

L 14054-66

ACC NR: AT6003455

SOURCE CODE: UR/0000/65/000/000/0072/0082

51  
BFI

AUTHOR: Kotova, A. B.; Tushenkov, L. I.; Antomonov, Yu. G. (Candidate of biological sciences)

ORG: Institute of Cybernetics AN UkrSSR, Kiev (Institut kibernetiki AN UkrSSR)

TITLE: Use of an analog computer for analyzing the properties of a mathematical model for excitation of nerve tissue

SOURCE: AN UkrSSR. Issledovaniya po bionike (Research in bionics). Kiev. Naukova dumka, 1965, 72-82

TOPIC TAGS: nerve fiber, neuron, mathematic model, electrophysiology, bionics, computer application, analog computer, switching theory

ABSTRACT: An analog computer is used for analyzing a nonlinear nonhomogeneous differential equation with a discontinuity coefficient of the form:

$$U' + \text{sgn} W \cdot dJ = V; \quad (1)$$

$$W = E_n - \int (V - V_n + V') dt + \int (U + U') dt; \quad (2)$$

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where  $V$  is the stimulating voltage,  $U$  is the nerve tissue potential,  $E_n$  is the analog of the threshold value for the integral of external energy, and  $V_n$  is the threshold with respect to voltage. This equation was proposed by Yu. G. Antomonov in the present collection of articles as a mathematical model for excitation of nerve tissue. This model was analyzed for the following properties of nerve tissue with respect to switching function (2): 1. the nature of responses to subthreshold depolarizing and hyperpolarizing stimulation; 2. the threshold relationship for various forms of the stimulating pulse; 3. the threshold summation; 4. adaptation; 5. transformation of response rhythm; 6. response frequency as a function of the amplitude of a depolarizing stimulating pulse. A schematic diagram is given of the model which was set up on an MN-7 nonlinear analog computer. Passive variations in the rest potential of the tissue (electronus) generated by weak pulses are discussed. Oscillograms and graphs are given for the resultant data. A comparison of these results with experimental physiological data shows that differential equation (1) and switching function (2) give a satisfactorily complete description of the properties of nerve tissue excitation. Orig. art. has: 19 figures, 6 formulas.

SUB CODE: 06,09/

SUBM DATE: 25Aug65/

ORIG REF: 003/

OTH REF: 000

BVK  
Card 2/2

MEDVEDEV, K.P.; KHUDOKORMOVA, N.P.; AKIMOVA, L.M.; SENICHENKO, S.Ye.;  
~~KOTOVA, A.D.~~

Investigating the relation between the composition of the mineral  
part of coals and their germanium content. Koks i khim. no.1:9-13 '63.  
(MIRA 16:2)

(Coal--Analysis)

U CHZHUAN-DA [Wu Chuang-ta]; KOTOV, A.V. [translator]; KOTOVA, A.F.  
[translator]; GLUSHAKOV, P.I., red.; MIKHAYLOV, A.F., red.;  
KHAR'KOVSKAYA, L.M., tekhn.red.

[Taiwan; a geographical outline] Taivan'; geograficheskii  
oчерk. Pod red. P.I.Glushakova. Moskva, Izd-vo inostr.  
lit-ry, 1959. 328 p. (MIRA 12:9)  
(Formosa--Description and travel)

LIAN ZHEN'-TSAY [Liang, Jen-ts'ai]; KHUAN MYAN' [Huang, Mien];  
SHEN' VEY-CHEN [Wei-ch'eng]; GAVRILOV, V.G. [translator];  
KOTOV, A.V. [translator]; KOTOVA, A.F. [translator];  
SUN' TSZIN-CHZHI [Sun Ching-chih], red.; CHERNOZHUKOV, K.N.,  
red.; MIKHAYLOV, A.F., red.; BELEVA, M.A., tekhn.red.

[Southern China] Iuzhnyi Kitai. Otv. red. Sun, Ching-chih.  
Moskva, Izd-vo inostr. lit-ry, 1962. 389 p. (MIRA 15:8)  
(China, Southern--Economic geography)

LOZINSKIY, S.N., starshiy prepodavatel' (g.Odessa); KOTOVA, A.I.,  
assistent (g.Odessa)

[Collection of problems on probability theory] Sbornik zadach  
po teorii veroiatnoستي. Odessa, Odesskii kreditno-ekon.in-t.  
No.1. 1960. 62 p. (MIRA 14:1)  
(Probabilities)

ANTIPIN, V.I.; BUDANOV, N.D.; KOTLUKOV, V.A.; LEYBOSHITS, A.M.;  
PROKHOROV, S. P.,, kand.geol.-minor.nauk; SIRMAN, A.P.;  
FALOVSKIY, A.A.; SHTEYN, M.A.; BASKOV, Ye.A.; BOGATKOV,  
Ye.A.; GANEYEVA, M.M.; ZARUBINSKIY, Ya.I.; IL'INA, Ye.V.;  
KATSIYAYEV, S.K.; KOMPANIYETS, N.G.; NELYUBOV, L.P.;  
PONOMAREV, A.I.; REZNICHENKO, V.T.; RULEV, N.A.; TSELIGOROVA,  
A.I.; ALSTER, R.K.; SHVETSOV, P.F.; VYKHODTSEV, A.P.; KOTOVA,  
A.I.; KASHKOVSKIY, G.N.; LOSEV, F.I.; ROMANOVSKAYA, L.I.;  
PROKHOROV, S.P.; MATVEYEV, A.K., dots., retsenzent; CHEL'TSOV,  
M.I., inzh., retsenzent; KUDASHOV, A.I., otv. red.; PETRYAKOVA,  
Ye.P., red. izd-va; IL'INSKAYA, G.M., tekhn. red.

[State of flooding and conditions for the exploitation of coal-  
bearing areas in the U.S.S.R.] Obvodnennost' i usloviia eksplu-  
atatsii mestorozhdenii ugol'nykh raionov. Pod nauchn. red.  
S.P.Prokhorova. Moskva, Gosgortekhzdat, 1962. 243 p.

(MIRA 15:7)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut gidro-  
geologii i irzhenernoy geologii. 2. Kafedra geologii i geo-  
khimii goryuchikh iskopayemykh Moskovskogo Gosudarstvennogo  
universiteta (for Matveyev).

(Coal geology) (Mine water)

S/181/63/005/002/024/051  
B104/B102

AUTHORS: Predvoditelev, A. A., Spivak, G. V., Kotova, A. M.,  
Yurasova, V. Ye., and Kushnir, F. F.

TITLE: Study of non-decored dislocations in zinc single crystals  
by ion bombardment

PERIODICAL: Fizika tverdogo tela, v. 5, no. 2, 1963, 542-545

TEXT: This paper is aimed to prove the possibility of detecting "virgin" dislocations by ion bombardment of single-crystal faces. Cylindrical zinc single crystals (2.5 mm in diameter, 50 mm high) were split along the (0001) plane at nitrogen temperature and the faces were bombarded with ions in flowing neon gas. Thin pieces of specimens that had been bombarded with ions on both (0001) planes showed the same etch patterns on both sides. Repeated etching of any one surface section produces no new etch patterns but intensifies those existing. The results from chemical etching and from ion bombardment are consistent. The most favorable experimental conditions are: neon pressure between  $6 \cdot 10^{-2}$  and

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Study of non-decored dislocations ...

S/181/63/005/002/024/051  
B104/B102

$3 \cdot 10^{-2}$  mm Hg, voltage between anode and specimen between 1.5 and 1.75 kv, current density at the specimen  $1.2 \text{ a/cm}^2$ , bombardment period, approximately one hour. There are 5 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V.  
Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: June 23, 1962 (initially)  
August 29, 1962 (after revision)

Card 2/2



GINDIN, Ye.Z.; LEYKIN, G.A.; LOZINSKIY, A.M.; MASNICH, A.G.; AL'PERT, Ya.L.;  
CHUDSENKO, E.F.; SHAPIRO, B.S.; GALKIN, A.M.; GORLOV, O.G.; KOTOVA,  
A.P.; KOSOV, I.I.; PETROV, A.V.; SEROV, A.D.; CHERNOV, V.H.;  
YAKOVLEV, V.I.; MIKHAYLOV, A.A., otvetstvennyy red.; BEN'KOVA, N.P.,  
doktor fiz.-mat. nauk, otvetstvennyy red.; SILKIN, B.I., red.;  
PODOL'SKIY, A.D., red.; PRUSAKOVA, T.A., tekhn. red.

[Preliminary results of the scientific research on the first  
Soviet artificial earth satellites and rockets; collection of  
articles in the 11th section of the IGY program (rockets and  
satellites)] Predvaritel'nye itogi nauchnykh issledovaniy s  
pomoshch'yu pervykh sovetskikh iskusstvennykh sputnikov zemli  
i raket; sbornik statei (XI razdel programmy MGG - rakety i  
sputniki). Moskva, Izd-vo Akad. nauk SSSR, No.1. 1958. 148 p.  
(MIRA 11:10)

1. Russia (1923- U.S.S.R.) Mezhdunarodstvennyy komitet po  
provedeniyu Mezhdunarodnogo geofizicheskogo goda. 2. Galen-kor-  
respondent AN SSSR (for Mikhaylov).

(Atmosphere, Upper-Rocket observations)  
(Artificial satellites)

KOTOVA, A.P., mladshiy nauchnyy sotrudnik

Dynamics of vestibular disorders in severe acute craniocerebral injuries. Vest.otorin. no.5:47-51 '62. (MIRA 15:9)

1. Iz Nauchno-issledovatel'skogo ordena Trudovogo Krasnogo Znameni instituta neyrokhirurgii imeni akademika N.N. Burdenko AMN SSSR (dir. - deystvitel'nyy chlen AMN SSSR zasluzhennyy deyatel' nauki prof. B.G. Yegorov), Moskva.  
(BRAIN--WOUNDS AND INJURIES) (LABYRINTH (EAR))

PLINER, M.A. (Moscow); KOFOVA, A.P. (Moscow)

A case of lingual actinomyces. Stomatologia no.6:54-55 '53. (MLRA 7:1)  
(Tongue--Diseases) (Actinomyces)

KOTOVA, A.P. (Moskva)

Cholesteatoma of the maxillary sinus, ethmoidal labyrinth, and orbit. Vest.oto-rin. 16 no.2:78-79 Mr-Ap '54. (MLRA 7:6)

(ETHMOID BONE, neoplasms,

\*cholesteatoma of ethmoidal labyrinth, maxillary sinus & orbit)

(ORBIT, neoplasms,

\*cholesteatoma of maxillary sinus, ethmoidal labyrinth & orbit)

(MAXILLARY SINUS, neoplasms,

\*cholesteatoma of maxillary sinus, ethmoidal labyrinth & orbit)

KOTOVA, A.P., assistant

Vascular reactions in patients with hypertension following treatment with reserpine. Sbor. trud. Kursk. gos. med. inst. no.13: 330-333 '58. (MIRA 14:3)

1. Iz kliniki propedevtiki vnutrennikh bolezney (zav. - prof. M.A.Cherkasskiy)Kurskogo gosudarstvennogo meditsinskogo instituta.  
(HYPERTENSION) (RESERPINE)  
(REFLEXES)

KOTOVA, A.P., assistant

Vascular reactions in hypertensive patients following treatment  
with redergam. Sbor. trud. Kursk. gos. med. inst. no.13:365-368  
'58. (MIRA 14:3)

1. Iz kliniki propedavtiki vnutrennikh bolezney (zav. - prof.  
M.A.Cherkasskiy) Kurskogo gosudarstvennogo meditsinskogo instituta.  
(HYPERTENSION) (ERGOTOXIN)  
(REFLEXES)

KOTOVA, A. P., Cand Med Sci -- (diss) "Vascular reactions in patients with hypertonic sickness. (According to data based on plethysmography, arterial tonometry and oscillography)." Smolensk, 1960. 22 pp; (Ministry of Public Health RSFSR, Smolensk State Medical Inst); 200 copies; price not given; (KL, 52-60, 122)

КОТОВА, А. Р.

А. П. Котова защитила 6/XII 1960 г. в Совете Смоленского медицинского института диссертацию на тему «Сосудистые реакции у больных гипертонической болезнью».

Использованные методы исследования (плетизмография, артериальная тонометрия и осциллография) открывают известную возможность объективного учета динамики нервно-сосудистой реактивности в процессе дифференцированного лечения больных гипертонической болезнью.

Candidate of Medical Sciences

Dissertations approved by the Higher Attestation Commission in January and February of 1961. Terap. arkh. no.6:117-121 '61



CHERKASSKIY, M.A., prof.; KOTOVA, A.P., assistant

Vascular reactivity in regional angiodystonia; original data.  
Sbor, trud. Kursk, gos. med. inst. no.16:202-209 '62.

(MIRA 17:9)

1. Iz kliniki propedvtiki vnutrennikh bolezney (zav. - prof.  
M, A. Cherkasskiy) Kurskogo meditsinskogo instituta.

17.9000

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SOV/169-59-5-5349

Translation from: Referativnyy zhurnal, Geofizika, 1959, Nr 5, p 139 (USSR)

AUTHORS: Galkin, A.M., Gorlov, O.G., Kotova, A.R., Kosov, I.I., Petrov,  
A.V., Serov, A.D., Chernov, V.N., Yakovlev, V.I.

TITLE: Investigations of the Vital Activity of Animals When Flying  
in Hermetically Sealed Cabins of Rockets up to a Height of  
212 km 3 ✓

PERIODICAL: V sb.: Predvarit. itogi nauchn. issled. s pomoshch'yu pervykh  
sov. iskusstv. sputnikov Semli i raket. Moscow, AS USSR, 1958,  
pp 112 - 129 (res. Engl.)

ABSTRACT: Since 1949 systematical medical-biological investigations have  
been carried out in the Soviet Union during flights in rockets  
into upper layers of atmosphere. As experimental animals dogs  
of a weight of 5 - 7 kg were chosen. During the flight, pulse,  
blood pressure, and respiration were registered, moreover,  
electrocardiograms were taken. During the entire flight, dogs  
were continuously filmed. The results of investigations allow  
the following conclusions: the conditions in flying with rockets

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S/726/58/000/001/003/004  
E195/E385

**AUTHORS:** Galkin, A.M., Gorlov, O.G., Kotova, A.R., Kosov, I.I.,  
Petrov, A.V., Serov, A.D., Chernov, V.N. and  
Yakovleb, V.I.

**TITLE:** Investigation of the vital activity of animals  
during flight in an airtight rocket cabin to an  
altitude of 212 km

**SOURCE:** Predvaritel'nyye itogi nauchnykh issledovaniy s  
pomoshch'yu pervykh sovetskikh iskusstvennykh  
sputnikov Zemli i raket; sbornik statey. no. 1.  
XI razdel programmy MGG (rakety i sputnik). Moscow,  
Izd-vo AN SSSR. 112 - 129

**TEXT:** The behavior of animals during high-altitude flight  
in rockets as well as their state of health and changes registered  
after the flight have been studied in the USSR since 1949. The  
results of investigations carried out on 14 dogs of 5 - 7 kg in  
weight are described. Their blood pressure, pulse, respiration,  
before, during and after the flight were registered, cardiograms  
were made and their behavior during the flight filmed. A short  
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Investigation of ....

S/726/58/000/001/003/004  
E195/E385

description of the airtight cabin and its equipment is given. The conditions of rocket flights to altitudes of 100 to 212 km did not produce sudden changes from the normal in the physiological functions of animals nor in their behavior and health, kept under control after the flight. Some of the animals used in the tests were narcotized. During the active part of the flight the heart-beats, breathing and blood pressure of the non-narcotized animal usually increased. In the period of dynamic weightlessness the registered physiological parameters reached a high level with a decreasing tendency during the first 2-3 minutes. The return to the starting level of physiological conditions took place after 5 -6 min. of the action of dynamic weightlessness. There are 12 figures and 5 tables.

Card 2/2

KOTOVA, A.V.; YEMEL'YANOVA, S.V.; BEN'KOVSKIY, V.G.

Removal of vanadium from oil and petroleum products with the  
aqueous solutions of sulfo acids. Khim. i tekhn. topl. i masel  
10 no.10:29-31 O '65. (MIRA 18:10)

1. Institut khimii nefti i prirodnykh soley AN KazSSR.

VIKTOROVA, M.Ye.; KOTOVA, A.V.

Colorimetric determination of boron, bormine, iodine, and phosphate-ions  
in highly mineralized waters of the Emba region. Trudy Inst. nefi  
AN Kazakh.SSR 4:171-174 '61. (MIRA 16:4)  
(Emba region--Mineral waters--Analysis) (Colorimetry)

VIKTOROVA, M.Ye.; KOTOVA, A.V.

Barium and strontium contents in oil field waters of the Emba region.  
Trudy Inst. nefli AN Kazakh.SSR 4:175-178 '61. (MIRA 16:4)  
(Emba region—Oil field brines—Analysis)

L 4151-66 EWT(m)/EPF(c)/T/EWP(t)/EWP(b) LIP(c) JD/JG/WE

ACC NR: AP5024949

UR/0065/65/000/010/0029/0031  
655.53:546.881:547.54

25  
24  
B

AUTHOR: Kotova, A. V.; Yemel'yanova, S. V.; Ben'kovskiy, V. G.

TITLE: Removal of vanadium from petroleum and petroleum products by aqueous solutions of sulfonic acids. 21

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 10, 1965, 29-31

TOPIC TAGS: vanadium, vanadium compound, petroleum refining, petroleum product, metal extracting

ABSTRACT: Aqueous solutions of p-toluenesulfonic, o-sulfobenzoic, and sulfanic acid were used to extract vanadium from several types of petroleum and petroleum products (kerosene-gas oil fraction and diesel fuel). The optimum concentration of the extracting solutions and the number of extractions were determined for each type. To elucidate the nature of the vanadium compounds present in the petroleum and petroleum products, the presence of the vanadium-porphyrin complex was investigated by spectrophotometric analysis of alcohol extracts in the 400-750 mμ range. When this complex was present, the extraction of vanadium was lower than in its absence. It is thought that the side chains of the porphyrins, which are relatively high-molecular compounds and are present in some of the types of petroleum studied, interfere with the extraction of vanadium by aqueous solutions of organic acids. When the porphyrins are absent, vanadium is assumed to be present in the form of salts of organic acids, and is therefore easy to extract in this manner. Orig. art. has: 3 tables.

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L 4151-66

ACC NR: AP5024949

ASSOCIATION: Institut khimii nefiti i prirodnykh soley AN Kazakh, SSR (Institute of Petroleum Chemistry and Chemistry of Natural Salts, AN Kazakh, SSR)

SUBMITTED: 00

ENCL: 00

SUB CODE: GC, FP

NO REF SOV: 005

OTHER: 004

Card

*mlr*  
2/2

KOTOVA, A.V.; VIKTороVA, M.Ye.

Oils containing gallium and germanium in the Emba region.  
Geokhimiia no.11:1370-1372 N '65. (MIRA 19:1)

1. Institut khimii nef'ti i prirodnykh soley AN KazSSR, Gur'yev.  
Submitted December 14, 1964.

KOTOVA, E.A.; SAZONOV, N.T.

Colloquium on the nomenclature of Jurassic system. Sov. geol.  
8 no.6:169-170 Je '65. (MIRA 18:8)

KOTOVA, E.L., mladshiy nauchnyy sotrudnik

Concerning the optimum level of lighting for precision work. Svetote-  
khnika 7 no.1:19-24 Ja '61. (MIRA 14:2)

1. Leningradskiy institut gilyony truda i profzabolevaniy.  
(Fluorescent lighting)

S/196/61/000/009/016/052  
E194/E155

AUTHOR: Kotova, E.L.

TITLE: Optimum illumination levels for fine visual work

PERIODICAL: Referativnyy zhurnal, Elektrotehnika i energetika,  
no.9, 1961, 15-16, abstract 9V 127. (Svetotekhnika,  
no.1, 1961, 19-24)

TEXT: Optimum levels of illumination have been based on a study of the operation of a visual analyser, on the functional condition of the central nervous system, and also on the indications of quantitative and qualitative indices of labour productivity. Visual capacity was assessed from data on the stability of clear vision and the rate of differentiation between details. With various kinds of lighting the criterion for assessing visual fatigue was the percentage reduction in stability of clear vision and in rate of differentiation during the working time relative to the condition of the visual function before the start of work. Visibility was investigated with a Dashkevich polarisation binocular visibility measuring device. In order to study the functional condition of the central nervous system,  
Card 1/3

Optimum illumination levels ...

S/196/61/000/009/016/052  
E194/E155

observations were made of the duration of the latent period of the condition of motor reaction, using a modified Ivanov—Smolenskiy procedure and of the optical chronaxies. Studies were made for work on sorting and counting three kinds of 'relief' parts of neutral colour with angular dimensions from 7' to 13.8'. The shape of the parts was nearly spherical; the reflection coefficient about 0.1 - 0.05. The reflection coefficient of the working surface was 0.7. The difference between the sizes of parts, on which the sorting was mainly based, was 0.1 - 0.3 mm. From the physiological-hygienic standpoint, using a system of general illumination with fluorescent lamps, the most favourable and comfortable level of illumination is about 1500 lux. Observations of the visual and general working capacity of the subjects tested indicated that with irregular distribution of brightness in the field of vision a level of illumination which is rational (from the physiological-hygienic standpoint) for this type of work is about 2000 lux produced by general fluorescent lighting. A very uniform brightness in the field of vision promotes favourable conditions for the operators.

Card 2/3



ACC NR: AT6036594

SOURCE CODE: UR/0000/66/000/000/0227/0227

AUTHOR: Kotova, E. S.

ORG: none

TITLE: Campimetric investigations on humans during prolonged accelerations <sup>[paper</sup> presented at the Conference on Problems of Space Medicine held in Moscow from 24-27 May 1966/

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 227

TOPIC TAGS: biologic acceleration effect, campimetry, human physiology, ophthalmology

## ABSTRACT:

A campimetric method of investigating the blindspot and retinal angioscotoma was used to supplement complex data in a functional study of the visual analyzer. Human subjects were exposed to repeated transverse accelerations ranging from 4 to 18 G. Observations were conducted under identical conditions (illumination, time of day) by the same investigator. Data on changes in the dimensions of the blindspot during accelerations were obtained.

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ACC NR: AT6036594

Results of the measurements showed that the blindspot expands 38-50 min after the centrifuge is stopped. The dynamics of these changes were traced as a function of acceleration magnitude. The process of blindspot normalization began 28-36 hr after the experiment. Angioscotoma normalization took place when normalization of vascular calibers occurred, which took place after 5, 8, and 11 days.

This data might indicate that an increase in blindspot scotoma and angioscotoma is the product of local vascular hemocirculatory disorders as well as hemodynamic shifts in the cerebral vascular system.

[W. A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 2/2

L 16996-63

RM/WN/JD/JW/MAY

EWP(j)/EFF(c)/EWP(q)/EWT(m)/BDS AFFTC/ASD Pc-4/Pr-4

S/204/63/003/002/006/006 <sup>77</sup>/<sub>76</sub>AUTHOR: Paushkin, Ya. M., Vishnyakova, T. P., Sokolinskaya, T. A., Zimina, K. I., and Kotova, G. G.

TITLE: Alkylation of Ferrocene by olefins in the presence of the compounds boron fluoride and aluminum chloride

PERIODICAL: <sup>27</sup> Neftekhimiya, v. 3, no. 2, 1963, <sup>27</sup> 280-284 <sup>27</sup>

TEXT: The number of olefins used for alkylation of ferrocene was expanded, and such catalysts as the strong complex acid  $H_3PO_4 \cdot BF_3$  and  $BF_3 \cdot O(C_2H_5)_2$ , in addition to  $AlCl_3$ , were used, which allowed the concept on the mechanisms of ferrocene alkylation to be widened and new previously unknown alkylferrocenes to be synthesized. A considerable increase in yields of mono-alkyl derivatives of ferrocene is reported. The mono- and di-isooctylferrocenes were obtained by the direct alkylation of ferrocene by olefins. There are 3 tables and 1 figure. The most important English-language references read as follows: T. I. Kealy, P. L. Pavson, Nature, 168, 1039, 1951; G. Wilkinson, F. A. Cotton, J. M. Birmingham, J. Inorg. and Nucl. Chem., 2 95, 1956.

ASSOCIATION: Moscow Institute of Petrochemical and Gas Industry imeni I.M. Gubkin.  
Card 1/8/



PENTIN, Yu.A.; SHARIPOV, Z.; KOTOVA, G.G.; KAMERNITSKIY, A.V.; AKHREM, A.A.

Spectroscopic investigation of the conformation equilibrium of  
chlorocyclohexane and bromocyclohexane. Zhur.strukt.khim. 4  
no.2:194-200 Mr-Ap '63. (MIRA 16:5)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.  
(Cyclohexane—Spectra)

OBOLENSKIY, K.P., doktor ekon. nauk, prof., red.; KOTOVA, G.G.,  
doktor ekon. nauk, prof., red.; RUSAKOVA, G.K., kand. sel'-  
khoz. nauk, red.; USTINOV, M.A., red.; ZAVERNYAYEVA, L.V.,  
red.; RYBAKOVA, V.D., red.

[Efficient organization and the economics of agricultural  
production; methods and recommendations] Voprosy ratsional'-  
noi organizatsii i ekonomiki sel'skokhoziaistvennogo pro-  
izvodstva; metodiki i rekomendatsii. Moskva, Ekonomika,  
1964. 495 p. (MIRA 17:1)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut  
ekonomiki sel'skogo khozyaystva.  
(Agriculture--Economic aspects)

L 65031-65 ENT(4)/EPT(3)/MPC(1) RM

ACCESSION NR: ZAF020953

UR/0204/85/005/004/0629/0635  
0547-2613/122-1-513-422-4

AUTHOR: Zharina, K. I., Kotova, G. G., Sanin, P. I., Sher, V. V., Kuz'mina, G. N.

TITLE: Infrared absorption spectra of dialkyldithiophosphates of metals

SOURCE: Nefekhimiya, v. 5, no. 4, 1965, 629-635

TOPIC TAGS: absorption spectrum, nickel compound, lead compound, zinc compound, IR spectrum, electron mobility

ABSTRACT: The spectra of dialkyldithiophosphates of metals were recorded on a UR-10 infrared spectrophotometer, in the region of frequencies from 400 to 1600  $\text{cm}^{-1}$ . The spectral width of the aperture was varied from 3 to 6  $\text{cm}^{-1}$  and the scanning rate was 50  $\text{cm}^{-1}/\text{min}$ . The liquid preparations were placed in a sectional tray, with the thickness of the layer about 0.01 mm. Solid preparations were precipitated from their carbon tetrachloride solutions on an aperture made of potassium bromide, in the form of a crystalline or vitreous layer. A study was made of the dialkyldithiophosphates of zinc, nickel, and lead, containing alkoxy groups of hydrocarbon radicals with different structures: isopropyl, butyl, Card 1/2

L 65051-67

ACCESSION NR: AP5020959

2-ethylhexyl, decyl, and hexadecyl. The stretching vibrations of the P=S and P-S bonds are shown in a table. The most intensive absorption bands are observed in the frequency intervals 625-665, 750-850, and about 1000  $\text{cm}^{-1}$ ; these correspond to the stretching vibrations of the P-S, P-O-(C), and C-O-(P) groups. The present article examines the absorption frequencies of the P-S and P-S bonds, which are most significant for dithiophosphates. Results show that the nature of the metal and the structure of the alkyl groups have an effect on the stretching vibrations of the P=S and P-S groups. Frequencies of 861, 842, and 653  $\text{cm}^{-1}$  correspond to P=S bonds, and frequencies of 543 and 552  $\text{cm}^{-1}$  to P-S bonds. Zinc dialkylthiophosphates are absorbed in the interval 651-662  $\text{cm}^{-1}$ , nickel dialkylthiophosphates in the interval 635-655  $\text{cm}^{-1}$ , and lead dialkylthiophosphates in the interval 625-640  $\text{cm}^{-1}$ . This is evidence of the different mobility of the valence electrons. Orig. art. has 1 figure and 4 tables

ASSOCIATION: Vsesoyuznyy Institut po pererabotke nefti (All-Union Institute for Oil Refining) / Institut neftekhimicheskogo sinteza im. A. V. Topchiyeva AN SSSR (Institute for Petrochemical Synthesis, AN SSSR)

SUBMITTED: 09Nov64

ENCL: 00

SUB CODE: 05, NP

NR REF SOV: 006

OTHER: 008

Card 2/2

BOLOTOVA, G.I.; KOTOVA, G.G.; ZIMINA, K.I.; ISAGULYANTS, V.I.

Investigating the synthesis of homologous series of individual potassium dialkyl- and diaryldithiophosphates and studying their structure by the method of infrared spectrometry. Izv. vys ucheb. zav.; neft' i gaz. 8 no.5:62 '65. (MIRA 18:7)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im. akademika I.M.Gubkina.

BOLOTOVA, G.I.; KOTOVA, G.G.; ZIMINA, K.I.; ISAGULYANTS, V.I.

Synthesis of the homologous series of individual potassium dialkyl- and diaryldithiophosphates and the study of their structure by infrared spectroscopy. Zhur. prikl. khim. 38 no.7:1580-1585 J1 '65. (MIRA 18:7)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti imeni Gubkina.

L 29560-66 EWP(j)/EWT(m)<sup>T</sup>/<sub>(A)</sub> RM/DJ

ACC NR: AP6003435

SOURCE CODE: UR/0065/66/000/001/0054/0057

AUTHOR: Zimina, K. I.; Kotova, G. G.; Sher, V. V.; Kuz'mina, G. N.; Sanin, P. I.ORG: VNII NPTITLE: Determination and characteristics of zinc dialkyldithiophosphate-type additives based on infrared absorption spectra

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 1, 1966, 54-57

TOPIC TAGS: lubricant additive, zinc compound, phosphorus compound, sulfur compound, IR spectrum

ABSTRACT: Infrared absorption spectra of motor oil additives based on zinc dialkyldithiophosphates were studied in the 400-700  $\text{cm}^{-1}$  range. The alkyl radicals of zinc dialkyldithiophosphates (general formula  $(\text{RO})_2\text{P}(\text{S})\text{Szn}(\text{S})\text{P}(\text{OR}')_2$ ) contained isopropyl, isobutyl, n-butyl, isoamyl, 2-ethylhexyl, sec-heptyl, and higher radicals. It was found that the additives contain basic salts in addition to neutral zinc salts of dialkyldithiophosphates, and that the absorption band with a maximum at 480  $\text{cm}^{-1}$  is due to stretching vibrations of the Zn-O bond in such basic salts. The

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UDC: 543.544 : 546.47

L 29560-66

ACC NR: AP6003435

presence of the latter has no adverse effect on the quality of the additives. A study of the P-S band of zinc dialkyldithiophosphates showed that if the extinction coefficients of two dialkyldithiophosphates and the molecular mass of one of them are known, the molecular mass and hence the average number of carbon atoms present in the alkyl groups of the second dialkyldithiophosphate can be determined. Orig. art. has: 5 figures and 1 table.

SUB CODE: 07/ SUBM DATE: 00/ ORIG REF: 002/ OTH REF: 000

Card 2/2

BRAGA, P.P. [Braha, P.P.]; KOTOVA, G.M. [Kotova, H.M.]; STAKOVICHENKO, N.O.  
[Stakovychenko, N.O.]

Locknit warp fabric for lace and blouses made with synthetic fibers.  
Leh.prom. no.3:23 Je - Ag '62. (MIRA 16:2)

1. Ukrainskiy nauchno-issledovatel'skiy institut pererabotki  
iskusstvennogo i sinteticheskogo volokna.  
(Synthetic fabrics) (Knit goods)



KOTOVA, G.M. [Kotova, H.M.]

Analyzing the potentialities of "Super-garant" Rachel knitting machines in the manufacture of fancy-net designs and assortments. Leh. prom. no.2:70-72 Ap-Je '63. (MIRA 16:7)

1. Ukrainskiy nauchno-issledovatel'skiy institut po pererabotke iskusstvennogo i sinteticheskogo volokna.  
(Knitting machines)

~~KOTOVA, G.H.~~  
KOTOVA, G.H.

Reflexes from certain arteries and veins on the lymphatic vessels.  
Fiziol.zhur. 43 no.5:428-434 My '57. (MIRA 10:12)

1. Kafedra normal'noy fiziologii Bashkirskego meditsinskogo instituta,  
Ufa.

(CARDIOVASCULAR SYSTEM, physiology,  
eff. of obstruct. of various arteries & veins on lymphatic  
vessels (Rus))

(LYMPHATIC VESSELS, physiology,  
eff. of obstruct. of various arteries & veins (Rus))

KOTOVA, G.N., Cand Med Sci -- (diss) <sup>On</sup> "Concerning reflexes  
from <sup>the</sup> arteries and veins of the abdominal organs and  
extremities <sup>to</sup> on the lymphatic blood-~~carrying~~ vessels."  
Ufa, 1958, 18 pp (Bashkir State Med Inst in 15th Anniversary  
VLKSM) 200 copies (KL, 32-58, 111)

- 69 -

KOTOVA, G.N., PORTNOVA, N.G., (Rostov-na-Donu)

Case of the abdominal form of lymphogranulomatosis [with summary  
in English]. Arkh.pat. 20 no.8:70-72 '58 (MIRA 11:9)

1. Iz klinicheskoy gorodskoy bol'nitsy No.1 Rostova-na-Dony  
(glavnyy vrach A.V. Goreshtnyak, nauchnyy rukovoditel' - prof. V.N.  
Slyshko, zav. patologo-anatomicheskim otd. - prof. Sh.I. Krinitkiy).  
(HODGKIN'S DISEASES, in aged,  
abdom. case (Rus))

KOTOVA, G.N.

Effect of intra-arterial and intravenous injections of hypertonic and isotonic solutions on lymphatic and blood vessels. Fiziol.zhur. 46 no.6:695-'04 Je '60. (MIRA 13:8)

1. From the Chair of normal physiology, Bashkirian Medical Institute, Ufa.

(INJECTIONS, INTRA-ARTERIAL)  
(LYMPHATICS)

(INJECTIONS, INTRAVENOUS)  
(BLOOD PRESSURE)

KOTOVA, G.N.; PETROVSKIY, V.V.; SMIRNOV, D.I.

Effect of various factors on venous tone. Fiziol.zhur. 47 no.2:  
237-246 F '61. (MIRA 14:5)

1. From the Normal Physiology Chair, Bashkirian Medical Institute,  
Ufa.

(VEINS)

KOTOVA, G.N.

Reflex regulation of venous tone during the variation of venous and arterial pressure. Fiziol.zhur. 47 no.8:1004-1014 Ag '61.

(MIRA 14:8)

1. From the Department of Physiology, Bashkir Medical Institute, Ufa.

(BLOOD PRESSURE)

(VEINS)

KOTOVA, G.N.

Reflex connections between the internal organs and the lymph and blood vessels. Fiziol. zhurn. 49 no.4:461-469 pp '63.

(MIRA 17:4)

1. From the department of Physiology, Basikov Medical Institute, Ufa.



KOTOVA, G. P.

"Selection and Cultivation of Green Cove Crops During Spring and Fall Periods in Environmental Conditions of Kamennaya Step'." Min. Higher Education USSR, Voronezh Agricultural Inst., Voronezh, 1954. (Dissertation for the Degree of Candidate in Agricultural Sciences)

SO: Knizhnaya Letopis', No. 22, 1955, pp 93-105

: Knizhnaya Letopis', No. 22, 1955, pp 93-105  
 AUTHOR : Kotova, G. P.  
 TITLE : Planting Squash for Forage with the Cultivation of Immature Green Fruits ("Zelentsy").  
 ABSTRACT : Exptl. nauchno-tekhn. Inform. Ser. 1. in-ta s. kh. TshhF, 1956, No. 1, 38-40  
 SUMMARY : Experiments with 3-fold gathering of immature green fruits ("zelentsy") showed an increase in the yield of squash by 1 1/2 times in comparison with the single gathering with a decrease in the cost of producing 1 c of fruits.

Card: 1/1

Country : USSR  
Category: Cultivated Plants. Fodders.

Abs Jour: RZhBiol., No 22, 1958, No 100327

Author : Kotova, G.P. in the Central Cher-

M

KOTOVA, G.

KOTOV, P., kand. sel'skokhozyaystvennykh nauk; KUMKODOV, V., kand. sel'-  
skokhozyaystvennykh nauk; KOTOVA, G., kand. sel'skokhozyaystvennykh  
nauk.

Establishing an ever normal feed supply in the Central Black Earth  
region. Nauka i pered. op. v sel'khoz. 18 no.2:10-13 F '58.  
(Central Black Earth region--Feeding and feeding stuffs)(MIRA 11:3)

KOTOV, Petr Filippovich, kand. sel'khoz. nauk; KOTOVA, Galina  
Petrovna, kand. sel'khoz. nauk; ADEL'FINSKAYA, Ye.N.,  
red.; SHESHNEVA, E.A., tekhn. red.

[Growing corn for grain in the Central Chernozem Region]  
Kukuruza na spaloe zerno v Tsentral'no-chernozemnoi polose.  
Moskva, Izd-vo MSKh RSFSR, 1963. 69 p. (MIRA 16:7)

1. Nauchno-issledovatel'skiy institut sel'skogo khozyaystva  
Tsentral'no-chernozemnoy polosy im. V.V.Dokuchayeva (for  
Kotov, Kotova).  
(Central Chernozem Region--Corn (Maize))

MUKHINA, Z.S.; KOTOVA, G.S.; KUZ'MICHEVA, R.A.

Determination of lead, copper, bismuth, and cadmium in heat  
resistant alloys. Zhur. anal. khim. 20 no.7:785-788 '65.  
(MIRA 18:9)

MUKHINA, Z.S.; ZHEMCHUZHAYAYA, I.A.; KOTOVA, G.S.

Analysis of impurities in refractory alloys based on nickel, cobalt,  
iron, and chromium. Zhur.anal.khim. 17 no.2:170-173 Mr-Ap '62.  
(MIRA 15:4)

(Alloys) (Metals--Analysis)

RUDOY, D.G.; KOTOVA, G.S.

Clinical, functional and histomorphological characteristics of  
protracted forms of Botkin's epidemic hepatitis. Akt. vop. pat.  
pech. no. 2:120-128, '63. (MIRA 18:8)

L 62695-65 ENT (w) / SMA (G) / EMP (L) / ENR (w) / ENR (L) LJP (c) MJW/JD

ACCESSION NR: AP501P755

UR/0075/65/020/007/0785/0789  
543.253

33  
32  
16

AUTHOR: Mukhina, Z.S.; Kotova, G.S.; Kuk'micheva, B.A.

TITLE: Determination of lead, copper, bismuth, and cadmium in heat-resistant alloys

SOURCE: Zhurnal analiticheskoy khimii, v. 20, no. 7, 1965, 785-788

TOPIC TAGS: lead determination, copper determination, bismuth determination, cadmium determination, heat resistant alloy, nickel alloy, chromium alloy

ABSTRACT: A method was developed for extracting trace impurities (0.0001% and more) of lead, bismuth, copper, and cadmium, in the form of diethyldithiocarbamates, and for extracting trace impurities of these metals with a solution of bismuthol II



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L 62693-65

ACCESSION NR: AP6013786

in chloroform. The determination of these elements is carried out by using a single sample of the heat-resistant alloy and an oscillographic (or photometric) method as the last step of the determination. The entire analytical procedure is described in detail for the case of nickel and chromium heat-resistant alloys, and results of a determination of lead are tabulated for the case of EI437b alloy. Oscillographic polarography increases the sensitivity of the determination considerably. Orig. art. has: 8 tables.

ASSOCIATION: none

SUBMITTED: 20Apr64 ENCL: 00 SUB CODE: MM, IC

NO REF SOV: 007 OTHER: 008

Card *2/2*



MEL'NIKOV, B.N.; KOTOVA, I.B.

Effect of some organic solvents on the swelling of rayon  
fibers during dyeing. Izv. vys. ucheb. zav.; tekhn. tekst.  
prom. no.4:103-107 '63. (MIRA 16:11)

1. Ivanovskiy khimiko-tekhnologicheskii institut.

MEL'NIKOV, B.N.; KOTOVA, I.B.

Studying the effect of hydrophilic organic solvents on the kinetics of the dyeing of cellulose hydrate fibers with direct dyes. Izv.-vys.ucheb.zav.; tekhn.tekst.prom. no.1:106-114 '62. (MIRA 15:3)

1. Ivanovskiy khimiko-tekhnologicheskii institut.  
(Dyes and dyeing--Cellulose)

MEL'NIKOV, B. N.; KOTOVA, I. B.

Interaction of direct dyes with organic solvents. Izv. vys.  
ucheb. zav.; tekhn. tekst. prom. no.4:89-94 '62.  
(MIRA 15:10)

1. Ivanovskiy khimiko-tekhnologicheskii institut.

(Dyes and dyeing)

AL'TSHULER, Isaak Saulovich, dots., kand. tekhn. nauk; KOTOVA,  
I.I., doktor tekhn. nauk, prof., nauchn. red.;  
VEREVKINA, N.M., red.

[Problems in descriptive geometry] Zadachnik po nacherta-  
tel'noi geometrii. Izd.2., perer. i dop. Minsk, Vyschaia  
shkola, 1964. 98 p. (SIRA 18:1)

ACC NR: AT6036634

SOURCE CODE: UR/0000/66/000/000/0339/0339

AUTHOR: Senkevich, Yu. A. ; Lashchenova, V. A.; Kotova, I. N.

ORG: none

TITLE: Effect of altered gravitation on vascular reflexes in the carotid-sinus zone [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24-27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 339

TOPIC TAGS: vascular reflex, carotid sinus, vascular lumen, cardiovascular system, space physiology, blood circulation, biologic acceleration effect

## ABSTRACT:

There can be no doubt that pressure and chemoreceptive mechanisms of the carotid-sinus zone play a very important role in regulating blood circulation in general and arterial pressure in particular. Many authors have noted a reduction and distortion of reflexes from this zone due to extreme factors such as shock, hemorrhage, etc. It has also been noted that accelerations cannot be withstood as well if impulsion from the carotid-

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ACC NR: AT6036634

sinus zone is cut off.

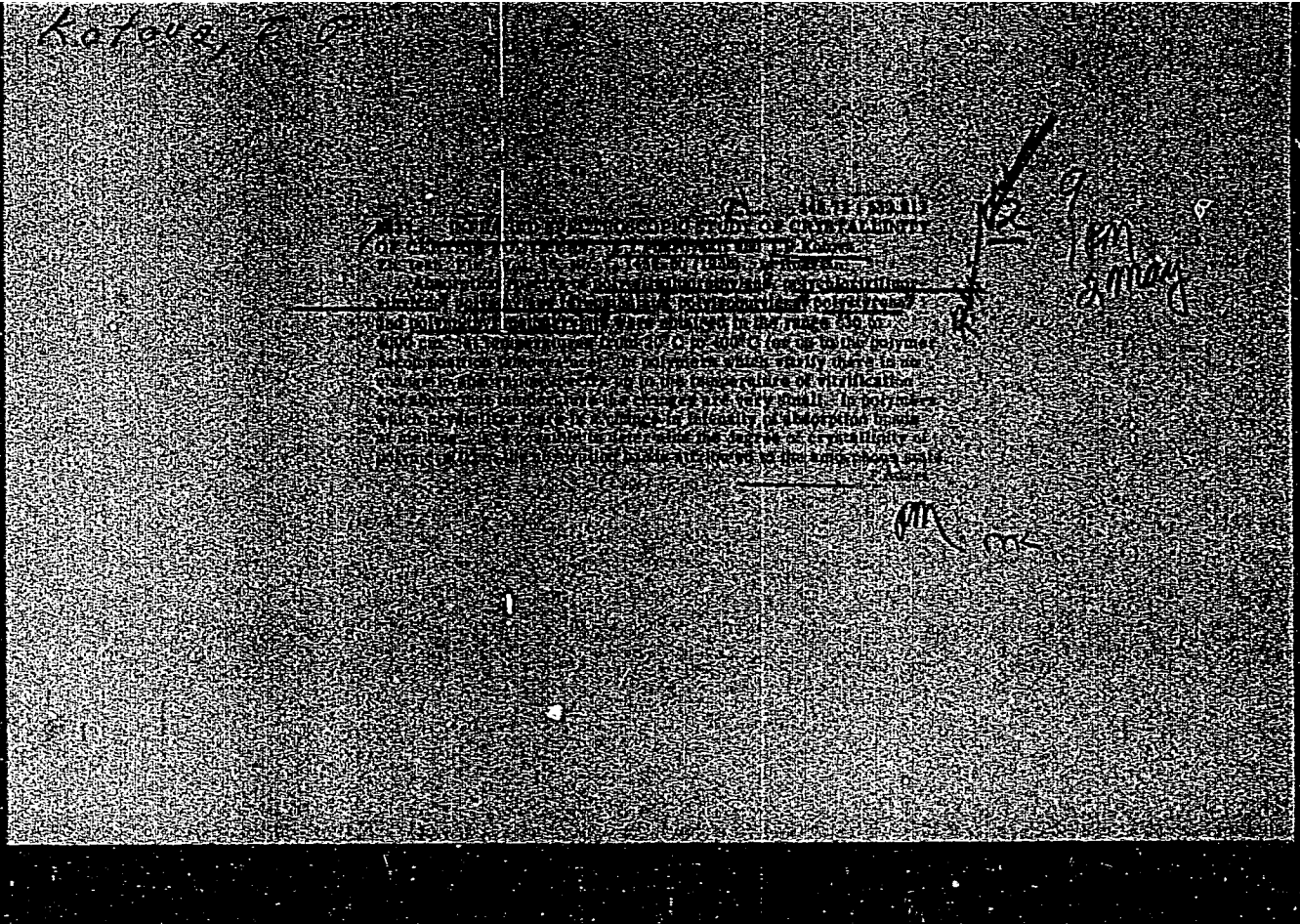
The work is based on the hypothesis concerning the specific role of the carotid sinus zone in maintaining adequate circulation during changes in the gravity vector and the action of acceleration. The effects of clamping both carotid arteries, of relaxing of sinuses of Hering's nerve by electrical stimulation, and of injecting of cytitone and hypertonic sodium-chloride solution were tested in acute and chronic experiments performed on dogs. Changes in the gravity vector were obtained by means of a tilt-table. Acceleration stress was produced by subjecting dogs to transverse accelerations of 9 G.

It was found that changes in the gravity vector and to an even greater extent the effect of accelerations caused a significant diminution and distortion of the reflexes indicated. There is reason to assume that acceleration results in a change in the functional condition of the receptor organs in the carotid-sinus zone.

[W. A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 2/2



KOTOVA, I.Z.

Jurassic-Cretaceous boundary in the coal-bearing stratum of the Bureya Basin according to the data of spore and pollen analysis. Dokl. AN SSSR 141 no.3:694-697 N '61. (MIRA 14:11)

1. Geologicheskii institut AN SSSR. Predstavleno akademikom A.L. Yanshinym.

(Bureya Valley--Geology, Stratigraphic)

BOLKHOVITINA, N.A.; KOTOVA, I.Z.

Spore-pollen complexes in the coal-bearing layer of the Syufun basin in the Far East. Izv. AN SSSR. Ser. geol. 28 no. 1: 77-92 Ja '63. (MIRA 16:2)

1. Geologicheskii institut AN SSSR, Moskva.  
(Suyfun Valley--Palynology)



GARETSKIY, R.G.; KOTOVA, I.Z.; SHLEZINGER, A.Ye.

Upper Jurassic continental formations of the Usturt. Dokl. AN  
SSSR 154 no.1:98-101 Ja'64. (MIRA 17:2)

1. Geologicheskii institut AN SSSR. Predstavleno akademikom  
A.L. Yanshinym.

BOLKHOVITINA, N.A.; KOTOVA, I.Z.; SAMODUROV, V.I.; YAN TSZI-DUAN' [Yang Chituan]

Stratigraphy of continental Cretaceous sediments of the lower Syr Darya uplift (northeastern Aral Sea region). Dokl. AN SSSR 152 no.2:392-395 S '63. (MIRA 16:11)

1. Geologicheskii institut AN SSSR. Predstavleno akademikom A.L. Yanshinym.

KOTOVA, I.Z.

Presence of fossil spores of the genus Mohria in the U.S.S.R. Paleont.  
zhur. no.1:140-141 '63. (MIRA 16:4)

1. Geologicheskii institut AN SSSR.  
(Palynology)

KOTOVA, I.Z.

Age of the continental sediments of the Gusinoozersk Depression and the characteristics of the composition of Early-Cretaceous floras in Transbaikalia. Izv. AN SSSR. Ser. geol. 29 no.8:84-93 (MIRA 17:11)  
Ag '64.

1. Geologicheskii institut AN SSSR, Moskva.

KOTOVA, I.Z.

Paleofloral areas of the U.S.S.R. in the Jurassic and Early Cretaceous and the data of spore-pollen analysis. Paleont. zhur. no.1:115-124 '65. (MIRA 18:4)

1. Geologicheskii institut AN SSSR.

PETELINA, V.S.; STARTSEV, B.Ya.; Prinsipalni uchastiyet: KOTOVA, L.A.,  
laborant; TRUSOVA, M.I., laborant; TENNOGRUDOVA, L.G., laborant;  
TURKOVA, N.A., laborant

Regeneration of alkali from the sulfide alkalies of desulfurized  
petroleum-products. Neftoper. i neftekhim. no.9:25-27 '63.  
(MIRA 17:8)

L. Nauchno-issledovatel'skiy institut khimii, g. Saratov.

PETELINA, V.S.; STARTSEV, B.Ya.; Primalni uchastiye: KOTOVA, L.A., laborant;  
TRUSOVA, M.I., laborant; TEMNOGRUDOVA, L.G., laborant; TURKOVA, N.A.,  
laborant

Problem of the recovery of alkali from sulfide waste liquors. (MIRA 18:10)  
Zhur.prikl.khim. 38 no.6:1212-1216 Je '65.

1. Nauchno-issledovatel'skiy institut khimii Saratovskogo gosudar-  
stvennogo universiteta imeni N.G.Chernyshevskogo.

PANASYUK, V.D.; KOTOVA, I.B.

Complex formation of zinc and cadmium with serine in aqueous solutions. Ukr. khim. zhur. 31 no.8:846-850 '65. (MIRA 18:9)

1. Kiyevskiy gosudarstvennyy universitet imeni Shevchenko.

KOTOVA, L.D.

Device to improve the piecing of capron reinforcement thread on  
"Svit" automatic two-cylinder circular hosiery knitting machines.  
"Obm.tekh.opyt. [MLP] no.36:22-23 '56. (MIRA 11:11)  
(Knitting machines)



KOTOVA, L.D.

Transferring to higher speeds the production of high spliced heels  
in hosiery on "Svit" automatic double-cylinder circular knitting  
machines. Obm.tekh.opyt. [MLP] no.36:23 '56. (MIRA 11:11)  
(Knitting machines) (Hosiery)

KOTOVA, L. F.      Eng.

"Application of Matrix Calculation to an Active Linear Quadripole,"  
Elektrichestvo, No.8, 1949

Moscow Power Engineering Inst. im. Molotov

KOTOVA, L. F.

"Circuit of Linear Active Quadrupoles," Tr. Vses. sovet. energ. in-st., No 3, 1954, pp 219-214

The computation of the diagram is facilitated by presenting it as a connection of active quadrupoles. The derived formulas are applied as example to the computation of the amplification factor and the dependence of output current on the potential of the feeding source for a two-tube amplifier with dc current. (IZNFiz, No 7, 1955) SC: Sum. No. 713, 9 Nov 55

KOTOVA, L.F., inzh., assistant

Applying the successive-approximation method to the calculation  
of circuits containing nonlinear elements. Trudy VZEI no.9:140-145  
'58. (MIRA 12:10)

(Electric circuits)

BESSONOV, L.A., doktor tekhn. nauk, prof.; DEMIDOVA, I.G.; KOTOVA,  
L.F.; LINNICHENKO, N.N.; OCHAN, V.V.; SEREDNITSKIY, L.M.;  
VOSTROKNUTOV, N.G., retsenzent; OLEKSEYEVICH, V.P.,  
retsenzent; FILARETOVA, A.S., retsenzent; ZARUDI, M.Ye.,  
retsenzent; ZAIKA, Ye.V., st. prepod., retsenzent

[Textbook on the theoretical principles of electrical  
engineering] Zadachnik po teoreticheskim osnovam elektro-  
tekhniki. [By] L.A.Bessonov i dr. Moskva, Vses. zaachnyi  
energ. in-t, 1963. 212 p. (MIRA 16:10)  
(Electric engineering)

FRIDMAN, S.G.; KOTOVA, L.I.

Derivatives of imidazobenzothiadiazole, imidazobenzoselenodiazole,  
imidazobenzotriazole, and imidazoquinoxaline. Zhur.ob.khim. 32  
no.9:2871-2882 S '62. (MIRA 15:9)

1. Institut organicheskoy khimii AN Ukrainskoy SSR.  
(Benzothiazole) (Benzothiadiazole) (Quinoxaline)

KOTOVA, L. I. Cand Tech Sci -- (diss) " Study of ~~the~~ friction in roller-bearings and its effect upon ~~the~~ basic specific resistance to the movement of freight cars." Len, 1957. <sup>(with graphs)</sup> 24 pp. (Len Order of Lenin Inst of Engineers of Railroad Transport im Academician V. N. Obrastsov), 100 copies (KL, 44-57, 100)

KOTOVA, L. I.

AUTHOR: KOTOVA, L. I., DERYAGIN, B. V. 57-6-17/36  
 TITLE: Theory of Cylinder Rolling on a Surface covered with a Plastic Lubricant. (Teoriya kacheniya tsilindra po poverkhnosti, pokrytoy sloyem plastichnoy smazki, Russian)  
 PERIODICAL: Zhurnal Tekhn.Fiz. 1957, Vol 27, Nr 6, pp 1261-1271 (U.S.S.R.)  
 ABSTRACT: Formulae are derived for the determination of the pressure of the lubricant layer, the carrying strength of the lubrication layer and the power which is used for overcoming friction in the lubricating layer, i.e. for the case of a constant exterior shearing strain. A formula is determined for the pressure distribution in the lubricating layer for that case in which the shearing strain depends exponentially on pressure. It is shown that in this case there exists an utmost minimum thickness of the lubricating layer in the gap between the cylinder and the rolling surface. (With 10 Illustrations and 1 Slavic Reference).  
 ASSOCIATION: Not given  
 PRESENTED BY:  
 SUBMITTED: 11.1.1957  
 AVAILABLE: Library of Congress  
 Card 1/1

AUTHOR: Kotova, L. I. 57-27-7-17/40  
 TITLE: The Theory for the Rolling of a Cylinder on a Surface Covered With a Viscous-Plastic Layer of Lubricant (Teoriya kacheniya tsilindra po poverkhnosti, pokrytoy sloyem vjazko-plastichnoy smazki)  
 PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1957, Vol. 27, Nr 7, pp. 1540-1557 (USSR)  
 ABSTRACT: The investigation refers to the case of a hydrodynamic lubricant, i.e. when the flow of lubricant in the gap is laminar and satisfies the equations from the hydrodynamics of a viscous-plastic liquid according to Shvedov-Bingham. The influence of the thermodynamic pressure "wedge loosening" is disregarded. The cylinder is assumed as infinitely long and the flow of lubricant as flat. The calculation is made per unit of length. The equation of Shvedov-Bingham is integrated and a differential equation for the hydrodynamic pressure is obtained. This equation is solved for  $dp/dx$  and on the basis of the analysis the selection of the solution satisfying the conditions made is carried out. The equations for  $dp/dx$  are integrated (with a certain approximation). The fundamental relations are obtained: for the distribution of the hydrodynamic pressure in the layer of lubricant, for the bearing strength of the layer of lubricant and for the power expended in rolling for overcoming the friction in the layer of lubricant.  
 Card 1/2



The Theory for the Rolling of a Cylinder on a Surface Covered With a Viscous-Plastic Layer of Lubricant. 57-27-7-17/40

These dependences are brought to a nondimensional form. There are 9 figures and 5 references, 4 of which are Soviet.

ASSOCIATION: Leningrad Institute for Railroad Engineers (Leningradskiy institut inzhenerov zheleznodorozhnogo transporta)

SUBMITTED: January 29, 1957

AVAILABLE: Library of Congress

1. Lubricants-Properties-Mathematical analysis
2. Differential equations-Applications
3. Fluid flow-Theory
4. Cylinders-Motion-Theory

Card 2/2

KOTOVA, L.I., aspirant

Theoretical investigation of freight-car traction resistance  
caused by vibration friction in heavily greased roller-bearing axle  
boxes. Sbor. LIIZET no.158:286-301 '58. (MIRA 11:6)  
(Railroads--Freight cars) (Car axles)

VOROB'YEV, G.M.; KOTOVA, L.I.

Determining the texture of transformer steel. Zav. lab. 30  
no.10:1224-1227 '64. (MIRA 18:4)

1. Dnepropetrovskiy metallurgicheskiy institut.

VCROB'YEV, G.M.; GRECHNYI, Ya.V.; KOTGVA, L.I.; SEMIREV, I.P.

Comparison of various methods of measuring the textural  
perfection of cold-rolled transformer steel. Zav. lab.  
31 no.8:983-986 '65. (MIRA 18:9)

1. Dnepropetrovskiy metallurgicheskiy institut.

KoToVA, L.L.

Paper submitted for the 10th International Symposium, Pasadena, California, August 2-8 September, 1960.

- A. E. Woods - Detonation Parameters
- P. P. Nikhil - The Mechanism of Combustion of Colloidal Fuels
- I. S. Danilovskii - The Combustion Mechanism and Burning Velocity in a Turbulent Flow
- S. M. Kuznetsov - On the Burning Probability for Droplets of Liquid Atomized Fuel in a Turbulent Flow
- S. M. Kuznetsov - Amplification of Compression Waves in the Combustion Zone
- Z. Kuznetsov, B. I. - On the Stationary Theory for Heat Balance of Powder and Explosive Contained Flames
- Z. Kuznetsov - On the Mechanism of Detonative Combustion
- S. S. Galovits - The Interaction of Carbon with Carbon Dioxide and Oxygen at Temperatures up to 3000°K
- G. P. Kuznetsov - The Carbon Oxidation Burning Characteristics of Solid Fuel
- K. I. Kuznetsov, L. K. - The Investigation of the State of Explosion Products Behind the Shock Wave
- S. V. Kuznetsov, V. Ye. - On the Ionization in the Flame Front
- O. A. Tashchova
- V. A. Kuznetsov
- ASSEMBLY, U.S.S.R.

S/196/61/000/006/011/014  
E194/E435

AUTHORS: Khitrin, L.N., Ravich, M.B., Kotova, L.L.

TITLE: Procedure and results of determination of the combustion constant of pulverized fuels

PERIODICAL: Referativnyy zhurnal. Elektrotehnika i energetika, 1961, No.6, p.9. abstract 6G58. (Sb. 3-e Vses. soveshchaniye po teorii goreniya. T.2.,M., 1960, pp.123-130)

TEXT: In determining the combustion constant the accuracy of the results chiefly depends upon the process being as isothermal as possible. Ballasting the gas flow with finely divided material was selected as an effective method of solving this problem. For this purpose the fuel under investigation may be used either alone or mixed with inert material. In either case, it is important that the solid phase should be present in sufficient quantity to ensure "absorption" of the total heat of reaction without appreciable heating of the system. Ballasting the flow with dust of the actual fuel under investigation is to be preferred because there is then considerable excess of fuel and the  
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✓

S/196/61/000/006/011/014  
E194/E435

Procedure and results of ...

dust particles burn very little. Accordingly, the dimensions of the dust particles and their reacting surface may be considered to remain unchanged, which simplifies calculation of the constant. High fuel concentration also permits clearer observation of possible chemi-sorption processes. Observation of the course of the process is simplified because the primary characteristic of combustion is consumption of oxygen in the flow. Accordingly, in making the tests it is only necessary to register the changes in composition of the gaseous product along the flow. The experimental equipment consisted of an electrically heated vertical tube 800 mm long and 8 mm internal diameter. Pulverized fuel in a flow of oxidizing medium (air or nitrogen-oxygen mixture) which had first been heated to the test temperature was delivered to the tube, the dust was entrained by the flow and carried up the tube. Temperature differences of 10 to 15°C were permitted between the start and end of the tube. The excess oxygen coefficient was 0.035 to 0.10. Tests were made with coked, powdered, Moscow Basin coal and with milled peat previously heat-treated for six hours at temperatures of about 600 and 800°C. The dimensions of the mean fractions ranged from 65 to 367 microns. The initial oxygen

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APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R000825420001-9

S/196/61/000/006/011/014  
E194/E435

Procedure and results of ...

concentration ranged from 3.7 to 20.9%, the dust concentration from 0.5 to 8.5 g per litre at n.t.p. and the temperature from 370 to 700°C. It was established that the oxygen consumption and the amount of gaseous oxides formed are not linear functions of the effective oxygen concentration. The rate constants of these processes do not depend on the dimensions of the particles. The gaseous reaction product with oxygen is CO<sub>2</sub> (with peat). On burning coke of Moscow Basin coal the oxygen is strongly absorbed by the coke, the process is of a chemi-sorption character. Sorbed oxygen is returned to the gaseous phase in the form of CO<sub>2</sub> after the fuel has been heated to a temperature higher than that of the process. An equation is given for the total oxygen consumption. There are 4 references.

Abstracted by S.Tager.

[Abstractor's note: Complete translation]

Card 3/3

S/170/62/005/001/002/013  
B104/B102

AUTHORS: Khitrin, L. N., Ravich, M. B., Kotova, L. L.

TITLE: Methods and results of a study of the kinetic characteristics of combustion of powdery fuel in a flow

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 5, no. 1, 1962, 7-12

TEXT: A device designed for studying the combustion of powdery fuel in a gas flow under isothermal conditions is described. Its main part is a vertical, electrically heated, stainless steel reaction tube of 800 mm length and 8 mm inner diameter. A screw conveyer transports fuel from a bunker into the tube and at the same time air or a nitrogen-oxygen mixture is blown through. The mixture is heated to a certain temperature in the tube (maximum 750°C). The ratio between the oxygen used in the flow during the experiment and the theoretically necessary value amounted to 0.035-0.10. A section of 500 mm of the reaction tube could be investigated. Gas samples were taken at the end of the tube. The conditions for sufficient mixing of the gas flow with fuel particles and also the isothermal reaction conditions in the tube were studied in

Card 1/2



KHITRIN, L.N.; RAVICH, M.B.; KOTOVA, L.L.

Oxygen sorption during the combustion of carbon (coke). Inzh.-  
fiz.zhur. 5 no.8:17-22 Ag '62. (MIRA 15:11)

1. Energeticheskiy institut imeni G.M.Krzhizhanovskogo, Moskva.  
(Sorption) (Combustion) (Carbon)

KHITRIN, L.N.; KOTOVA, L.L.

Combustion constants for coke from coal of the Moscow region.  
Inzh.-fiz.zhur. 6 no.3:58-62 Mr '63. (MIRA 16:6)

1. Energeticheskiy institut imeni G.M.Krzhizhanovskogo, Moskva.  
(Combustion) (Coke)

W.A. 77  
L 06188-67 EWT(d)/EWT(l)/EWT(m)/EWP(j)/EWP(t)/ETI IJP(c) JD/WJ/JW/RM

ACC NR: AP6027732

SOURCE CODE: UR/0020/66/169/004/0807/0809

AUTHOR: Golovina, Ye. S.; Kotova, L. L.

56  
B

ORG: Power Engineering Institute im. G. M. Grizhizhanovskiy (Energeticheskiy institut)

TITLE: Laws governing high-temperature reactions of carbon 27

SOURCE: AN SSSR. Doklady, v. 169, no. 4, 1966, 807-809

TOPIC TAGS: carbon, carbon dioxide, carbon diffusion, carbon density, high temperature ~~reaction~~ phenomenon

ABSTRACT: In earlier studies the authors have observed changes in the density of carbon in the course of its interaction with chemically reactive gases at above 2300K. It was assumed that this phenomenon is a result of the diffusion of carbon atoms from the bulk to the surface of solid carbon. This assumption was confirmed by a study of carbon density distribution in carbon spheres (d., 15 mm) in the course of this interaction at various temperatures with CO<sub>2</sub> diluted with N<sub>2</sub> (CO<sub>2</sub> concentration, 50%; gas flow velocity, 0.6 m/sec). The diffusion coefficients (D<sub>c</sub>) for carbon atoms in solid carbon for various temperatures were calculated by substituting the experimental density values in Gauss error integral

T, °K	2770	2770	2780	2830	2970	3070	3070	3200	3230
D <sub>c</sub> · 10 <sup>4</sup> , cm <sup>2</sup> /sec	0,69	0,62	2,01	2,24	4,23	1,19	4,54	6,78	8,00

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UDC: 541.124

L 06188-67

ACC NR: APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R000825420001-9

Analysis of the experimental data showed that the determined D<sub>c</sub> values can be used for calculations. It is noted that the results of this study indicate that in the analysis of the interaction of a solid body with a chemically reactive gas the behavior of not only the gas but also that of the solid body should be taken into account. Orig. art. has: 3 figures. [W.A. 77] [B0]

SUB CODE: 07/ SUBM DATE: 09Jun65/ ORIG REF: 004/ OTH REF: 006

Card 2/2 afs

ACC NR: AP6033957

SOURCE CODE: UR/0294/66/004/055/0703/0709

AUTHOR: Colovina, Ya. S.; Kotova, L. L.

ORG: Power Engineering Institute im. G. M. Krzhizhanovskiy (Energeticheskiy institut)

TITLE: Laws governing high-temperature reactions of carbon in the presence of solid-phase diffusion

SOURCE: Teplofizika vysokikh temperatur, v. 4, no. 5, 1966, 703-709

TOPIC TAGS: carbon, carbon dioxide, high temperature <sup>phenomenon</sup> ~~reaction~~, solid phase diffusion

ABSTRACT: Earlier, the authors discovered that on reaction of carbon with a gaseous reagent ( $\text{CO}_2$  or  $\text{O}_2$ ) at temperatures above 2300K, the density of the bulk of the solid decreases. To study this phenomenon, an experiment was carried out to determine the distribution of density across a carbon sample as a function of time and temperature in the course of its reaction with nitrogen-rarefied  $\text{CO}_2$  in the 1400—3500K range. The samples were spherical particles, 15 mm in diameter, of VM-4 graphitized carbon. The carbon particles were induction heated. The reaction rate was determined gravimetrically. Sample diameter changes in time were recorded photographically. The density distribution was determined by successive removal from the particle surface of 0.2—0.25 mm layers and determination of their density. Layer removal was continued until the density of the particle core equalled the initial density. The  $\text{CO}_2$  concentration in the gas phase was 50% and the gas flow

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ACC NR: AP6033957

velocity was 0.6 m/sec. It was found that at 1600--2500K the process is steady-state. As the sample diameter changes the reaction zone, which is of constant depth (about 0.2 mm), moves along the radius. This indicates that the reaction proceeds at the surface under maximum diffusion conditions. The process rate is determined by the diffusion rate of the gas phase toward the carbon surface. At above 2500K, the picture is different. Under maximum diffusion conditions, the gas is consumed at the surface, but because of the mobility of carbon atoms at such high temperatures the carbon atoms strive to occupy the sites vacated in the lattice near the surface. Carbon-atom diffusion from the bulk to the surface of the sample develops. When the rate of diffusion becomes commensurate with or exceeds the reaction rate at the surface, the carbon atoms are able to occupy the vacated sites before the next gas molecule reaches them. In such a case, a considerable change in density but a small change in diameter is observed for the particles. The process in this case will be substantially unsteady-state: the reaction zone depth and the density distribution will constantly change with time. The diffusion coefficient was calculated for unsteady-state conditions. In conclusion, it is noted that the fact of the internal diffusional transfer of a solid in the course of its reaction in a chemically reactive gas phase, necessitates a revision of the existing viewpoint on the behavior of the solid in such reactions. The authors thank O. A. Tsukhanova, B. I. Boltaks and R. Sh. Malkovich for reviewing the paper and for discussing the material. Orig. art. has: 7 figures.

SUB CODE: 07, 21/ SUBM DATE: 22Mar65/ ORIG REF: 006/ OTH REF: 009

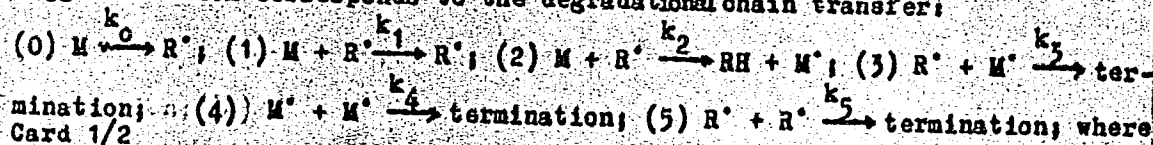
Card 2/2

S/190/63/005/003/014/024  
B101/B203AUTHORS: Barkalov, I. M., Gol'danskiy, V. I., Kotova, L. M.,  
Kuz'mina, S. S.

TITLE: Radiation polymerization of acetylene derivatives

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 5, no. 3, 1963, 375-377

TEXT: The radiation polymerization of hexyne-1, cyclohexyl acetylene, and octyne-1 up to 10-12% degree of conversion was studied by a method described earlier (Vysokomolek. soyed., 2, 1103, 1960). The results were compared with those obtained for phenyl acetylene. The rate of polymerization decreases in the order phenyl acetylene > octyne > hexyne, cyclohexyl acetylene, and is proportional to the first degree of irradiation intensity. The polymer yield between -196 and 0°C is independent of the radiation dose. Admission of oxygen does not inhibit the process. A reaction sequence is suggested which corresponds to the degradational chain transfer:



Radiation polymerization of...

S/190/63/005/003/014/024  
B101/B203

$R^*$  = polymer radical;  $M^*$  radical type  $R-C\equiv C^*$ ;  $M$  = monomer. Since  $[R^*] \ll [M^*]$ , reaction (5) can be neglected. If termination occurs according to (3),  $W = (2 + k_1/k_2)k_0 I[M]$  holds for the reaction rate, and  $\nu = 2 + k_1/k_2$  for the chain length. If termination occurs according to (4),  $W = (3 + 2k_1/k_2)k_0 I[M]$  and  $\nu = 3 + 2k_1/k_2$ . The latter equation corresponds better to the experimental length  $\nu = 10 - 13$ .  $k_1/k_2$  does not depend on the nature of the radical. The free valence of the polymer chain is situated on a link of the structure  $-CR-CR'$ . Owing to intense self-inhibition by the monomer, the inhibiting effect of  $O_2$  is not efficient. On the contrary, the yield increases in octyne-1 and phenyl acetylene in the presence of oxygen due to the formation of the more active peroxide-radicals. There are 1 figure and 1 table.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics AS USSR)

SUBMITTED: August 18, 1961

Card 2/2

AUTHOR: Kotova, L.N. SOV/20-121-3-6/47

TITLE: ~~A~~ Linearized Estimation of the Error in the Numerical Integration of the System of Differential Equations for the Fundamental Problem of External Ballistics (Linearizovannaya otsenka pogreshnosti chislennogo integrirvaniya sistemy differentsial'nykh uravneniy osnovnoy zadachi vneshney ballistiki)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 121, Nr 3, pp 418-421 (USSR)

ABSTRACT: An estimation of the errors in numerical integrations orally given to the author by S.M. Lozinskiy is applied to the external ballistic problem under very numerous suppositions which are partially badly to be surveyed. By some numerical examples it is shown that in this way an improvement of the estimations of errors usual in ballistics can be obtained. There are 5 Soviet references.

PRESENTED: March 10, 1958, by V.I. Smirnov, Academician

SUBMITTED: February 20, 1958

Card 1/1



ALIYEVA, S.G.; KOTOVA, L.P.

Use of cardiolipin antigen in the serodiagnosis of syphilis. Med.  
zhur. Uzb. no.9:29-30 S '61. (MIRA 15:2)

1. Iz Uzbekistanskogo nauchno-issledovatel'skogo kozhno-venerologiches-  
kogo instituta (direktor - dotsent Matveev V.H.).  
(SYPHILIS---DIAGNOSIS) (CARDIOLIPIN)  
(SERUM THERAPY)

KORCHINSKIY, I.I., prof., doktor tekhn. nauk; BYKHOVSKIY, V.A.,  
kand. tekhn. nauk; PAVLYK, V.S., inzh.; SOLOVEY, I.N.;  
SUMINOV, N.A.; KOTOVA, L.S., inzh.; SHITOVA, L., red.  
izd-va; RUDAKOVA, N.I., tekhn. red.

[Instructions for determining the seismic load for vertical  
equipment and examples of calculation] Ukazaniia po oprede-  
leniiu seismicheskoi nagruzki dlia vertikal'nykh apparatov i  
primery rascheta. Moskva, Gosstroizdat, 1961. 30 p.

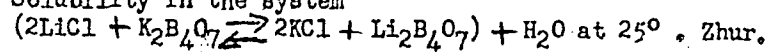
(MIRA 15:8)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut  
stroitel'nykh konstruksiy. 2. Tsentral'nyy nauchno-issledo-  
vatel'skiy institut stroitel'nykh konstruksiy Akademii stroi-  
tel'stva i arkhitektury SSSR (for Korchinskiy, Bykhovskiy,  
Pavlyk). 3. Gosudarstvennyy institut po proyektirovaniyu nef-  
tyanykh zavodov pri Gosudarstvennom planovom komitete Soveta  
Ministrov SSSR (for Solovey, Suminov, Kotova).

(Earthquakes and building)

LEPESHKOV, I.N.; BODALEVA, N.V.; KOTOVA, L.T.

Solubility in the system



neorg. khim. 8 no.11:2597-2602 N '63. (MIRA 17:1)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.  
Kurnakova AN SSSR.

SOV/78-3-12-28/36

AUTHORS: Lepeshkov, I. N., Bodaleva, N. V., Kotova, L. T.

TITLE: Investigations Concerning the Solubilities of the Systems  $\text{Li}_2\text{SO}_4\text{-Na}_2\text{SO}_4\text{-K}_2\text{SO}_4\text{-H}_2\text{O}$  at  $25^\circ\text{C}$  (Issledovaniye rastvorimosti v sisteme  $\text{Li}_2\text{SO}_4\text{-Na}_2\text{SO}_4\text{-K}_2\text{SO}_4\text{-H}_2\text{O}$  pri  $25^\circ$ )

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 12, pp 2781-2785 (USSR)

ABSTRACT: The solubilities of the systems  $\text{Li}_2\text{SO}_4\text{-Na}_2\text{SO}_4\text{-H}_2\text{O}$  were investigated at  $25^\circ\text{C}$ . The isothermal lines of solubility of these systems have three branches, which correspond to the following crystals:  $\text{Li}_2\text{SO}_4\cdot\text{H}_2\text{O}$ ; double salt  $\text{Li}_2\text{SO}_4\cdot 3\text{Na}_2\text{SO}_4\cdot 12\text{H}_2\text{O}$ , and  $\text{Na}_2\text{SO}_4\cdot 10\text{H}_2\text{O}$ . The double salt crystallizes to large, perfect crystals with the following indices of refraction:  $N_g = 1.464$ ,  $N_p = 1.460$ . The solubility of the system  $\text{Li}_2\text{SO}_4\text{-K}_2\text{SO}_4\text{-H}_2\text{O}$  was investigated at  $0^\circ$ ,  $25^\circ$  and  $50^\circ\text{C}$ . The double salt  $\text{Li}_2\text{SO}_4\cdot\text{K}_2\text{SO}_4$  and the solid solution which forms lithium sulfate with  $\text{Li}_2\text{SO}_4\cdot\text{K}_2\text{SO}_4$  were determined. The double salt  $\text{Li}_2\text{SO}_4\cdot\text{K}_2\text{SO}_4$

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