"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, K.V.; SENKEVICH, S.V.

Content of adrenalin in the blood in animals in various types of anesthesia. Tr. Vsesoiuz. obsh. fiziol. no. 1:113 1952. (CIML 24:1)

1. Delivered 14 December 1949, Kazan'.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, K.V.

Chamber for the production of conditioned defense reflexes in small laboratory animals. Zhur. vys. nerv. deiat. 11 no.1:190-192 Ja-F '61. (MIRA 14:5)

1. Chair of Physiology, Medical Institute, Kazan.
(CONDITIONED RESPONSE) (PSYCHOLOGICAL APPARATUS)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

VOLKOVA, I.N.; LEBEDEV, K.V.; TUKHVATULLINA, L.V.

Influence of X-rays on the process of formation of a mediator in the sympathetic nervous system. Biul. eksp. biol. i med. 52 no.9:37-39 S '61. (MIRA 15:6)

1. Iz kafedry normal'noy fiziologii (zav. - prof. I.N. Volkova) i kafedry radiorentgenologii (zav. - prof. M.I. Gol'dshteyn) Kazanskogo meditsinskogo instituta. Predstavlena deystvitel'nym chlenom AMN SSSR A.V. Lebedinskim.

(SYMPATHINS)
(X RAYS--PHYSIOLOGICAL EFFECT)
(NERVOUS SYSTEM, SYMPATHETIC)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

L 21402-66 EWT(d)/EWP(f)/EPF(n)-2/EWP(v)/T-2/EWP(k)/EWP(h)/EWP(l)/ETC(m)-6 WW
ACC NR: AP6009924 SOURCE CODE: UR/0413/66/000/004/0118/0119

INVENTOR: Korotkov, F. A.; Mushenko, G. I.; Dobrynin, A. N.; Sokolov, Ye. A.; Lebedev, K. V.

ORG: none

TITLE: Fuel feed control device for gas turbine engines. Class 46, No. 179127

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 4, 1966, 118-119

TOPIC TAGS: gas turbine installation, engine turbine system, turbine fuel system, fuel pump

ABSTRACT: The proposed fuel feed regulator contains a fuel pump which feeds the fuel to a metering needle valve with a servo-plunger whose cavities are connected by a duct. The device also includes an engine speed limiter and speed governor, an automatic starter, and a minimum pressure valve which are located parallel to the constant pressure-gradient valve which maintains a constant fuel pressure drop across the needle valve (see Fig. 1). To increase the accuracy of control and reduce the weight and size, one of the plunger cavities is directly connected to the same line through a jet nozzle and a throttle unit. The duct between the cavities is also connected to the control element of the starter and through the minimum pressure valve to the sensing element of the speed limiter and speed governor.

UDC: 621.438-543.3-531.9

Card 1/2

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L 21402-66
ACC NR: AP6009924

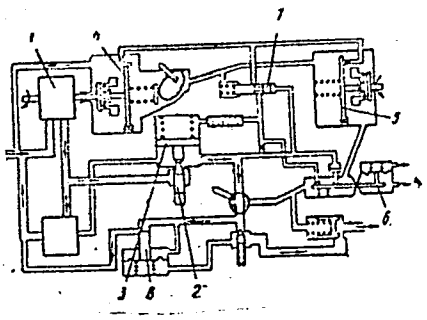

Fig. 1. Fuel feed regulator

1 - Fuel pump; 2 - needle valve; 3 - servo plunger; 4 - speed governor; 5 - speed limiter; 6 - automatic starter; 7 - minimum pressure valve; 8 - maximum flow rate regulator.

To increase the accuracy of control of the turbocompressor speeds and of the regulation of helicopter rotor rpm's in a variation of this device, the speed governor actuation is based on a derivative and the speed limiter is similar in design with a residual nonuniformity. In order to eliminate the effect of leakage on the maximum fuel flow rate, the regulator is made in the form of a jet nozzle and a constant pressure gradient valve. Orig. art. has: 1 figure. [TN]

SUB CODE: 21/ SUBM DATE: 05Sep63/ ATD PRESS: 4221

Card 2/2 ULR

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

AZERNIKOV, V.; ARLAZOROV, M.; ARSKIY, F.; BAKANOV, S.; BELOUSOV, I.; BILENKIN, D.; VAGEL', I.; VLADIMIROV, L.; GUSHCHEV, S.; YELAGIN, V.; YERESHKO, F.; ZHURBINA, S.; KAZARNOVSKAYA, G.; KALININ, Yu.; KELER, V.; KONOVALOV, B.; KREYNDLIN, Yu.; LEBEDEV, L.; PODGORODNIKOV, M.; RABINOVICH, I.; REPIN, L.; SMOLYAN, G.; TITARENKO, V.; TOPILINA, T.; FEDCHENKO, V.; EYDEL'MAN, N.; ETTE, A.; NAUMOV, F.; YAKOVLEV, N.; MIKHAYLOV, K., nauchn. red.; LIVANOV, A., red.

[Little stories about the great cosmos] Malen'kie rasskazy o bol'shom Kosmose. Izd.2., Moskva, Molodaia gvardiia, 1964. 368 p. (MIRA 18:4)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.A., inzhener.

Winter production of bricks in seasonal factories. Gor.khoz.Mosk. 25 no.9: 17 S '51. (MLRA 6:11)

(Brickmaking--Cold weather conditions)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.A. ENG.

Building Materials Industry - Moscow

Developing an industrial basis for residential and cultural building construction in Moscow. Gor. khoz. Mosk. 26, No. 8, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. UNCLASSIFIED.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.A.; SAKOVSKIY, S.A.

Neces ary and sufficient conditions for an extremum functional in the problem of an optimum flight of an aircraft having a low-thrust engine. Izv. vys. ucheb. zav.; av. tekh. 7 no.4: 20-25 '64 (MIRA 18:1)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

Country : USSR
Category : Human and Animal Physiology, Blood

Abs. Jour. : Ref Zhur - Biol., No. 2, 1959, No. 7951

Author : Lebedev L.A.

Title : Recent Data on Transfusing Animals with Preserved Blood.

Orig Pub. : S.x. Sibiri, 1957, No. 12, 68--71

Abstract : A glucose-citrate solution (10 ml of a 5% solution of neutral sodium citrate plus 1 ml of a 25% glucose solution to 100 ml of blood) makes it possible to keep horse blood (until the first signs of hemolysis) for up to 14 days. The addition of 1 ml of a 1 N solution of HCl lengthens the period of preservation five times. Still better is the use of the same preservative with a 60% glucose solution; in combination with HCl it allows for the preservation of horse blood for up to 80--88 days. The results of clinical investigations, blood tests

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APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

Country : USSR T
Category : Human and Animal Physiology, Blood

Abs. Jour. : Ref Zhur - Biol., No. 2, 1959, No. 7951

Author :
Institut. :
Title :

Orig. Pub. :

Abstract : and a study of pigment metabolism demonstrate that such blood remains fully efficacious.

Card: 2/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.A., prof.; SAZONOV, V.M., kand.biol.nauk

New optimal media for the prolonged preservation of stored cattle and horse blood. Veterinariia 35 no.5:90-97 My '58. (MIRA 12:1)

1. Omskiy veterinarnyy institut.
(Blood--Collection and preservation)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

L 16040-65 EWT(1)/EEC(a)/EWP(m)/FS(v)-3/EEC(j)/EEC(r)/EWG(v)/EWA(d)/ Pb-4/Pe-5
Pq-4/Pg-4 AEDC(a)/BSD/SSD/ASD(p)-3/AFMD(c)/AFETR/AFTC(a)/AFTC(b)/ESD(si)/ GW
ACCESSION NR: AP4048503 S/0147/64/000/004/0020/0025

AUTHOR: Lebedev, L. A.; Sakovskiy, S. A.

TITLE: Necessary and sufficient conditions for an extremum of a functional in the problem of an optimal flight of a low-thrust spaceship

SOURCE: IVUZ. Aviatsionnaya tekhnika, no. 4, 1964, 20-25

TOPIC TAGS: functional extremum conditions, optimal spaceship flight, low thrust spaceship, Euler condition, Clebach condition, Weierstrass condition, Jacobi condition

ABSTRACT: The article presents an analysis of the problem of determining a routine for the variation of the acceleration-control vector in the flight of a low-thrust spaceship between two points. The routine must assure the minimum value of the functional

$$I = \int_{t_0}^{t_1} a^2 dt, \qquad (1)$$

Card 1/3

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L 16040-65
ACCESSION NR: AP4048503

where a is the acceleration due to the thrust of a rocket. It is assumed that the optimal flight takes place within the gravitational field of two bodies, the Sun and the planet, and that the flight time is given. To simplify the calculation, the following assumptions are made: 1) the trajectories of a planet and of a spaceship are coplanar; 2) the planet moves in a circular orbit. With these assumptions the equations of motion are written, and boundary conditions are established. Finally, the problem is formulated as follows: to determine the system of functions $Z_k^0(t)$ (where Z_k are flight parameters) which satisfy the motion equations and boundary conditions and minimize the functional (1). The methods of the classical calculus of variations are used to solve the problem. The Eulers, Clebach, Weierstrass, and Jacobi necessary conditions for a minimum value of (1) are analyzed. It is shown that strengthened Clebach and Weierstrass conditions are always satisfied and that, therefore, for the realization of the minimum of (1) on the extremal $Z_k^0(t)$, it is sufficient that the strengthened Jacobi condition be satisfied. Orig. art. has: 1 figure and 28 formulas.

ASSOCIATION: none

Card 2/3

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

L 16040-65
ACCESSION NR: AP4048503

SUBMITTED: 10Feb64 ENCL: 00 SUB CODE: SV, MA

NO REF SOV: 003 OTHER: 003 ATD PRESS: 3140

Card 3/3

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

17(4) SOV/20-128-1-50/58

AUTHORS: Razumova, L. L., Lemazhikhin, B. K., Lebedev, L. A., Pen'kina, V. S.

TITLE: Some Differences Observed in the X-Ray Study of Keratin From Feathers

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 1, pp 186-189 (USSR)

ABSTRACT: The macro structure of coverts and supporting feathers (wing-feathers and rudder-feathers of the tail) shows certain differences depending on the function of the concerned feathers. The kind of flight also has a certain influence on the structure. The authors tried to answer the question whether the function of the feathers also has an influence on the molecular structure. Characteristic features of the molecular structure can be investigated by means of an X-ray diffraction method. X-ray photographs made (with a sufficient solvent power) of the keratin of feathers (Fig 1) are characterized by clearness and richness of reflexes unusual for fibril albumins. The authors succeeded in getting some information regarding the dependence of the keratin structure on the existence of amino acids and

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Some Differences Observed in the X-Ray Study of Keratin From Feathers

also with regard to the role of S-S and hydrogen compounds in the structural packing. X-Ray examinations of three test series were carried out by means of X-ray cameras with collimator with a diameter of 0.1 mm. A micro tube for focusing of the Institut biofiziki AN SSSR (Institute of Biophysics AS USSR) was used. The X-ray was directed perpendicularly on the surface of the feathers. The investigations showed that the structure of wing feathers on non-flying birds (ostrich) is the same as that of coverts of flying birds. It is not as orderly as the structure of the wing feathers strained by flying. This fact proves a connection between the molecular structure of feathers and their function. A dependence of the molecular structure on the kind of flight was not found. The authors thank the staff members of the Zoologicheskiy muzey Moskovskogo gosudarstvennogo universiteta (Zoological Museum of the Moscow State University), Professor N. A. Gladkov, A. M. Sudilovskaya, M. V. Vasil'yeva, the staff members of the Institut morfologii zhivotnykh (Institute of the Morphology of Animals), Professor G. S. Shestakov, T. L. Borodulin, and the staff members of Moskovskiy zoopark (Moscow Zoological

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

Some Differences Observed in the X-Ray Study of Keratin From Feathers

Gardens), R. I. Afonskaya, M. P. Kagayev, for their assistance in selecting the specimens. There are 3 figures and 7 references.

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

PRESENTED: April 23, 1959, by V. N. Kondrat'yev, Academician

SUBMITTED: April 22, 1959

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEMAZHIKHIN, B.K.; LEBEDEV, L.A.

Design of a demountable microfocus X-ray tube with a variable focus. Prib.i tekh.eksp. no.1:136-138 Ja-F '60.
(MIRA 13:6)

1. Institut biofiziki AN SSSR.
(Electron tubes)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

MILLIONOVA, M.I.; ANDREYEVA, N.S.; LEBEDEV, L.A.

Structure of polymers related to collagen. Report No.1: Characteristics of two polymer fractions (glycine-l-proline-l-hydroxyproline)n. Biofizika 8 no.4:430-432 '63.

(MIRA 17:10)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.F., elektromekhanik; BORISOV, O.V., elektromekhanik

Automatic reservation of TU-600 amplifiers. Avtom., telem.i sviaz' 6 no.2:28-30 F '62. (MIRA 15:3)

1. Kirovskaya distantsiya signalizatsii i svyazi Gor'kovskoy dorogi.
(Railroads—Communication systems)
(Railroads—Electronic equipment)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, Lev Georgiyevich; MERTSALOV, Valentin Grigor'yevich; MELENT'YEVA, V., red.; NAZAROVA, A., tekhn. red.

[At various latitudes] Na raznykh shirotakh. Moskva, Izd-vo "Znanie," 1963. 125 p. (MIRA 16:11)
(Voyages and travels)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.I.[Lebediev, L.I.], naukovii pratsivnik; KOSNIKOV, M.I., naukovii pratsivnik

Evaluating performance and economic characteristics of various harvesting machines. Mekh. sil'. hosp. 9 no. 6:15-17 Je '58. (MIRA 11:7)

1. Kubans'kiy naukovo-doslidniy institut viprobuvan' traktoriv i sil'skogospodars'kikh mashin.
(Harvesting machinery)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.I.

Tectonic structure of the Central Caspian. Dokl. AN SSSR 137 no.3: 663-666 Mr '61. (MIRA 14:2)

1. Institut geologii i razrabotki goryuchikh iskopayemykh AN SSSR. Predstavleno akademikom D.I.Shcherbakovym.
(Caspian Sea—Submarine geology)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.I.; MAYEV, Ye.G.

Quaternary sediments of the Apsheron sill in the Caspian Sea.
Dokl. AN SSSR 151 no.5:1164-1167 Ag '63. (MIRA 16:9)

1. Institut geologii i razrabotki goryuchikh iskopayemykh.
Predstavleno akademikom D.I.Shcherbakovym.
(Caspian Sea--Submarine geology)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.I.

Origin of the shelf of the middle Caspian. Dokl. AN SSSR 137 no.4:927-930 Ap '61. (MIRA 14:3)

1. Institut geologii i razrabotki goryuchikh iskopayemykh AN SSSR. Predstavleno akademikom D. I. Shcherbakovym.
(Caspian Sea--Submarine geology)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.I.

Origin of the relief of the continental slope of the central Caspian. Okeanologiia 2 no.5:874-880 '62. (MIRA 15:11)

1. Institut geologii i razrabotki goryuchikh iskopayemykh AN SSSR.
(Caspian Sea--Submarine topography)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

MAYEV, Ye.G.; LEBEDEV, L.I.

New data on the Post-Khvalynian regression of the Caspian Sea. Okeanologiia 3 no.1:71-75 '63. (MIRA 17:2)

1. Institut geologii i razrabotki goryuchikh iskopayemykh AN SSSR.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.I.

Facies zones and the thickness of Post-Khalynian sediments in the Middle Caspian. Okeanologiia 3 no.6:1029-1038 '63. (MIRA 17:4)

1. Institut geologii i razrabotki goryuchikh iskopayemykh Gosudarstvennogo komiteta po toplivnoy promyshlennosti pri Gosplane SSSR.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

L 23141-66 EWT(m)/EWP(t) IJP(c) JD/JG
ACC NR: AP6006939 SOURCE CODE: UR/0075/66/021/002/0182/0186

AUTHOR: Potrokhov, V. K.; Lebedeva, L. I.

B 38

ORG: Leningrad State University im. A. A. Zhdanov (Leningradskiy gosudarstvennyy universitet)

TITLE: Effect of tungsten on the determination of molybdenum by the thiocyanate method

27 27

SOURCE: Zhurnal analiticheskoy khimii, v. 21, no. 2, 1966, 182-186

TOPIC TAGS: tungsten, molybdenum, thiocyanate, quantitative analysis, oxidation reduction reaction

ABSTRACT: The dependence of the rate of electrolytic reduction of molybdenum on the Mo:W ratio in solution was studied at 20 ± 0.5C in connection with the quantitative determination of molybdenum with thiocyanate in the presence of tungsten. In strongly acidic media, hexavalent molybdenum was found to react with tungsten to form compounds whose composition depends on the acidity of the solution and proportions of the components. The rate of molybdenum reduction bound in such a state is higher

UDC: 543.70

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

L 23141-66
ACC NR: AP6006939

than that of free molybdenum. This promotes the reduction of Mo(V) to Mo(III), which accounts for the low results obtained in the thiocyanate determination of Mo when $SnCl_2$ is used as the reductant. The influence of such impurities as tungsten, aluminum, and others (i, e., ions capable of forming heteropoly compounds with Mo in acid media) on the thiocyanate determination of Mo cannot be avoided by lowering the oxidation-reduction potential of the reductant; it is necessary to introduce competing complex-forming agents. Most promising in this respect appear to be those reductants which combine both of these properties (thiourea, ascorbic acid). Orig. art. has: 3 figures, 2 tables.

SUB CODE: 07/ SUBM DATE: 03Mar64/ ORIG REF: 008/ OTH REF: 002

Card 2/2 UCR

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L. L.

Dissertation: "Feedback Problems Connected with the Nonsteady Motion of a Contour in a Fluid." Cand Phys-Math Sci, Kazan' State U, Kazan', 1953. (Referativnyy Zhurnal--Matematika, Moscow, Aug 54)

SO: SUM 393, 28 Feb 1955

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.L.

Unsettled motion of a boundary in a liquid. Uch.zap.Kaz.un. 116 no.1:50-54 '55. (MLRA 10:5)

1.Kafedra gidromekhaniki.
(Boundary layer)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

SOV/124-57-3-3020

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 3, p 52 (USSR)

AUTHOR: Lebedev, L. L.

TITLE: On the Nonstationary Motion of a Profile in a Fluid (O neustanovivshemsya dvizhenii kontura v zhidkosti)

PERIODICAL: Uch. zap. Kazansk. un-ta, 1956, Vol 116, Nr 1, 50-54

ABSTRACT: The following problem is studied for a case of nonstationary motion of a closed profile in an idealized incompressible fluid which is at rest at infinity: The velocity distribution along the moving contour which is to be determined is prescribed in the form of a function of the arc length s and the time t

$$V_\tau = f_1(s, t), \quad V_n = f_2(s, t) \quad (0 \leq s \leq \ell)$$

here V_τ and V_n are the tangential and normal velocity components, respectively, and ℓ is the length of the arc of the contour. The shape of the contour and the law of its motion are to be determined. For any given fixed instant of time this problem is reduced to the inverse boundary problem of an analytic function, in the region external to

Card 1/2

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

On the Nonstationary Motion of a Profile in a Fluid

the contour that is to be determined, which represents the complex velocity potential $w = \phi + i\psi$ (here ϕ is the velocity potential and ψ is the stream function). The solution of the boundary problem obtained is performed according to the methods of the inverse-boundary-problem theory developed by G. G. Tumashev and M. T. Nuzhin (see RZhMekh, 1956, abstract 5885). Once the shape of the contour is determined, the law of its motion is readily obtained. In the statement of the problem the author assumes that the contour to be determined is nondeformable, i.e., its shape remains unchanged with time. Since it follows from the equation for the determination of the auxiliary parameter γ (arc-length of a unit circle in the auxiliary plane),

$$\phi(s,t) + i\psi(s,t) = \omega(e^{i\gamma}, \phi_o, \psi_o)$$

the final formulas for the coordinates of the profile contour that is to be determined, generally speaking, will include the time t. Actually, it is probable that only a certain group of functions $f_1(s,t)$ and $f_2(s,t)$ can be identified, a group that will, for any pair of functions chosen from this group, correspond to a nondeformable contour in the plane of the flow.

G. N. Pykhteyev

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.L.

An inverse mixed problem. Uch. zap. Kaz. un. 117 no.9:100-103 '57. (MIRA 13:1)

1.Kazanskiy gosudarstvennyy universitet im. V.I. Ul'yanova-Lenina. Kafedra gidromekhaniki.
(Fluid mechanics)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

ACCESSION NR: AR4034726 S/0124/64/000/003/B034/B034

SOURCE: Ref. zh. Mekhan., Abs. 3B207

AUTHOR: Lebedev, L. L.

TITLE: The structure of a surface according to the predetermined distribution of speeds for flat and axially-symmetrical deflection by a supersonic flow

CITED SOURCE: Sb. Itog. Nauchn. konferentsiya Kazansk. un-ta za 1962 g. Sekts. matem. n.. Kazan', Kazansk. un-t, 1963, 160-161

TOPIC TAGS: aerodynamics, streamlining, supersonic flow, flow deflection, supersonics, speed distribution

TRANSLATION: In a note, which is of the nature of a resume, it is stated that the author solved problems concerning the calculation of hard walls at a predetermined distribution of speeds using the method of Prandtl-Busemann characteristics for the case of flat flow, and the approximate method of integrating equations of the Dorodnitsin characteristics for the case of axially-symmetrical flow.

DATE ACQ: 02Apr64 SUB CODE: AI ENCL: 00

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L. M.

Triplite from Transbaikalia, and its changes. L. M. Lebedev. *Trudy Mineralog. Muzeya, Akad. Nauk S.S.S.R.* No. 4: 77–85 (1952).—Lenses of triplite in quartz, of 20 to 40 cm. in diam., and veins of this mineral in quartz diorite in contact with bostonite dikes have a typical clastic structure, with pyrite, chalcopyrite, galena, and fluorite as the cementing matrix. The crystals often show the monoclinic faces (230), ($\bar{2}30$), ($\bar{2}\bar{3}0$), (111), ($\bar{1}11$), ($\bar{3}21$), and ($\bar{3}\bar{2}1$), red-pinkish, translucent on edges; cleavage faces have a glassy luster, the fractures a fatty luster. Cleavage is parallel to two crystallographic faces. Hardness is 4.5 to 5; d. 3.78 to 3.80; $\gamma = 1.672$; $\beta = 1.653$; $2V = +82°$. The chem. analysis shows a nearly pure Mn triplite, $MnPO_4F$, with slight contaminations by FeO, MgO, CaO, and SiO_2. Characteristic decompn. phenomena of triplite are observed in the neighborhood of chalcopyrite and fluorite; the mineral is surrounded by a yellowish zone of a chalcedony-like formation, with excellent colloidomorphic zone structures and coarse-cryst. rhodochrosite + inclusions of fluorapatite (greenish, $\omega = 1.632$; $\epsilon = 1.630$, with 1.54% MnO). Another typical change is characterized by a porcelain-like product on the contacts of triplite and fluorite. This new formation consists of three minerals, viz. an isotropic mineral with $n = 1.628$, fluorapatite (with $\omega = 1.634$ and $\epsilon = 1.631$, in well-developed tabular crystals), and small-granular rhodochrosite, with excellent twins. Chem. analysis of the chalcedony-like mineral shows it to be identical with whitlockite, formed under the same paragenetic conditions as Frondel described for whitlockite from New Hampshire (*C.A.* 35, 4708⁹). Triplite of the brecciated zones usually shows a deeper decompn. to the chalcedony-like aggregate described above and an exterior zone of fine-granular apatite + pale-violet fluorite + quartz. The highest degree of decompn. of triplite is characterized by a coarse-granular aggregate of skeletons of apatite + fluorite, with scarce rounded relictic triplite. The Mn of the triplite is removed, more or less, by replacement reactions.

W. Eitel

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.M

Red spinel from Slyudyanka. L. M. Lebedev and N. G. Sumin. *Trudy Mineralog. Muzeya, Akad. Nauk S.S.S.R.* No. 4, 149–51(1952).—Characteristic are green spinels as accessory minerals in the contact of limestone of Slyudyanka. Excellent crystals up to 4 cm. in diam. are also observed from the contacts of marble with pegmatite. Relatively scarce is a new occurrence of red spinel in the lazurite pits and a rose-red spinel in a boulder of marble from the crest of the watershed of River Pakhabikha and R. Slyudyanka. The coarse-grained marble contains graphite flakes and forsterite, phlogopite, and a green tremolite. The spinel crystals of 0.5 to 1 cm. in diam. are perfectly transparent, $n = 1.713$; d. 3.68; single octahedra, and characteristic spinel twins. Spectral analysis shows strong lines of Cr, moderate lines of Fe, V, and Mn, weak lines of Zn, Ga, Ca, and Si, and traces of Cu, Ag, Ni, and Tl. The occurrence is in its paragenetic conditions similar to those of Pamir and Ceylon, but no chondrodite was observed in Slyudyanka. The color pigments are principally Cr, V, and Fe, according to Fajans' theory (*Uspekhi Fiz. Nauk* 5, 294 (1925)) of deformation of the electronic orbits of cations by the anions in the crystal structure. W. Ritel

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.M.

Inclusions in quartz and calcite from Manyshlak. Trudy Min.muz. (MLRA 7:5)
no.5:180-195 '53.
(Manyshlak Peninsula--Mineralogy) (Mineralogy--Manyshlak Peninsula)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L. M.

"Dune-Like Formations on Drusy Quartz"
Tr. Mineralogich Muzeya AN SSSR, 1953, No 5, 195-199

Dune-like formations of horstone-like quartz on drusy quartz were observed by the author in a vertically incident vein lying in granite-porphyry. The part of the vein close to the selvage (casin) was complicated with orthoclase, and the central portions with compact quartz. (RZhGeol, No 3, 1954)

SO: W-31187, 8 Mar 55

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

Lebedev, L M.

Collomorphic sphalerite and galena. L. M. Lebedev. *Trudy Mineralog. Muzeya, Akad. Nauk S.S.S.R.* 1954, No. 6, 125-30.—Some colloidal structures (lenses and oölites) contg. sphalerite or galena are characterized by the apparent functioning of ZnS as an adhesive. The geometry of the oölites suggests high plasticity at some stage of its formation. The pattern of galena crystals in finely dispersed sphalerite indicates that the galena crystd. in a highly viscous medium. The sphalerite contains very little more than ZnS in some samples, but PbS impurities and oxidation products may appear in appreciable quantities, depending on location of the deposit. The edge of sphaleritic lenses shows the presence of keummerphite.

— C. H. Fuchsman

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

Lebedev, L. M.

Oölitic metacolloidal sphalerite. L. M. Lebedev. *Doklady Akad. Nauk S.S.S.R.* 95, 641–4 (1954). The occurrence of excellently developed ZnS ore of oölitic character is observed in a flat lens in brecciated limestone, with sharp boundaries to the country rock. The oölitic structure is especially distinct in the central parts of the lenses while in the much thinner salbands the ore is layered, with small hemispheric aggregates. The oölites are 1 to 4 cm. in diam., and are cemented by rare calcite and PbS. They are built up of rhythmic-concentric shells of yellowish or deep-brownish sphalerite, and fine-granular galena. D. = 4.102. A typical analysis is Zn 66.50; Cd 0.25; Pb 0.55; Cu 0.10; S 32.50; CaO 0.20; MgO 0.03; FeO 0.20%; no Al_2O_3, SiO_2. Traces of As, Tl, and Ge were observed by spectral analysis.
W. Eitel

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.M.

Polymetal and nickel sulfides in the Jurassic deposits of the sub-Moscow region. Dokl.AN SSSR 98 no.2:259-260 S '54. (MLRA 7:12)

1. Vsesoyuznyy neftyanoy nauchno-issledovatel'skiy geologo-razvedochnyy institut.
(Moscow Province--Sulfides)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.M.

USSR/Cosmochemistry - Geochemistry. Hydrochemistry, I

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61899

Author: Lebedev, L. M., Stepanov, V. I.

Institution: None

Title: Nickel-Containing Calcite from [redacted]

Original Periodical: Tr. mineralog. muzeya AN SSSR, 1955, No 7, 158-161

Abstract: The authors have observed in limestone pits of Podol'skiy, Ruzskiy and Vereyskiy rayons of Moscow Oblast a greenish-yellow Ni-containing calcite, first discovered by A. Ye. Fersman. Chemical composition (in %): Al_2O_3 traces, CaO 56.28, NiO 0.10, CO_2 42.00, SO_3 1.93, Si, FeO and Mn not found. Spectral analysis showed also medium Sr lines, weak lines of Si, Fe, Mn, Na, Zr, Hf, Y, Yb, Zn and traces of lines of Ti, Cu, Bi. In 3 variegated allophanes and pyrolusite associated with the calcite, spectral analysis revealed: Ca, Be, Ni, Mg, Y, Cu, Zn, Nb, Ga, Mn, Ti, La, Co, P, Fe, Ba, Si, Al, Na, Sr and Tl. It is assumed that Ni is present in the calcite as a mechanical admixture of basic carbonate.

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.M.

Morphological characteristics of quartz and cassiterite in the Shakh-Shagayly deposit. Geol. rud. mestorozh. no.3:103-114 My-Je '59. (MIRA 12:10)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii, i geokhimii AN SSSR, Moskva.
(Shakh-Shagayly region (Karaganda Province)--Quartz)
(Shakh-Shagayly region (Karaganda Province)--Cassiterite)

Inst Geology of Mineral Deposits, Petrography, Mineralogy & Geochemistry

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

AMAYEV, A.D.; LEBEDEV, L.M.

[Testing machines for studying the mechanical properties of irradiated materials] Ispytatel'nye mashiny dlia izucheniia mekhanicheskikh svoistv obluchennykh materialov. Moskva, In-t atomnoi energii AN SSSR, 1960. 15 p.
(MIRA 16:12)

(Testing machines)
(Materials, Effect of radiation on)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.M.

Experimental study of factors determining the formation of globular and oolitic sulfur zinc aggregates. Zap. Vses. min. ob-va 89 no.3: 333-337 '60. (MIRA 13:8)
(Mineralogy)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.M.

New ore formations and hydrothermally alternated rocks in the region of Pauzhetsk thermal springs. Trudy Lab.vulk. no.19: 115-122 '61. (MIRA 14:9)

(Kamchatka--(Geology))
(Kamchatka--Ore deposits)

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.M.; UDALOVA, A.I.

Machines for testing under operating conditions. Priborostroenie no.8:17-20 Ag '62. (MIRA 15:9)
(Testing machines)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.M.; PISAREV, G.V.

Machines and instruments for testing polymers. Priborostroenie no.8:13-16 Ag '62. (MIRA 15:9)
(Polymers--Testing)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.M.

Unit for measuring dynamic parameters of polymer materials. Izm. tekh. no.11:16-19 N '63. (MIRA 16:12)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.M.

Device for dynamic rubber tests. Kauchuk i rezina no.12:
16-17 D'63. (MIRA 17:1)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

GORDON, M.M.; YEGOROV, G.B.; LEBEDEV, L.M.

Effect of tanning wastes from the "Skorokhod" Factory on the technical characteristics of portland cement. Trudy LTI no.59:60-64 '61. (MIRA 17:9)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, Lev Mikhaylovich; RUDICH, K.N., otv. red.

[Metacolloids in endogenetic deposits] Metakolloidy v endogennykh mestorozhdeniiakh. Moskva, Nauka, 1965. 309 p. (MIRA 18:3)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

EWT(m)/EPF(n)-2/EWP(t)/EWP(b) LJP(c) ES/JD/WW/JG/GG

ACC NR: AP5026444 SOURCE CODE: UR/0089/65/019/004/0372/0380

AUTHOR: Butra, F. P.; Yevkina, Z. F.; Fufayeva, O. L.; Korobeynikov, I. A.; Lebedev, L. M.

ORG: none

TITLE: The effect of temperature and neutron irradiation on plastic deformation of alpha uranium monocrystals

SOURCE: Atomnaya energiya, v. 19, no. 4, 1965, 372-380

TOPIC TAGS: radiation defect, radiation damage, neutron bombardment, uranium

ABSTRACT: The effect of temperature, crystal orientation, and neutron irradiation on the plastic deformation of alpha uranium monocrystals was investigated. The shape of the stress-strain curves of unirradiated samples was explained in terms of the plastic deformation modes. The effect of neutron irradiation on plastic deformation was investigated on 9 x 1.5 x 0.4—0.5 mm monocrystalline samples grown by $\beta \rightarrow \alpha$ recrystallization. The samples were exposed to integrated fluxes (nvt) up to 10^{17} n/cm^2 and to 4×10^{20} n/cm^2 at temperatures not exceeding 100C and subjected to tensile tests. X-rays and metallographic investigations have shown that exposure to nvt up to 1.6×10^{16} n/cm^2 does not change the plastic deformation mode. In crystals in which initial deformation occurred by slip along the plane (010) the yield point increased rapidly at small nvt, reaching saturation at 10^{17} n/cm^2. Irradiation caused a 3—5-fold increase in

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UDC: 621.039.553

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L 9558-66

ACC NR: AP5026444

the critical shear stress and decreased elongation from ~65% to ~40%. Annealing at 450C of crystals exposed up to 5.5×10^{17} n/cm^2 restored the mechanical properties of the samples. Orig. art. has: 14 figures. [CS]

SUB CODE: SS/ SUBM DATE: 22Feb65/ ORIG REF: 006/ OTH REF: 012/ ATD PRESS: 4151

Card 2/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, Leonid Nikolayevich, inzh.; PAVLENKO, Vladimir Timofeyevich; IVANOV-SKOBLIKOV, P.V., inzh., red.; GVIRTS, V.L., tekhn.red.

[Using rammed earth in building] Stroitel'stvo zdanii iz zemli. Leningrad, 1959. 38 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Stroitel'naia promyshlennost', vyp.5-6). (MIRA 13:4)
(Pisé)

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L. N.

36-74-4/5

AUTHOR: Lebedev, L. N.

TITLE: Probability of Storms in Limited Areas (Veroyatnost' groz na ogranichennykh uchastkakh territorii)

PERIODICAL: Trudy Glavnoy geofizicheskoy observatorii, 1957, Nr 74, pp 61-70 (USSR)

ABSTRACT: The author states that in a storm cloud a plane may either be thrust upwards or forced down and lose as much altitude as 4,000 meters; hence the importance of the storm probability service. The author points out that storms are local phenomena and occur in limited areas. Consequently, there is a discrepency between the total number of storms in a given area and the number of storms observed on the spot where the area's meteorological station is located. As a rule, 2 to 4 times more storms were observed in an area with a radius of 100 to 200 kilometers than at the stations servicing the area. These figures were examined by the author using data from 120 stations and their territories of jurisdiction,

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Probability of Storms in Limited Areas 36-74-4/5

all in the Volga region, where summer storms are frequent, i.e., 7-8 days in July and 5-7 days in June and August. There are 4 tables, 1 map, 9 diagrams and 6 Soviet references.

AVAILABLE: Library of Congress (QC 801 .I46)

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6-9-58

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

BELOUSOV, V.R.; LEBEDEV, L.N.; POLYAK, G.I.

Simulation of turbines and their speed regulators. Izv. NIIPT no.5:273-284 '60. (MIRA 14:1)
(Turbines--Electromechanical analogies)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

34741
S/020/62/142/003/006/027
C111/C333

16.4100

AUTHOR: Lebedev, L.P.

TITLE: An efficient method of constructing the best approximation procedures

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 142, no. 3, 1962, 530-533

TEXT: The author considers the construction of polynomials

$$U_n(f; x; \lambda) = \frac{a_0}{2}\lambda_0^{(n)} + \sum_{k=1}^{n} \lambda_k^{(n)}(a_k \cos kx + b_k \sin kx), \quad (2)$$

where $f(x) \in C_{2\pi}$, which satisfy the relation

$$\mathcal{E}U_n(KW_H^{(r)(\alpha)}, x) = \sup_{f \in KW_H^{(r)(\alpha)}} |f(x) - U_n(f; x)| = O\left(\frac{1}{n^{r+\alpha}}\right). \quad (1)$$

Definition : The class of summation methods (2) is called class $e_n(f; x; \lambda)$ if

$$\lambda_k = \lambda_k^{(n)} = 1 - e^{\varphi(n,k)}, \quad k = 1,2,\ldots, n ; \quad \lambda_0^{(n)} = 1, \quad \lambda_{n+1}^{(n)} = 0 \quad (3)$$

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An efficient method of constructing ...

and if $\varphi(n,x)$ is twice differentiable in $[1,n]$, $\varphi'(n,x) \geq 0$ and $\varphi''(n,x)$ is continuous.

Theorem 1 : In order that

$$e_n(f;\ x;\ \lambda) \xrightarrow[n\to\infty]{} f(x) \in C_{2\pi} \tag{4}$$

be satisfied uniformly relative to real x, it is necessary that the conditions

$$\lim_{n\to\infty} \varphi(n,k) = -\infty, \quad k = 1,2,\ldots ; \tag{5}$$

$$\lambda^{(n)}_{n-m} \ln \frac{n}{m+1} = O(1), \quad \frac{m}{n} \xrightarrow[n\to\infty]{} 0 \tag{6}$$

are satisfied.

For every method (2) with functions $\lambda^{(n)}_x$ (λ''_x continuous) twice differentiable on $[1,n]$ it holds :

Theorem 2 : Let λ''_x have at most a finite number of real zeros in the

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

An efficient method of constructing ...

interval $[1,n]$. Then for (4) being satisfied it is sufficient that (5). (6) are satisfied for $m = 0$ and if

$$x\lambda'_x = O(1), \quad x \leq n \quad . \tag{7}$$

Theorem 3: Let the following conditions be satisfied for the method $e_n(f; x; \lambda)$:

$$\lambda_n^{(n)} \ln n = O(1) \quad , \tag{8}$$

$$e^{\varphi(n,k)} = O\left[\left(\frac{k}{n_o}\right)^m\right] \tag{9}$$

or

$$\varphi(n,k) > O\left(\ln \frac{n_o}{k}\right) \quad , \quad \varphi'(n,k) \leq O\left[\left(\frac{n_o}{k}\right)^{p_o} \frac{1}{k^{l_o}}\right] , \tag{10}$$

where $n_o \leq O(n)$; $k < O(n_o)$; m -- arbitrary positive number ; p_o and $l_o \geq 1$ -- certain fixed real numbers. Then for every integer $r \geqslant 0$ and

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$0 \leq \alpha < 1$ it holds

$$\mathcal{E}_n = \left\{ \begin{matrix} \mathcal{E} e_n \left(KW^{(r)}_H(\alpha), x\right) \\ \mathcal{E} e_n \left(KW^{(r)}_H(\alpha), x\right) \end{matrix} \right\} \leq O\left(\frac{n^2}{n_o^{r+\alpha+2}}\right) . \qquad (11)$$

If $n_o = O(n)$ in the conditions of theorem 3, then $e_n(f;x;\lambda)$ realizes the relation (1).

The author mentions Bernshteyn and A.F. Timan.

There is 1 Soviet-bloc reference.

PRESENTED: August 28, 1961, by A.N. Kolmogorov, Academician

SUBMITTED: August 8, 1951 (?)

Card 4/4

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

Le-Be-P 1/2 3.

48-7-11/21

AUTHORS: Golovanov, I.B., Dzhelepov, B.S., Lebedev, L.S., Prikhodtseva, V.P., Khol'nov, Yu.V.

TITLE: The γ-Spectrum of In^{114*}(γ-spektr In^{114*})

PERIODICAL: Izvestiya Akad. Nauk SSSR, Ser. Fiz., 1957, Vol. 21, Nr 7, pp. 985 - 986 (USSR)

ABSTRACT: The relative intensities of the γ-rays of the 49 days In^{114*} were determined by means of a "ritron" under new test conditions. The figure shows the distribution of the emission electrons according to $H\rho$ (after drawing off the background). The peak values corresponding to the 4 γ-lines of In^{114*} 191, 556, 772 and 1300 keV are distinctly to be seen. It has to be noted that in the study of the γ-spectrum of In^{114*} for the first time, by means of the "ritron", a γ-line - 191 keV so soft for this apparatus was investigated. In this domain of energy we did not possess any point on the curve of the spectral sensitivity. In order to obtain this point, the authors used the preparation of In^{114*} The course of the investigation is fully described and explained. The separation of the spectrum was carried out by means of the standard individual lines. The re-

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48-7-11/21

The γ-Spectrum of In^{114}

sult of the analysis is given in the table and the table values are described and explained in detail. There are 1 figure, 1 table and 2 Slavic references.

ASSOCIATION: Radium Institute im. V.G. Khlopin, AN USSR
(Radiyevyy institut imeni V.G. Khlopina Akademii nauk SSSR)

AVAILABLE: Library of Congress

Card 2/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.V., inzh. (g.Krasnoyarsk)

Laying a cable across the Kiya River and constructing a crossing over the Yenisey River. Stroi. truboprov. 5 no.8:16-17 Ag '60. (MIRA 13:9)

(Kiya River--Cables) (Yenisey River--Pipelines)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.V. (Leningrad, Botkinskaya ul., d.21, komn.107)

Dicoumarin therapy of venous thrombosis and thrombophlebitis [with summary in English, p.157]. Vest.khir. 78 no.3:11-18 Mr '57. (MLRA 10:6)

1. Iz fakul'tetskoy khirurgicheskoy kliniki im. S.P.Fedorova (nach. - prof. V.N.Shamov) Voyenno-meditsinskoy ordena Lenina akademii im. S.M.Kirova.

(COUMARIN, related cpds.
bishydroxycoumarin, ther. of thrombophlebitis (Rus))
(THROMBOPHLEBITIS, ther.
bishydroxycoumarin (Rus))

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.V. (Leningrad, Botkinskaya ul., d.21, komn. 107)

Steroid anesthesia in surgery; review of foreign literature. Vest. khir. 80 no.3:143-147 Mr '58. (MIRA 11:4)

1. Iz fakul'tetskoy khirurgicheskoy klikini im. S.P.Fedorova (nach. - prof. V.N.Shamov) Voyenno-meditsinskoy ordena Lenina akademii im. S.M.Kirova.

(ANESTHETICS
pregnane-21-ol-3,20-dione succinate in surg., review (Rus))

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.V.

BORODIN, I.M., (Leningrad, Botkinskaya ul,d.17, kv.9) GORBATSEVICH, A.B., LEBEDEV, L.V., PANASHCHENKO, A.D.

Results from the use of di-isopropylputrescine in ptentiated anesthesia and hypothermia. [with summary in English]. Vest.khir. 80 no.4:95-100 Ap'58 (MIRA 11:5)

1. Iz kliniki fakul'tetskoy khirurgii No.1 (nach. - prof. V.N. Shamov) Voyenno-meditsinskoy ordena Lenina akademii im. S.M.Kirova.

(AMINES, ther.use
di-isopropylputrescine as ganglion-blocking adjuvant in artif. hibernation & hypothermia (Rus))
(AUTONOMIC DRUGS, ther. use
same)
(HIBERNATION, ARTIFICIAL
adjuvant di-isopropyl-putrescine (Rus)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

SHAMOV, V.N. , prof. (Leningrad, Lesnoy prosp., d.61, kv.31); BORODIN, I.M., kand.med.nauk; LEBEDEV, L.V., kand.med.nauk

New methods of anesthesia in the surgical clinic. Nov.khir.arkh. no.5:3-13 S-O '59. (MIRA 13:3)

(ANESTHESIA)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.V.; FRID, I.A.

Experience in the use of controlled hypotension in surgical practice.
Khirurgiia 36 no.7:9-17 Je '60. (MIRA 13:12)
(HYPOTENSION) (AUTONOMIC DRUGS)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, L.V.; PLOTKIN, L.L.

Corrugated vascular prostheses from lavsan. Ortop., travm. i protez. 22 no.2:49-51 F '61. (MIRA 14:3)
(BLOOD VESSELS--SURGERY) (PLASTICS)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LYTKIN, M. I., dotsent; LEBEDEV, L. V., kand. med. nauk

Plastic surgery of the peripheral arteries with lavsan prostheses of Soviet manufacture. Khirurgiia no.2:40-48 '62.
(MIRA 15:2)

1. Iz kafedry fakul'tetskoy khirurgii imeni prof. S. P. Fedorova (zav. - prof. V. M. Sitenko) Voyenno-meditsinskoy ordena Lenina akademii imeni S. M. Kirova.

(ARTERIES--SURGERY) (LAVSAN)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

ZAVFORODNYY, P.Ye.; LEBEDEV, L.V. (Leningrad, Botkinskaya ul., d. 21, komn. 107)

Plastic surgery of the axillary artery using a lavsan prosthesis. Vest. khir. 91 no.7:72-73 Jl'63 (MIRA 16:12)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (nachal'nik - prof. V.M.Sitenk) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M.Kirova.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

SITENKO, V.M., prof.; LYTKIN, M.I.; LEBEDEV, L.V.

Use of vascular prostheses in the treatment of arteriosclerosis obliterans. Vest. khir. no.7:3-8 Jl '64. (MIRA 18:4)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (nachal'nik prof. V.M. Sitenko) Voyenno-meditsinskoy ordena Lenina akademii imeni Kirova. Adres avtorov: Leningrad, K-9, Pirogovskaya naberezhnaya, 3, klinika fakul'tetskoy khirurgii Voyenno-meditsinskoy ordena Lenina akademii imeni Kirova.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LYTKIN, M.I., prof. (Leningrad K-156, prospekt Engel'sa d.7, kv.136); LEBEDEV, L.V., kand. med. nauk; KURYGIN, A.A.

Alloplasty of arteries in injuries of the main vessels and their sequelae. Ortop., travm. i protez. 26 no.8:23-28 Ag '65. (MIRA 18:9)

1. Iz kliniki fakul'tetskoy khirurgii imeni prof. Fedorova (nachal'nik prof. V.M. Sitenko) Voyenno-meditsinskoy akademii imeni Kirova.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

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E032/E514

24.4500

AUTHOR: Lebedev, L. Ye.

TITLE: Singular Solutions of the Spinor Equation and the Theory of the Electron

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1960, No.4, pp. 22-29

TEXT: Using a new interpretation of the ψ-function a generalization is given of the Dirac equation for a free electron. It is assumed that the wave function ψ represents a material quantum field (Ref.1) in which case bilinear combinations of $\psi\hat{L}\psi$ can be looked upon as measurable physical densities characterizing the ψ-field. A distribution of such densities can be looked upon as a material formation. The electron is then identified with a special form of the material formation of the ψ-field. In relativistic quantum mechanics a free electron is described by the Dirac equation

$$i\gamma^{\mu}\frac{\partial\psi}{\partial x^{\mu}} - \varkappa_0\psi = 0 \qquad (1)$$

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Singular Solutions of the Spinor Equation and the Theory of the Electron

In the present paper this equation is generalized to

$$i\gamma^{\mu}\frac{\partial\psi}{\partial x^{\mu}} - \chi\psi = q(x); \qquad (2)$$

where χ is a new parameter and $q(x)$ is the ψ-field source function. $q(x)$ is a 4-spinor and is equal to zero practically everywhere (in space) except for a certain region Q. Eq.(2) is then solved as follows:

1) Using existing ideas about the nature of the electron, a new class of ψ-function is defined capable of describing an electron.

2) Using the above postulate that $q(x)$ is zero except for the region Q, it is possible to separate out a 4-spinor which would satisfy

$$i\gamma^{\mu}\frac{\partial\psi}{\partial x^{\mu}} - \chi\psi = 0 \text{ outside } Q. \qquad (3)$$

3) The 4-spinor thus defined can be extended to all space and

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

Singular Solutions of the Spinor Equation and the Theory of the Electron

q(x) can then be introduced in accordance with Eq.(2). 4) Since Eq.(2) is Lorentz-invariant, it may considered that Eq.(3) is defined in the system of coordinates in which the electron is at rest. Solutions of Eq.(3) are then sought in the form of stationary, singular, normalized and single valued ψ-functions. A discussion is given of the properties of the functions thus obtained and a number of new results are found, e.g. "classical" convergence of the self-energy of the electron, the existence of a specific quantum binding energy and the presence of an excited (virtual) level for the electron. An attempt is made to extend the results obtained for the electron to the theory of the proton. An excited state is found for the proton given by

$$E = \pm \sqrt{(Mc^2)^2 + \left(\frac{hc}{2\chi}\right)^2}, \qquad |E| < 2596\ m_o c^2; \quad (30)$$

where χ is the radius of the "core" of the stable proton.

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S/139/60/000/004/001/033
E032/E514

Singular Solutions of the Spinor Equation and the Theory of the Electron

There are 1 table and 5 Soviet references, 2 of which are translations from English.

ASSOCIATION: Dnepropetrovskiy gosuniversitet (Dnepropetrovsk State University)

SUBMITTED: June 29, 1959 (Initially)
February 29, 1960 (After revision)

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APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

S/139/62/000/003/005/021
E032/E314

AUTHOR: Lebedev, L.Ye.

TITLE: The proper energy, spin and radius of a free electron

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, no. 3, 1962, 38 - 40

TEXT: The consequences of the theory given in a previous paper (L.Ye. Lebedev - Izv. vuzov. SSSR, Fizika, 4, 22, 1960) are discussed. The ensuing expressions for the z-component of the spin, proper energy, virtual electron level, effective electron radius and similar physical characteristics of the electron are considered.

ASSOCIATION: Dnepropetrovskiy gosuniversitet im. 300-letiya vossoyedineniya Ukrainy s Rossiyey (Dnepropetrovsk State University im. 300th Anniversary of the Union of the Ukraine with Russia)

SUBMITTED: January 13, 1961

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APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

S/0139/64/000/001/0039/0048

ACCESSION NR: AP4020297

AUTHOR: Lebedev, L. Ye.

TITLE: Singular solutions in spinor theory of fields and class of fermions

SOURCE: IVUZ. Fizika, no. 1, 1964, 39-48

TOPIC TAGS: field theory, singularity spinor, pseudovector, electromagnetic field, energy tensor, asymptotic solution, muon, fermion, lepton, baryon

ABSTRACT: A field theory model for particles has been considered. A class of weak singularity spinors have been determined satisfying

$$\gamma_\mu \frac{\partial \Psi}{\partial x_\mu} + \varkappa_0 \Psi = -q(x) ,$$

under conditions $q(x) = 0$ outside a domain G and is given by

$$q(x) = \overline{q}(r) \exp(-i\omega t),$$

inside G. Here ψ represents the fermion field. The fermion is shown to

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

ACCESSION NR: AP4020297

represent a structure built from a system of interacting fields. The intrafermion interaction is described by the pseudovector $A_k (k = 1, 2, 3)$. In a self-acting electromagnetic field the field equations are obtained

$$\gamma_\mu \frac{\partial \Psi}{\partial x_\mu} + \varkappa_0 \Psi = -q + \frac{ie}{\hbar c} \gamma_\mu A_\mu \Psi - \frac{lg}{\hbar c} \gamma_5 \gamma_\mu \tilde{A}_\mu \Psi,$$

$$\frac{\partial^2 \tilde{A}_\mu}{\partial x_\mu^2} - \varkappa_0^2 \tilde{A}_\mu = l 4\pi \tilde{j}_\mu, \quad \tilde{j}_\mu = \lambda g \bar{\Psi} \gamma_5 \gamma_\mu \Psi,$$

where asymptotic solutions of the above can represent weak singularities. The canonical energy-momentum tensor is represented by the system $T_{\mu\nu}$, and the total energy of the field system is written as

$$H = -\int T_{44} dV.$$

New quantities are defined

$$h(k) = -\frac{H}{E_0}, \quad x = \tau \frac{g}{|E_0|}$$

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ACCESSION NR: AP4020297

Applying the weak singularity as a test function, a set of equations are obtained for h and D, which for a stationary state are subject to the variational principle

$$\frac{\delta h}{\delta x} = 0, \quad \frac{\delta^2 h}{\delta x^2} > 0$$

leading to the expression

$$Dx = \frac{\sqrt{1-x^2}}{3x^2-2} = y,$$
$$-\Theta D\{6x^4 - 9x^2 + 2\} > 0.$$

This function is represented graphically and shows three classes of stationary points for $D \geq 1.4$. General characteristics of baryon, muon, and electron class fermions are obtained, and a special mention is made of the relative nature of baryon and lepton charge conservation. Orig. art. has: 60 equations, 2 tables, and 1 figure.

ASSOCIATION: Dnepropetrovskiy gosuniversitet (Dnepropetrovsk State University)

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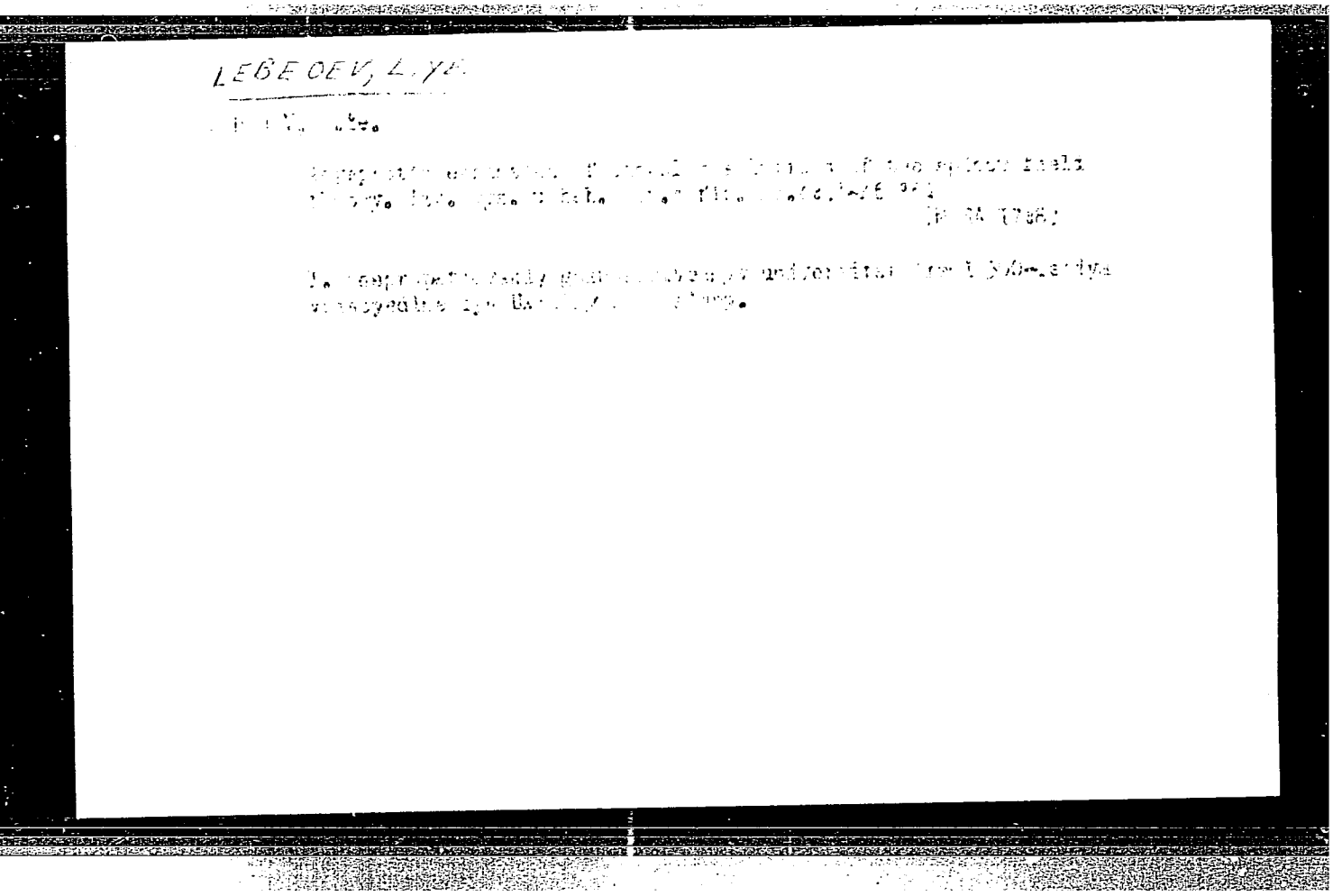

LEBEDEV, Lev

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, M., doktor sel'skokhoz.nauk, prof.

In the old manner. Agrobiologiia no. 3:467-470 My-Je '64.
(MIRA 17:7)

1. Leningradskiy sel'skokhozyaystvennyy institut.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBELEV, M., ofitser zapasa (Krymskaya oblast')

Aid on the spot. Voen. znan. 41 no.10:30-31 O '65. (MIRA 18:10)

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

S/185/61/006/006/015/030
D299/D304

AUTHORS: Lebedyev, M.A., and Zhuk, V.K.

TITLE: Changes in fluorescence yield during photochemical sensitized reactions

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 6, no. 6, 1961, 789 - 792

TEXT: The dependence was studied of the fluorescence yield of aqueous- and alcoholic solutions of eosin (in the presence of thiourea, sodium sulfate, diphenylamine and trioxybenzol), on the wavelength of the exciting light and on the duration of the irradiation. A table lists the values of the critical wavelength λ_{exc}, of the maximum λ_m of the absorption spectrum of the solutions, and of the fluorescence yield B. If the eosin solutions are irradiated by light in the presence of thiourea, three independent photochemical reactions take place: Sensitized oxidation, discoloration of eosin and formation of a new photoproduct. A change in thiourea concentration does not affect the dependence of the fluorescence yield on

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Changes in fluorescence yield ...

the time of irradiation. The fluorescence yield decreases with increasing concentration. The presence of alcohol increases the yield. The sensitized oxidation of trioxybenzol and of diphenylamine differs from the reaction involving alcohol. In the process of trioxybenzol oxidation, the eosin absorption spectrum changes, the absorption maximum being shifted towards the longwave side, whereas the shortwave side of the spectrum is broadened. Oxidation of diphenylamine in the presence of eosin causes a broadening of the absorption spectrum; diphenylamine reduces the fluorescence yield. The changes in the fluorescence yield during irradiation of trioxybenzol and diphenylamine are due to the formation of reaction products which absorb the fluorescence light. The above examples of sensitized photochemical reactions show that the critical value λ_{exc}, at which the fluorescence yield drops sharply, is a true measure of the changes in the sensitizer. Thus, in reactions which do not involve changes in the sensitizer, λ_{exc} remains constant, whereas if the sensitizer undergoes changes, λ_{exc} is shifted. There are 2 figures, 1 table and 9 references: 7 Soviet-bloc and 2 non-Soviet

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

S/185/61/006/006/015/030
D299/D304

Changes in fluorescence yield ...

-bloc.

ASSOCIATION: Kryms'kyy pedahohichnyy instytut im. M.F. Frunze (Crimean Pedagogical Institute im. M.F. Frunze), Simferopol'

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APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

LEBEDEV, M.A.; GUS'KOV, Yu.K.

Electric breakdown in cesium vapor. Zhur. tekh. fiz. 33 no.12: 1462-1463 D '63. (MIRA 16:12)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

L 15140-65 EWT(1)/EEC(b)-2 IJP(c)/SSD/AFWL GG

ACCESSION NR: AP4046662 S/0185/64/009/009/1001/1008

AUTHOR: Ky*slyak, G. M. (Kislyak, G. M.); Lebedev, N. A. (Lebedev, N. A.); Ly*nenko, G. M.

TITLE: The anti-Stokes phosphorescence of organic phosphors

SOURCE: Ukrayins'ky*y fizy*chny*y zhurnal, v. 9, no. 9, 1964, 1001-1008

TOPIC TAGS: phosphorescence, phosphorescence duration, phosphorescence yield, metastable level population, anti Stokes spectrum, organic phosphor, anti Stokes phosphorescence

ABSTRACT: The effect of the wavelength of an exciting light on the duration and the relative yield of phosphorescence was investigated. It was found that shifting to the light of the anti-Stokes region of the spectrum results in a decrease in the duration and relative yield of phosphorescence, followed by a change in population of the metastable level. Such changes in some luminescence characteristics in the anti-Stokes region of the spectrum can not be explained by inactive absorption of nonluminescent admixtures in solutions, since this phenomenon is observed in organic phosphors of different purities.

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

L 15140-65
ACCESSION NR: AP4046662

The most thorough purification of solvents and activators does not affect the shape of curves representing the dependence of the duration and relative yield of phosphorescence on the wavelength of an exciting light. It also can not be explained by the presence of dimers and polymers since such dependence is observed with frozen solutions of organic phosphors of different concentrations. A comparison of all results obtained leads to the conclusion that the decrease in duration and relative yield of phosphorescence in the anti-Stokes region of the spectrum can be explained by extinction of the second kind, the extinction that occurs when molecules are in the excited state. The conclusion is also drawn that activation energy is needed for a molecule to pass into a metastable state. In addition, transitions from high oscillation levels of the unstable state into a metastable state have greater probabilities than transitions from low oscillation levels. The extinction of phosphorescence, whether due to Stokes or anti-Stokes excitation, proceeds according to an exponential law. Orig. art. has: 7 figures, 5 formulas, and 2 tables.

ASSOCIATION: Poltavs'ky*y pedinsty*tut (Poltava Pedagogical Institute)

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APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

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ACCESSION NR: AP4046662

SUBMITTED: 24Dec63 ENCL: 00 SUB CODE: GIOP

NO REF SOV: 012 OTHER: 001

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R000929020005-4

L 14036-65 EWT(1)/EWP(e)/EPA(s)-2/EWG(k)/EWT(m)/EPF(c)/EEC(k)-2/T/EWP(t)/EWP(k)/
EPA(bb)-2/EWP(b)/EWA(h)/FS(b) Pz-6/Pf-4/Pr-4/Pt-10/Peb/Pk-4 IJP(c)/ASD(m)-3/SSD/
ACCESSION NR: AP4045315 SSD(b)/ASD(d)/AFETR/AS(mp)-2/ S/0048/64/028/009/1530/1533
ASD(a)-5/AEDC(a)/AFWL/ESD(gs)/ESD(t) JHB/JD/TT/WW/AT

AUTHOR: Gus'kov, Yu. K.; Lebedev, M. A.; Stakhanov, I. P.

TITLE: Effect of a longitudinal magnetic field on a low-voltage arc (in cesium vapor) [Report, Tenth Conference on Cathode Electronics held in Kiev from 11 to 18 Nov 1963]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 28, no. 9, 1964, 1530-1533

TOPIC TAGS: electric arc, cesium, thermionic converter

ABSTRACT: In high-power thermionic converters, the heavy current may induce a transverse magnetic field which can significantly reduce the output power. It has been suggested (A. Schock, J. Appl. Phys. 31, 1978, 1960) that a longitudinal magnetic field might be applied to the converter to compensate for the transverse field. However, there are no reports in the literature on any experimental studies of the effect of a longitudinal field on the parameters of arc-type converters. The present paper gives the results of investigation of the effect of a longitudinal field H on a low-voltage arc in cesium vapor. A diagram of the thermostated, solenoid-jacketed arc chamber used in the experiments is given in the text. Longitudinal fields from zero to 430 oe were applied. A set of curves showing the

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variation of the discharge current at different Cs vapor pressures with H is presented; these were obtained at a cathode temperature of 800C and an anode temperature of 350C. At low vapor pressures (5×10^{-4} mm Hg) the current first increases with H, goes through a maximum, then falls off; at higher pressures (5×10^{-2} to 1.0 mm Hg) no initial rise is evidenced, instead, the current decreases linearly with H. Other figures show the variation of I with H at different cathode temperatures at $p = 5 \times 10^{-4}$ mm Hg, and the variation of I_H/I_0 (I_0 is the zero field value of the current) and of the relative arc potential with H (both the last two are characterized by almost straight lines with negative slope). An interpretation of the observed effects is proposed. It would appear that, in general, the effect of a longitudinal magnetic field is not favorable. "The authors are grateful to the late Prof. I. I. Bondarenko for his constant interest in the work and useful discussions." Orig. art. has: 5 figures and 4 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: EC, EM

NO REF SOV: 001 OTHER: 002

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L 14389-65 EWT(l)/EWP(e)/EWG(k)/EWT(m)/EPA(sp)-2/EPF(n)-2/EPA(w)-2/T/
EWP(t)/EWP(k)/EWA/EWP(b) Pz-6/Pab-10/Pf-4/Pu-4 IJP(c)/AFWL/SSD/ASD(p)-3
JD/AT S/0057/64/034/008/1451/1461
ACCESSION NR: AP4042934

AUTHOR: Gus'kov, Yu. K.; Lebedev, M. A.; Stakhanov, I. P.

TITLE: Low-voltage arc in cesium vapors

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TOPIC TAGS: arc discharge, cesium vapor, glow discharge, cathode physics

ABSTRACT: Low-voltage arc discharge in cesium vapors was investigated in view of the possible practical applications of this phenomenon, particularly in thermionic energy converters. The experiments were performed with two specially constructed discharge chambers with plane electrodes; the interelectrode spacing was 6 mm in one chamber and 10 mm in the other. In one series of experiments the dependence of V_b (breakdown potential) on Pd (P is the cesium vapor pressure in mm Hg and d is the interelectrode spacing) was established at various cathode temperatures from 500 to 800C and at anode temperatures either kept constant at 800C or varying from 500 to 800C. In another series of experiments the potential differences occurring on the electrodes after the sparking of the discharge were plotted with the minimal glow potentials. Further measurements included the dependence of the

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discharge current on Pd. Volt-ampere characteristics were plotted for various temperatures and for Pd values of 0.68, 2.75 and 3.0. The potential distribution, electron temperatures, and plasma densities were investigated by the probe method. The experiments showed that the glow discharge occurs at T_{cath} < 600C and the arc discharge, at T_{cath} > 600C. In the first case the ionization takes place in the direct vicinity of the cathode, while in the second case the emission increases rapidly and thermal ionization becomes possible. It is stated that additional experiments will be needed to determine the character of changes in electron temperatures and work functions taking place near the cathode. The authors thank Professor I. I. Bondarenko (Deceased) for his interesting discussions. Orig. art. has: 10 figures, 1 table, and 15 formulas.

ASSOCIATION: none

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