

KAYUMOV, S. K. Cand Biol Sci -- (diss) "Effect of check-row sowing and cross
cultivation upon the ^{Principal} ~~predominant~~ cotton pests." Samarkand, 1959. 14 pp (Min of
Higher Education USSR. Uzbek State Univ im Alisher Navoi), 150 copies
(KL, 45-59, 145)

KAYUMOV, Ye. G.

"Measurement of Average Intra-Arterial Pressure by a Direct Method and Its Clinical Importance." *Card Med Sci, Central Inst for the Advanced Training of Physicians, Tashkent, 1953. (RZhBiol, No 6, Nov 54)*

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No. 521, 2 Jun 55

~~KAYUMOV, Yunus Mordanovich~~; SMOLOV, V.B., red.; SHILLING, V.A.,
red. izd-va; GVIRTS, V.L., tekhn. red.

[Use of ferrite-transistor cells in the construction of
the arithmetical units-digital computers and control
machines] - Ispol'sovanie ferrit-tranzistornykh iacheek
dlia postroeniia arifmeticheskikh ustroystv tsifrovyykh
svchislitel'nykh i upravliaiushchikh mashin. Leningrad,
1962. 24 p. (Leningradskii dom nauchno-tekhnicheskoi pro-
pagandy. Obmen peredovym opytom. Seria: Pribory i ele-
menty avtomatiki, no.18) (MIRA 16:6)
(Electronic digital computers) (Automatic control)

28321 S/124/51/000/004/020/033
A005/A126

1.7700
AUTHOR:

Kayumova, D. S.

TITLE: The dependence of flame oscillation limits on temperature

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 4, 1961, 83, abstract 4 B 568.
(V sb.: Materialy 1-y konferentsii molodykh nauchn. pabotn. g. Kazani,
Fiz.-tekhn. i matem. sektsiya. Kazan', 1959, 69 - 75)

TEXT: The author reports on experimental results of an investigation of flame oscillations in a horizontal glass pipe, dependent on the initial temperature of the mixture at normal pressure. One end of the pipe was open, the other end was sealed by a rubber stopper having a round axial orifice. CO-O₂ and Co-air mixtures were used as combustible material. The mixture was ignited at the open end. The frequency and amplitude of the oscillations were measured by controlled flame development. The ranges of oscillatory flame propagation were found by coordinate plotting of the fuel percentage in the mixture versus the initial mixture temperature. It was found by qualitative determination that the flame oscillation frequency is nearly independent of the initial mixture temperature; the amplitude, however, depends on the initial temperature and the diameter of the orifice in

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L 1386-66 EEC(k)-2/EWT(1) IJP(c)

ACCESSION NR: AR5014381

UR/0058/65/000/004/A013/A013

SOURCE: Ref. zh. Fizika, Abs. 4A138

AUTHOR: Kayumova, D. S. 44.55

TITLE: Use of a diffraction interferometer for studying the temperature field during propagation of a flame in a tube 48 B

CITED SOURCE: Sb. Itog. nauchn. konferentsiya Kazansk. un-ta za 1962 g. Kazan', Kazansk. un-t, 1963, 57-59 44.55

TOPIC TAGS: flame propagation, interferometer, light diffraction

TRANSLATION: The time change in temperature distribution is measured behind the flame front when a mixture of 55% CO and 45% air is ignited in a vertical semi-closed tube 720 mm long with a rectangular cross section 12.5 x 28.5 mm. The mixture was ignited at the bottom (closed) end of the tube. A two-beam diffraction interferometer based on a Töpler IAB-451 instrument was used for the measurements. The slot and the knife in the focal planes of the lenses in the IAB-451 instrument were replaced by diffraction gratings with 25 lines/mm, and a diaphragm with two openings was placed in the plane of the object. A film fastened to a rotating drum

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ACCESSION NR: AR5014381

was used for time scanning of the diffraction pattern. The use of two-beam interference gave a more detailed interpretation of the process with respect to time. The measurement errors are analyzed. Yu. Kutev.

SUB CODE: OP, FP

ENCL: 00

KE
Card 2/2

L 08565-67 EWT(1)/EWT(m) WW/JW/JWD/WE

ACC NR: AP6033536

SOURCE CODE: UR/0170/66/011/004/0467/0471

AUTHOR: Kayumova, D. S.

ORG: Construction Engineering Institute, Kazan (Inzhenerno-stroitel'nyy institut)

TITLE: Heat transfer from combustion products to the tube walls during flame propagation

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 11, no. 4, 1966, 467-471

TOPIC TAGS: combustion, combustion chamber, cooling, oscillatory combustion, flame propagation, pipe flow

ABSTRACT: Heat transfer in pulsating forced pipe flow has been insufficiently studied. In some previous studies pulsations were found to have no effect on heat transfer, or to increase, or decrease it. To clarify this problem, experiments were made in a rectangular duct (28.5 x 12.5 mm, 60 cm length) which was filled with CO-air mixtures of various compositions. The mixture was ignited at the open end with an electric spark so that the flame front moved towards the closed end of the duct. The open end was connected with a plastic tube to a gas meter to measure the flow rate of the combustion products. By compressing the plastic tube at various distances from the duct, oscillations with various frequencies and amplitudes were induced in the system.

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UDC: 536.24

L 08565-67

ACC NR: AP6033536

The process was scanned by Toepler photography through a 10 cm section with glass windows. The specific heat flux was determined by the enthalpy method using the formula:

$$q = \frac{1}{S} \frac{Q}{\tau} = \frac{1}{S} V_1 \Delta i. \quad (1)$$

where S is the wall surface; V_1 , volume of combustion products; Δi , change in volumetric enthalpy; and τ is time. The amplitudes of the flame front propagation pulsations, and the instantaneous and mean flame speeds relative to the wall were determined from the Toepler photographs. The temperature fields in the combustion products were determined with a diffraction interferometer. The photographs were obtained at various amplitudes, velocities, and mixture compositions. The instantaneous heat fluxes were calculated at the time $\tau = 5.68 \times 10^{-2}$ sec ($\tau = 0$ is the time when the wall temperature starts to increase after passage of the flame front through the test section. A comparison of the overall heat fluxes with and without oscillations is given in Table 1. All the oscillations were of the second type, i.e., the flame front surface is higher than in nonoscillating flame propagation, the flame speed increases considerably, and the flow of combustion products is turbulent. The table shows that the ratio of the oscillatory to nonoscillatory heat fluxes is larger than the ratio of the velocities which shows a positive effect of oscillations on the

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L 08565-67

ACC NR: AP6033536

heat transfer from the combustion products to the wall. Orig. art. has: 10 formulas and 2 tables. [WA No. 76]

Table 1. Comparison of the ratios of heat fluxes and velocities during oscillation with the corresponding values without oscillations

n_{film}	η_q	η_w	n_{film}	η_q	η_w
2/1	0.83	0.65	13/10	1.28	0.64
3/1	0.50	0.42	14/10	2.16	0.88
4/1	0.77	0.53	12/11	1.16	0.68
5/1	0.75	0.56	13/11	0.94	0.63
7/6	1.10	0.73	14/11	1.59	1.17
8/6	0.74	0.52	16/15	0.65	0.62
9/6	1.22	0.58	17/15	0.94	0.88
12/10	1.57	0.51			

(η_q = ratio of heat flux with oscillation to flux without oscillation; η_w = ratio of velocity with oscillation to velocity without oscillation.)

SUB CODE: 21/ SUBM DATE: 26May66/ ORIG REF: 007/ OTH REF: 004

Card 3/3

L 26107-66 EPF(n)-2/EWT(1)/ETC(m)-6

ACC NR: AP6014995

SOURCE CODE: UR/0170/66/010/005/0676/0677

AUTHOR: Podymov, V. N.; Kayumova, D. S.

50
B

ORG: State University im. V. I. Ul'yanov-Lenin, Kazan (Gosudarstvennyy universitet)

TITLE: Observation on the appearance of vortexes in oscillatory combustion

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 10, no. 5, 1966, 676-677

TOPIC TAGS: combustion, gas combustion, combustion instability, oscillatory combustion

ABSTRACT: A photographic study was made of vortex formation during oscillatory combustion in tubes. In normal combustion, the combustion products behind the flame front move in a steady-state regime and with a Poisseuille velocity distribution. The present study, made with direct and schlieren photography, showed the presence of discrete vortexes in oscillatory combustion. Two types were observed in vertical tubes: vortexes adjacent to the tube wall and cellular vortexes filling the entire tube. In the oscillatory combustion of a thin jet burning in a tube, the process is affected by the standing acoustic wave and annular vortexes observed around the jet. The vortexes form in the lower part of the flame and move upwards in a stepwise motion which is coupled with the acoustic oscillations. Thus, it seems to be evident that oscillatory combustion is connected with the formation of discrete vortexes. Orig. art. has: 2 figures. [PV]

SUB CODE: 21/ SUBM DATE: 03Nov65/ ORIG REF: 004/ OTH REF: 001/ ATD PRESS: 4252
Card 1/1 UDC: 536.46

KAYUMOVA, M.

Method of obtaining and the biological characteristics of
dysentery bacteria reversed from L-form cultures. Zdrav.Tadzh.
9 no.5:55-58 '62. (MIRA 15:12)

1. Iz otdela bakteriologii (zav. L.S.Koretskaya) Dushanbinskogo
instituta epidemiologii i gigiyeny.
(SHIGELLA)

KAYUMOVA, M.K.

Diffusion of enteropathogenic serotypes of Escherichia coli in
an external medium. Zdrav.Tadzh. 6 no.3:27-30 My-Je '59.
(MIRA 12:11)

1. Iz Stalinabadskogo Instituta epidemiologii i gigiyeny.
(ESCHERICHIA COLI)
(STALINABAD--DAY NURSERIES--HYGIENIC ASPECTS)

KORETSKAYA, L.S.; KOVALEVSKAYA, A.N.; ~~KAYUMOVA, M.K.~~

Test of the influence of gibberellic acid on the growth of some
bacteria of the intestinal group. Zdrav. Tadzh. 7 no.5:61-62 '60.
(MIRA 13:12)

(GIBBERELIC ACID)

(INTESTINES--BACTERIOLOGY)

KAYUMOVA, M.K.

Morphology and some biochemical properties of the L-form of
dysentery bacteria. Zdrav. Tadzh. 8 no.3:42-43 My-Je '61.
(MIRA 14:6)

1. Iz Stalinabadskego instituta epidemiologii i gigiyeny.
(SHIGELLA PARADYSENERIAE)

KAYUMOVA, M.K.

Comparative study of the serological properties of Δ and initial forms of dysentery bacteria. Zhur. mikrobiol., epid. i immun. 41 no.1:48-53 Ja '64. (MIRA 18:2)

1. Dushanbinskiy institut epidemiologii i gigiyeny.

L 45573-66 EWI(m)

ACC NR: AP6027002

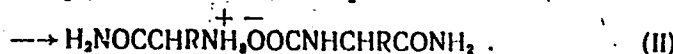
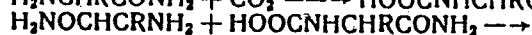
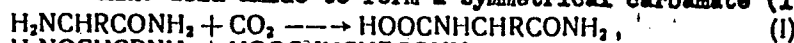
(A)

SOURCE CODE: UR/0291/66/000/002/0031/0034

AUTHOR: Korshak, V. V.; Rogozhin, S. V.; Kayumov, R. D.26
BORG: Institute of Organometallic Compounds, AN SSSR (Institut elementoorganicheskikh soyedineniy AN SSSR)TITLE: Polycondensation of carbamates of α -amino acid amidesSOURCE: Uzbekskiy khimicheskij zhurnal, no. 2, 1966, 31-34

TOPIC TAGS: polycondensation, carbamic acid, amide, amino acid

ABSTRACT: Carbamates of glycyl-, d, L-alanyl-d, L-valyl-d, L-leucyl- and d, L-nor-leucyl amide were synthesized, and their polycondensation in the melt was studied. It is thought that in the first stage of the reaction of carbon dioxide with the α -amino acid amides an N-carboxyamino acid amide (I) is formed which then reacts with another molecule of the α -amino acid amide to form a symmetrical carbamate (II):



Since the reaction is reversible, when the carbamate alone or its mixture with the α -amino acid amide is heated, substances of type (I) which may catalyze the transamidation reaction may appear in the reaction mixture. Furthermore, during the polycon-

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Card 2/2 IC

KAYUMOVA, R..

Prognostic significance of data from a cytological study of vaginal smears in utero -cervical cancer. Vop. onk. 9 no.7: 71-78 '63 (MIRA 16:12)

1. Iz ginekologicheskogo otdeleniya (zav. - prof. V.P.Tobilevich) i tsitologicheskoy laboratorii (zav. - doktor med. nauk M.P.Ptokhov) Instituta onkologii AMN SSSR (dir.- deystvitel'nyy chlen AMN SSSR prof. A.I. Serebrov). Adres avtora: Leningrad, P-129, 2-ya Berezovaya al., 3, Institut onkologii AMN SSSR.

KAYUMOVA, R.N., assistant

Pathohistology of the basic argyrophil substance of the tonsils in chronic tonsillitis. Med. zhur. Uzb. no.2:42-45 F '60. (MIRA 15:2)

1. Iz kafedry bolezney ukha, nosa i gorla (zav. - prof. I.Yu.Laskov)
Tashkentskogo gosudarstvennogo meditsinskogo instituta.
(TONSILS...DISEASES)

KAYUMOVA, R.N., aspirant

Pathohistological study of the nerve elements in the palatine tonsils in chronic tonsillitis. Med. zhur. Uzb. no.5:41-43
My '60. (MIRA 15:3)

1. Iz kafedry bolezney ukha, gorla i nosa (zav. prof. I.Yu. Laskov) Tashkentskogo gosudarstvennogo meditsinskogo instituta.

(TONSILS--INNERVATION)
(TONSILS--DISEASES)

GOROKHOVSKIY, Yu.N.; KAYUNCHINA-LIKSNO, A.N.

Temperature dependence of the kinetics of color development in
multilayer color films. Zhur.nauch.i prikl. fiz. i kin. 1 no.1:
23-28 Ja-F '56. (MIRA 9:10)

1.Gosudarstvennyy opticheskiy institut imeni S.I.Vavileva.
(Color photography--Developing and developers)

KAYLEY 2 12

480? Antion of bromine given internally or orally.

KAYUFOV, A. K.

20570 KAYUFOV, A. K. O nekotorykh zakonornostyakh razvitiya treshchinovatosti v osadochnykh porodakh. Izvestiya akad. nauk kazakh. SSR, No. 70, seriya geol., vyp. 11, 1949, s. 125-33.-Rezyume na kazakh. yaz.

SO: LETOPIS ZHURNAL STATEY - Vol. 28, Moskva - 1949

KATUPOV, A.K.

Concerning the absolute age of granitoids of the Kalba. Izv.AN
Kazakh.SSR.Ser.geol. no.21:129-130 '55. (MLRA 9:8)
(Kalba Range--Rocks, Igneous)

KAYUPOV, A.K.

Age of polymetallic mineralization in the Altai. Izv. AN
Kazakh.SSR. Ser.geol. no.24:79-89 '56. (MLRA 10:2)

(Altai Mountains--Ore deposits)

KAYUPOV, A.K.

SHCHERBA, G.N.; YERMOLAYEV, K.Ye.; ~~KAYUPOV, A.K.~~; KIM, V.A.; NIKITINA, L.G.;
FLEROV, Ye.A.; SATPAYEV, K.I., akademik, red.; BOK, I.I., red.;
SEMENOVA, M.V., red.; POPOV, N.D., tekhn.red.

[Geology of the Leninogorsk and Zyryanovsk mine regions in the
Altai Mountains] Geologiya Leninogorskogo i Zyrianovskogo
rudnykh polei na Altae. Pod red.K.I.Satpaeva. Moskva, Gos.
nauchno-tekhn.izd-vo lit-ry po geoli okhrane nedr, 1957. 370 p.
(MIRA 11:1)

1. Akademiya nauk Kazakhskoi SSR, Alma-Ata.
(Kazakhstan--Geology, Structural)

KAYUPOV, A.K.

KAYUPOV, A.K.; SHLYGIN, A.Ye.

Changes in the reservoir rocks of the Zyrianov deposits in the
Altai Mountains. Izv. AN Kazakh.SSR. Ser.geol.no.3:70-85 '57.
(Altai Mountains--Ore deposits)

SATPAYEV, K.I.; BORUKAYEV, R.A.; AKHMEDSAFIN, U.M.; BOK, I.I.; KUSHEV, G.L.;
SBERGIYEV, N.G.; SHLYGIN, Ye.D.; SHCHERBA, G.N.; MONICH, V.K.;
LOMONOVICH, I.I.; LAVROV, V.V.; MEDOYEV, G.TS.; NOVOKHATSKIY, I.P.;
BARBOT-DE-MARNI, A.V.; GALITSKIY, V.V.; KOLOTILIN, N.F.; ZHILINSKIY,
G.B.; KAYUPOV, A.K.; KAZANLI, D.N.; SATPAYEVA, T.A.; ABDULKABIROVA,
M.A.; GAZIZOVA, K.S.; VBYTS, B.I.; KHAYRUTDINOV, D.Kh.; MUKHAMEDZHANOV,
S.M.; CHOLPANKULOV, T.Ch.; PARSHIN, A.V.; TAZHIBAYEVA, P.F.; YANULOVA,
M.K.; BYKOVA, M.S.; VOLKOV, A.N.; BOLGOV, G.N.; MITRYAYEVA, N.M.;
CHOKABAYEV, S.Ye.; KUNAYEV, D.S.; YARENSKAYA, M.A.; REBROVA, T.I.

Tireless explorer of the depths of the earth's crust; on the 65th
birthday and 40th anniversary of the scientific engineering ac-
tivities of Academician M.P. Rusakov. Vest. AN Kazakh. SSR 13
no.12:96-97 D '57. (MIRA 11:1)

(Rusakov, Mikhail Petrovich, 1892-)

KAYUPOV, A.K.

PHASE I BOOK EXPLOITATION 307/1886

3(5)
Oshchennaya nachaya sessiya po stallogenicheskim i prognoznym kartam, Alma-Ata, 1958.

Materialy nauchnoy sessii po stallogenicheskim i prognoznym kartam: Materialy Presented at the Scientific Session on Metallogenetic and Postulated Ore Occurrence Maps; Reports Alma-Ata, Kazakh SSR, 1958. 318 p. Errata slip inserted. 3,850 copies printed.

Ed.: A.S. Pogozhev; Tech. Ed.: P.P. Alferova.
Sponsoring Agencies: (1) Akademiya nauk SSSR, (2) Akademiya nauk Kazakhskoy SSR, Alma-Ata, (3) USSR, Ministerstvo geologii i obratnykh zemedel, (4) Kazakh SSR, Ministerstvo geologii i obratnykh zemedel.

Purpose: This book is intended for exploration geologists, mining engineers, and cartographers.

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Materials Presented (Cont.)

COVERAGE: This collection of reports was presented at the United Scientific Session on Metallogeny and Postulated Ore Occurrence Maps convened by the Academy of Sciences in Alma-Ata, December, 1958. The reports deal with various aspects of compiling metallogenetic and ore occurrence maps as well as the methodology and techniques of correlating geophysical exploration data. Reports deal only with non-ferrous metals. Three of the reports delivered at the conference but not included in this work were read by Ye.Ye. Zokharov, S.S. Shatalov, and Yu.K. Gortalskiy. References accompany each article.

TABLE OF CONTENTS:

Materials Presented (Cont.) 307/1886
Tukhlin, B.V. [Ural'skiye GU MOON]. Principles of Compiling Metallogenetic Maps for the Magmatic Deposits of the Urals 80
Alekhin, M.M., V.O. Feroz, [Ural'skiye GU MOON]. Technique of Compiling of Copper and Iron Metallogenetic and Postulated Occurrence Maps for the Urals 86
Lazarev, N.Y., I.Y. Lemnykh. [GU MOON]. Copper and Nickel Postulated Occurrence Maps for Certain Districts of the Southern Urals 100
Ivanov, P.P., A.K. Kayupov, and G.M. Shcherba. [AM KazSSR]. Metallogeneticheskii Postulirovannyi Otkrytiya Karty dlya Altau 110
Shcherba, G.M. Postulated Occurrence Maps for Rare Minerals in Central Kazakhstan 119
Bok, I.F., and L.A. Miroshchikov. [IGM AM KazSSR]. Prolivnyye Metallifitsionnyye Otkrytiya Karty i Otkrytiya dlya Predelov Otkrytiya i Eksploatacii 131
Card 4/6

KAYUROV, A.K.

Discovery of the Almay rare-metal deposit in central Kazakhstan.
Izv. AN Kazakh. SSR. Ser. geol. no. 3:84-86 '58. (MIRA 12:1)
(Kazakhstan--Metals, Rare and minor)

SATPAYEV, K.I.; POLOSUKHIN, A.P.; BAISHEV, S.B.; CHDKIN, Sh.Ch.; BORUKAYEV, R.A.;
AKHMEDSAFIN, U.M.; KUSHEV, G.L.; SHCHERBA, G.N.; MONICH, V.K.; MEDOYEV,
G.TS.; LAVROV, V.V.; BARBOT-DE-MARNI, A.V.; GALITSKIY, V.V.; ZHILIESKIY,
G.B.; ~~KAYUPOV, A.K.~~; KAZANLI, D.N.; KOLOTILIN, N.F.; MUKHAMEDZHANOV, S.M.;
SATPAYEVA, T.A.; VEYTS, B.I.; GAZIZOVA, K.S.; CHOLPANULOV, T.Ch.;
PARSHIN, A.V.; BYKOVA, M.S.; MITHYAYEVA, N.M.; VOLKOV, A.N.; GHAKABAYEV,
S.Ye.; YARENSKAYA, M.A.; KHAYRUTDINOV, D.Kh.

On the 60th anniversary of the birth of I.I. Bok, Academician of the
Academy of the Kazakh S.S.R. Vest.AN Kazakh.SSR 14 no.10:95-96
0 '58. (MIRA 11:12)

(Bok, Ivan Ivanovich, 1898-)

KAYUPOV, A.K.

Age relation between complex and rare-metal deposits in the Altai.
Izv. AN Kazakh. SSR. Ser.geol. no.1:40-50 '59. (MIRA 12:7)
(Altai Mountains--Mineralogy)

KAYUPOV, A.K.; SEYFULLIN, S.Sh.

Ore manifestation in the Dzheskagan deposit. Izv. AN Kazakh. SSR.
Ser. geol. no.2:75-82 '59. (MIRA 13:2)
(Dzheskagan District--Ore deposits)

SOV/31-59-2-9/17

3(5)

AUTHORS: Dautov, R.M., Kayupov, A.K., and Petrovskaya, N.M.

TITLE: Phengite Rocks in the Zyryanovsk Rayon (Fengitovaya poroda v Zyryanovskom rayone)

PERIODICAL: Vestnik Akademii nauk Kazakhskoy SSR, 1959, Nr 2, pp 86 - 90 (USSR)

ABSTRACT: This article is a report on the site, characteristics and genesis of a special micaceous rock recently discovered by the geologist R.M. Dautov in the south-eastern part of the Revnyushinskaya anticlinal fold (Revnyushinskaya antiklinal'naya struktura) in the Zyryanovsk Rayon. In this section, the site of the ore field of the Grekhovskaya group (Grekhovskaya gruppa) of polymetallic layers, the geologist found a fine-grained micaceous rock in the form of a mealy, friable mass of yellowish color, greasy to the touch. Until now six outcrops in different places have been established, which are attributed to the thick sedimentary-volcanic rock layer of the middle Devonian period.

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variety between muscovite and pyrophyllite with the substitution of the aluminum component by silica in the tetrahedral group. Such a substitution causes a corresponding potassium reduction in the mineral.

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causes the disappearance of potassium, pyrophyllite is obtained. On the basis of their analysis of the characteristics of the phengite rocks the authors maintain that the following can be established:

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Phengite Rocks in the Zyryanovsk Rayon

SOV/31-59-2-9/17

1) rock formation after folding; 2) known outcrops may be attributed to that section of the middle paleozoic stratigraphic profile, which contains the absolute majority of polymetallic and copper layers in the given district. In addition to the scientists already cited the following names are mentioned: G.N. Shcherba, N.N. Kurek, B.I. Veyts, M.V. Tashchinina. There are 1 table, 1 diagram, and 7 Soviet references.

Card 3/3

AVROY, P.Ya.; AYMALIYEV, Zh. A.; AUEZOV, M.O.; AKHMEDSAFIN, U.M.; BATISHCHEV-
TARASOV, S.D.; BAZANOVA, N.U.; BAISHEV, S.B.; BAYKONUROV, A.B.;
BEKTUROV, A.B.; BOGATYREV, A.S.; BOK, I.I.; BORUKAYEV, R.A.; BURLICHENKO,
N.L.; BYKOVA, M.S.; ZHILINSKIY, G.R.; ZYKOV, D.A.; IVANKIN, P.F.;
KAZANLI, D.N.; ~~KAZIROV, A.K.~~ ZENESBAYEV, S.K.; KOLOTILIN, N.P.;
KUNAYEV, D.A.; KUSHEV, G.L.; L.V. 7, 7.V.; MASHANOV, O.Zh.; MSDOVY,
G.TS.; MONICH, V.K.; MUKANOV, S.; MUSREPOV, G.; MUKHAMEDZHANOV, S.M.;
PARSHIN, A.V.; POFROVSKIY, S.N.; POLOSUKHIN, A.P.; RUSAKOV, M.P.;
SERGIYEV, M.G.; SHYFULLIN, S.Sh.; TAZHIBAYEV, P.T.; YASENKOV, V.G.;
SHLYGIN, Ya.D.; SHCHERRA, G.N.; CHOKIN, Sh.Ch.; CHOLPANKULOV, T.Ch.

Sixtieth birthday of Academician Kanysh Imantaovich Satpaev. Vest.
AN Kazakh. SSR 15 no.4:58-61 Ap '59. (MIRA 12:7)
(Satpaev, Kanysh Imantaovich, 1899-)

VEYTS, B. I., KAYUPOV, A. K.

On P.F. Ivankin and V.S. Kuzebnyi's article on the upper age limit
of Altai complex ore deposits. Vest.AN Kazakh.SSR 16 no.7:28-32
Jl '60. (MIRA 13:8)

(Altai Territory--Ore deposits)
(Ivankin, P.F.) (Kuzebnyi', V.S.)

VEYTS, B.I., kand.geologo-mineralogicheskikh nauk; KAYUPOV, A.K., kand.
geologo-mineralogicheskikh nauk

Sulfide mineralization in the Malaya Ul'ba series of the Altai.
Vest.AN Kazakh.SSR 18 no.3:43-45 Mr '62. (MIRA 15:3)
(Altai Mountains--Ore deposits)

KAYUPOV, A.K.; NIKITINA, L.G.; SHLYGIN, A.Ye.

Alteration of enclosing rocks of the Paryginskoye deposit
(Rudnyy Altai). Izv. AN Kazakh. SSR.Ser.geol. no.1:40-51
'62.

(Altai Mountains--Petrology)

(MIRA 15:5)

KAYUPOV, A.K.; KIM, V.A.; KUNAYEV, D.S.

Genesis of quartzites in the Maybulak ore-bearing region.
Izv. AN Kazakh. SSR Ser.geol. no.2:97-105 '62. (MIRA 15:6)
(Maybulak region ~~(Kazakhstan)~~--Ore deposits)

S/169/63/000/002/086/127
D263/D307

AUTHORS: Yermolayev, K. F. and Kayupov, A. K.

TITLE: The principle of volume smoothing out of exploration data during geometric studies of polymetallic deposits of the Altay type

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 2, 1963, 15, abstract 2D86 (Tr. Altaysk. Gornometallurg. n.-i. in-ta, 1962, 12, 81-92)

TEXT: The authors give a description of the technique, order of calculations, and construction of graphs with the aid of volume smoothing of statistical values, i.e. sampling data, as applied to the Leninogorskoye deposit. This method not only demonstrated the main regularity, i.e. increasing mineralization from the hanging side to the underside, but also followed a fairly accurate determination of surface gradients reflecting this regularity. The method of volume smoothing out of numerical characteristics of deposit parameters (contents, magnitudes, etc.) has been reflected in
Card 1/2

The principle of volume ...

S/169/63/000/002/086/127
D263/D307

the published works of P. A. Ryzhov and may be widely used. [Ab-
stracter's note: Complete translation.]

Card 2/2

KAYUPOV, A.K.; KAZANIN, Yu.I.

Structural types of complex metal deposits in the Dzungarian Ala-Tau.
Izv.AN Kazakk.SSR. Ser.geol. no.5:27-31 '62. (MIRA 15:12)
(Dzungarian Ala-Tau--Ore deposits)

ZHUKOV, Pavel Konstantinovich; KAZANIN, Yuriy Ivanovich; ~~KAYUPOV, Aryktyy Kayupovich~~; MURSALINOV, Khakim Ibragimovich; FIGULEVSKIY, Nikolay Arsen'yevich; SHLYGIN, Artem Yevgen'yevich. Prinimali uchastiye: BAYKENEV, Sh.A.; BAYNAZAROVA, G.; ZORIN, Ye.S.; KRIKUNOVA, N.P.; SHUKHOV, N.N.; BOK, I.I., akademik, otv. red.; NESTEROVA, I.I., red.; ALFEROVA, P.F., tekhn. red.

[Basic features of the geology and metallogeny of the Koksutekeli area of the Dzungarian Ala-Tau] Osnovnyye cherty geologii i metallogenii Koksutekeliiskogo raiona Dzhungarskogo Alatau. Alma-Ata, Izd-vo Akad. nauk Kazakhskoi SSR, 1962. 123 p. (MIRA 15:11)

1. Institut geologicheskikh nauk (for Zhukov, Kazanin, Kayupov, Figulovskiy, Shlyginin). 2. Yuzhno-kazakhstanskoye geologicheskoye upravleniye (for Mursalinov). 3. Akademiya nauk Kazakhskoy SSR (for Bok).
(Dzungarian Ala-Tau--Geology, Economic)

BORUKAYEV, R.A., akademik; KAYUPOV, A.K., doktor geologo-mineralogicheskikh nauk; LYAPICHEV, G.F., kand.geologo-mineral. nauk; MIROSHNICHENKO, L.A., kand. geologo-mineral.nauk

Tectonic and metallogenic regionalization of eastern Kazakhstan.
Vest. AN Kazakh. SSR 21 no.11:14-26 N '65.

(MIRA 18:12)

1. Akademiya nauk Kazakhskoy SSR (for Borukayev).

BORUKAYEV, R.A.; YESENOV, Sh. Ye.; KAYUPOV, A.K.; ABULIN, A.A.

Problems of geological science and practice in Kazakhstan.

Izv. AN Kazakh. SSSR Ser. geol. 22 no.6:3-11 N-D '65

(MIRA 19:1)

1. Institut geologicheskikh nauk imeni K.I. Satpayeva AN
KazSSR, Alma-Ata, i Ministerstvo geologii KazSSR, Alma-Ata.

KAYUPOVA, M.M.

Superimposed metamorphism in the Dzhumart and Kamys iron-manganese deposits in the Atasu region. Izv. AN Kazakh. SSR. Ser. geol. no.2:40-45 '60. (MIRA 13:8)
(Atasu region--Metamorphism (Geology))

KAYUPOVA, M.M.

Friedelite from the iron-manganese deposits of Dzhumart and
Kamys in central Kazakhstan. Dokl. AN SSSR 135 no.2:416-418
N '60. (MIRA 13:11)

1. Institut geologicheskikh nauk AN KazSSR. Predstavleno
akademikom K.I.Satpayevym.
(Kazakhstan--Friedelite)

KAYUPOVA, M.M.

Manganese silicates from the Dzhumart and Kamys deposits in
central Kazakhstan. Izv. AN Kazakh. SSR. Ser. geol. no.2:45-
69 '61. (MIRA 14:7)

(Atasu region--Manganese silicates)

KAYUPOVA, M.M.

Pyrosmalite from the Dzhamart and Ushkatyn deposits in central
Kazakhstan. Dokl. AN SSSR 159 no.3:560-563 N '64

(MIRA 18:1)

1. Institut geologicheskikh nauk im. K.I. Satpayeva AN KazSSR.
Predstavleno akademikom D.S. Korzhinskim.

KAYUPOVA, M.M.; ZAYTSEVA, R.I.; GEKHT, I.I.

Penwithite from the Ushkatyn deposit in central Kazakhstan.
Vest. AN Kazakh. SSSR 20 no.12:61-63 D '64 (MIRA 18:2)

KAYKOVA, M.M.

Characteristics of the mineralogy of some iron-manganese deposits
in the Atasu region. Izv. AN Kazakh. SSR. Ser.geol. 22 no.2:27-35
Mr-Apr '65. (MIRA 18:5)

1. Institut geologicheskikh nauk imeni Satpayeva, Alma-Ata.

KAYUPOVA, M.M.

Pennantite from the Ushkatyn deposit in central Kazakhstan. Dokl. AN
SSSR 163 no.1:189-192 J1 '65. (MIRA 18:7)

1. Institut geologicheskikh nauk im. K.I.Satpayeva AN KazSSR. Sub-
mitted January 28, 1965.

CHUBRIKOV, L.G.; SIROTIN, M.I.; SUYAROV, D.I.; Prinsipali uchastiye:
KAYURIN, V.P.; PROKHOROV, V.S.

Investigating reduction conditions on plate mills at the Asha
metallurgical plant. Trudy Inst.met.UFAN SSSR no.9:27-33 '62.
(MIRA 16:10)

17.1400

32001
S/089/62/012/001/004/019
B102/B138

26.2246

AUTHORS: Broder, D. L., Kayurin, Yu. P., Kutuzov, A. A.

TITLE: Passage of gamma radiation through heterogeneous media

PERIODICAL: Atomnaya energiya, v. 12, no. 1, 1962, 30 - 35

TEXT: The buildup factor was measured for heterogeneous media, consisting of different combinations of shielding materials (polyethylene, Al, Fe, Pb). Co^{60} was used as point source (~ 1 g-equ. Ra, $E_0 = 1.25$ Mev).

Various combinations of ~ 10 mm thick plates (Fe and Pb: $700 \cdot 700$ mm; polyethylene (P) and Al: $1000 \cdot 1000$ mm) were investigated. A plastic scintillator connected via a lightpipe to a ФЭУ-24 (FEU-24) photomultiplier was used as a detector. Dose rates were varied in the range $1 - 10^5$ relative units. Measurement accuracy was about $\pm 10\%$. The following combinations were investigated: (P) + Pb, (P) + Fe, Fe + Pb, Pb + (P), Fe + (P), Pb + Fe, with the first material nearest to the source. The buildup factor was calculated by the empirical formula

$$B_{\text{heter.}} = \sum_{n=1}^N B_n \left(\sum_{i=1}^n \mu_i x_i \right) - \sum_{n=2}^N B_n \left(\sum_{i=1}^{n-1} B \mu_i x_i \right); B_n \text{ is the buildup factor of Card 1/2}$$

L 05055-67 EWT(m)/EWP(j) IJP(c) JR/GD/RM

ACC NR: AT6027930

SOURCE CODE: UR/0000/66/000/000/0150/0155

AUTHOR: Kayurin, Yu. P.; Shalin, V. A.

37
36
B+1

ORG: None

TITLE: Accumulation of gamma radiation from a plane isotropic source with an initial energy of 1.25 Mev in laminar media consisting of polyethylene, iron and lead

SOURCE: Voprosy fiziki zashchity reaktorov (Problems in physics of reactor shielding); sbornik statey, no. 2. Moscow, Atomizdat, 1966, 151-155

TOPIC TAGS: gamma radiation, polyethylene, lead, reactor shielding

ABSTRACT: Experiments are conducted to explain the behavior of accumulation factors for γ -radiation from a plane isotropic source in laminar media. The source used was Co^{60} in a medium made up of various combinations of polyethylene, iron and lead. Recommendations are given for calculating the accumulation factors for γ -radiation in laminar media based on the behavior of accumulation factors for $E_0=1.25$ Mev. A comparison with the results in the literature showed that accumulation factors may be calculated in laminar media for higher energies. The experimental results show that the accumulation factor in laminar media made from several materials for the case of both plane and point isotropic sources lies below the highest and above the lowest

Card 1/3

L 05055-67

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721220017-9"

accumulation factors for the homogeneous materials used in the laminar medium. The following empirical formula

$$B_{comp} = \sum_{n=1}^N B_n \left(\sum_{l=1}^n |x_l| \right) - \sum_{n=2}^N B_n \left(\sum_{l=1}^{n-1} |x_l| \right),$$

derived for calculating accumulation factors of γ -radiation from a point isotropic source in laminar media may also be used for plane isotropic sources. This formula may be used for higher energies since the energy dependence is accounted for in the accumulation factors for homogeneous media and these factors are used as initial data in calculating laminar media. Although this empirical formula gives a good description of the behavior of the accumulation factor in laminar media, computational difficulty makes it inconvenient to use for media consisting of 3 or more materials. The calculation of accumulation factors in shielding media consisting of 10-20 layers with 2 or 3 different types of materials by using this formula gives an error of $\pm 40\%$. Layers of this type approach homogeneity and the order in which the layers are arranged loses its significance. The empirical formula

$$B'_{comp} = \sum_{l=1}^n \frac{a_l}{A} B_l(A)$$

Card 2/3

L 05055-67

ACC NR: AT6027930

where n is the number of materials making up the mixture, a_i is the total thickness of the layers made of the i -th material in terms of the mean free path, A is the total thickness of the mixture in terms of the mean free path, and $B_i(A)$ is the accumulation factor of the i -th material taken on the thickness of the entire mixture. This formula may also be used in the case of a medium consisting of 2 or 3 layers if the accumulation factors in the materials differ over the entire thickness by no more than 2 times. The authors thank Doctor of physical and mathematical sciences D. L. Broder for assistance in the work and discussion of the results. Orig. art. has: 5 figures, 3 formulas.

SUB CODE: 18/ SUBM DATE: 12Jan66/ ORIG REF: 006

Card 3/3 *plw*

BRODER, D.L.; KAYURIN, Yu.P.; KUTUZOV, A.A.

Calculating the factors of β -ray build-up in heterogeneous media.
Atom.energ. 13 no.6:593-595 D '62. (MIRA 15:12)
(Gamma rays) (Nuclear reactions)

ACCESSION NR: AT4019049

S/0000/63/000/000/0198/0207

AUTHOR: Broder, D. L.; Kayurin, Yu. P.; Kutuzov, A. A.

TITLE: The passage of Gamma radiation through heterogeneous media

SOURCE: Voprosy* fiziki zashchity* reaktorov; sbornik statey (Problems in physics of reactor shielding; collection of articles). Moscow, Gosatomizdat, 1963, 198-207

TOPIC TAGS: nuclear reactor, reactor shielding, iron shielding, lead shielding, Gamma radiation, Gamma ray attenuation, Gamma radiation shielding, Gamma radiation accumulation factor, polyethylene shielding, aluminum shielding

ABSTRACT: The authors note that the computation of shielding against gamma-radiation requires a knowledge of one of the essential characteristics of the material — the radiation accumulation factor. For homogeneous media the accumulation factor $B(E_0, x, z, g)$ is a function of the initial energy of the γ -radiation E_0 , the thickness of the material x , the ordinal number of the substance z , and also the form of the source g . The significance of the accumulation factor for such homogeneous media is discussed in some detail. Some recommendations, based on general physical considerations, with respect to the computation

Card 1/2

ACCESSION NR: AT4019049

of accumulation factors for heterogeneous shieldings consisting of two materials are analyzed. An experimental determination is made of the dose accumulation factor for heterogeneous media, consisting of various combinations of materials (polyethylene, aluminum, iron, lead), and for γ -quanta energies of 1.25, 2.76 and ca. 6.4 Mev. As the source of the γ -quanta with an energy of 1.25 Mev, Co^{60} was used; for the quanta with the 2.76-Mev energy level, Na^{24} was employed. In order to obtain the high-energy (6.4 Mev) γ -quanta the authors made use of an $\text{F}^{19}(\text{p},\alpha)\text{O}^{16}$ reaction. On the basis of the experiments with Co^{60} and general physical considerations, an empirical formula was derived for the computation of accumulation factor in a heterogeneous medium consisting of any number of layers of different materials. The experiments with Na^{24} and the 6.4-Mev γ -ray source demonstrated that this formula may be used even in the case of γ -quanta energy levels in excess of the critical. Experimentally derived accumulation factors differ from those computed according to this formula by no more than 15%. Orig. art. has: 3 formulas, 1 table and 9 figures.

ASSOCIATION: none
SUBMITTED: 14Aug63
SUB CODE: NP

DATE ACQ: 27Feb64
NO REF SOV: 004

ENCL: 00
OTHER: 004

Card 2/2

KAYUROV, V.

Deviation of an underwater wrist compass. Voen. znan. 38 no.6:31
Je '62. (MIRA 15:6)

1. Nachal'nik spasatel'noy stantsii, g. Aleksandrovsk, Sakhalinskoy
oblasti.

(Compass)
(Diving, Submarine)

TOLSTOPYAT, A.I.; KAYUROV, V.S., red.; SAYTANIDI, L.D., tekhred.

[Loading cartridges with buckshot] Snariashenie patronov
k drobovomu ruzh'iu. Moskva, Gos.izd-vo "Fizkul'tura i sport,"
1953 p. 130 p. (MIRA 13:7)
(Cartridges)

KAYUROV, Yu.

Business accounting the new practice in awarding bonuses. Sots. trud
5 no.5:108-116 My '60. (MIRA 13:11)

1. Zamestitel' nachal'nika planovogo otdela Gor'kovskogo avtozavoda.
(Gorkiy--Automobile industry--Finance)

KOROL'KOVA, V.A.; KAYUSHEVA, I.V.

Pulseless disease. Klin. med. 38 no. 2:141-142 F '60. (MIRA 14:1)

(ARTERIES—DISEASES)

F

KAYUSHIN, L.P.; LYUDKOVSKAYA, R.G.

Study of elastic and volume modifications in nerve tissues by
light-interference method. Dokl. AN SSSR 95 no.2:253-255 Mr '54.
(MLRA 7:3)

1. Institut biologicheskoy fiziki Akademii nauk SSSR.
(Nerves) (Interferometer)

||
KAYSHIN, I.P.; LYUDKOVSKAYA, R.G.
A

Changes in the volumetric and elastic properties of the nerve during
the conduction of excitation and their connection with bioelectric
potentials. Trudy Inst. biol. fiz. no. 1:40-49 '55. (MIRA 9:9)
(NERVES) (ELECTROPHYSIOLOGY)

Kayushin, L. P.

USSR/ Medicine - Neurology

Card 1/1 Pub. 22 - 19/53

Authors : Kayushin, L. P., and Lodkovskaya, R. G.

Title : Elastic and electrical phenomena in a nerve during the transmission of an excitation

Periodical : Dok. AN SSSR 102/4, 727-728, Jun 1, 1955

Abstract : Experiments intended to clarify the relationship between elastically - volumetric changes in a nerve receiving an impulse and the transmission of that impulse in the nerve are described. The experiments were conducted with the help of a micro-interferometer of the MII-5 type, a square wave oscillator for pulse excitations and photographic equipment for recording the results of the experiments. One USSR reference (1954). Photograms.

Institution : The Acad. of Sc., USSR, Institute of Biological Sciences

Presented by : Academician V. A. Engled'gardt, February 7, 1955

KAYUSHIK, L. P., FRANK, G.M., LUDKOVSKAYA, R.G.

"ON THE CHANGE OF STRUCTURAL AND MECHANICAL PROPERTIES
OF THE NERVE IN SPREADING OF EXCITATION"

pp. 366, Reports given at the 20th International
Congress of Physiologists, Brussels, 30 Jul-4 Aug 56

Translation E-5368

Country : USSR
Category : Human and Animal Physiology.
Abs. Jour. : Nerve and Muscle Physiology.
Ref Zhur-Biol., No 23, 1958, 106724
Author : Kayushin, L. P.; Lyudkovskaya, R. G. ;*
Institut. :
Title : The Dependence of the Nerve's Elastic Properties on Temperature.
Orig Pub. : Biofizika, 1956, 1, No 5, 405-411

T

Abstract : The sciatic nerve of a frog was placed into a thermostate equipped chamber at temperatures ranging from 6 to 43° [C]. Two pairs of platinum electrodes were attached to the nerve which irritated it and through which the current produced by the nerve's activity (CA) passed. The changes of the nerve's length were determined microscopically. When initially 200 mg and larger loads were used and the length of the nerve remained stable, tension diminished gra-

Card: 1/4

Country : USSR
Category= : Human and Animal Physiology. T
Nerve and Muscle Physiology.
Abs. Jour. : Ref Zhur-Biol., No 23, 1958, 106724
Author :
Institut. :
Title :

Orig. Pub. :

Abstract :
(cont) dually. The authors relate this phenomenon to plastic properties of the nerve. As the nerve was continuously strained, its plasticity became apparent in a lengthening or "flowing" of the nerve substance. CA became somewhat weaker. When loads of less than 100 mg were used, the tension lost its dependence upon time some time after the load was applied. If the nerve length was stable, the curve of diminished tension was

Card: 2/4

83

Country : USSR
Category= : Human and Animal Physiology. T
Nerve and Muscle Physiology.
Abs. Jour. : Ref Zhur-Biol., No 23, 1958, 106724
Author :
Institut. :
Title :

Orig. Pub. :

Abstract :
(cont) which was related to growing elastic properties of the nerve. Simultaneously, changes of CA magnitude and form were observed as well as a complete loss of conductivity. This conductivity loss and disruption of the tension and temperature curves are related to structural modifications in axoplasma. -- F. I. Imedadze

Card: 4/4

84

Gas Dynamics (Cont.)

SOV/3201

of flow on the combustion process of gas mixtures; 3) theoretical investigations of inconsistencies in hydrodynamic theories of combustion and explosion, and the methods of Riemann, Hugoniot and Hadamard for describing front processes. The editor states that strict criteria have been established for separating from a class of physical phenomena a special class characterized by the frontal wave motion process. These criteria purportedly offer a new fundament to the identical and kinetic (compatibility) conditions of wave motion of Hadamard and permit their generalization for the case of varying discontinuities of these or other physical quantities of an explosion wave front. No personalities are mentioned. References accompany each article.

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Gas Dynamics (Cont.)

SOV/3201

Bazhenova, T.V. Propagation of Waves of Finite Amplitude Which Arise During the Explosion of a Gas in a Cylindrical Vessel of Variable Volume	51
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Card 3/4

LYUDKOVSKAYA, R.G.; KAYUSHIN, L.P.

Effect of light on the electrical activity of the giant axon of a squid and the myelinated fiber of a frog. Biofizika 4 no. 4:404-413 '59. (MIRA 14:4)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
(ELECTROPHYSIOLOGY) (NERVES)
(LIGHT—PHYSIOLOGICAL EFFECT)

S/081/62/000/003/022/090
B150/B101

AUTHORS: Kuzin, A. M., Kavushin, L. P., Kolomiyaeva, I. K., L'vov, K. M.

TITLE: Investigation by the electronic paramagnetic resonance method of free radicals of some organic peroxides after irradiation

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 3, 1962, 78, abstract 3B541 (Sb. "Rol' perekisey i kisloroda v nach. studiyakh radiobiol. efekta", M., AN SSSR, 1960, 99 - 104)

TEXT: Benzoyl peroxide (I), dioxymethyl peroxide (II), and succinic acid peroxide (III) are irradiated (Co^{60}) at a dose rate of 550 r/min with a total dosage of 6·10-25·10 r. The electronic paramagnetic resonance spectra of I and II after irradiation have similar shapes and represent asymmetrical doublets, the result of superposition of the spectra of various radicals, with the peroxide radical being the most important one. It is found that unirradiated III is paramagnetic by the breaking of the O—O bonds in a part of the molecules. Its spectrum is a symmetrical quadruplet with a ratio of intensities of 1:3:3:1 and a splitting of 19 gauss.
Card 1/2

LYUDKOVSEKAYA, P.G.; KAYUSHIN, I.P.

Effect of ultraviolet irradiation on single nerve fibers.
Biofizika 5 no.1:40-45 '60. (MIRA 13:6)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
(ULTRAVIOLET RAYS eff.)
(NEURONS radiation eff.)

KAYUSHIN, L.P.; LYUDKOVSKAYA, R.G.; SHMELEV, I.P.

Ultraviolet absorption by the giant axon of sepia in a state of rest
and excitation. Biofizika 5 no.3:279-283 '60. (MIRA 13:7)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
(NERVES) (ULTRAVIOLET RAYS)

L'VOV, K.M.; KAYUSHIN, L.P.; LYUDKOVSKAYA, R.G.

Relationship between highly elastic properties of the nerve fiber
and certain functional characteristics. Biofizika 5 no. 3:379-381
'60. (MIRA 13:7)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
(NERVES)

KOLOMIYTSEVA, I.K.; L'VOV, K.M.; KAYUSHIN, L.P.

Determination of free radicals in tissues of rats with transplanted
sarcoma G-45. Biofizika 5 no. 5:636-637 '60. (MIRA 13:10)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
(TUMORS) (RADICALS CHEMISTRY)

LYUDKOVSKAYA, R.G.; KAYUSHIN, L.P.

Photodynamic effect of various fluorescent dyes on the excitable
giant axon. Biofizika 5 no. 6:663-670 '60. (MIRA 13:10)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
(STAINS AND STAINING (MICROSCOPY)) (FLUORESCENCE)
(ELECTROPHYSIOLOGY)

KAYUSHIN, L.P.; KOLOMIYTSEVA, I.K.; L'VOV, K.M.

Study of free radicals in surviving animal tissues. Dokl. AN SSSR
134 no.5:1229-1231 O '60. (MIRA 13:10)

1. Institut biologicheskoy fiziki Akademii nauk SSSR. Predstavleno
akademikom A.I. Oparinym.
(TISSUES) (RADICALS (CHEMISTRY))

87415

21.6300

S/020/60/135/006/033/037
B016/B060

17.2400

AUTHORS:

Eydus, L. Kh. and Kayushin, L. P.

TITLE:

Lasting Conservation of Unpaired Electrons in Macromolecules
Upon Irradiation of Proteic Solutions

PERIODICAL:

Doklady Akademii nauk SSSR, 1960, Vol. 135, No. 6,
pp. 1525-1527

TEXT: The authors have applied the method of electron paramagnetic resonance (e.p.r.) to prove the ability of protein molecules (myosin and pepsin, which have quite different properties in many respects) to conserve unpaired electrons in aqueous solutions for a long time. Myosin was extracted by Lyubimova's method (not described in the text) from rabbit muscles (concentration: 10 mg/ml) and irradiated with a Co^{60} gamma dose of $0.5 \cdot 10^6$ r in a 0.5 M KCl solution. Pepsin was irradiated by Northrop's (Northrop) method as modified by G. A. Levdikova (Ref. 13) with a dose of $3 \cdot 10^6$ r in 0.2 M acetate buffer (concentration: 5 mg/ml) at pH 4.8. The radiation doses corresponded to a loss in the activity of ferments of

Card 1/3

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Lasting Conservation of Unpaired Electrons
in Macromolecules Upon Irradiation of
Proteic Solutions

S/020/60/135/006/033/037
B016/B060

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about 80%. The irradiated solutions were dried out and pulverized. The e.p.r. was measured by a radiospectrometer with a double modification of the magnetic field (upper modulation frequency 465 kc/sec). The first derivatives of the absorption lines were recorded by an ЭПР-09 (EPP-09) self-recorder. Fig. 1 shows the measurement results. The e.p.r. spectra of the two irradiated substances constitute singlet signals. Their factor of spectroscopic splitting approaches the g-factor of 1,1-diphenyl picryl hydrazine. The distance between points of maximum inclination is 14.5 gauss in myosin, and 17.5 gauss in pepsin. Such signals were not observed in the control preparations. The same ferment solutions were incubated in a warm ambient prior to drying after irradiation (myosin 24 h at 20°C, pepsin 6 h at 54°C). According to results supplied by an earlier paper, the "thermal" after-effect of irradiation is observed with such an incubation, as a part of the protein with hidden damage loses its fermentative activity. The incubation process was complete, and the remaining degree of activity was therefore no more altered by additional incubation. It was observed from curves A, b, and B, b (Fig. 1) that no more unpaired electrons could be proved to exist after the mentioned

Card 2/3

87415

Lasting Conservation of Unpaired Electrons
in Macromolecules Upon Irradiation of
Proteic Solutions

S/020/60/135/006/033/037
B016/B060

inactivation in the proteins. The same conservation of unpaired electrons was established with the photodynamic effect. The duration of exposure with visible light (2 bulbs 300 watts each) corresponded to about the loss of half the ferment activity. Results are shown in Fig. 2. No similar e.p.r. signals were observed in the control preparation. The authors conclude that their results confute the principal objection against the hypothesis of an "after-effect" of radiation damage, namely, the unlikelihood of the appearance of unpaired electrons in diluted proteic solutions. G. K. Otarova and M. K. Pulatova are thanked for their assistance. There are 2 figures and 13 references: 10 Soviet, 2 US, and 1 British. X

ASSOCIATION: Institut biologicheskoy fiziki Akademii nauk SSSR (Institute of Biophysics of the Academy of Sciences USSR)

PRESENTED: October 5, 1960, by N. M. Sisakyan, Academician

SUBMITTED: September 16, 1960

Card 3/3

KAYUSHIN, L.P., LVOV, K.M., GOLUBEV, I.I.

"Study of the Excitable Tissues (Nerve, Muscle) with ESR."

report presented at the Intl. Biophysics Congress, Stockholm, Sweden, 31 July -
4 August 1961.

Institute of Biophysics, USSR Academy of Sciences, Moscow, USSR.

KAYUSHIN, L.P., KUZIN, A.M., KOLOMITSEVA, I.K.

"Study of Amino Acid Radicals during Irradiation by the ESR Technique."

report presented at the Intl. Biophysics Congress, Stockholm, Sweden, 31 July -
4 August 1961.

Institute of Biophysics, USSR Academy of Sciences, Moscow, USSR.

KAYUSHIN, L. P., LVOV, K.I.M., GOLUBEV, I. M., KOFMAN, Y. B., and
SAZONENKO, M. K. (USSR)

"Free Radicals in Muscle and Muscle Proteins."

Report presented at the 5th International Biochemistry Congress,
Moscow, 10-16 Aug 1961

KAYUSHIN, L.P.; KOFMAN, Ye.B.; GOLUBEV, I.N.; L'VOV, K.M.; PULATOVA,
M.K.

Transfer of energy released by the hydrolysis of adenosinetriphosphoric
acid to contractile proteins. Biofizika 6 no. 1:20-23 '61.
(MIRA 14:2)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
(MUSCLES—MOTILITY) (ADENOSINETRIPHOSPHORIC ACID)

SHMELEV, I.P.; KAYUSHIN, L.P.

Absorption of monochromatic ultraviolet radiation by the giant
nerve fiber of the cuttlefish. Biofizika 6 no.4:436-439 '61.
(MIRA 14:7)

1. Institut biologicheskey fiziki AN SSSR, Moskva.
(NERVES) (ULTRAVIOLET RAYS--PHYSIOLOGICAL EFFECT)

KOLOMIYTSEVA, I.K.; KAYUSHIN, L.P.; KUZIN, A.M.

Free radicals in rat tissues under normal conditions and following gamma irradiation by Co⁶⁰. Dokl. AN SSSR 140 no.1:230-231 S-O '61. (MIRA 14:9)

1. Institut biologicheskoy fiziki AN SSSR. 2. Chlen-korrespondent AN SSSR (for Kuzin).
(GAMMA RAYS...PHYSIOLOGICAL EFFECT) (RADICALS (CHEMISTRY))

KOMETIANI, Z.P.; KAYUSHIN, L.P.

Role of metabolism and free radicals in the electric polarization
of biological membranes. Dokl. AN SSSR 141 no.4:970-972 D '61.
(MIRA 14:11)

1. Institut biologicheskoy fiziki AN SSSR. Predstavleno
akademikom I.S. Beritashvili.

(SKIN)

(RADICALS (CHEMISTRY))

(ELECTROPHYSIOLOGY)

FULATOVA, M.K.; ROGULENKOVA, V.N.; KAYUSHIN, L.P.

Characteristics of the spectra of electronic paramagnetic resonance of synthetic polypeptide films and proteins. Biofizika 6 no.5:548-555 '61. (MIRA 15:3)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
(PEPTIDES—SPECTRA)
(PARAMAGNETIC RESONANCE AND RELAXATION)
(PROTEINS)
(RADIATION--PHYSIOLOGICAL EFFECTS)

KAYUSHIN, L. P.

(4)
Dynamics of Free Radicals in Cell Constituents of Organisms Exposed to Radiation

I. K. Kolomiltseva, L. P. Kayushin and A. M. Kuzin

The ESR method was used to investigate the relative numbers of free radicals in dried specimens of homogenate, nuclei and mitochondria of rats' spleens. After drying, the irradiation was carried out in a N₂ atmosphere. The highest concentration of free radicals was found in the homogenate; in the nuclei and mitochondria, the numbers of free radicals were about the same but less than those in the homogenate.
In the spleen nuclei separated immediately after a whole-body irradiation of the animal with a dose of 1000 r, the number of free radicals did not show any change relative to controls. In the mitochondria, a certain decrease of the relative content of free radicals was found. The significance of the observed changes for the study of the primary mechanisms of radiation injury is discussed.

Institute of Biophysics, Academy of Sciences, Moscow, USSR

Report presented at the 2nd Intl. Congress of Radiation Research,
Harrogate/Yorkshire, Ct. Brit. 5-11 Aug 1962

FRANK, G.M., AZHIFA, YA.I., KAYUSHIN, L.P.

"Free radicals in a skeletal muscle."

Report submitted, but not presented at the 22nd International
Congress of Physiological Sciences.
Leiden, the Netherlands 10-17 Sep 1962

VAN LIN-FAN [Wang Ling-fang]; L'VOV, K.M.; SAZONENKO, M.K.; KAYUSHIN,
L.P.; GOLUBEV, I.N.

Role of free radicals in muscle contraction. Biofizika 7 no.4:
479-480 '62. (MIRA 15:11)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
(MUSCLES--MOTILITY) (RADICALS (CHEMISTRY))

AZHIPA, Ya.I.; KAYUSHIN, L.P.; L'VOV, K.M.

Changes in the amount of free radicals in the skeletal muscle during atrophy. Biofizika 7 no.5:610-614 '62.

(MIRA 17:8)

1. Institut vysshey nervnoy deyatel'nosti i neyrofiziologii AN SSSR, Moskva i Institut biologicheskoy fiziki AN SSSR, Moskva.

RAZUMOVA, L.L.; GUN TSZU-SYUN' [Kung Tsu-hstn]; KAYUSHIN, L.P.; PULATOVA, M.K.

Studying various structural forms of the protein myosin by the
electron paramagnetic resonance method. Dokl. AN SSSR 146 no.5:
1197-1200 0, '62. (MIRA 15:10)

1. Institut biologicheskoy fiziki AN SSSR. Predstavleno
akademikom V.N.Kondrat'yevym.
(MYOSINS) (PARAMAGNETIC RESONANCE AND RELAXATION)

KOLOMIYTSEVA, I. K.; KAYUSHIN, L. P.; KUZIN, A. M.

Free radicals in lipids of a rat's liver in the normal state
and at various periods following gamma-irradiation. Dokl. AN
SSSR 147 no.4:951-953 D '62. (MIRA 16:1)

1. Institut biologicheskoy fiziki AN SSSR. 2. Chlen-korrespondent
AN SSSR (for Kuzin).

(Radicals(Chemistry)) (Lipid metabolism)
(Radiation—Physiological effect)

EL'PINER, Isaak Yefimovich; KAYUSHIN, L.P., red.; RAYSKAYA, N.A.,
red.; PLAKSHE, L.Yu., tekhn. red.

[Ultrasound; its physicochemical and biological effects]
Ul'trazvuk; fiziko-khimicheskoe i biologicheskoe deistvie.
Moskva, Fizmatgiz, 1963. 420 p. (MIRA 16:7)
(Ultrasonic waves)

PULATOVA, M.K.; BURSHEYN, E.A.; KAYUSHIN, L.P.

Change in the localization of unpaired electrons in irradiated proteins under the action of infrared radiation. Dokl. AN SSSR 149 no.6:1432-1434 Ap '63. (MIRA 16:7)

1. Institut biologicheskoy fiziki AN SSSR. Predstavleno akademikom N.M.Sisakyanom.
(Infrared rays—Physiological effect) (Proteins)

L 17508-63

ACCESSION NR: AP3004437

S/0020/63/151/004/0986/0988

AUTHORS: Ostrovskiy, M. A.; Kayushin, L. P. 45

TITLE: Study of electron paramagnetic resonance in the retina in the presence of light.

SOURCE: AN SSSR. Doklady*, v. 151, no. 4, 1963, 986-988.

TOPIC TAGS: electron paramagnetic resonance, retina, Rana temporaria.

ABSTRACT: Isolated, dark-adapted retinas from the frog, Rana temporaria, which contained traces of the pigmented epithelium were examined in an electron paramagnetic resonance (EPR) spectrometer at temperatures below 0°C. The retinas gave a definite EPR signal at -20°C. An average increase in amplitude of 50% occurred when the retinas were exposed to a 750 watt incandescent lamp. The amplitude returned to its initial level a few minutes after the lamp was turned off. Both light and dark signals had a singlet form; the g-factor of the spectrum approximated the g-form of a free electron; and the width of the absorption lines between points of minimal slope was about 6 cersteds. A similar response was obtained at -196°C, but the decrease in amplitude after the lamp was switched off was very slow. These experiments indicate that there is a considerable increase in the number of unpaired electrons in the retina when it is exposed to visible
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ACCESSION NR: AP3004437

light. "Pure" pigmented epithelium exposed to visible light gave signals which increased only 17-19% from the initial "dark" values. Increase in the amplitude of the signal in retinas with traces of pigmented epithelium may be due either to photochemical processes in the photoreceptors or to basic photochemical properties of the photoreceptor-pigmented epithelium system. The low temperatures employed in these experiments make it unlikely that enzymatic processes are involved. "Authors express deep gratitude to Prof. V. G. Samsonovaya for her constant interest in the work and valuable advice, and also to G. T. Rikherevaya and M. K. Pulatovaya for assistance in the work." Orig. art. has: 3 figures.

ASSOCIATION: Institut vysshey nervnoy dyeyatel'nosti i neyrofiziologii Akademii nauk SSSR (Institute for higher nervous activity and neurophysiology, Academy of sciences SSSR). Institut biologicheskoyi fiziki Akademii nauk SSSR (Institute for Biological Physics, Academy of Sciences, SSSR).

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ACCESSION NR: AP4042475

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AUTHOR: Umrikhina, A. V.; Golubev, I. N.; Kayushin, L. P.;
Krasnovskiy, A. A.

TITLE: A study of the paramagnetic properties of chlorophyll and
its analogs

SOURCE: Biofizika, v. 9, no. 4, 1964, 423-427

TOPIC TAGS: tetrapyrrol pigment, chlorophyll, ethyl chlorophyllide,
pheophytin, phthalocyanin, magnesium phthalocyanin, EPR signal,
paramagnetic property, light effect, chlorophyll aggregation, EPR
signal temperature dependence, protoporphyrin, hematoporphyrin

ABSTRACT: The article describes a study of the EPR signals of chloro-
phyll and some of its structurally different analogs, namely,
pheophytin, ethyl chlorophyllide, hemato- and protoporphyrin, and
phthalocyanin and Mg-phthalocyanin. The pigments were examined
in the form of solid crystalline samples in glass ampuls, either
evacuated or in the presence of air. All the pigments gave a similar

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