

DEMIDYUK, P.F., nauchnyy sotrudnik (Kiyev, Brest-Litovskoye shosse, d.7/1, kv.91);
KHALABUDA, N.S., nauchnyy sotrudnik

Vacat oxygen and the coefficient of incomplete oxidation in anesthesia using nitrous oxide with oxygen on healthy persons. Nov. khir. arkh. no.12:29-32 D '61. (MIRA 14:12)

1. Otdel klinicheskoy khirurgii (zav. - dotsent A.L.Pkhakadze)
Ukrainskogo nauchno-issledovatel'skogo instituta klinicheskoy meditsiny imeni akademika N.D.Strazhesko.

(ANESTHESIA) (OXYGEN IN THE BODY)
(NITROUS OXIDE—PHYSIOLOGICAL EFFECT)

PKHAKADZE, A.L., dots.; BOYKO, V.K., dots.; DEMIDIYUK, P.F., nauchnyy
sotrudnik

Surgical treatment of some diseases of the blood system. Nov.
khir.arkh. no.11:3-14 '61. (MIRA 14:12)

1. Otdel klinicheskoy khirurgii (zav. - dots. A.L. Pkhakadze)
Ukrainskogo nauchno-issledovatel'skogo instituta klinicheskoy
meditsiny.

(BLOOD--DISEASES) (CARDIOVASCULAR SYSTEM--DISEASES)

GVATUA, N.A.; DEMIDYUK, P.F.; LESHCHENKO, A.I. (Kiyev)

Vectorcardiogram in myocardial hypertrophy of the right ventricle.
Vrach. delo no.1:31-37 Ja '62. (MIRA 15:2)

1. Otdel klinicheskoy revmatologii (zav. - prof. A.L.Pkhakadze)
Ukrainskogo nauchno-issledovatel'skogo instituta klinicheskoy
meditsiny imeni akademika N.D.Strazhesko.
(VECTORCARDIOGRAPHY) (HEART__MUSCLE__DISEASES)

PKHAKADZE, A. L.; DEMIDYUK, P. F.; TANASIYENKO, I. D.

Combined sarcoma of the right lung and mitral stenosis. Grud.
khir. 4 no.3:94-96 My-Je '62. (MIRA 15:7)

1. Iz otdela klinicheskoy khirurgii (zav. - dotsent A. L. Pkhakadze Ukrainskogo nauchno-issledovatel'skogo instituta klinicheskoy meditsiny imeni N. D. Strazhesko (dir. - zaslyzhennyy deyatel' nauki prof. A. L. Mikhnev). Adres avtorov: Kiyev, ul. Saksaganskogo, d. 65, Ukrainskogo nauchno-issledovatel'skogo instituta klinicheskoy meditsiny imeni N. D. Strazhesko.

(LUNGS--CANCER) (MITRAL VALVE--DISEASES)

PKHAKADZE, A.L., dotsent (Kiyev, ul. Nikol'sko-Botanicheskaya, d3, kv.;
VOVCHENKO, Ye.M., kand. med. nauk; DEMIDYUK, P.F.

Metabolic reactions of the organism to surgical trauma. Klin.
khir. no.10:3-13 0 '62. (MIRA 16:7)

1. Otdel kliricheskoy khirurgii (zav.-dotsent A.L. Pkhakadze)
Ukrainskogo nauchno-issledovatel'skogo instituta klinicheskoy
meditsiny imeni akademika N.D. Strazhesko.

(PATHOLOGY, SURGICAL)
(METABOLISM, DISORDERS OF)

VOVCHENKO, Ye.M., kand.med.nauk (Kiyev, 87, per.Nishchinskogo,d.3,kv.32);
DEMIDYUK, P.V.

Embolectomy during mitral commissurotomy. Klin.khir. no.8:63-64
Jl '62. (MIRA 15:11)

1. Otdel klinicheskoy khirurgii (zav. - dotsent A.L.Pkhakadze)
Ukrainskogo instituta klinicheskoy meditsiny.
(MITRAL VALVE--SURGERY) (EMBOLISM)

SEREDENKO, M.M., kand.ekon.nauk; KUGUSHEV, M.F. [Kubushev, M.F.]; PRAVDIN, M.V.; FOMICHEV, V.I.; ALEKSANDROVA, V.P.; GORODETSKIY, N.I. [Horodets'kyi, N.I.]; DYATLOV, T.I.; KALITA, M.S. [Kalyta, M.S.]; DARAGAN, M.V. [Darahan, M.V.]; RADINA, Yu.M.; VOROB'YEVA, K.T. [Vorobyova, K.T.]; LASTIVKA, N.N.; STARODUBSKIY, R.D. [Starodubs'kyi, R.D.]; YATSENKO, P.F.; MUROMTSEVA, G.M. [Muromtseva, H.M.]; RASNER, S.I.; CHERNYAK, K.I.; KOBILYAKOV, I.I. [Kobyliakov, I.I.]; ALEKSANDROVA, V.O., kand.ekonom.nauk, otv.red.; DEMIDYUK, V.F. [Demydiuk, V.F.], red.; LIBERMAN, T.R., tekhn.red.

[Ways of increasing profits in metallurgical industries] Shliakhy pidvyrchennia rentabel'nosti metalurgiiynykh pidpriemstv. Kyiv, Vyd-vo Akad.nauk URSR, 1961. 93 p.

(MIRA 14:6)

1. Akademiya nauk USSR, Kiyev. Institut ekonomiki. 2. Institut ekonomiki AN USSR (for Seredenko, V.P.Aleksandrova, Kalita, Daragan, Radina). 3. Dnepropetrovskiy khimiko-tekhnologicheskii institut (for Gorodetskiy, Dyatlov). 4. Dneprodzerzhinskiy metallurgicheskii institut (for Kobilyakov).

(Dnepropetrovsk Province—Steel industry—Costs)

DEMIDYUK, V.F., otv. za vypusk

[Materials of the Conference of Agricultural Workers of the Ukrainian S.S.R.] Materialy Soveshchaniia rabotnikov sel'skogo khoziaistva Ukrainskoi SSR, Kiev, 1961. Kiev, Gos. izd-vo polit. lit-ry USSR, 1962. 133 p. (MIRA 15:2)

1. Soveshchaniye rabotnikov sel'skogo khozyaystva Ukrainskoy SSR, Kiev, 1961.
(Ukraine--Agriculture)

MEN'SHIKOV, Valentin Pavlovich [Men'shikov, V.P.], kand. ekon. nauk;
DEMIDYUK, V.F. [Demydiuk, V.F.], red.; LEVCHENKO, O.K.,
tekh. red.; MEYEROVICH, S.L., tekh. red.

[National income and its distribution in the U.S.S.R.] Na-
tsional'nyi dokhod i ioho rozpodil v SRSR. Kyiv, Derzh-
polityvdav URSR, 1962. 36 p. (MIRA 15:11)

1. Kiyevskiy politekhnicheskii institut (for Men'shikov).
(Income)

BANDURKO, Grigoriy Yeremeyevich [Bandurko, H.E.], kand. ekonom. nauk;
DEMIDYUK, V.F., red.; LEVCHENKO, O.K., tekhn. red.

[Reduction of the workday is the great achievement of
socialism] Skorochnnia robochoho dnia - valyke zavoiuvan-
nia sotsializmu. Kyiv, Derzhpolitvydav URSR, 1962. 41 p.
(MIRA 15:11)

1. Zaveduyushchiy kafedroy politicheskoy ekonomii Zaporozhskogo
mashinostroitel'nogo instituta (for Bandurko).
(Ukraine--Hours of labor)

VISHNEVETSKIY, Iosif Antonovich [Vyshnevets'kiy, I.A.], kand. ekon.
nauk; DEMIDYUK, V.F., red. [Demydiuk, V.F.], red.; KOPYTKOVA,
N.K., tekhn. red.

[The main economic tasks of the U.S.S.R.] Holovne ekonomichne
zavdannia SRSR. Kyiv, Derzhpolitvydav URSR, 1962. 50 p.
(MIRA 16:3)

(Russia--Economic policy)

ZAGLADA, Nadezhda Grigor'yevna [Zahlada, N.H.], Geroy Sotsialisti-
cheskogo Truda; DEMIDYUK, V.F. [Demydiuk, V.F.], red.;
PALAMARCHUK, T.L., red.; LASTOVETS', Z.S., tekhn. red.

[Life. Work. Meditation; a field leader tells her story]
Zhyttia. Pratsa. Rozdumy; rozpovid' lankovoi. Kyiv, Derzh-
politvydav URSR, 1962. 106 p. (MIRA 16:4)
(Ukraine--Agricultural workers)

YAKOVENKO, Rada Feodos'yavna; DEMIDYUK, V.F. [Demydiuk, V.F.], red.;
MEYEROVICH, S.M. [Meierovich, S.M.], ~~tekhn.~~ red.

[Agriculture on the path to communism] Sil's'ke hospodarstvo
na shliakhu do komuniamu. Kyiv, Derzhpolitvydav, URSR, 1962.
48 p. (MIRA 16:3)

(Agriculture)

DEMIDYUK, V.F., [Demydiuk, V.F.], red.; LEVCHENKO, O.K., ~~ukhn.~~ red.

[Program on the principles of economics for study groups of the party educational system] Programa z osnov politychnoi ekonomii dlia hurtkiv systemy partiinoi osvity. Kyiv, Derzhpolitvydav URSR, 1962. 29 p. (MIRA 16:3)

(Economics)

DEMIDYUK, V.F. [Demydiuk, V.F.], red.; KOPYTKOVA, N.K., tekhn.
red.

[Program on economics for seminars of the party educational system as well as for those who study economics independently] Program z politychnoi ekonomii dlia seminariv sitky partiinoi osvity, a takozh dlia samostiino vyvchaiuchykh politychnu ekonomiiu. Kyiv, Derzhpolitvydav URSS, 1962. 61 p. (MIRA 16:3)

1. Kommunisticheskaya partiya Sovetskogo Soyuza. Vysshaya partiynaya shkola. Kafedra politicheskoy ekonomii.
(Economics)

GRIGOR'YAN, G.S. [Hryhor'ian, H.S.], dots.; KISTANOV, Ya.A., dots.;
FEFILOV, A.I., dots.; GENKINA, L.S. [Henkina, L.S.], dots.;
VASIL'YEV, S.S. [Vasil'iev, S.S.], dots.; SEREBRYAKOV, S.V.,
prof.; DNEPROVSKIY, S.P. [Dnieprovs'kyi, S.P.], prof.;
PIROGOV, P.V. [Pyrohov, P.V.], dots.; GOGOL', B.I. [Hohol', BI.],
dots.; SMOTRINA, N.A., dots.; KULIKOV, O.G. [Kulikov, O.H.],
dots.; KUZIN, M.I., dots.; DEMIDYUK, V.F. [Damydiuk, V.F.], red.;
SKVIRSKAYA, M.P. [Skvyrs'ka, M.P.], red.; LEVCHENKO, O.K., tekhn.
red.; SERGEYEV, V.F. [Serhieiev, V.F.], tekhn. red.

[Soviet trade economics] Ekonomika radians'koi torhivli; pid-
ruchnyk. [By] G.S.Grigor'ian ta inshi. Kyiv, Derzhpolitvydav
URSR, 1962. 500 p. (MIRA 16:1)

(Russia--Commerce)

BELYAVIN, Fedor Kuz'mich [Bieliavin, F.K.]; DEMIDYUK, V.I. [Demydiuk, V.I.],
red.; KISILEVSKIY, O.M. [Kysilievskiy, O.M.], red.; MEYEROVICH, S.L.,
tekhn. red.

[Party guidance of socialist competition in rural areas, 1953-1960]
Partiine kerivnytstvo sotsialistychnym zmahanniam na seli, 1953-
1960 rr. Kyiv, Gospolitizdat USSR, 1961. 69 p. (MIRA 15:12)
(Ukraine--Socialist competition)
(Agriculture--Labor productivity)

SULTANOVICH, A.I.; DEMIKHOV, V.I.; LUPPA, V.G.

Using electric measuring devices in sparkproof electrical networks.
Mash. i nef. obr. no.4:20-23 '65. (MIRA 18:5)

1. Groznenskiy filial Vsesoyuznogo nauchno-issledovatel'skogo i
proyektno-konstruktorskogo instituta kompleksnoy avtomatizatsii
neftyanoy i gazovoy promyshlennosti.

L 5124-66 EWT(1)/EWA(h)

ACCESSION NR: AP5023659

UR/0119/65/000/008/0026/0027
621.3.082.7:621.317.361

20
19
B

AUTHOR: Demikhov, V. I. (Engineer)

TITLE: Frequency sensor 25

SOURCE: Priborostroyeniye, no. 8, 1965, 26-27

TOPIC TAGS: transducer, sensor, frequency sensor

ABSTRACT: The development of a new frequency-type sensor capable of measuring small linear displacements is reported. It is intended for dynamometric tests of operation of depth pumps in oil wells. The sensor includes a variable-beat generator has a high temperature-frequency stability, and its characteristic is practically linear within 0--400 μ m of the displacement. A powder-iron core is placed in the gap between two coils belonging to two transistorized LC-oscillators. As the core moves (under an external pressure), the frequencies of both oscillators vary, thus changing the beat frequency at the output of a transistorized frequency converter. The beat frequency is stable within a $\pm 20\%$ variation of the supply voltage and a $\pm 50\%$ of the load resistance. A principal electrical circuit and a sketch of the sensor design are shown. Orig. art. has: 3 figures and 2 formulas.

Card 1/2

09010733

L 5124-66

ACCESSION NR: AP5023659

ASSOCIATION: VNIIKANEFTEGAZ

SUBMITTED: 00

ENCL: 00

SUB CODE: EC

NO REF SOV: 002

OTHER: 000

BC

Card 2/2

127-58-1-6/28

AUTHORS: Demikhov, I.M., Chief of the Mining Section of the Technical Department of the Sverdlovsk Sovnarkhoz, and Mekler, L.S., Chief Engineer of the Degtyarsk Mine Administration

TITLE: The Mining of a Section of the Degtyarka Mine by Large-Scale Caving (Method) (Razrabotka uchastka na Degtyarskom rudnike s massovym obrusheniyem)

PERIODICAL: Gornyy Zhurnal, 1958, Nr 1, pp 24-27 (USSR)

ABSTRACT: There is a considerable bulge towards the roof-rock side in the lode-like deposit of the Degtyarsk copper pyrite mine. The thickness of the ore body is sharply increased, attaining 100 m at a strike length of 400 m. During 1955 to 1956, an experimental section was mined by a combination system devised by the Institute Unipromed'. Three chambers were mined with sublevel drifts, and two interchamber pillars were subsequently crushed by a large-scale blast. Simultaneously the roof rocks were blasted. When the ore had been removed, the section was filled in with mud pulp. The total amount of ore produced by this large-scale blast was 140,000 tons. The authors describe technical details and economical advantages of the system and conclude that its

Card 1/2

127-58-1-6/26

The Mining of a Section of the **Degtyarka** Mine by Large-Scale Caving (Method)

application calls for effective measures for preventing sulfide dust explosions and ore inflammation. They recommend more experimental work to determine more precisely the individual parameters of the system and to accumulate experience.

The article contains 2 figures, 2 tables, and 1 Soviet reference.

ASSOCIATION: Sverdlovskiy Sovnarkhoz Degtyarskoye rudoypravleniye
(Sverdlovsk Sovnarkhoz Degtyarka Mining Administration)

AVAILABLE: Library of Congress

1. Mining engineering-USSR
2. Copper pyrite ores-Sources

Card 2/2

SEREDA, Boris Konstantinovich; SAZHIN, Dmitriy Ivanovich; BUBOK,
Konstantin Grigor'yevich; BENUNI, A.Kh., prof., retsenzent;
DEMIKHOV, I.M., inzh., retsenzent; BAKIROV, U.Kh., kand.
tekh.nauk, red.; KEL'NIK, V.P., red.izd-va; ZEP, Ye.M.,
tekh.red.

[Prevention and extinction by silting of endogenous fires
originating during the mining of sulfide ores] Predupresh-
denie i tushenie endogennykh pozharov sailivaniem pri
razrabotke mestorozhdenii sul'fidnykh rud. Sverdlovsk, Gos.
nauchno-tekh.izd-vo lit-ry po chernoi i tsvetnoi metallurgii,
Sverdlovskoe otd-nie, 1959. 307 p. (MIRA 12:8)
(Mine fires)

SAVOSTIN, G.A., inzh.; TERESHCHENKO, F.P., inzh.; NECHIPORENKO, M.M.; SAMOTEYEV,
G.V., ~~DEKHCHEROV, I.~~, inzh.

Concerning the article "Increase cross sections of haulageways"
Bezop.truda v prom. 2 no.4:22-24 Ap '58. (MIRA 11:4)

1. Institut "Krivbassproyekt" (for Savostin, Tereshchenko). 2.Uprav-
leniye Tul'skogo okruga Gosgortekhnadzora SSSR (for Nechiporenko,
Samoteyev).

(Mining engineering)

BABIN, Pavel Nikolayevich; DENIKHOV, T.V., otv. red.; NESTEROVA,
I.I., red.; ALFEROVA, P.F., tekhn. red.

[Refractory raw materials of Kazakhstan] Ogneupornoe syr'e
Kazakhstana. Alma-Ata, Izd-vo AN Kaz.SSR, 1963. 141 p.
(MIRA 17:3)

DEMIKHOV, V. P.

35459. Gomoplasticheskaya peresadka serdtsa i legkikh v tenlokrovnykh (sobak). V sb: Voprosy grudnoy Khirurgii. T. Sh. M., 1949, s. 42-46

Letopis' Zhurnal'nykh Statey, Vol. 48, Moskva, 1949

DEMIKHOV, V.P.

Problem of transplantation of organs according to Michurin's theory.
Khirurgiia, Moskva no.9:27-33 Sept 1953. (GML 25:5)

1. Of the Laboratory for Transplanting Organs (Head -- V. P. Demikhov),
Institute of Surgery imeni A. V. Vishnevskiy (Director -- Prof. A. A.
Vishnevskiy), Academy of Medical Sciences USSR.

DEMUKHOV, V. P.

USSR/Biology - Physiology

Card 1/1 : Pub. 77, 13/26

Authors : Demikhov, V. P., Cand. Med. Sci.

Title : Transplanting organs

Periodical : Nauka i zhizn' 21/7, 25 - 26, July 1954

Abstract : A comparison is made between the grafting of parts among plants and grafting from one animal organism to another. The latter is found to be more difficult but success has been obtained to the extent of transplanting parts of eyes and restoring sight to more than 5,000 people. The transplanting of organs such as hearts and lungs is also recounted without any explanation as to nerve connections, although such organs are said to have functioned normally. Illustrations.

Institution : ...

Submitted : ...

DEM!KHOV, V.P.

PLUTENKO, A.Ye.; DEMIKHOV, V.P.; TSURENKO, G.I. (Moskva)

X-ray diagnosis of coronary sclerosis. Klin.med. 35 no.5:116-124
My '57. (MLRA 10:8)

1. Iz kafedry operativnoy khirurgii (zav. kafedroy - prof. V.V. Kovanov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova

(CORONARY DISEASES, diag.
sclerosis, x-ray)

(SCLEROSIS, diag.
coronary, x-ray)

DEMIKHOV, V.P. (Moskva)

~~Letter~~ to the editor. Klin.med. 36 no.5:155 My '58 (MIRA 11:7)
(CORONARY ARTERIES--SURGERY)

DEMIKHOV, V.P.

The German Academy of Sciences in Berlin (East Germany) held a Research Colloquium at the Inst. of Medicine & Biology in Nov. 1958. Among the Soviet papers presented were
 Koyul, M. "Die Wirkung der imitierenden Strahlen auf Mikroorganismen."
 Bannat, G.M. "Zur. Chemische Physik, AS USSR über Probleme der Antibiotikatherapie."
 Demikhov, V. P., Med. Lab. of Transplantation of Organs, Chair of Operative Surgery, 1st Moscow Medical Inst. "Die Transplantation von Herz, Nieren, Blasen und Adrenen. Ergebnisse der vergleichenden Sicht."

Dr. Demikhov's Research Colloquium, 28 Sept. 1959, West.

DEMIKHOV, Vladimir Petrovich; BENYUMOV, O.M., red.; ATROSHCHENKO, L.Ye.,
tekhn.red.

[Transplantation of organs: is it possible?] Peresadka organov:
eto vozmozhno? Moskva, Izd-vo "Znanie," 1959. 29 p. (Vsesoiuznoe
obshchestvo po rasprostraneniю politicheskikh i nauchnykh znanii.
Ser. 8, Biologiya i meditsina, no.8) (MIRA 12:8)
(Transplantation of organs, tissues, etc.)

DEMIKHOV, Vladimir Petrovich; BENYUMOV, O.M., red.; LAZORENKO, M.F., red.

[Transplantation of organs: is it possible?] Peresadka organiv:
tse mozhlyvo! Kyiv, 1959. 30 p. (Tovarystvo dlia poshyrennia
politychnykh i naukovykh znan' Ukrain's'koi RSR. Ser.5, no.15)
(MIRA 13:1)

(TRANSPLANTATION (PHYSIOLOGY))

17(1)

SOV/25-59-8-26/48

AUTHOR: Demikhov, V.P., Chief of the Laboratory

TITLE: With Two Hearts

PERIODICAL: Nauka i zhizn', 1959, Nr 8, p 64 and p 3 of center-fold

ABSTRACT: The Scientific-Research Laboratory for the Transplantation of Organs at the First Moscow Medical Institute for some years has been working on the problem of replacing seriously injured organs by healthy ones. More than 20 variants of transplantation were tried to find the simplest and most perfect way of operating. Surgeons developed an operation method which prevents thrombosis. The heart to be transplanted is taken out together with the lung. The vessels are united in a way in which small blood coagulations which happen to develop during the separation of the blood are held back in numerous vessels of the lung without reaching the heart. In most cases, the transplanted heart functioned normally. The old heart produced the movement of the blood in the upper part of

Card 1/3

SOV/25-59-3-26/48

With Two Hearts

the body, and the transplanted heart ensured the blood circulation in the lower part. In a dog operated in this way, the electro-cardiogram showed both hearts to be in good condition, for 29 days. A few days later, the dog died of an inflammation of the lungs. Based on further investigations, the surgeons concluded that the separation of nerves running from the cerebrum to the heart, results in a steadier activity of the heart. The heart not being connected with cerebrum by nerves is more resistant to poisonous substances. Tissues of the transplanted heart grow together very well with tissues of the new organism. Obviously, in transplantations of entire organs, an immunologic paralysis appears due to the absence of resistibility of the new organism with respect to the transplanted tissues or organ. There are two photo-

Card 2/3

SOY/25-59-8-26/48

With Two Hearts

graphs, three drawings and 2 diagrams.

ASSOCIATION: Nauchno-issledovatel'skaya laboratoriya po peresadke organov Pervogo Moskovskogo meditsinskogo instituta (Scientific-Research Laboratory for the Transplantation of Organs at the First Moscow Medical Institute).

Card 3/3

VESELOVA, Ye.A.; DEMIKHOV, V.P.

On the question of the mechanism of bradycardia induced by cardiac glycosides. *Biul. eksp. biol. i med.* 47 no.8:76-80 Ag '59. (MIRA 12:11)

1. Iz kafedry farmakologii (zav. - deystvitel'nyy chlen AMN SSSR V.V. Zakusov) i laboratorii po peresadke organov pri kafedre operativnoy khirurgii (zav. V.P. Demikhov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova. Predstavlena deystvitel'nyy chlenom AMN SSSR V.V. Zakusovym.

(BRADYCARDIA exp.)

(CARDIAC GLYCOSIDES eff., inj.)

DEMIKHOV, Vladimir Petrovich; KOSITSKIY, G.I., red.; SENCHILO, K.K.,
tekhn. red.

[Experimental transplantation of vital organs; experiments in
transplanting the heart, lungs, head, kidneys and other organs]
Peresadka zhiznenno vazhnykh organov v eksperimente; opyty po
peresadke serdtsa, legkikh golovy, pochek i drugikh organov.
Moskva, Medgiz, 1960. 258 p. (MIRA 15:6)
(TRANSPLANTATION OF ORGANS, TISSUES, ETC.)

DEMIKHOV, V. P.

Today they experiment, but tomorrow... Znan. ta pratsia no.6:14
Je '60. (MIRA 13:8)
(Transplantation (Physiology))

DEMIKHOV, V.P.

USSR

DEMIKHOV, Vladimir Petrovich, The Sklifosovsky
Institute, Moscow - "On the transplantation of
the heart" (Session 5)

KAPICHNIKOV, Mikhail Mikhaylovich, Visiting Fellow,
Institute of Experimental Biology, Academy of
Sciences USSR, Moscow - "Immunological reactions to
skin homo-transplantation in rats and rabbits"
/Joint paper, together with D. L. BALLANTYNE, Jr.,
and C. A. STETSON, both of the New York
University School of Medicine, New York, New
York/ (Session 2)

LAPCHINSKIY, Anastasiy G., Central Institute of
Traumatology and Orthopedics, Moscow - "Experi-
mental transplantation of skin preserved by sub-
freezing to - 196°C in liquid nitrogen" (Session 6)

Report to be submitted for the Fifth Intl. Tissue Transplantation Conference
(National Science Foundation and N Y Academy of Sciences, New York City,
8-10 Feb 62.

6

DEMIXHOVA, T. V.

Service of Dinas in reverberatory furnaces of copper smelters.
A. I. AVGUSTINIK AND T. V. DEMIXHOVA. *Uchenyye Zapiski Kazanskogo Universiteta*, 15 (III) 611-18 (1950).—The study was limited to 5 smelters in the Kazakh S.S.R. in Central Asia, where the ores differ sharply from those handled at other smelters in the Soviet Union. The composition of the ores is not given; their nature can be judged from the slags, which analyzed SiO₂ 20.23 to 54.17, Al₂O₃ 4.96 to 13.22, FeO 21.27 to 49.08, CaO 3.69 to 14.70, MgO up to 1.57, S up to 2.32, ZnO up to 6.48, BaO up to 2.55, and Cu 0.37 to 0.53%. The greatest wear occurred in the second and third sections of the crown (from the furnace wall) and in the zones adjacent to the charging holes along the whole length of the furnace. The chief factors of wear of the crown are high temperature and chemical action of charge dust mixed with coal ash. During service, the Dinas acquires a zonal structure which is characterized by sharp differences in chemical composition and microstructure. The working section of the Dinas becomes enriched with up to 6% alumina and up to 2.5% iron oxides instead of the usual 0.3 to 0.4% and 1.5%. Low-melting eutectics formed on the working surface migrate into the brick, thus lowering the refractoriness of the working surface and facilitating the separation of some quartzite grains and the formation of drops. Microstructure depended upon the temperature regions in the furnace. The working surface was covered with a vitreous coating having a large number of mullite crystals which act as a shield against wear. The creation of a synthetic mullitized coating should serve as the most important measure to prolong the service of Dinas.

AVGUSTINIK, A.I.; DEMIKHOVA, T.V.

Protective refractory coatings. Izv.AN Kazakh. SSR Ser.gor.dola, met.
i stroinat. no.2:34-39 '54. (MLRA 9:6)
(Refractory materials)

DEMIXHOVA, T. U.

USSR/Miscellaneous - Foundry furnaces

Card 1/1 Pub. 123 - 10/16

Authors : Demikhova, T. V., Cand. of Tech. Sc.

Title : ~~Technical data on the service ability of Dinas bricks in high-temperature copper-melting furnaces~~
The service life of Dinas brick in reverberating copper-melting furnaces

Periodical : Vest. AN Kaz. SSR 12, 73-77, Dec 1954

Abstract : Technical data are given regarding the service ability of Dinas bricks in high-temperature copper-melting reverberating furnaces. The effects of Fe_2O_3 and CaO forming during the melting processes on the strength and appearance of Dinas brick are described. Two USSR references (1950 and 1952).

Institution :

Submitted :

DEMIKOVA, T. V.

✓ Behavior of Aktash diaspore during heating. T. V. Demikova. *Izvest. Akad. Nauk Kazakh S.S.R., Ser. Gornogo Dela, Khim. i Stroimaterial.*, 1953, No. 5, pp. 92-97. — Tests were conducted at 300° to 1300°C. with diaspore from the Aktash deposit; it analyzed SiO₂ 39.06, TiO₂ 0.78, Al₂O₃ 46.77, Fe₂O₃ 1.23, CaO 0.40, K₂O 4.0, Na₂O 0.4, and ignition loss 9.38%. Mineral composition was not uniform; diaspore content was over 70%. Dehydration takes place primarily at about 500° and is complete at 900° to 1000°. Dehydration causes a change in the optic axial angle from +84° to -25° and in index of refraction from 1.75 to 1.591 (at 900°). These changes indicate the gradual change of diaspore into corundum. B.Z.K.

TRAD

PM [signature]

DEMUKHOVA, T.V.

3000

Use of technical alumina for making high-alumina protective coatings. T. V. Demukhova, *Izvest. Akad. Nauk Kazakh. S.S.R. Ser. Fiz.-Mat. i Stroitel. Material.* 1955, No. 5, 174 (in Russian).—Products made with tech. alumina are characterized by (a) small degree of multilamination at 1600°; (b) absence of a single cryst. concretion; (c) high sintering temp. (above 1600°); and (d) disparity between coeff. of linear expansion of coatings and films within the interval 120–920°. B. Z. Kamich

RM

DEMIKOVA, T.V., kandidat tekhnicheskikh nauk

Experimental application of protective refractory coatings to
the crown of reverberatory furnaces. Vest. AN Kazakh, SSR 11
no. 10:75-80 0'55. (MLRA 9:1)
(Refractory materials)

SOV/137-58-11-21920

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 11, p 12 (USSR)

AUTHORS: Babin, P. N., Demikhova, T. V.

TITLE: Magnesite-refractory Service Life in the Masonry of Electric Ferroalloy Furnaces (Sluzhba magnezitovogo ogneupora v kladke elektroferrosplyavnykh pechey)

PERIODICAL: Izv. AN Kaz.SSR, Ser. gorn. dela, metallurgii, strova i stroy-materialov, 1956, Nr 10, pp 101-114

ABSTRACT: Laboratory investigations and analysis of used magnesite bricks are taken as the basis for a series of conclusions on the wear of linings of ferroalloy furnaces utilized to melt purified Fe-Cr. Attention is directed to the fact that the final slags of the melt do not provide characteristic information on lining wear and that it is the primary and the intermediate slags that affect wear. This is particularly true of limestone slags which, forming readily fusible liquid melts, easily penetrate into the pores and react with the brick. The destruction of the initial brick structure and its replacement by a new one is explained by the penetration of Si into the brick from the metal-silicon melt when a separate Si-Cr aftercharge is employed. The

Card 1/2

SOV/137-58-11-21920

Magnesite-refractory Service Life in the Masonry of Electric (cont.)

influence of the silicates is explained by the fact that the silicates forming within the body of the brick render it more dense and promote recrystallization of periclase grains. The pronounced nonhomogeneity of the phase composition results in a zoned structure that gives rise to destruction of the brick by spalling. The influence of erosion of the refractory by the melt, i. e. , a mechanical effect, is also noted. Bibliography: 18 references.

N. M.

Card 2/2

DEMIKHOVA, T.V.

Certain properties of compact magnesite products. Trudy Inst. stroi.
i stroimat. AN Kazakh SSR 1:140-148 '58. (MIRA 11:6)
(Refractory materials)

DEMIKOVA, T.V.

Slag resistance of refractory materials. Trudy Inst. stroi. i
stroimat, AN Kazakh SSR 2:187-191 '59. (MIRA 12:10)
(Refractory materials) (Slag)

AVGUSTINIK, A.I.; DEMIXHOVA, T.V.

Changes in disthene subjected to heating. Trudy Inst. stroi. i
stroimat. AN Kazakh SSR 2:216-219 '59. (MIRA 12:10)
(Silicates)

BABIN, P.N.; DEMIKHOVA, T.V.

Life of refractory linings in electric furnaces for smelting
carbon ferrochrome. Trudy Inst. stroi. i stroimat. AN Kazakh
SSR 2:225-234 '59. (MIRA 12:10)
(Refractory materials) (Electric furnaces)

~~DEMIXHOVA, T.V.~~

Service of refractories in a test furnace for the smelting of copper concentrates in suspension. Trudy Inst. met. i obogashch. AN Kazakh. (MIRA 13:10)
SSR 2:64-77 '60.
(Copper--Metallurgy) (Refractory materials)

DEMIKHOVA, T.V.

Results and objectives of research on the life of refractories
at enterprises of nonferrous metallurgy in Kazakhstan. Trudy
Inst. met. i obogashch. AN Kazakh. SSR 3:58-66 '60. (MIRA 14:6)
(Kazakhstan--Nonferrous metals--Metallurgy)
(Refractory materials)

DEMIKHOVA, T.V.; YUSUPOVA, A.

Stability of refractories during the cyclone smelting of zinc
sinter cakes. Trudy Inst. met. i obogashch. AN Kazakh. SSR
4:133-146 '62. (MIRA 15:8)
(Refractory materials--Testing) (Zinc--Metallurgy)

DEMIKHOVA, T.V.; SOKOLOVA, C.Ye.

Mineralogical composition of dinas bricks following service in electric furnaces for the smelting of copper-bearing concentrates. Trudy Inst. met. i obogashch. AN Kazakh. SSR 4:147-158 '62,

(MIRA 15:8)

(Firebrick--Analysis) (Electric furnaces)

DEMIKHOVA, T.V.; BALAKH, I.K.; VORONTSOV, Yu.V.

Service of basic refractories in copper-smelting converters.
Trudy Inst. met. i obogashch. AN Kazakh. SSR 4:109-124 '62.
(MIRA 15:8)
(Converters) (Refractory materials)

DEMIKHOVA, T.V.; VORONTSOV, Yu.V.

Stability of periclase-spinelide linings during the converting of
copper matte. TSvet. met. 36 no.9:37-41 S '63. (MIRA 16:10)

12. DEMIKHOVSKAYA, A. A.

Antagonism between Urobacillus and certain other microorganisms.
Mikrobiol. zhur. 16 no.1:54-57 '54 (MLRA 8:4)

1. Z Institutu mikrobiologii AN URSS.
(BACILLUS,
Urobacillus, antag.)

DEMIKHOVSKAYA, A.A. [Demikhovs'ka, A.A.]

Some data on house fungi in the Ukrainian S.S.R. Mikrobiol.
zhur. 21 no.4:19-24 '59. (MIRA 12:11)

1. Z Tsentral'noi naukovo-doslidni stantsii Ukraini po borot'bi
z domovimi gribami u sporudakh.
(FUNGI)

L 9997-63

EWT(1)/BDS--AFFTC/ESD-3--TF

ACCESSION NR: AP3003170

8/0249/63/019/004/0037/0042

AUTHOR: Demikhovskaya, E. M.; Kuznetsov, V. P.

TITLE: Characteristics of energy attenuation from shallow earthquake foci

SOURCE: AN AzerbSSR. Doklady, v. 19, no. 4, 1963, 37-42

TOPIC TAGS: seismic wave propagation, seismology of Apsheron Peninsula

ABSTRACT: Several parameters of seismic wave propagation in sedimentary rocks during twelve earthquakes (S - P less than or equal to 7 sec) recorded on the Apsheron Peninsula during the period 1958-1960 are analyzed. VSKh and GSKh seismographs with GK-UI and GK-UII galvanometers were used. Rapid attenuation of energy with distance is characteristic of the area. Attenuation is almost complete at 30-40 km, indicating shallow focal depth. In addition, coefficients of attenuation for body waves vary with epicentral distance. The relationship between the energy and the magnitude of Apsheron earthquake foci is expressed as: $\log E = 7.5 + 1.8 M(\text{Joule})$. The article was presented by Academician A. D. Sultanov, AN Azerbaydzhan SSR. Orig. art. has: 5 figures and 2 formulas.

Card 1/2

L 9997-63

ACCESSION NR: AP3003170

ASSOCIATION: Institut geologii (Institute of Geology)

SUBMITTED: 30Dec62

DATE ACQ: 24ul63

ENCL: 00

SUB CODE: 00

NO REF SOV: 008

OTHER: 000

ja/ea

Card 2/2

KUZNETSOV, V.P.; RAGIMOV, Sh.S.; DZHAFAROV, R.D.; ALIYEV, A.M.; BAGIROVA, Z.A.;
AGA-ZADE, S.S.; MAMEDOV, I.F.; ALIYEVA, S.M.; KULIYEV, A.S.;
DEMIKHOVSKAYA, E.M.; SUBASHIYEVA, O.S.; AGALAROVA, A.B.;
SHAKHMALIYEVA, Sh.A.; MIRZOYEVA, G.I.; KASPAROV, V.A.

Caspian earthquake of January 27, 1963. Izv. AN SSSR. Ser. geofiz.
no.9:1392-1393 S '63. (MIRA 16:10)

1. Institut geologii AN AzerbSSR.

DEMINKOVSKAYA, I. A.

24377 DEMINKOVSKAYA, I. A. K etiologii infektsionnoy zheltuki (Bolezn Botkina).
Vracheb. Dolo. 1949, No. 8, STB. 713-16.

SO: Letopis, No. 32, 1949.

DEMIDOVSKAYA, L. F., CAND BIO SCI, "FELLED FORESTS OF
NORTHERN KAZAKHSTAN, THEIR TYPES AND ^{peculiarities} PARTICULARS OF RE-
GENERATION:" ALMA-ATA, 1961. (ACAD SCI KAZSSR. JOINT
^{Acad}~~Sci~~ COUNCIL OF INSTITUTES OF SOIL SCI, BOTANY, MICROBIO-
LOGY, AND VIRUSOLOGY). (KL-DV, 11-61, 214).

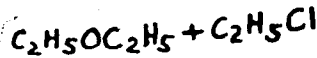
AKHMEDOV, K.S.; DEMIKHOVSKAYA, M.B.

Study of the swelling of high polymers. Kinetics of the swelling and solution of rubber in liquid mixtures and their thermal dependence. Trudy SAGU no.27:31-38 '51. (MLBA 9:5)
(Rubber)

CA ДЕМИХОВСКАЯ, С.З.

2

Thermochemical studies of solutions. IV. Vapor pressure and composition in the binary system $C_2H_5OC_2H_5 + C_2H_5Cl$. M. B. Neiman and S. Z. Demikhovskaya. *Zhur. Obshchei Khim.* 19, 882-892; *J. Gen. Chem. U.S.S.R.* 10, 541-541 (1940) (English translation); *ibid.* *C.A.B.* 27, 1812. — Measurements were made at 5° intervals from 0 to 35° for the pure compounds, and for various mixts. Heats of vaporization were detd. and ranged from 1000 kcal. for H_2O to 3000-4000 kcal. for all mixts. There are extensive tables of vapor pressures and vapor contents, at the various temps. and mixt. concns. At 35°, e.g., values of mole % of H_2O in the mixt., partial pressure of H_2O in mm., and total vapor pressure in mm., are: 0.0, 0.0, 52; 10.0, 220, 780; 55.1, 711, 1004; 70.0, 877, 1078; 102.0, 1078, 1180; 100.0, 1100, 1162. The vapor pressure-concn. curves show pos. deviations from Raoult's law at all temps., but the b.p.'s of the pure components are sufficiently different to prevent azeotropic formation.



No. 4

Artid J. Miller

Chair Physical Chem., Gor'kiy State Univ

DEMIKHOVSKAYA, S.Z.

Spectrophotometric method for determining the furfurole and methyl fur-
~~furol~~ contents. Gidroliz. i lesokhim. prom. 14 no.7:20-21 '61.
(MIRA 14:11)

1. Tsentral'nyy nauchno-issledovatel'skiy i proyektnyy institut
lesokhimicheskoy promyshlennosti.
(Furaldehyde)
(Spectrophotometry)

DEMIKHOVSKAYA, S.Z.

Rosin luminescence. *Gidroliz. i lesokhim.prom.* 15 no.2:22 '62.
(MIRA 18:3)

1. *Sentral'nyy nauchno-issledovatel'skiy lesokhimicheskiy*
institut.

~~DEMIKHOVSKAYA, S.Z.; VOIZINSKIY, Yu.V.; YUSTOVA, Ye.N.; GROMOVA, I.S.;~~
~~POKROVSKAYA, G.V.~~

Standard specimens of the color of rosin. Hidroliz. i lesokhim.
prom. 16 no.2:8-10 '63. (MIRA 16:6)

1. Tsentral'nyy nauchno-issledovatel'skiy i proyektnyy institut lesokhimicheskoy promyshlennosti (for Demikhovskaya, Vodzinskiy).
2. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii im. Mandeleyeva (for Yustova, Gromova, Pokrovskaya).
(Gums and resins—Grading)
(Color)

DENIKHOVSKAYA, V. I., Cand Agr Sci (diss) "Study of the sorting of
delinted cotton seeds ^{for the purpose of} ~~with a view to~~ freeing seeding material from
seeds affected with internal infection of gummosis." Len, 1958. 22
pp (All-Union Order of Lenin Acad Agr Sci im V. I. Lenin, All-Union
Inst of Protection of Plants), 100 copies (KL, 16-58, 122)

-81-

DEMIKHOVSKAYA, S.Z.

Spectrophotometric method for determining furfurole and
methylfurfurole in the products of wood-chemical industries.
Trudy Kom.anal.khim. 13:411-418 '63. (MIRA 16:5)

1. Tsentral'nyy nauchno-issledovatel'skiy lesokhimicheskiy institut.
(Wood-Chemistry) (Spectrophotometry)

DEMIKHOVSKIY, I.Ye.

Time of appearance of microbes, pathogenic bacteria antagonists,
in the oral cavity of the newborn infant. *Pediatria* 42 no.6:
24-26 Je'63
(MIRA 17:1)

DEMIKHOVSKIY, I. Ye.

Simple method for evaluating microbial capacity of secrete substances
destroying antibiotics. Antibiotiki 6 no.3:258-262 Mr '61.

(ANTIBIOTICS)

(BACTERIA)

(MIRA 14:5)

DEMIKHOVSKIY, I.Ye.

Method for isolating bacteria from the pharynx. Lab. delo 7 no.3:
44-46 Mr '61. (MIRA 14:3)

(PHARYNX--BACTERIOLOGY)

DEMIKHOVSKIY, I.Ye.

Influence of the infectious process on the form and some properties
of the normal microflora of the macro-organism. Zhur. mikrobiol.,
epid. i immun. 32 no.9:140-143 S '61. (MIRA 15:2)
(INFECTION) (MOUTH MICROBIOLOGY)

DEM'KHOVSKIY, I. Ye. [Demikhovs'kiy, I. IU.]

Biology of some coccal micro-organisms of the oral cavity.

Mikrobiol. zhur. 23 no.4:53-57 '61.

(MOUTH--MICROBIOLOGY)

(MIRA 15:4)

DEMIKHOVSKIY, I.Ye.

Relation of pathogenic microbes to antibiotics secreted by the microflora
of the oral cavity. Antibiotiki 7 no.1:71-74 Ja '62. (MIRA 15:2)
(MOUTH MICROBIOLOGY) (ANTIBIOTICS)

DEMIKHOVSKIY, I. Ye.

Species composition of microbe antagonists in the oral cavity.
Zhur. mikrobiol., epid. i immun. 32 no.8:128-131 Ag '61.
(MIRA 15:7)

(MOUTH—MICROBIOLOGY)

DEMIKHOVSKIY, L.

USSR/Electronics - Tape Recorders

Card 1/1

Author : Demikhovskiy, L.

Title : A magnetophone-attachment

Periodical : Radio, 3, 42 - 46, Mar, 1954

Abstract : A magnetic-tape recorder and player is described. This device can be used together with a regular electric type record player, or radio-broadcasting set or a simple radiola. The device consists of a magnetic tape, magnetic poles and reels; it also has a special amplifier. Photographs and diagrams of the attachment are included.

Institution :

Submitted :

DEMIKHOVSKIY, L., inzh.

Sound recording equipment at the 22nd All-Union Radio Exhibition.
Radio no.4:44-46 Ap '64. (MIRA 17:9)

DEMIKHOVSKIY, L.A., inzh.

Correspondence courses for operators of sound recording apparatus.
Nauka i zhizn' 28 no.7:59 JI '61. (MIRA 14:8)
(Magnetic recorders and recording)

DEMIKHOVSKIY, L.E.; DROZHHA, A.L.

Device for collecting the dry remnants of nitrocellulose lacquer.
Der. prom. 14 no.5:26 My '65. (MIRA 18:6)

DEMIKHOVSKIY, L.M. (Arsanas)

Mobile model for geometrical figures. Mat.v shkole no.3:53-55 My-Je
'55. (MIRA 8:7)

(Geometry) (Mathematical models)

DEMIKHOVSKIY, M.V.

Against the bourgeois falsification of the history of public lands
in the United States. Dokl. AN Azerb. SSR 17 no. 1:71-76 '61.

(MIRA 14:3)

1. Bakinskiy filial Odesskogo instituta morskogo flota. Predstavleno
akademikom AN Azerb. SSR A. S. Sumbatzade.

(United States--Public lands)

DEMIKHOVSKIY, V.A.

Hydraulic drive for the shifting mechanism of rotary
excavators. Stroi.truboprov. 10 no.10:11-14 0 '65.

(MIRA 18:10)

DEMIKHOVSKIY, V.I. [Demikhovskiy, V.I.]; FOMENKO, V.S.

Sanitary-hygienic significance of the study on the quantitative composition of bacterial antagonists in river water. Mikrobiol. zhur. 23 no.1:70-74 '61. (MIRA 14:5)

1. Dnepropetrovskiy meditsinskiy institut.
(WATER—MICROBIOLOGY)

S/181/63/005/002/042/051
B102/B186

Some effects caused by ...

are obtained: $G(E)dE = \frac{m}{\pi\hbar^2} SdE$. (7)

$$n(T) = \sum \frac{1}{L_z} \frac{mkT}{\pi\hbar^2} \exp \frac{\eta - E_n}{kT}. \quad (9)$$

(Boltzmann statistics); $n(T) + \frac{N}{\exp \frac{-E_d - \eta}{kT} + 1} = N$, (10) $\eta = -\frac{E_d}{2} + \frac{kT}{2} \ln NL_z \frac{\pi\hbar^2}{m} \frac{1}{kT}$ (11) ✓

For carriers that are in only one layer $\eta = -\frac{E_d}{2} + kT \ln \left(\frac{m_e^*}{m_h^*} \right)^{1/2}$, (13)

$$n(T) = \frac{1}{L_z} \left(\frac{m_h^* m_e^*}{\pi\hbar^2} \right)^{1/2} kT \exp \left(-\frac{E_d}{2kT} \right). \quad (14).$$

$G(E)$ is the state density in the layer of the Brillouin zone, S the film area, m_h^* and m_e^* are the effective masses of holes and electrons, E_d the forbidden band width, N the number of impurity atoms per cm^3 ; the z -direction is perpendicular to the Brillouin zone. Also the paramagnetism in thin films at low temperatures (kT is smaller than the energy difference between the layers) is considered in effective-mass approximation. The state density in one layer (7) is then not dependent on energy. The magnetic

Card 2/3

Some effects caused by ...

S/181/63/005/002/042/051
B102/B186

moment $M = (N_+ - N_-)\mu$ where μ is Bohr's magneton N_+ (N_-) is the occupation number of states with positive (negative) projections of the spin onto the field direction. Electrons with positive (negative) spin projections will occupy all states up to the energy $\eta + \mu H$ ($\eta - \mu H$), so the magnetic moment

can be given by $M = \mu \int_{\eta - \mu H}^{\eta + \mu H} \frac{dZ}{dE} dE$. If the field is strong enough ($kT < \Delta E$

$< \mu H_{max}$) the magnetic susceptibility pulsates. This is also the case if the effective-mass approximation cannot be applied. The pulsation arises in the same range as the de Haas - van Alphen effect but also in metals that do not show the latter. The film has to have a certain thickness: for $E_d = 0.1$ ev and $H \sim 5 \cdot 10^4$ gauss, it should equate 200 atomic layers. There is 1 figure.

ASSOCIATION: Gor'kovskiy gosudarstvennyy universitet im. N. I. Lobachevskogo (Gor'kiy State University imeni N. I. Lobachevskiy)
SUBMITTED: June 11, 1962 (initially)
Card 3/3 September 27, 1962 (after revision)

DEMIKHOVSKIY, V.Ya.; TAVGAR, B.A.

Degree of magnetization of thin ferromagnetic films at low temperatures. Zhur. eksp, i teor. fiz. 45 no.4:1156-1158 0 '63.

(MIRA 16:11)

1. Fiziko-tekhnicheskii institut Gor'kovskogo gosudarstvennogo universiteta.

ACCESSION NR: AP4019874

8/0181/64/006/003/0960/0962

AUTHORS: Demikhovskiy, V. Ya.; Tavgar, B. A.

TITLE: Scattering of electrons by acoustical vibrations in thin semiconducting films

SOURCE: Fizika tverdogo tela, v. 6, no. 3, 1964, 960-962

TOPIC TAGS: electron scattering, acoustical vibration, semiconductor, boundary defect, electron function, Brillouin zone, thin film, semiconductor surface

ABSTRACT: The authors have attempted to explain the increase in resistivity with decrease in thickness on the basis of peculiarities in the electron state of the film. They have used a model of an ideal crystal with no consideration of scattering at boundary defects. If the wave length of vibration is small, compared with the thickness of the film, then the film may be considered a massive sample. The authors have examined temperatures at which this is true, and they have found that the model is valid for films on the order of 10^{-5} cm thick in the temperature range 5-50K and for films $3 \cdot 10^{-6}$ cm thick in the temperature range 15-500K. From

Card 1/2

ACCESSION NR: AP4019874

an examination of the electron function and relaxation time, the authors demonstrate that the electron pulse is determined by the temperature up to that temperature at which the electron state is disposed in a single plane cutting the Brillouin zone. Therefore, in the thickness and temperature interval examined, the relaxation time in a film proves to be lower than in massive material, and it decreases with decrease in thickness. The authors thus conclude that the high resistance of a semiconducting film as compared with the resistance of massive samples may be explained on the basis of this "ideal" film, i.e., without consideration of surface defects. Orig. art. has: 6 formulas.

ASSOCIATION: Gor'kovskiy Issledovatel'skiy fiziko-tekhnicheskiy institut (Gorkiy Research Physicotechnical Institute)

SUBMITTED: 02Oct63

DATE ACQ: 31Mar64

ENCL: 00

SUB CODE: EC

NO REF SOV: 001

OTHER: 001

Card 2/2

L 11112-66 EWT(1)/EWT(m)/T/EWP(t)/EWP(k)/EWP(b) IJP(c) JJ/HW/GG

ACC NR: AP6000861 SOURCE CODE: UR/0181/65/007/012/3600/3606

AUTHOR: Demikhovskiy, V. Ya.

ORG: Gor'kiy State University im. N. I. Lobachevskiy (Gor'kvoskiy gosudarstvennyy universitet)

TITLE: Some features of superconductivity in thin semiconductor films

21144155 21144155

61
59

SOURCE: Fizika tverdogo tela, v. 7, no. 12, 1965, 3600-3606

TOPIC TAGS: superconductivity, semiconducting film, pair theory

ABSTRACT: In connection with the discovery of semiconductors which exhibit superconductivity at low temperatures, the author investigates the superconductivity of very thin films, thin enough for the quantization of the electron energy connected with the limited dimensions of the film in one direction to become significant. This makes the electron energy a discrete function of the quantum number n and a continuous function of the wave vectors in the plane of the film (k_x and k_y). The electron gas in the system is assumed to be

Card 1/2

2

L 14142-66

ACC NR: AP6000361

modeled by an aggregate of electronic subsystems corresponding to different two dimensional sub-bands. With such an analysis, it is shown that in the film, unlike the bulk sample, the Cooper pairs are produced by electrons which have opposite two-dimensional momentum and identical quantum number n . It is shown that the two-dimensional subsystems are characterized generally speaking by different energy gaps, and the dependence of the gap and of the critical temperature on the thickness film is determined. Some simple cases are considered and the influence of some concrete singularities of the gap and of the critical temperature on the film thickness are determined. Author thanks B. A. Tavger for numerous discussions and valuable remarks, and M. Ya. Shirobokov for continuous interest in the work and discussions. Orig. art. has: 12 formulas.

SUB CODE: 20/ SUBM DATE: 24Mar65/ ORIG REF: 005/ OTH REF: 007
11/

FW
Card 2/2

L 34488-65 EWT(1)/EWT(m)/EES(f)/EWA(1)/EWP(t)/EWP(b) IJP(c) G1/JP

ACCESSION NR: AF5006521

11/0056/65/048/002/0148/0750

AUTHOR: Tavqer, B. A.; Semikhovskiy, V. Ya.

31
30
B

TITLE: On the possible occurrence of superconductivity in thin nonmetallic films

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 2, 1965, 748-750

TOPIC TAGS: superconductivity, thin film, electron phonon interaction, dielectric, semimetal, semiconductor

ABSTRACT: The authors show that in the case of thin semiconductor, semimetal, or dielectric superconducting films, account must be taken of the quantization of the transverse motion of the electron. Since the transverse projection of the quasi-momentum in the film is not defined, the state and the energy of the electron are determined by longitudinal projections of the quasi-momentum k_x and k_y and by a discrete quantum number n . This gives rise to quasi-discrete levels $\epsilon(k_x, k_y, n)$, with the case of $n = 1$ being of greatest interest. It is shown that although the crystal film is a three-dimensional formation on coordinate space, the momentum

Card 1/3

L34488-65

ACCESSION NR: AP5006528

space becomes two-dimensional. Such a case was considered by the authors earlier (PIT v. 5, 644, 1963), and temperature conditions as well as limits on the carrier concentration necessary for superconductivity were derived in that paper. It is shown that the temperature condition is satisfied for thicknesses less than 10^{-5} cm. Although in thin films the phonons exhibit certain singularities in behavior, when the film lies on a substrate of nearly equal elastic constant the system of phonons in the film and in the substrate differ little from those in a bulk sample. An equation for the energy gap at absolute zero is derived for the film, similar to the equation for a bulk superconductor. It is likewise shown that the connection between the critical temperature and the energy gap at zero temperature is the same as for bulk samples. However, the density of the electron states is different, and furthermore the gap does not depend on the energy or, consequently, on the carrier density. Another distinguishing feature of the film is the dependence of the gap on the film thickness, since the gap increases exponentially with decreasing thickness. A maximum state density, equal to that in metals, is reached when the thickness becomes equal to the unit-cell dimension. It is concluded from the results that a substance with a positive interaction constant can become superconducting even at very low carrier density, provided it is made in the form of a sufficiently thin film. "The authors thank A. A. Abrikosov for interest in the work and for useful discussions." Orig. art. has: 5 formulas. [02]

Card 2/3

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AUTHOR: Demikhovskiy, V. Ya.; Tavger, B. A.

ORG: none

TITLE: Method for studying the phenomenon of quantization of electron energy in a thin film

SOURCE: Radiotekhnika i elektronika, v. 11, no. 6, 1966, 1147-1148

TOPIC TAGS: quantum electronics, semiconducting film, electron energy

ABSTRACT: A method is suggested for experimentally studying the quantized energy spectrum in thin semiconductor or semimetal films. The experimental device includes two thin films having the same conductance type separated by a dielectric layer. The current between the films is realized through tunnel transitions at the dielectric. The current starts to flow when a populated level of

Card 1/2

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B

PROCESSING AND PROPERTIES INDEX

181 AND 180 (1918)

180 AND 179 (1918)

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The determination of the quality of nutrient media by means of the bacteriological photoelectric nephelometer. *Demikhovskii, Z. Microbiol. Epidemiol. Immunol. Gistol. (U. S. S. R.)* 10, 123-8 (in English) (1947). -- The intensity of growth is normally used to det. the quality of a nutrient medium, but it is more accurate to judge media in terms of "generation time." The rate of generation time is measured by a detn. of increased turbidity of cultures by means of a photoelec. nephelometer constructed in an incubator. In expts. on *B. coli*, cultured on media prepd. from placenta at 6.6-7.7 pH, identical values of increasing turbidity were obtained; thus *B. coli* multiplies with equal rapidity at all pH values within the above range. When meat-infusion peptone broth, prepd. from decayed placenta, a similar medium from fresh placenta and Hottinger's broth, also from fresh placenta, were used at pH 7.1, the last was found to be the best medium for the growth of the given strain of *B. coli*. S. A. Katjala

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DEIKHOVSKIY, Ye. I.

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Vracheb. Delo. 1949, No. 8, STB. 713-16.

SO: Letopis, No. 32, 1949.