations of the variation of cosmic ray intensity, and also from other unrelated data) is its oblateness with respect to the plane of the ecliptic or the solar equatorial plane.

SUB CODE: 04/ SUBM DATE: 25Dec65/ ORIG REF: 026/ OTH REF: 009,

Card 2/2

*esp*

L 45143-65 EWT(1)/FCC GW

ACC NR: AR6027538 SOURCE CODE: UR/0313/66/000/005/0043/0043

AUTHOR: Kuz'min, A. I.; Krymskiy, G. F.; Krivoshapkin, P. A.; Skripin, G. V.; Chirkov, N. P.; Shafer, G. V.

52  
B

TITLE: The nature of cosmic ray variations

SOURCE: Ref. zh. Issledovaniye kosmicheskogo prostranstva, Abs. 5.62.292

REF SOURCE: Sb. Issled. po geomagnetizmu i aeron. M., Nauka, 1966, 111-118

TOPIC TAGS: cosmic ray, cosmic ray variation, magnetic field, interplanetary magnetic field, magnetosphere

ABSTRACT: A review of studies is presented on cosmic ray variations caused by changes in the magnetosphere, the temperature of the upper atmosphere, modulation effects, and flare effects. The role of the interplanetary magnetic field in the generation of cosmic ray variations is emphasized and the characteristics of the field are evaluated. [Translation of abstract] [FM]

SUB CODE: 03, 04/ SUBM DATE: none/

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20101-65 ENT(1)/ENG(v)/FGC/EEC-1/EEC(t)/EWA(h) Po-L/Pc-5/Pg-1/Pac-2/Peb/Pi-1  
CLASSIFICATION NR: AP5002101 GW/AS S/0048/64/028/012/1997/2000

AUTHOR: Kuz'min, A. I.; Krynskiy, G. F.; Krivoshapkin, P. A.;  
Shirkov, N. P.; Shafer, G. V.

Modulation of cosmic rays by an interplanetary magnetic  
field

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v 28, no. 12,  
1964, 1997-2000

KEYWORDS: cosmic ray flux, chromospheric flare, magnetic field,  
terrestrial orbit, solar particle, Forbush decrease, galactic cosmic  
ray, exponential function, interplanetary magnetic field

ABSTRACT: The flux of cosmic rays depends upon the state of chro-  
mospheric flares. A reflecting magnetic field can exist inside or  
outside the terrestrial orbit; this field does not restrict the mo-  
tion of solar particles. The modulation of cosmic rays during various  
flares can be traced in the Forbush decrease. The Forbush decrease  
is not a result of the particles being scattered freely. The Forbush decrease  
is separated from other space by an envelope in this sector.

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ACCESSION NR: AP5002101

gated space, solar cosmic rays may move away from or toward the sun. This segregated space is characterized by a decrease of galactic cosmic rays. The energy spectrum of particles with an energy more than 7 Bev is characterized by a power-law distribution with an exponent of  $-0.5$  to  $-1.0$ . Variations of the intensity of cosmic rays are associated with the 11-year solar activity cycle. The degree of variation is greater in the polar regions than at middle latitudes. The delay in the Forbush decrease on the earth as compared with the solar chromospheric flares obtained by experiments indicates an expansion of the magnetic shell of the segregated space with a velocity of  $10^8$  cm sec $^{-1}$ . This expansion may be identified with the expansion of the radial interplanetary magnetic field. The intensity of galactic cosmic rays is less in the vicinity of the solar system than in the free flux in the galaxy. An intensity gradient of cosmic rays must exist at the boundary between the solar system and the unperturbed galaxy. Orig. art. has: 1 figure, 1 table, and 4 tables. [30]

ASSOCIATION: Institut kosmofizicheskikh issledovaniy i aeronomii  
Sibirskogo filiala Sibirskogo otdeleniya Akademii Nauk SSSR

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L 23401-65

ACCESSION NR: AP5002101

(Institute of Space Physics Research and Aeronomy of the Yakutsk  
Branch of Siberian Division, Academy of Sciences, SSSR)

EDITED: 00

ENCL: 01

JOB CODE: AA

NO REF SOV: 008

OTHER: 004

Card 3/3

L 4510-66 EWT(1)/EWT(m)/FCC/T/EWA(h) IJP(c) GS/GW

ACCESSION NR: AT5022836

UR/0000/65/000/000/0239/0245

36  
35  
3+1

AUTHOR: Kuz'min, A. I.; Krivoshapkin, P. A.; Krymskiya, G. F.; Skripin, G. V.

TITLE: The study of upper atmosphere temperature variations from terrestrial measurements of cosmic rays

SOURCE: Vsesoyuznoye soveshchaniye po kosmofizicheskomu napravleniyu issledovaniy kosmicheskikh luchey, 1st, Yakutsk, 1962. Kosmicheskiye luchy i problemy kosmofiziki (Cosmic rays and problems in cosmophysics); trudy soveshchaniya. Novosibirsk, Redizdat Sib. otd. AN SSSR, 1965, 239-245

TOPIC TAGS: cosmic ray measurement, atmospheric temperature, cosmic ray intensity, upper atmosphere

ABSTRACT: Data concerning the dynamics of the mesosphere are necessary for the understanding of the coupling mechanism between the solar and terrestrial events and of the general circulation of the atmosphere. However, systematic data about atmospheric dynamics at altitudes between 20 and 80 km are practically nonexistent. The present article, consequently, gives results concerning the periodic temperature variations of the mesosphere as derived from the terrestrial measurements of cosmic rays at Yakutsk. The cosmic ray intensity was measured continuously over the 1959-1960 period at 30 and 60° from

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ACCESSION NR: AT5022836

the zenith on the Earth's surface and underground at 20 and 60 m. w. equiv. (some data concerning daily variations are based on the 1958-1959 period). Experiments were carried out under the assumption that the variations in cosmic ray intensity at 60° and 20 (60) m. w. equiv. depths were caused by temperature variations of the atmosphere only. The analysis of data confirmed the accepted production mechanism for the hard cosmic ray component via intermediate nuclear-active mesons. Significant periodic changes in upper atmosphere temperature were found at the height of the ozone layer. These seasonal variations were between 35 and 50C, the 27-day variation amplitude was 5-10C, while daily variations were within the 3-7° limit. The yearly maximum appears in the fall, and the daily maximum during night hours. The observed temperature variations agree well with data from spectral observations of the night skies. The spectral results referring to altitudes of 80-120 km have amplitudes several times larger than the corresponding results for the 20-50 mb layer presented in this article. Orig. art. has: 2 formulas, 7 figures, and 2 tables.

ASSOCIATION: Institut kosmofizicheskikh issledovaniy i aeronomii YaF SO AN SSSR (Institute of Cosmic Physics Studies and Aeronomy, YaF SO AN SSSR)

SUBMITTED: 29Oct64

ENCL: 00

SUB CODE: ES, AA

NO REF SOV: 005

OTHER: 000

PC  
Card 2/2

L 29178-66 - EWT(1)/FCC/EWA(h) GW

ACC NR: AP6018864

SOURCE CODE: UR/0203/65/005/005/0817/0825

AUTHOR: Skripin, G. V.; Krivoshapkin, P. A.; Krymskiy, G. F.; Filippov, V. A.

ORG: Institute of Astrophysical Research and Aeronomy, Yakutsk Branch, SO AN SSSR  
(Institut kosmofizicheskikh issledovaniy i aeronomii Yakutskogo Filiala SO AN SSSR)

TITLE: Study of the anisotropy of cosmic rays by the crossed telescopes method

41  
39  
B

SOURCE: Geomagnetizm i aeronomiya, v. 5, no. 5, 1965, 817-825

TOPIC TAGS: cosmic ray anisotropy, geomagnetic field, solar activity

ABSTRACT: A method is proposed for taking into account distortions of anisotropy of cosmic rays by the geomagnetic field and the directional diagram of the instrument. The authors have computed matrices restoring the true vector of anisotropy for instruments of the Yakutsk complex. Computations were made using coupling coefficients for different zenith angles and three forms of the energy spectrum of anisotropy. Using the matrices the authors have restored the true vectors of anisotropy for the neutron component for three epochs of solar activity (1958-1964). Readings of azimuthal telescopes were used in finding the true vectors and the vectors of the atmospheric influence for the earth's surface and for depths of 7.20 and 60 m (water equivalent). An evaluation is given of the degree of agreement between the derived vectors and three forms

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L 29178-56

ACC NR: AP6018864

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of energy spectra. Use of the matrices makes it possible to determine the primary and atmospheric components of the diurnal wave. In the period of the maximum and decline of solar activity observations are described satisfactorily by a spectrum given by the diffusion mechanism. The authors express thanks to L. I. Dorman and A. I. Kus'min for their fruitful discussion of a number of problems. Orig. art. has: 4 figures, 8 formulas, and 1 table. [JPRS]

SUB CODE: 04, 03, 08 / SUBM DATE: 02Nov64 / ORIG REF: 009 / OTH REF: 007

Card 2/2

PP

170  
KRIVOSHAPKO, M.R., insh.

Protecting communication channels from disturbances caused by  
electric traction. Avtom., telem. i sviaz' 2 no.1:27 Ja '58.  
(MIRA 11:1)

1. Laboratoriya signalizatsii i svyazi L'vovskoy dorogi.  
(Telephone lines)

MASHINSKIY, V.L.; POPOV, I.K. [deceased]; KRIVOSHAPOV, I.S., red.

[Problems of the organization of production in nurseries, flower and greenhouse farms, and orchard and park management; brief lectures as an aid to correspondence teaching] Voprosy organizatsii proizvodstva v pitomnikakh, tsvetochno-oranzhe-reinykh i sadovo-parkovykh khoziaistvakh; kratkie lektsii v pomoshch' zaobnomu obucheniiu. Moskva, Vserossiiskoe ob-vo sodeistviia okhrane prirody i ozeleneniiu naselennykh punktov, 1960. 86 p. (MIRA 15:7)

(Plants, Ornamental)

GASSOVSKIY, L. N.; KRIVOSHAPOVA, L. V.

Multifocal eyeglasses. Nov. med. tekhn. no.2:47-59 '61.  
(MIRA 14:12)

1. Gosudarstvennyy ordena Lenina opticheskiy institut imeni  
S. I. Vavilova.

(EYEGLASSES)



KRIVOSHCHAPOV, M., polkovnik, Voyenny letchik pervogo klassa

Flight discipline and flight commander. Av. i kosm. 47 no.9:  
32-37 S '64 (MIRA 17:6)

SNEZHKO, N.; KRIVOSHCHESKIY, A., <sup>F</sup> glavnyy vrach

Prophylactic surveys for the detection of cancer and pre-cancerous conditions. Zdrav.Belor. 5 no.6:55-56 Je '59.  
(MIRA 12:9)

1. Zavoduyushchaya Gomel'skim gorzdravotdelom (for Snezhko).
2. Gomel'skiy oblastnoy onkodispenser (for Krivoshekiy).  
(CANCER)

KRIVOSHCHEKIY, A.F., zasluzhennyy vrach BSSR; GRIBENNIKOVA, D.M.

Dispensary service in stomach diseases. Zdrav. Bol. 9 no.6:54-55  
Je '63. (MIRA 17:5)

1. Iz Gomel'skogo oblastnogo onkologicheskogo dispansera (glavnyy  
vrach A.F. Krivoshekiy).

KRIVOSHCHEKIY, A.F.

Practices of consultation centers in the prevention of cancer  
in women. Vop.onk. 6 no.2:98-101 F '60. (MIRA 14:2)  
(GENERATIVE ORGANS, FEMALE—CANCER)

KRIVOSHCHEKIY, A.F.

Thrombocyte count in the diagnosis of cancer. Vest.khir. no.7:  
30-34 '61. (MIRA 15:1)

1. Iz Gomel'skogo onkologicheskogo dispansera (gl. vrach -  
A.F. Krivoshekiy).  
(CANCER--DIAGNOSIS) (BLOOD PLATELETS)

S. N. KURBANOV, G.S.

A.V. Fedushin, zoologist of Siberia. Okhr. prirody  
Izd. Vost. no.1:212-220 1962.

"Nature of Tomsk Province and its protection." Reviewed by  
G.M. Krivonozhkov. Ibid.:252-255 (1962) 1964

БЕЛЕН, Б.С., КСЕВРОПОСОВ, С.И.

New literature on problems of conservation in Bulgaria:  
1951-1960. Okhr. prir. Sib. i Bal'. Vest. no. 2, 1967, 187-192.  
(MIRA 1245)

LOGANZEN, B.G.; GUNDRIZER, A.N.; KAFANOVA, V.V.; KRIVOSHCHEKOV, G.M.

Lake Teletskoye as a unique body of water of the Altai and  
an object deserving protection. Izv. Alt. otd. Geog. ob-ya  
SSSR no.5:216-217 '65. (MIRA 18:12)

1. Tomskiy gosudarstvennyy universitet.



IOGANZEN, B.G.; PETKEVICH, A.N.; KRIVOSHCHIEKOV, G.M., red.

[New fishes of Western Siberia] Novye ryby Zapádnói Sibiri.  
Novosibirak. 1960. 50 p. (MIRA 14:7)

1. Vserossiyskoye obshchestvo sodeystviya okhrane prirody i  
ozeleneniyu naselennykh punktov.  
(Siberia, Western--Fishes)  
(Animal introduction)

KATVOSHCHENKOV, G.P.

Discussion of problems in ecology at the Biological Institute of the  
Siberian Division of the Soviet Academy of Sciences. *Izv.Sib.otsd.*  
AN SSSR no.12:137 '60. (MIRA 14:2)  
(Ecology)

KRIVOSHCHENKOV, G.V.; DROBININA, A.V.

A new cathode for thermionic emission. Izv.vost.fil. Ak SSSR  
no.2: 10-94 '57. (MLRA 10:9)

1. Zapadno-Sibirskiy filial Akademii nauk SSSR.  
(Thermionic emission) (Cathodes)

*KRIVOSHCHEKOV, G. V.*

AUTHORS: Rumer, Yu. B., Doctor of Physico -Mathematical Sciences, Krivoshchekov, G. V. 30-10-16/26

TITLE: The Siberian Institute of Radiophysics and Electronics (Sibirskiy institut radiofiziki i elektroniki).\*

PERIODICAL: Vestnik AN SSSR, 1957, October, Nr 10, pp. 108-110 (USSR)

ABSTRACT: Scientific research is being conducted at the Siberian Institute of Radiophysics and Electronics in the following fields:

- a) Theoretical physics (applied electrodynamics)
- b) Electronic phenomena at super-high frequencies.
- c) Electronics of cathodes.
- d) Physics of gas-discharges.

Methods of mathematical physics were developed and the following problems studied:

- 1) Theory of directional antennas.
- 2) Studies of distribution of the currents in aerials with optimum radiation pattern.
- 3) Theoretical investigation of wave guides the cross-section of which changes slowly.
- 4) Development of a new theory of the magnetron.
- 5) Experimental determination of a new inversion process of the conductivity of diodes. \*[ organized from the Section of Technical Physics of the West-Siberian Branch of the AS USSR]

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