"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, A.M.

Restoration of dry cells. Avtom.telem. i sviaz' 4 no.11:31 N '60. (MIRA 13:11)

(Electric batteries)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

ACC NR: AP6035747 (A,N) SOURCE CODE: UR/0413/66/000/019/0117/0117

INVENTOR: Valer'yanov, S. L.; Sakharov, A. N.; Mukhin, G. M.

ORG: none

TITLE: Fuel pump control of an internal-combustion engine. Class 46, No. 186813

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 19, 1966, 117

TOPIC TAGS: fluid pump, engine fuel pump, internal combustion engine

ABSTRACT: A fuel pump control of an internal-combustion engine contains a fuel-supply lever, kinematically connected with the spindle of a foot-pedal actuator, and a manual drive. To increase the reliability in shutting off the fuel supply when stopping the engine, the spindle is provided with an arresting lever which is coupled with the manual drive and has two working surfaces. One surface restrains the motion of the arresting device on the spindle during manual supply of fuel, and the other surface interacts with the spindle which turns to the side to shut off the fuel supply. Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 04Feb63

Card 1/1 UDC: 621.43.038.5-521

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, A.N., Geroy Sotsialisticheskogo Truda; POGORELYY, B.G.

Mechanization and automation of operations at the Lyublino car repair shops. Zhel.dor.transp. 42 no.2:70-73 F '60. (MIRA 13:5)

1. Nachal'nik vagonnogo depo.Lyublino, stantsiya Lyublino (for Sakharov). 2. Glavnyy inzhener depo Lyublino, stantsiya Lyublino (for Pogorelyy).
(Automatic control)
(Lyublino--Railroads--Cars)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

PA 20/49T75

SAKHAROV, A. N.

USSR/Medicine - Tuberculosis Nov/Dec 48
Medicine - Tuberculosis, Clinics

"A New Service for Dispensary Type Tuberculosis Institutions," A. Sakharov, Inst Pub Health and Hist of Med, Acad Med Sci USSR, 2½ pp

"Problemy Tuberkuleza" No 6

Describes new services to be rendered by subject institutions upon acquisition of new mobile unit.

20/49T75

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, A.N.

Veterinary service of a local agricultural administration. Veterinariia 41 no.11:7-10 N '64. (MIRA 18:11)

1. Nachal'nik Vyaznikovskogo proizvodstvennogo upravleniya, Vladimirskaya oblast'.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, A. N.

Sakharov, A. N. "Tuberculosis mortality and meterological factors," (On the methodology of investigating the influence of meteorological factors on tuberculosis mortality, notes on a candidate's dissertation), Byulleten' In-ta tuberkulesa Akad. med. nauk SSSR, 1949, No. 1, p. 50-51.

SO: U-3736, 21 May 53, (Letopis 'Zhurnal 'nykh Statey, No. 18, 1949).

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

ASEYEV, D.D., professor; BERLIN, I.I., professor; VOZNESENSKIY, A.N., professor; SOROKIN, I.E., professor; UGRYUMOV, B.P., professor; TOPCHAN, A.B., professor; AGAPKIN, I.N., kandidat meditsinskikh nauk; AGRACHEV, G.I., kandidat meditsinskikh nauk; AL'TSHULER, N.S., kandidat meditsinskikh nauk; BERENZON, Ya.Ye., kandidat meditsinskikh nauk; ZORIN, Ye.N., kandidat meditsinskikh nauk; KOROVINA, Yu.P., kandidat meditsinskikh nauk; KOSITSKIY, G.I., kandidat meditsinskikh nauk; MANDEL'SHTAM, F.M., kandidat meditsinskikh nauk; MOCHALOVA, T.P., kandidat meditsinskikh nauk; OBLOGINA, Ye.Ya., kandidat meditsinskikh nauk; PATSKHVEROVA, A.G., kandidat meditsinskikh nauk; POKOTILOV, K.Ye., kandidat meditsinskikh nauk; ROZANOVA, M.D., kandidat meditsinskikh nauk; SAKHAROV, A.N., kandidat meditsinskikh nauk; YASHCHENKO, T.N., kandidat meditsinskikh nauk

"Tuberculosis"; handbook for physicians edited by Z.A.Lebedeva and N.A.Shmelev. Reviewed by D.D.Azeev and others. Probl.tub. 34 no.2: 76-80 Mr-Ap '56. (MLR 9:8)

(TUBERCULOSIS) (LEBEDEVA, Z.A.) (SHMELEV, N.A.)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, A.N.; POGORELYY, B.G.

Automatic line for cleaning and washing wheel pairs. Zhel. dor.transp. 42 no.7:78-81 Jl '60. (MIRA 13:7)

1. Nachal'nik vagonnogo depo Lyublino Moskovskoy dorogi, g.Lyublino (for Sakharov). 2. Glavnyy inzhener depo Lyublino Moskovskoy dorogi, g.Lyublino (for Pogorelyy).
(Railroads--Maintenance and repair)
(Automatic control)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, A. P.

USSR/Electricity - Personalities Jul 51

"Professor V. I. Polonskiy (60th Birthday and 30 Years of Scientific and Teaching Activity)," M. A. Shatelen, M. P. Kostenko, S.A. Rinkevich, B. M.Mordovin, A. P. Sakharov, F. N. Kharadzha, A. Ye. Alekseyev

"Elektrichestvo" No 7, p 94

199T28

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, A. P., Cand Tech Sci -- (diss) "Study of the gravity method of the filling ~~up mined~~ of worked-out areas during the mining of steep beds in the Kuzbass." Mos, 1959, 16 pp (Acad Sci USSR, Inst of Mining), 150 copies)
(KL, 45-59, 147)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

Sakharov, A.P.

14(5) PHASE I BOOK EXPLOITATION SOV/1944

Akademiya nauk SSSR. Institut gornogo dela

Nauchnyye problemy vskrytiya i razrabotki mestorozhdeniy poleznykh iskopayemykh (Scientific Problems in Developing and Exploiting Mineral Deposits) Moscow, Izd-vo AN SSSR, 1959. 333 p. 3,000 copies printed. Errata slip inserted.

Resp. Ed.: N.V. Mel'nikov, Corresponding Member, USSR Academy of Sciences; Ed. of Publishing House: Yu.P. Vasil'yev; Tech. Ed.: P.S. Kashina.

PURPOSE: This book is intended for coal and ore mining engineers.

COVERAGE: The collection of articles reports on the results of scientific studies conducted by members of the Institute of Mining Industries of the AN SSSR on problems of developing and exploiting coal and ore deposits. The book is divided into two parts. Part I discusses the development and exploitation of coal deposits, the trends in developing underground and surface exploitation methods, the scientific bases and principles applied in selecting exploitation methods for different natural conditions, the determination of the basic elements in the use of modern mechanized equipments in underground development, and the preparation and exploitation of coal. Part II is devoted to problems in the development and exploitation of ore deposits, the draining and mining methods used in underground exploitation of deposits in the area of the KMA (Kursk Magnetic Anomaly), the open pit mining method used in exploiting the rich KMA ores, the determination of size of ore, and further ore dressing. The book is dedicated to Academician Lev Dmitriyevich Shevyakov, mining engineer. The articles are accompanied by diagrams, tables, and bibliographic references.

TABLE OF CONTENTS:

Scientific Problems (Cont.) SOV/1944

Gapanovich, L.N., V.P. Parusimov, and A.F. Sudoplatov. Summary of Results Obtained in the Exploitation of Thick Flat or Inclined Seams in the Soviet Union and Elsewhere 27

Baykov, N.A. Multiple Deck Exploitation of Shaft Areas Under the Conditions Prevailing in the Prokop'yevsko-Kiselevskiy Region of the Kuzbass, and Ways of Eliminating This 44

Sakharov, A.P. Efficiency and Practical Limits in Using Gravity Waste Filling in Exploitated Coal Seams 54

Galikov, A.Ye. Conditions for Using Short Stopes in the Karaganda Basin 62

Il'nitskaya, Ye.I. Hydraulic Coal Recovery (Cleats) 71

Mel'nikov, N.V. Technical Considerations in Developing Opencut Coal Production 78

Terpigorev, A.N., and B.A. Rozentreter. Selection of Combined Cutting and Loading Machines for Exploiting Flat Seams of Small and Moderate Thickness 92

Card 1/7

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

TSYBA, Fedor Matveyevich; SAKHAROV, A.P., otv. red.; SMIRENSKIY, M.M., red. izd-va; OVSEYENKO, V.G., tekhn. red.

[Working contiguous seams] Razrabotka sblizhennykh plastov. Moskva, Gosgortekhizdat, 1962. 45 p. (MIRA 15:5)
(Donets Basin--Coal mines and mining)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SUDOPLATOV, Aleksey Pavlovich, prof.; PARUSIMOV, Vasiliy Fedorovich; GAPANOVICH, Leonid Nikolayevich; STARIKOV, Aleksey Vasil'yevich; SAKHAROV, Arkadiy Petrovich; BUTKEVICH, R.V., otv. red.; SMIRENSKIY, M.M., red. izd-va; IL'INSKAYA, G.M., tekhn. red.

[Working coal deposits with short stoping faces] Razrabotka ugol'nykh mestorozhdenii korotkimi ochistnymi zaboiami. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1962. 303 p. (MIRA 15:3)

(Coal mines and mining)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SEREDNYAKOV, Petr Yakovlevich; SMIRENSKIY, M.M., red. izd-va; SAKHAROV, A.P., otv. red.; LOMILINA, L.N., tekhn. red.

[Pillar systems of working flat coal seams under complex mining geological conditions] Stolbovye sistemy razrabotki pologikh ugol'nykh plastov v slozhnykh gornogeologicheskikh usloviiakh. Moskva, Gosgortekhizdat, 1963. 114 p. (MIRA 16:6)

(Donets Basin--Coal mines and mining)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, A.P. (Moskva)

Concerning O.G.Vendik's article "Synthesis of the radiation line of radiators with nonmechanical scanning of the beam." Izv. vys. ucheb. zav.; radiotekh. 6 no.1:103-105 Ja-F '63. (MIRA 16:3)
(Antennas (Electronics))

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

GAPANOVICH, L.N., kand.tekhn.nauk; SAKHAROV, A.P., kand.tekhn.nauk; KAPKOV, Yu.V.

Using the optical method to study the streee state of interchamber pillars of coal in the chamber-and-pillar system. Nauch. soob. IGD 17:79-86 '62. (MIRA 16:7)
(Coal mines and mining) (Strains and stresses)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, A.S.

"Forking" operation in old tuberculous coxitis with major destruction. Ortop., travm. i protez. 21 no.8:72 Ag '60. (MIRA 13:11)

1. Iz kliniki fakul'tetskoy khirurgii (zav.kafedroy - prof. E.A. Sakfel'd) Stanislavskogo meditsinskogo instituta (direktor - dotsent G.A.Babenko).

(HIP JOINT—TUBERCULOSIS)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, A.S.

Traumatic dislocation of the hip in conjunction with fracture of the bones of the pelvis. Ortop.travm. i protez. 20 no.7: 60-61 Jl '59. (MIRA 12:10)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. kafedroy - prof.Z.A.Sakfel'd) Stanislavskogo meditsinskogo instituta.
(HIP fract. & disloc.)
(PELVIS fract. & disloc.)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

CA

Murmanite, a new mineral of the Lovozero tundra. M. L. Zolotar and A. S. Sakharov. *Redkie Metal.* 5, No. 2, 37-9(1936).—Murmanite is a monoclinic or rhombic mineral found in nephelite syenites. It has a hardness of 2-3, sp. gr. 2.84, violet color and contains principally SiO_2, TiO_2 and Na_2O and small amts. of Ta_2O_5 and Cb_2O_5.
H. W. Rathmann

CODE ELEMENTS

OPEN

MATERIALS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, A.S.

BEL'KOV, I.V.; GORBUNOV, G.I.; IVANOVA, T.N.; KOZLOV, Ye.K.; MAZUROV, M.K.; NAMOYUSHKO, V.I.; SAKHAROV, A.S.; TENNER, D.D.; GORBUNOV, G.I., kand. geol.-mineral. nauk, red.; DUBYAGO, V.N., tekhn. red.

[Mineral wealth of the Kola Peninsula] Bogatstva nedr Kol'skogo poluostrova. Murmansk, Knizhnaia red. "Poliarnoi pravdy," 1957. 128 p. (MIRA 11:10)

(Kola Peninsula—Mineralogy)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

BUSSEN, I.V.; SAKHAROV, A.S.

State of matter during the formation of the Lovozero alkaline massif. Izv.Kar.i Kol.fil.AN SSSR no.5:19-22 '58. (MIRA 12:9)

1. Geologicheskiy institut Kol'skogo filiala AN SSSR.
(Kola Peninsula--Urtite)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, A.S.

Structure of the alkaline massive of Lovozersk. I. V. Bussen and A. S. Sakharov. *Zapiski Vsesoyuz. Mineral. Obshchestva* 87, 101-6(1958).—The Luyavurut massive in the center of the Kola peninsula is one of the most important occurrences of rare earth minerals. The petrographic constitution of Luyavrurt and the Lovozersk is detd. by Paleozoic lujavrite-foyaite-urtites, nepheline syenites, and by Devonian basic effusives and tuffaceous schists overlying Archean oligoclase gneisses, with veins of eudialyte-lujavrites, albitites, lamprophyres, and alk. pegmatites, whereas hydrothermal veins are relatively scarce. The deeper portions of the pluton are still unexplored. The general chem. characteristics of the massif is a systematic increase in amts. of dark minerals from the older to the younger alk. rocks. The most striking feature, however, of the Lovozersk massive is not only its chem. differentiation but its layered structure indicating a particular intrusion mechanism in layerlike viscous liquids. W. Fitel

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, A.S.

Using a less dense pattern of test holes in calculating reserves. Izv. Kar. i Kol'. fil. AN SSSR no.1:27-32 '59. (MIRA 12:9)

1.Geologicheskiy institut Kol'skogo filiala AN SSSR.
(Ores--Sampling and estimation)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, A.S.

Verifying the results of rock chemical analyses. Mat.po min.Kol'. poluost. 1:157-165 '59. (MIRA 15:2)
(Rocks--Analysis)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

BUSSEN, I.V.; ~~SAKHAROV, A.S.~~

Structural analysis applied to the Lovozero alkaline massif. Izv.Kar. i Kol'.fil. AN SSSR no.2:25-28 '59. (MIRA 12:11)

1. Geologicheskiy institut Kol'skogo filiala AN SSSR.
(Lovozero region--Rocks, Igneous)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

BONDAREVA, A.M., ROGACHEV, D.L., SAKHAROV, A.S.

Alkali amphibole containing lithium from the contact zone of the Lovozero massif. Zap. Vses. min. ob-va 88 no.6:710-712 '59. (MIRA 13:8)

1. Geologicheskiy institut Kol'skogo filiala AN SSSR.
(Lovozero Tundras--Amphibole)
(Lovozero Tundras--Lithium)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, A.S.

Zastayd-II ultrabasic massif. Vop. geol. i min. Kol'. poluos. no.3:91-117 '60. (MIRA 13:9)
(Kola Peninsula--Rocks, Igneous)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

BUSSEN, I.V.; SAKHAROV, A.S.

Primary foliation in the Lovozero alkaline massif. Vop. geol. i min. Kol'. poluos. no.3:139-149 '60. (MIRA 13:9)
(Lovozero Tundras--Geology, Stratigraphic)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

BUSSEN, I.V.; SAKHAROV, A.S.

Structural details of, and relationship between the two main complex-plutons in the Lovozero alkaline massif. Vop. geol. i min. Kol'. poluos. no.2:188-208 '60. (MIRA 13:10)
(Lovozero Tundras--Rocks, Igneous)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

KOLEVATOV, P.A.; SAKHAROV, A.S.; ZELENKIN, V.A.; DEMIN, V.S.; OVSYANKIN, A.D.

Combatting dust in the sintering department of the Chusovoy Metallurgical Plant. Nauch. trudy Perm NIUI no. 4:164-170 '62.

Sanitary and hygienic working conditions in the production of ferrovanadium and combatting dust during the grinding of charging materials in ball mills. Ibid.:171-178 (MIRA 17:6)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

BUSSEN, I.V.; SAKHAROV, A.S.

Concerning T.I.Ivanova and A.V.Galakhov's review of the book "Lovozero alkaline massif" by K.A.Vlasov, M.V.Kuz'menko, E. M. Es'kova. Izv. AN SSSR. Ser.geol. 27 no.1:113-115 Ja '62. (MIRA 15:1)

(Lovozero tundras--Rocks, Igneous) (Ivanova, T.I.) (Galakhov, A.V.) (Vlasov, K.A.) (Kuz'menko, M.V.) (Es'kova, E.M.)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

KOLEVATOV, P.A.; SAKHAROV, A.S.; ZELENKIN, V.A.; OVSYANKIN, A.D.

Using dry foam for eliminating dust from ball and tube mills. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch. i tekh. inform. 16 no.10:5-6 '63. (MIRA 16:11)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, A.S.; ZELENKIN, V.A.; OVSYANKIN, A.D.

Controlling dust with the help of steam during the unloading of limestone from hoppers. Nauch. trudy PermNIUI no.6:225-228 '64. (MIRA 18:2)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

L 8211-66 EWT(1) IJP(c)

ACC NR: AP5013866 SOURCE CODE: UR/0368/65/002/004/0377/0380

AUTHOR: Lebedev, Ye. I.; Pittsyna, I. G.; Sakharov, A. V.; Blokh, A. A.; Ivanova, N. I.; Fedoseyev, A. M.

ORG: Leningrad Society of Optical Equipment Enterprises (Leningradskoye ob"yedineniye optiko-mekhanichskikh predpriyatiy)

TITLE: New instruments for molecular spectral analysis in the infrared region of the spectrum [Paper presented at the Plenary Session of the 16th Conference on Spectroscopy, 2 February 1965]

SOURCE: Zhurnal prikladnoy spektroskopii, v. 2, no. 4, 1965, 377-380

TOPIC TAGS: IR photometer, IR microscope, IR optic system

ABSTRACT: The authors describe several new instruments developed by the Leningrad Society of Optical Equipment Enterprises in 1963-1964: the IKS-22 spectrophotometer for mass analysis; the IKS-23 spectrophotometer for research on radiation from liquid specimens; the PMO-2 microscope attachment for a single-beam spectrophotometer for use in studying specimens such as fibers and crystals; and the KRT-1 variable-thickness cell for studying liquids. A photograph of each instrument is given together with a detailed description of its operation and technical characteristics. A diagram of the optical system for the IKS-23 instrument is given and explained. Orig. art. has: 5 figures.

SUB CODE: OP/ SUBM DATE: 00/ ORIG REF: 000/ OTH REF: 000

UDC: 535.853

nw

Card 1/1

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

KOKIN, S.; SAKHAROV, B.

The "Moskvich" car manufactured on automatic lines. Za rul. 18 no.11:8-10 N'60. (MIRA 13:11)
(Moscow--Automobile industry)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

CA

4

The electrochemical preparation of cerium amalgam. S. I. Salyarenko and B. A. Sakharov. *J. Applied Chem.* (U. S. S. R.) 13, 841-5(in French, 845) (1940).—Ce amalgam was prepd. by electrolysis of a soln. of $CeCl_3$ in abs. or 96% EtOH, in MeOH or MeOH-EtOH. The optimal conditions are: 30-40°, c. d. 0.05 amp./sq. cm., thorough mixing of electrolyte and of the Hg cathode (the anode was Pt). The amalgam contains 0.5-1.2% Ce.

A. A. Podgorny

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

OPEN — COMMON ELEMENTS

MATERIALS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

Kinetics of the decomposition of lithium amalgam in water and in aqueous solutions of lithium chloride and lithium hydroxide. S. I. Sklyarenko and B. A. Sakharov (Lomonosov Inst. Fine Chem. Technol., Moscow). *J. Gen. Chem.* (U.S.S.R.) 17, 1385–400 (1947) (in Russian). —(1) The rate of soln. of Li from its amalgam, in agitated H_2O maintained at a const. pH = 9 by const. neutralization with HCl at a rate corresponding to that of the soln., follows the law $-dc/dt = k_1 s\sqrt{c}$, where c = concn. of Li in the amalgam at the time t (min.), s = surface area of the amalgam in sq. cm., in agreement with Fletcher and Kilpatrick (*C.A.* 32, 2413[6]); with s = 9.80 sq. cm., vol. of amalgam 4 ml., vol. of H_2O 60 ml., at 20°, stirring at 380 r.p.m., initial concns. c_0 0.270–0.833 M, k_1 = 1.05 × 10^{-4}. (2) This law does not hold if the pH is allowed to rise freely with progressing soln. of the Li; in that case, the rate is expressed by $t - t_1 = (2.308/k_1)\log(c_0/c)$, where t_1 = the time (min.) of attainment of the same c under conditions of constancy of pH = 9; from measurements of the progress of the soln. by the vol. v of H_2 evolved, with c_0 = 0.550 M corresponding to 25.0 ml. H_2 (complete extn. of the Li), k_1 = 1.72 at 20° and 380 r.p.m. The effect of the temp., at const. rate of stirring and c_0 = 0.455 M, is illustrated by the data: 20, 30, 50, and 60°, after 4 min. v = 6.5, 8, 12, and 15 ml., after 8 min. v = 12.5, 14.5, 18.5, and 20 ml.; at 20°, rates of stirring 0, 300, and 450 r.p.m., after 8 min. v = 12, 15.5, and 17 ml. (3) Extn. of Li by LiOH solns. sufficiently concd. for the change of alky. in the course of the reaction to be negligible, again follows the $\sqrt{c}$ law as under (1); at 20°, 300 r.p.m., c_0 = 0.600–0.650, initial LiOH = 0, 0.46, 0.85, 1.80, 2.40, and 4.82 M, $10^4 \times k_1$ = 1.05, 0.57, 0.37, 0.112, 0.090, and 0.046; in terms of temp., at 20, 40, and 60°, with c_0 = 0.616 M, initial LiOH 1.80 M, $10^4 \times k_1$ = 0.112, 0.282, and 0.561. (4) The acceleration of the extn. by contact of the amalgam with low-overpotential metals, is illustrated by the data (exposed surface area of the amalgam 7.5 sq. cm., of the metal 2.0 sq. cm., 20°, initial LiOH 2 M): contact none, Fe-Cb, Fe-Zr, cast Fe, graphite, time of complete decompn. 180, 1.3, 2.5, 3.5, 4.5 min. (5) The $\sqrt{c}$ law holds also for extn. by LiCl solns.; at 20°, c_0 0.6 M, LiCl 4, 8, and 10 M, $10^4 \times k_1$ = 0.890, 0.690, and 0.320; at 50°, LiCl 10 M, $10^4 \times k_1$ = 0.650. N. Thon

PROCESSES AND PROPERTIES INDEX

1ST AND 2ND ORDERS — 3RD AND 4TH ORDERS

1ST AND 3RD LETTER — AUTHOR INDEX

COMMON VARIABLES INDEX

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

4

Production of lithium hydroxide by electrolysis of lithium chloride solutions. S. I. Skiyarenko and H. A. Sakhatov. *J. Applied Chem.* (U.S.S.R.) 20, 409-21 (1947)(in Russian).—Expts. were conducted on a lab. scale between a Pt anode and a circulating Hg cathode (40 sq. cm.), with circulating electrolyte; the amalgam was decompd. with H_2O in contact with graphite. The current efficiencies η were detd. as a function of the concn. c of LiCl, the concn. a of Li in the amalgam, the rate of circulation of the electrolyte e (in. ml./min.), the c.d., and the temp. At const. i = 5.20 amp. (c.d. 1300 amp./sq. m.), length of electrolysis 1 hr., initial temp. about 20°, final about 26°, mean a 0.0034%, e = 15, η increased from 92.9 to 98.3% with c increasing from 10.0 to 42.5% and the voltage E rising from 6.8 to 7.4 v. At const. c = 35%, other factors as before, with a changing from 0.0015 to 0.0100% (by varying the rate of circulation of Hg), η decreased from 99.1 to 80.9%, practically linearly with a. At const. a = 0.0015, other factors as before e = 1.0, 5.0, 10.0, 20.5, η = 91.0, 95.3, 96.9, 96.8%; no further change of η above e = 10.0. At const. e = 15, other factors as before, (a kept const. = 0.0034% by varying the rate of circulation of Hg proportionally to the c.d.) c.d. 300, 1000, 1300, 2000, 2500 amp./sq. m., η = 91.0, 96.5, 97.0, 98.9, 99.1%. Under the same const. conditions as before but with the initial and final temp. made very close through an increased e (20-25 ml./min.) η = 97.1, 99.0 (max.), 95.7, 92.7% at the av. temp. 20°, 40° (optimum), 47°, 70°. At c = 34%, the decompn. potential is 3.27 v., as against 3.08 and 3.00 v. for 26% KCl and NaCl, resp. If all factors are considered, optimum conditions are: c 30-35%, a not over 0.002-0.004, high e, c.d. 1700-2500 amp./sq. m., temp. 25-30°, never over 45-50°. In 4-5-hr. electrolyses, pure LiCl gave η 93.9-95.1%; com. LiCl, contg. (KCl + NaCl) 0.50, 7 hrs., 93.1-93.4%. The product was free from Cl, SO_4, and Fe, contained Li_2CO_3 0.2-2.2, (NaCl + KCl) up to 0.07%.

N. Thon

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

PROCESSES AND PROPERTIES INDEX

2

Kinetics of the decomposition of alkali metal amalgams by water. S. I. Sklyarenko and B. A. Sakharov (Inst. of Fine Chem. Technology, Moscow). *Zh. Fiz. Khim.* (U.S.S.R.) 21, 97–107(1947).—If the amalgam is in contact with water, the pH of which is kept at about 9 by continual addn. of 0.1 *N* HCl, the concn. c of the amalgam decreases according to the equation (cf. Brönsted and Kane, *C.A.* 26, 361) $hst = 2(\sqrt{c_0} - \sqrt{c})$, s being the area (cm.²) of contact between amalgam and water, t time in sec., and c_0 the initial concn. of the amalgam in g.-atoms/l. The const. h is 1.06×10^{-4}, 0.87×10^{-4}, 0.74×10^{-4}, 0.62×10^{-4}, and 0.51×10^{-4} for Li, Na, K, Rb, and Cs, resp., independently of c_0 which varied between 0.27 and 0.63. When no acid is added to H_2O in contact with an amalgam, the time t before c is reached is, $t = t_1 + h_2 \log(c_0/c)$, t_1 being the time given by the Brönsted-Kane equation. The const. $2.3/h_2$ is 1.72, 0.071, 0.047, 0.026, and 0.017 for Li, Na, K, Rb, and Cs. The retarding effect of OH^- is greatest for Cs and least for Li. In all the above expts. the temp. was 20° and a stirrer making 300 r.p.m. was used. From these data the overvoltage of H_2 on the amalgams is calcd. J. J. Bikerman

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

Sakharov B.A.

CA

PROCESSES AND PROPERTIES INDEX

21

Catalytic combustion of the exhaust gases of internal-combustion engines on refractories. B. A. Sakharov and T. N. Nikolaeva (G. M. Krzhizhanovskii Energetics Inst., Moscow). *Bull. acad. sci. U.R.S.S., chim. sci. tech.* 1948, 79-86(in Russian).—Mixts. of exhaust gases contg., on the av., CO 2.5, H_2 1.5%, with the CO:H_2 ratio varying, at the extreme, between 2:1 and 1.4:1 (av. 1.6:1), amt. of hydrocarbons not over a few 0.1%, ratio O_2:sum of combustible gases = 4, were passed on grog catalysts, at 300 and 500°, at linear velocities 0.15-6 m./sec., space velocities 1000-20,000 l. l. catalyst/hr. The grog catalysts, grain size 5-7 mm., were activated with Fe, Mn, and Cu as nitrates, converted into oxides by firing at 500°, and with Pd as chloride, reduced in H_2, then oxidized in O_2 and fired at 500°. Analyses of the gas passed were made after 20-min. runs. On nonactivated grog, the degree of combustion y, at low velocities r, is 17% at 300° and 37% at 500°. At these r, y is nearly 100% with catalysts activated with either Fe + Mn, Cu + Mn, or Pd. Differences of activities appear at higher r, in the range of turbulent flow, the transition occurring at the Reynolds no. 50-60, corresponding, under the given conditions, to 15-20 m./min. at 500°. Increase of r from 10 to 100 m./min. (1000-10,000 l./l./hr.) results, at 300 and 500°, resp., in a 6.8- and 12.3-fold decrease of y on nonactivated grog, 15.2- and 1.5-fold on Fe + Mn, 1.1 and 1.5 on Cu + Mn, and 1.2-fold on Pd. Under conditions of complete inactivity of the carrier (nonactivated grog), at r 98 m./min. at 300° and 116 m./min. at 500°, the ratios of the catalytic activities of the activators themselves, (Cu + Mn):Pd:(Fe + Mn) = 1:0.88:0.03 at 300°, and 1:0.81:0.37 at 500°. There is a striking decrease of the relative activity of Fe + Mn with falling temp., as contrasted with the near constancy of (Cu + Mn):Pd. In the region of laminar flow (r less than 6 m./min.), at 300°, the activities of Fe + Mn, 48 cm. long, and of Cu + Mn, 24 cm. long, decrease with increasing r practically along the same curve; thus variation of the length of the catalyst column can efficiently bring the activities of different catalysts close together; at 500°, Fe + Mn, 48 cm., has about the same activity as Cu + Mn, 24 cm., at r 3 m./min., and a distinctly higher one at 5 m./min. Doubling of the height of the column of Fe + Mn has the same effect as raising the temp. from 300 to 500°. In the range r 0.2-6 m./min., complete combustion of the exhaust gas is attained on Fe + Mn with a catalyst column 88 cm. high, ½ of which is kept at 500°, ½ at 300°. For this catalyst, the plot of y as a function of the temp., at const. length 48 cm. and const. time of contact r = 0.43 sec., consists of 2 branches; combustion begins at 200°, attains about 80% at 420° where the curve bends over to a lesser slope, corresponding to a rate of combustion about half that of the first portion, attaining 95% at 550°. The inflection may correspond to appearance of homogeneous combustion at temps. above 420°, resulting in a slowing down of the heterogeneous surface combustion.

N. Thon

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

1ST AND 2ND ORDERS

SAKHAROV, B.A.

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

Heterogeneous oxidation of methane, carbon monoxide, and hydrogen in a porcelain tube. B. A. Sakharov and L. I. Duryaina (G. M. Krzhizhanovskii Energetics Inst. Acad. Sci. U.S.S.R., Moscow). *Doklady Akad. Nauk S.S.S.R.* 69, 1[illegible]-61(1949).—A gas mixt. CH_4 1.46 + H_2 1.51 + CO 0.84% + air, ratio O_2:combustible gases = 0.8, rate of flow 170 cc./min., was passed for 20 min. through a porcelain tube 18 mm. in diam. heated over a length of 0.5 m. and the gaseous product analyzed. At temps. below 670°, the amts. of CO and of H_2 in the product increase with increasing temp., both reaching a max. at 670°; evidently, part of the CH_4 is oxidized only to H_2 and CO, and, at 670°, almost all CH_4 is oxidized to CO. Between 480 and 670°, the ratio H_2/CO falls from 4 to 0. Inasmuch as $CH_4 + {}^3/_2O_2 = CO + 2H_2O$ corresponds to H_2/CO = 2, values higher than 2 must indicate formation of other oxidation products, such as MeOH. A value of H_2/CO less than 2 indicates that, at higher temps., H_2 is burned increasingly faster than CO. Above 670°, the amts. of CO and of H_2 in the product decrease rapidly with increasing temp. In the presence of CH_4, decrease of the amt. of H_2 begins only at about 680°, that of CO, at 716°. At 720°, CH_4 disappears totally from the product; at this point, the amt. of H_2 has decreased by 55%, that of CO only by 8%. Complete oxidation of the ternary mixt. under atm. pressure is attained at about 790°. N. Thon

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

21

Ca

SAKHAROV, B.A

PROCESSES AND PROPERTIES INDEX

Catalytic oxidation of methanized city gas (mixture of methane and hydrogen). B. A. Sakharov and L. I. Dorynina. *Doklady Akad. Nauk S.S.S.R.* 63, 289-91 (1948); cf. C.A. 42, 8507e. Degrees of oxidation of CH_4 and of $CH_4 + H_2$ were detd. for a mixt. dild. with air so as to contain CH_4 3.18%, H_2 1.50%, and a 3.5-fold excess of O_2, passed over a length of 8 cm. of catalyst (21 cc.) in a tube 2 cm. in diam., at 180 cc./min. (0.03-0.06 m./sec.), between 300 and 800°), with the following catalysts, on grog of 0.5-0.7 in. grain size (the figures give the amts. relative to the wt. of the carrier): Fe_2O_3 10 + MnO_2 2 (I), Pd 2 (II), K_2O 2 (III), and CuO 4 + MnO_2 6 (IV). On grog alone, oxidation of CH_4 is very low (~ 10%) even at 800°, whereas, on I, III, II, and IV, 25% of the CH_4 was oxidized at, resp., 650, 570, 500, and 300°, and complete (100%) oxidation was attained at, resp., 850, 850, 800, and 650°. On these catalysts, 25% oxidation of $CH_4 + H_2$ was attained at, resp., 600, 600, 400, and 500°, on grog alone only at 800°. Complete oxidation of $CH_4 + H_2$ was reached only on the activated contacts between 750 and 770°. N. Thon

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, B. A.

"The Contemporary State of the Production and Consumption of Lithium," by B. A. Sakharov, Candidate of Chemical Sciences, Khimicheskaya Nauka i Promyshlennost', Vol 1, No 5, Sep/Oct 56, pp 529-533

Methods for the production of lithium and the applications of lithium and of its compounds are reviewed on the basis of non-USSR publications. At the conclusion of the article, the following information is given:

"During World War II, it was proposed in the US to use the double lithium-boron hydride as a fuel in reaction engines. If it were possible to use metallic lithium as a solid fuel, the heat evolved during the combustion of 1 kg of Li would be equal in quantity to that yielded by the combustion of 4,000 tons of coal.

"Lately lithium has begun to play an important part in nuclear power technology. By bombarding the isotope Li^6 with slow neutrons, tritium is obtained by the following reaction:

$$_3Li^6 + {}_0n^1 \rightarrow (_3Li^7) \rightarrow {}_1H^3 + {}_2He^4$$

"Lithium deuteride LiD, which has a high neutron capture cross-section, has been investigated from the standpoint of its possible application in protective devices for nuclear reactors."

Sum 1219

A bibliography consisting of nine references, none of them from the USSR follows the article.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, B. A.

18(5,6); 25(1) PHASE I BOOK EXPLOITATION SOV/3134

Kommunisticheskaya partiya Sovetskogo Soyuza. Vysshaya partiynaya shkola

Dostizheniya nauki i tekhniki i peredovoy opyt v promyshlennosti i stroitel'-stve. Vyp. 2, chernaya i tsvetnaya metallurgiya (Progress in Science and Technology and Advanced Methods Applied in Industry and Construction. No. 2, Ferrous and Nonferrous Metallurgy) Moscow, Izd-vo VPSh i AON pri TsK KPSS, 1958. 157 p. 22,000 copies printed.

Ed. (Title page): G. I. Pogodin-Alekseyev, Doctor of Technical Sciences, Professor; Ed. (Inside book): G. V. Popova; Tech. Ed.: K. M. Naumov.

PURPOSE: This book is intended for the informed reader and should also be of interest to metallurgists.

COVERAGE: This is a collection of lectures, presumably delivered at the Vysshaya partiynaya shkola (Higher Party School) of the Communist Party, USSR, describing recent advances in the field of metallurgy. The approach is basically nontechnical, though a number of processes are briefly described. Specific ore deposits and metallurgical plants are referred to.

Card 1/7

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

Some statistics are given. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

Myrtsymov, A. F., Candidate of Technical Sciences. Technical Progress in Ferrous Metallurgy. Ways of Increasing the Productivity of the Blast-furnace Process 3

Claims of actual achievements described in this article include the highest blast-furnace operating efficiency in the world in 1955, when the Soviet yield of pig iron per cubic meter of useful blast furnace is stated to have been 11 percent higher than in the United States. The 1956 Soviet yield of open-hearth steel per square meter of hearth is given as 7 metric tons per 24-hr period, as compared with 5.7 for the United States. Current objectives in Soviet ferrous metallurgy include the following: 1) greater application of open-pit mining, increased mechanization of mining operations, prospecting for additional deposits, accelerating concentration operations, construction of several large ore-beneficiation combines in the Krivoy Rog Basin, and new concentration plants in other areas;

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

process; vacuum melting and teeming; high-temperature refractories; and direct reduction of iron from ore.

Tselikov, A. I., Corresponding Member, Academy of Sciences, USSR. 43
Progressive Methods and Basic Trends in the Development of Metal Forming
According to the author, improvements in metal-forming techniques are currently being achieved with two basic objectives, 1) reduction of metal waste, and 2) automation of processes. Attempts are being made to attain the first objective by designing lighter finished products and by using presized blanks and slugs to reduce allowances. As regards the increased-automation program, the main line of attack is the conversion of noncontinuous to continuous forming processes, especially in rolling, drawing, and extruding. In the case of hot and cold upsetting continuity of auxiliary operations is the aim, while in stamping operations, continuous feed is considered important. Particular reference is made to the Soviet method of helical cross rolling, by means of which cavities may be developed in originally solid bodies. The method is frequently used in the rolling of hollow bodies of rotation.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

salts. Uses and properties of various metals are discussed. Some operations involved in the production of these metals are briefly described. Advances made in the Soviet nonferrous-metals industry are attributed to progress in mining, ore-concentration, and extraction methods, as well as to modernization of equipment. Progressive extraction methods include fluidized-bed roasting, suspended-charge smelting, electrothermal methods, the fuming process, and the vacuum process for refining lead, zinc, bismuth, and other ores.

Strigin, I. A. Technical Progress in the Metallurgy of Nonferrous Metals 123
Subjects discussed in this article include improvements in mining, ore-concentration, and extraction techniques, and thorough and varied utilization of crude ore.

Sakharov, B. A., Candidate of Chemical Sciences. Latest Achievements in the Production of Rare Metals 137
The author defines rare metals and discusses their importance. The chief uses of these metals lie in such fields as the production of high-strength, heat-resistant, and chemically stable alloys, and

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

ACCESSION NR: AP4039410 S/0070/64/009/003/0436/0439

AUTHORS: Lishina, A. V.; Medvedev, S. A.; Nashel'skiy, A. Ya.; Sakharov, B. A.

TITLE: Morphology of gallium phosphide crystals grown from the gas phase

SOURCE: Kristallografiya, v. 9, no. 3, 1964, 436-439

TOPIC TAGS: crystal growth, twinned crystal, gallium phosphide

ABSTRACT: The crystals were obtained in a stream of inert gas by a method modified from that proposed by M. Gerchenszon and R. M. Mikulyak (J. Electrochem. Soc., 108, 6, 548-51, 1961). The procedure yielded transparent yellow-orange crystals of two principal forms: acicular and ribbon shaped. The acicular crystals formed three-sided prisms with equilateral triangular cross sections. Occasional hexagonal cross sections were observed. The direction of growth was the [111] axis. The tops of the crystals were generally bounded by octahedral faces {111}; the sides were bounded by the {110} form. Crystals with triangular cross section showed what appeared to be twinning on the (110) plane, but crystals with hexagonal cross sections did not show this. The tabular ribbon crystals grew in the [112] direction. The basal plane was (111). The {111} and {100} forms were dominant. Twins occurred on at least two composition planes, one type of twin being very

Card 1/2

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

ACCESSION NR: AP4039410

distinct in thin sections cut perpendicular to [112]. Orig. art. has: 5 figures.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskoy promyshlennosti (State Scientific Research and Planning Institute for the Rare Metal Industry)

SUBMITTED: 18Aug63 ENCL: 00

SUB CODE: SS NO REF SOV: 001 OTHER: 008

Card 2/2

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

L 48321-65 EWT(1)/EWT(m)/T/EWP(t)/EEC(b)-2/EWP(b)/EWA(h)/EWA(c) Pi-4/Pz-6/
Peb IJP(c) GG/AT

ACCESSION NR: AP5009360 UR/0363/65/001/002/0161/0166

AUTHOR: Sakharov, B. A.; Voronov, I. N.; Tumin, I. M.

45
43
B

TITLE: On the calculating process for the Czochralski method

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 2, 1965, 161-166

TOPIC TAGS: single crystal, crystal impurity, computing impurity concentration, crystal growth, semiconductor, donor impurity, acceptor impurity

ABSTRACT: A method is presented for calculating the concentration of impurities (donors and acceptors) in single crystals of semiconductors prepared by the Czochralski method. This computing method aids in obtaining homogeneous single crystals with a desired set of electrical and physical properties. The method takes into account three factors: the repulsive action of the growing crystals against impurities present in the melt, the effect of evaporation of volatile donor impurities from the free surface of the melt, and the contamination of the melt with crucible material (mainly donor-type). No published method of calculating distribution of contaminants in single crystals is known which takes into account all of

Card 1/3

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

L 48321-65

ACCESSION NR: AP5009360

these three factors. The derived equation for calculating the concentration of donor impurity in the single crystals (c_{MD}) is:

$$c_{MD} = \frac{1}{k_D}\left\{\frac{c_{p1} - c_{p2}}{1 - \exp\left(-\frac{k_u S_u}{V_0 - V}t\right)} - \frac{k_A n_k S_k t}{(V_0 - V)\left[1 - \exp\left(-\frac{k_u S_u}{V_0 - V}t\right)\right]} - k_D \frac{n_k S_k}{k_u S_u}\right\}(1-g)^{1-k_D-k_u S_u/f}$$

Where: k_D is the effective coefficient of donor distribution; c_{p1} is the surplus concentration of donor impurity which generates a specific resistance; c_{p2} is the surplus concentration of donor impurity at the end of the crystal growing process; k_A is the effective coefficient of acceptor distribution; n_k is the rate of melt contamination; S_k is the melt-crucible contact area; t is time; k_u is the coefficient of vaporization of volatile donor (constant); S_u is the free surface of the melt; V_0 is the original melt volume; V is the crystallizable volume; $g = V/V_0$; f is the rate of melt crystallization. The equation for concentration of the acceptor

Card 2/3

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

L 48321-65

ACCESSION NR: AP5009360

component (c_{MA}) is: $c_{MA} = \frac{k_D c_{MD} - c_p(0)}{k_A}$

Where: $c_p(0) = k_D \cdot c_{MD} - k_A \cdot c_{MA}$; k_u, k_D, k_A, and n_k are determined.

ASSOCIATION: Gosudarstvennyy institut redkikh metallov (State Institute of Rare Metals); Podol'skiy Khimiko-metallurgicheskiy zavod (Podolsk Chemical-Metallurgical Works)

SUBMITTED: 27Oct64 ENCL: 00 SUB CODE: SS

NO REF SOV: 001 OTHER: 005

Card 3/3

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

L 3075-66 EWT(1)/EWT(m)/EWP(i)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD/GG

ACCESSION NR: AP5018077 UR/0020/65/163/001/0076/0078

AUTHOR: D'yakonov, L. I.; Maslov, V. N.; Sakharov, B. A.

TITLE: Epitaxial growing of single-crystal gallium phosphide

SOURCE: AN SSSR. Doklady, v. 163, no. 1, 1965, 76-78

TOPIC TAGS: epitaxial growing, gallium compound, semiconducting material

ABSTRACT: The purpose of the investigation was to check on the applicability of the sandwich method (E. Sirtl, J. Phys. Chem. Solids v. 24, no. 11, 1285, 1963) to the production of large plate-like gallium phosphide single crystals, and to investigate the main factors influencing the growth rate and the quality of the epitaxial layers. The epitaxial growing was by means of the gas-transport reaction with water vapor

$$4GaP + 2H_2O \rightleftharpoons 2Ga_2O + P_4 + 2H_2$$

using needle-like single crystals obtained from the gas phase by interaction between phosphorus vapor and gallium monoxide in an argon stream. The details of the growth procedure are described. Samples up to 700 μ thick were grown in 70 hours at a rate which started at 30--40 μ/hr and slowed down to 7--15 μ/hr. The presence of moisture hindered the epitaxial growth by causing oxidation of the substrate surface. The morphology of the epitaxial layers depends on the orientation of the

Card 1/2

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

L 3075-66

ACCESSION NR: AP5018077

3

surface and on the perfection of the substrate crystal structure. The best results were obtained on substrates with ($\overline{111}$) orientation. Although the Debye pattern of the epitaxially grown single crystals indicates the presence of only one phase in the sample, the presence of several per cent of gallium arsenide impurity has been noticed. Although the content of this impurity can be reduced by lowering the substrate temperature, this leads to a deterioration of the photoluminescent and electroluminescent properties of the sample. The gallium phosphide obtained had n-type conductivity, with carrier density 10^{16}--10^{18} cm^{-3}, carrier mobility 114 cm^2/v-sec at density 2×10^{17} cm^{-3}, and resistivity 0.2 ohm-cm at room temperature, with a gallium arsenide content of 6 mol.%. This report was presented by N. P. Sazhin. Orig. art. has: 2 figures and 1 formula.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskoy promyshlennosti (State Scientific-Research and Design Institute of the Rare-Metal Industry)

SUBMITTED: 23Dec64 44,55 ENCL: 00 SUB CODE: SS

NR REF SOV: 002 OTHER: 009

Card 2/2

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

L 10866-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JW

ACC NR: AP5028718 SOURCE CODE: UR/0363/65/001/011/1892/1897

AUTHOR: D'yakonov, L. I.; Kistova, Ye. M.; Maslov, V. N.; Sakharov, B. A.

ORG: Giredmet

TITLE: Study of the transport of GaP during epitaxial growing in a moist hydrogen atmosphere

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 11, 1965, 1892-1897

TOPIC TAGS: gallium compound, phosphide, epitaxial growing

ABSTRACT: A theoretical and experimental study of the kinetic relationships governing the transport of gallium phosphide in epitaxial growing was made in a system where the substrate and source were located close to each other, i. e., the arrangement employed in the sandwich method. The assumptions made by R. F. Lever (*J. Chem. Phys.* 37, 1174, 1962) were checked for the transport of GaP, which in moist hydrogen can be represented as

$$2GaP + H_2O \rightleftharpoons Ga_2O + H_2 + P_2$$

and found to be correct. A computational formula is derived which shows that the transport velocity is directly proportional to the temperature gradient and square root of the water vapor pressure, and depends almost exponentially on the temperature.

UDC: 546.681'181.1:548.55

Card 1/2

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

L 10866-66

ACC NR: AP5028718

The activation energy is equal to one-half of the change in the enthalpy of the above transport reaction. Orig. art. has: 3 figures, 14 formulas.

SUB CODE: 20,11,07/ SUBM DATE: 23Jun65/ ORIG REF: 005/ OTH REF: 008

HW

Card 2/2

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

L 10235-66 EWT(1)/EWT(m)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD/GG

ACC NR: AP6001232 SOURCE CODE: UR/0363/65/001/012/2154/2157

AUTHOR: D'yakonov, L. I.; Lishina, A. V.; Maslov, V. N.; Nashel'skiy, A. Ya.; Sakharov, B. A.

ORG: Giredmet

TITLE: Epitaxial growing of single crystals of gallium phosphide-gallium arsenide solid solutions

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 12, 1965, 2154-2157

TOPIC TAGS: single crystal, single crystal growth, epitaxial growing, chemical transport reaction, gallium arsenide, gallium phosphide, quasibinary solid solution, semiconductor single crystal

ABSTRACT: Single crystal epitaxial layers of GaP_xAs_{1-x} solid solutions have been deposited on GaAs single crystal wafers of a given crystallographic orientation by a chemical-transport reaction in a close-spaced system (sandwich method). The purpose of the work was to grow GaP_xAs_{1-x} layers thick enough to be used separately from the substrate in various semiconductor devices of the most advanced type. References to Western sources suggested the use of GaP_xAs_{1-x} solid solutions in laser diodes, luminescent diodes with noncoherent emission characteristics, and in light modulating devices. Earlier, the sandwich method was successfully applied by Soviet scientists

Card 1/2 UDC: 546.681'181.1+546.681.191

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

L 10235-66

ACC NR: AP6001232

to deposition of thick GaP epitaxial layers [N. P. Sazhin, V. N. Maslov. DAN SSSR, 160, 171 (1965)]. The close-spaced system used in the present study was similar to that described by F. H. Nicoll [J. Electrochem. Soc., 110, 1165 (1963)]. The source material was a ground mixture of GaAs and GaP crystals, which was placed in a cavity on the surface of the lower graphite block. Water vapor carried by a stream of hydrogen was the transporting medium. The substrate was heated in a vertical resistance furnace to a maximum of 880C; the temperature gradient between the source and the substrate blocks was 10—20C. The growth rate was 7—15 μ/hr. Under the above conditions, the single crystal epitaxial GaP_xAs_{1-x} mirror-like layers, up to 700 μ thick and to 3 cm^2 in area, were prepared on $(\bar{1}\bar{1}\bar{1})$B GaAs substrate. Composition of the layers was dependent on the composition of the charge. Transport of components between the source and the substrate was accomplished in the 1:1 ratio, if the substrate was maintained at 872—875C. Therefore, a given ratio of the components could be obtained over the entire composition range of GaP_xAs_{1-x} solid solutions (x = 0—1). The problem was discussed of the application of this theoretically anomalous, transport of components to other semiconductor quasibinary systems. Orig. art. has: 1 figure. [JK]

SUB CODE: 20 SUBM DATE: 07Jun65/ ORIG REF: 003/ OTH REF: 017/ ATD PRESS: 4163

Card 2/2

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

MOROZOV, V.I.; VORONICHEV, N.M.; NAUDIN, Yu.V.; GARMAZA, V.A.; MEDVEDEV, G.I.; KAMENETSKIY, I.M.; IZOKH, V.V.; BARASHKOV, V.D.; EMPARAPULO, V.Kh.; RAYEVSKIY, N.P.; SHASHKOV, Yu.M.; GRISHIN, V.P.; SMYSLOV, I.I.; ROMANENKO, Yu.M.; SAKHAROV, B.B.

Innovations. Avtom. i prib. no.2:61-62 Ap-Je '65. (MIRA 18:7)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, B.I., aspirant

Design of a thin reinforced shperical shell subjected to internal uniform pressure. Izv. vys. ucheb. zav.; mashinostr. no. 10:86-93 '65 (MIRA 19:1)

1. Submitted May 22, 1965.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, B.N., inzh.; SOLOMATIN, V.I., inzh.

Using movable mixing plants in making black-gravel pavements.
Avt.dor. 22 no.1:18-19 Ja '59. (MIRA 12:2)
(Pavements) (Road machinery)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, B.P.

Journal of The American Ceramic Society, June 1, 1954
Cements, Lines and Plasters

(2)

Silicate cement from a mixture of lime and clay. B. S. LYSIN AND B. P. SAKHAROV. *Dopovidi Akad. Nauk Ukr. R.S.R.*, 1953, No. 2, pp. 93-98.—Charges of (*a*) CaO and clay and (*b*) $CaCO_3$ and clay were fired at 600° to 1450°C. Determinations were made of free lime, CO_2, and losses on firing. The crystal structure of clinkers was also studied. The process of alite formation was faster in *a* than in *b*. The structure in clinker from *a* was perfect, and the strength of cement from *a* was equivalent to that of Russian cement grades 400 and 600. B.Z.K.

Kiev Polytech Inst.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, B. P.

15

Gypsum making apparatus. V. I. Babushkin and B. P. Sakharov. U.S.S.R. 104,235, Nov. 25, 1956. M. Hosen

2

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, B. P.

Distr: 4E2c

15

Intensifying the dehydration of gypsum. B. Sakharov, V. Babushkin, and V. Nitchenko. *Stroitel. Materialy*, 4, No. 1, 32(1958).—Mobility of gypsum powder during heating was detd. by placing on a bottom of a container a plate suspended on a balance, filling the container with gypsum powder, heating it to 50–200°, and, on reaching the desired temp., adding wts. on the pan of the balance until the cylinder of gypsum powder having the base of the plate is pulled out. The diagram given, illustrating expts. conducted with a natural gypsum contg. 19.8% H_2O, shows an increase of resistance up to 80°, then a uniform decrease to 100°, where there is a sudden drop to a min. which extends between 110 and 175°. Above 175° the mobility of the powder rapidly decreases; this is assocd. with the formation of anhydride. Processing steps should be controlled in this light in order to save energy required for mixing. I. D. Gat

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, B.P., kand. tekhn. nauk

Rapid method of controlling the calcination of gypsum.
Stroi. mat. 5 no.5:16 My '59. (MIRA 12:8)
(Gypsum)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

KONDRATYUK, N.D., kand. sel'skokhoz. nauk; SAKHAROV, B.P., starshiy nauchnyy sotrudnik

Economic efficiency of egg and meat production in poultry plants in areas of large cities and industrial centers of regions which do not produce grain. Trudy TSNIIPPa 9:91-93 '62. (MIRA 16:6)

(Poultry industry)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, B.S., inzhener.

Automatic compressing plant. Gor.khoz.Mosk. 28 no.8:28-30 Ag '54. (MLRA 7:9)

(Trolley buses) (Compressed air) (Automatic control)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, B.N. (Khar'kov, Dinamovskaya ul., d.2, kv.37)

Clinical aspects and therapy of open infected knee fractures associated with radiation sickness; experimental study. Ortop., travm. i protez. 24 no.8:53-58 Ag '63. (MIRA 17:1)

1. Iz kliniko-radiologicheskogo otdeleniya (zav. - dotsent V.A. Polyakov) TSentral'nogo instituta travmatologii i ortopedii (dir. - prof. M.V. Volkov).

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, B.V.

From the experience in the organization of work. Gidroliz. i lesokhim. prom. 18 no.6:14 '65. (MIRA 18:9)

1. Syvaskiy lesokhimicheskiy kombinat.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

UL'YANOV, M.I.; SAKHAROV, B.V.

Change in the pain-induced leucocytic reaction in radiation and combined radiation injuries. Med.rad. 8 no.2:42-46 F'63 (MIRA 16:11)

1. Iz kliniko-radiologicheskogo otdeleniya (zav.-dotsent V.A.Polyakov) TSentral'nogo instituta travmatologii i ortopedii Ministerstva zdravookhraneniya SSSR.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

PAVLOVA, M.N.; SAKHAROV, B.V.

Treatment of open infected fractures in the knee joint area with metal osteosynthesis; experimental study. Ortop., travm. i protez. 25 no.7:11-16 Jl '64. (MIRA 18:8)

1. Iz TSentral'nogo instituta travmatologii i ortopedii (dir. - chlen-korrespondent AMN SSSR prof. M.V.Volkov). Adres avtorov: Moskva A-299, Novaya Ipatovka, d.8, TSentral'nyy institut travmatologii i ortopedii.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

USSR/Agriculture Sep 48
Soil Science
Salt

PA 61/49T4

"Salt Precipitations in the Volga-Aktyubinsk Area"
D. Sakharov, Astrakhan Complex Agr Experimental Sta,
1½ pp

"Pochvoved" No 9

Reveals his experience of year-long observations of salt percipitations in Volga-Aktyubinsk area. States that I. P. Zhel'tainskiy also assumed the possibility of salt precipitations in this region though surveys have not yet been performed. Considers it a necessity

[redacted] 61/49T4

USSR/Agriculture (Contd) Sep 48

to study the problem of salt precipitations, their influence on the nature of the soil and its effect on agriculture. Gives table of chemical analysis of salts.

SAKHAROV, D.

[redacted] 61/49T4

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, D.

Improving the management and organization of work at the Kokchetav Grain Elevator. Muk.-elev.prom. 25 no.9:6 S '59. (MIRA 12:12)

1. Direktor Kokchetavskogo elevatora.
(Kokchetav--Grain elevators)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, D.

Receiving and processing grain in a continuous operation at the Kokchetav Grain Elevator. Muk.-elev.prom. 26 no.8:3-6 Ag '60. (MIRA 13:8)

1. Direktor Kokchetavskogo elevatora.
(Kokchetav--Grain elevators)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

BOROVYAGIN, V. L.; SAKHAROV, D. A.; VEFRINTSEV, B. N.

"Satellites of nerve cells in gastropod ganglion."

report submitted to 3rd European Regional Conf, Electron Microscopy, Prague, 26 Aug-3 Sep 64.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, D. A. Cand Biol Sci -- (diss) " ~~The regular course~~ Laws of the ontogenetic ~~development~~ formation of the motor functions of amphibians (in connection with a critical analysis of the ethological conception of nervous activity)." Mos, 1957. 13 pp (Mos State Univ im M. V. Lomonosov, Biol and Soil Faculty), 100 copies (KL, 42-57, 92)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, D.A.

20-1-63/64

AUTHOR: SAKHAROV, D.A.

TITLE: On the Dynamics of the Swimming Activity in the Early Ontogeny of the Amblystoma.
(O dinamike razvitiya plavatel'noy aktivnosti v rannem ontogenese amblistomy. Russian).

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol 114, Nr 1, pp 226 - 228 (U.S.S.R.)

ABSTRACT: The paper under review reports on investigations of the Amblystom. mexican. in the state of ontogeny which corresponds to the transition from the embryonic period to active existence. The investigations were carried out in the black and in the white species (Amblystoma). In the majority of the specimens investigated, a short period of suppression of the motorics was observed, which took place soon after the occurence of the early swimming stage, as well as a periodic fluctuation of activity. (hereto 2 charts).

Finally it should be mentioned that the new knowlegde about the character of the normal development of the swimming activity in Amblystom. mexicanum can be utilized as test at other experimental investigations. (2 charts).

(References: S.R. Detwiler, J. Exp. zool. 102, 321 (1946); G.E. Goghill, R.W. Watkins, J. Comp. Neurot. 78, 91 (1943)

Card 1/2

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, D.A.

Quantitative study of swimming reaction in developing urodeles following the removal of auditory vesicles. Nauch.dokl.vys.shkoly; biol.nauki no.1:100-103 '58 (MIRA 11:8)

1. Predstavlena kafedroy fiziologii zhivotnykh Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.
(URODELA)
(LABYRINTH (EAR))
(SWIMMING)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, D.A.

Care and breeding of the Spanish newt (Pleurodeles waltli) and its use as a laboratory animal. Biul.MOIP.Otd.biol. 64 no.1:157 Ja-F '59. (MIRA 12:7)

(Newts as laboratory animals)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

17(4)

AUTHORS: Levinson, L. B., Popova, L. D., Sakharov, D. A.

SOV/20-124-6-37/55

TITLE: Histochemistry of the Nerve Cells of the Auditory Ganglion in Connection With the Development of Their Functions in the Course of Ontogenesis in Axolotl Embryos (Gistokhimiya nervnykh kletok slukhovogo gangliya v svyazi s formirovaniyem ikh funktsiy v ontogeneze zarodyshey aksolotlya)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 6, pp 1317-1320 (USSR)

ABSTRACT: Experiments by which the functional histochemistry of the nerve cells in connection with the occurrence of certain kinds of physiological activity during the ontogenesis of these cells is studied represent one of the ways in order to synchronize physiological and morphological data or to find adequate action methods according to their quality and intensity (Refs 1-3). The authors carried out experiments for the purpose of clarifying the period of time at which the specific functional activity of the above-mentioned cells commences; simultaneously their histochemistry at various stages of development of the embryo was studied. Apparently the occurrence of physiological

Card 1/3

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

activity cannot or rather is said not to agree with the period of time of functional development of the labyrinth analyzer apparatus as a whole. For this reason the maturity of ganglionic cells cannot be judged from the period of time of development of regulative and coordinating influences which originate from the labyrinths. The nerve cells of the ganglion begin to exercise their specific influence on the brain somewhat earlier. At first this influence has merely a tonic expression (Ref 10). If the extent of this reflex in the case of normal embryos is compared to that of embryos the auditory vesicles and auditory ganglions of which were removed at earlier stages, said extent increases parallely in both cases up to a certain period of time (limit of the 36 and 38 stages according to Garrison) until suddenly differences occur: this extent further increases in the case of intact embryos whereas in the case of operated embryos it not longer increases or, if so, only very slowly. Apparently at this period of time the tonicizing effect of ganglion cells on the motor systems of the brain is established. In the experiments carried out the following data were obtained:

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

Histochemistry of the Nerve Cells of the Auditory Ganglion in Connection With the Development of Their Functions in the Course of Ontogenesis in Axolotl Embryos SOV/20-124-6-37/55

in the cells of the developing auditory ganglion in the case of an axolotl certain age-conditioned concentration changes in ribonucleic acid and glycogen were observed. An abrupt change takes place in both cases in the "G" stage. This period of time corresponds to the 11th day of embryo development on which (according to the physiological experiment) the specific functional activity starts in the ganglion cells. The temporal concurrence of histochemical and physiological changes leads to the conclusion that the above-mentioned histochemical changes are functionally conditioned. There are 1 table and 15 references, 8 of which are Soviet.

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

PRESENTED: November 1, 1958, by Ye. N. Pavlovskiy, Academician

SUBMITTED: November 1, 1958

Card 3/3

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, D.A.

Automatism of pedal ganglia in the pteropod Clione limacina L.
Nauch. dokl. vys. shkoly; biol. nauki no.3:60-62 '60.
(MIRA 13:8)

1. Rekomendovana kafedroy fiziologii zhivotnykh Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.
(Pteropoda) (Nervous system--Mollusks)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, D.A.

In memory of Kh.S.Koshtoiants. Nauch. dokl. vys. shkoly; biol. nauki no.3:199-200 '61. (MIRA 14:7)
(KOSHTOIANTS, KHACHATUR SEDRAKOVICH, 1900-1961)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, D.A.; VERESH, Katalin

Changes in the sensitivity to strychnine in the ontogenesis of the reflex act. Dokl.AN SSSR 136 no.1:253-255 Ja '61. (MIRA 14:5)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova. Predstavleno akademikom A.N.Bakulevym.
(STRYCHNINE) (REFLEXES) (AGE)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

GUFALO, Ye.Ye.; LEVINSON, L.B.; SAKHAROV, D.A.; SOKOLOVA, G.P.

Cytology of Marthner's nerve cells in larvae of the crested newt. Dokl. AN SSSR 141 no.6:1469-1472 D '61. (MIRA 14:12)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova. Predstavleno akademikom Ye.N.Pavlovskim.
(Nervous system--Amphibia) (Medulla oblongata) (Histochemistry)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, D.A.

Giant nerve cells in the nudibranchiate mollusks Aeolidia papillosa and Dendronotus frondosus. Zhur.ob.biol. 23 no.4:308-311 Jl-Ag '62. (MIRA 15:9)

1. Severtsov Institute of Animal Morphology, U.S.S.R. Academy of Sciences.

(NERVOUS SYSTEM--MOLLUSKS)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

VEPRINTSEV, B.N.; SAKHAROV, D.A.

Potential of the nuclear membrane of the nerve cell. Biofizika 8 no.4:526 '63. (MIRA 17:10)

1. Institut biologicheskoy fiziki AN SSSR, Moskva i Institut morfologii zhivotnykh AN SSSR imeni A.N. Severtsova, Moskva.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, D.A.; NISTRATOVA, S.N.

Characteristics of cholinergic response in the heart of Anodonta. Fiziol. zhur. 49 no.12:1475-1481 D '63. (MIRA 17:12)

1. Laboratoriya obshchey i sravnitel'noy fiziologii im. Kh.S. Koshtoyantsa Instituta morfologii zhivotnykh im. A.N. Severtsova AN SSSR, Moskva.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

BOROVYAGIN, V.L.; SAKHAROV, D.A.; VEPRINTSEV, B.N.

Intranuclei inclusion in the neuron of the mollusk Tritonia diomedia Bergh. Biofizika 10 no.1:98-99 '65. (MIRA 18:5)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

L 27929-66

ACC NR: AP6017750 SOURCE CODE: UR/0221/65/060/003/0365/0383

21
B

AUTHOR: Sakharov, D. A.

ORG: Institute of Animal Morphology im. A. N. Severtsov, AN SSSR (Institut morfologii zhivotnykh AN SSSR)

TITLE: Functional organization of giant neurons of mollusks

SOURCE: Uspekhi sovremennoy biologii, v. 60, no. 3, 1965, 365-383

TOPIC TAGS: neuron, neurophysiology

ABSTRACT: This extensive article reviews Soviet and foreign literature as late as 1965. The bibliography contains well over one hundred items, most of them non-Soviet. The article's principal divisions are Giantism, Causes and Effects of Unipolarity, Functional Topography of the Process, Mediator Mechanisms and Secretion, Electrical Activity, and Integration. The author finds that a good basis has been laid for the solution of the outstanding problems in this field. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 021 / OTH REF: 086

Card 1/1 BLG

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, D.G., kand.ekonomicheskikh nauk, dotsent

Management of perennial cultivated pastures in Latvia.
Zemledelie 8 no.2:77-85 F '60. (MIRA 13:5)

1. Latviyskaya sel'skokhozyaystvennaya akademiya.
(Latvia--Pastures and meadows)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, Dmitriy Ivanovich

DECEASED

1889-1961

1964

Physics in schools

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAMAROV, G., inzh. (Petrozavodsk)

Let's improve the lay-out of apartments. Zhil. stroi. no.10:26 o '61. (MIRA 14:10)

(Apartment houses)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

137-58-5-9484

SAKHAROV, G.A.

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 96 (USSR)

AUTHORS: Golubev, T.M., Khaykov, M.A., Sakharov, G.A., Danilov, L.I., Shamets, Ya.V., Korchemnyy, M.I.

TITLE: Reductions and Pressures Employed in Rolling on a Medium-gage Sheet Mill (Rezhim obzhatiy i usiliya pri prokatke na srednelistovom stane)

PERIODICAL: Sb. tr. Kuznetskogo mezhobl. pravl. Nauchno-tekhn. o-va chernoy metallurgii, 1956, Vol 1, pp 79-95

ABSTRACT: The results of an investigation of reduction (RE) schedules on a 2150 2-stand three-high Lauta mill with 850/560/850 mm rolls are presented. Analysis of the temperature of rolling (R) and the pressures and actual RE schedules in the R of 1150-1800 mm wide sheets of St. 3, St. 4, 65G, 1Kh18N9T and SKhL4 steels from slabs 80-220 mm wide established that actual R schedules do not reveal any differentiation in RE with width of sheet as envisaged in the technical instructions. Differentiation of actual RE in accordance with the grades of steel being rolled is observed to be correct. R of sheet of ShKh15 and 65G steels is done in accordance with the technical instructions, while Nrs 3 and 4

Card 1/2

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

137-58-5-9484

Reductions and Pressures Employed (cont.)

steels are rolled by more intensive and 1Kh18N9T and SKhL steels by less intensive regimes. When billets <20-30 mm thick are being R, it is necessary to maintain uniform RE and therefore to hold the maximum thickness of the work going into the second stand within these limits. It is suggested that analysis of rational RE regimes be performed in accordance with the equation: $\Delta h = 2P_r^2 D \cdot B_0^2 \cdot p^2$, where Δh is the absolute RE, B_0 is the thickness of the sheet in m, D is the mean rolling diameter of the rolls; p is the unit rolling pressure and P_r is the R stress permissible in terms of fatigue strength and housing service life. An example is presented of the calculation of an RE schedule in the R of 1Kh18N9T steel to a 6x1700-mm sheet.

M. Z.

1. Rolling mills--Performance

Card 2/2

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, G.A.

GOLUBEV, T.M.; SOROKO, L.N.; ZAYKOV, M.A.; KAFTANOV, M.P.; CHELYSHEV, N.A.; SAKHAROV, G.A.; ZUYEV, B.P.

Power and electric power indexes for blooming mill rolling. Stal' 17 no.2:141-146 F '57. (MLRA 10:3)

1. Sibirksiy metallurgicheskiy institut i Kuznetskiy metallurgicheskiy kombinat.

(Rolling mills) (Electric driving--Testing)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, G.A.

SAKHAROV, G.A., inzhener; MIKHEYEV, V.G., inzhener.

Improving the sheet surface of stainless steel. Stal' 17 no.4:377-378 Ap '57. (MLRA 10:5)

1.Kuznetskiy metallurgicheskiy kombinat.
(Steel, Stainless)
(Surfaces (Technology))

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

PLEKHANOV, P.S., inzh.; PETUKHOV, B.G., inzh; SAKHAROV, G.A., inzh.

Production of silicon steel plate. Izv.vys.ucheb.zav.; chern.met. no.9:77-85 S '58. (MIRA 11:11)

1. Kuznetskiy metallurgicheskiy kombinat.
(Iron-silicon alloys) (Plates iron and steel)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2

SAKHAROV, G.D.

New method for studying surface compounds; prelinimary report. Vest.Mosk.un.Ser.mat., mekh., astron., fiz., khim. 14 no.1: 145-149 '59. (MIRA 13:8)

1. Kafedra fizicheskoy khimii Moskovskogo universiteta.
(Catalysts) (Adsorption)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001446730013-2"