

MADEIRA MEDICA Sec.12 Vol.12/5 Ophthalmology May 58
KOVINSKIY, G. I.

909. REPLACEMENT OF LOST VITREOUS BODY BY CADAVER MATERIAL IN
OPHTHALMIC SURGERY (Russian text) - Kovinsky G. I. - ZH.OFTALM.
1956, 5 (294-298)

In sub-total corneal grafts and operations for traumatic cataracts the ophthalmic surgeon sometimes observes partial or complete loss of vitreous body owing either to pathological changes within it or to the technical difficulties of the surgical procedure. The author replaced vitreous bodies lost at operation by vitreous bodies taken from cadavers. Altogether 23 such replacements, from partial to entire, have been performed and were always accompanied by saving the eye and its functions. A detailed account is given of 4 patients in whom complete replacement of the vitreous body had been performed.

(S)

KOVINSKIY, I.T. (Alma-Ata, kvartal 272-a, d.8, kv.4)

Two-cuff pneumatic dosage tourniquet and its use in intra-
osseous anesthesia. Ortop., travm.i protez. 23 no.6:59-60
Je '62. (MIRA 15:9)

1. Iz kafedry travmatologii i ortopedii (zav. - prof. G.L.
Edel'shteyn) Kazakhskogo meditsinskogo instituta.
(ANESTHESIOLOGY--APPARATUS AND INSTRUMENTS)

KOVINSKIY I.T. (Alma-Ata, kvartal 272-a, d.8, kvartira 4)

Abstracts of articles received by the editors. Ortoped. travm. i
rekonstr. 24 no.10:74 0 :63. (MIRA 17:4)

I. kafedry travmatologii i ortopedii (sav. -- prof. G.I.Edel'sheyn)
Kazakhskogo meditsinskogo instituta (rektor -- dotsent R.I.Samarin).

KOVINSKIY, I.T.

Arteriography in correction of flexor contractures and angular
ankyloses of the knee joint. Vest. khir. 92 no.5:93-95 My '64.
(MIRA 18:1)

1. Iz kafedry ortopedii i travmatologii (zav - prof. G.P. Edel'-
shteyn) Alma-Atinskogo meditsinskogo instituta.

KOVICHNIK, T. P.

"Clinical and X-ray Observations in the Case of Aseptic Infectious Foreign Bodies in
Bones." J. Med. Sci., Kazakh Medical Institute named V. M. Khlotov, 23 Feb 54. Observation
(Kazakhstanskaya Prava - Ala, 13 Feb 54)

NO: 136, 17 Apr 1954

KOVINYA, Petr Trofimovich, zootekhnik; MIKHAYLICHENKO, B., red.; NE-DOVIZ, S., techn.red.

[Obtaining 505 centners of milk per 100 hectares of farmland]
505 tsentneriv moloka na 100 hektariv zemli. L'viv, Knyzhkovo-
zhurnal'ne vyd-vo, 1959. 38 p.

(Vinniki District--Dairying)

(MIRA 14:5)

KOVINYA, Petr Trofimovich, zotekhnik; MIKHAYLICHENKO, B. [Mykhailychenko, B.], red.; NEZDOVIZ, S., tekhnred.

[Obtaining 505 centners of milk per 100 hectares of farmland]
505 tsentneriv moloka na 100 hektariv zemli. L'viv, Knyzhkovo-
zhurnal'ne vyd-vo, 1959. 38 p. (MIRA 13:1)
(Vinniki District--Dairying)

KOVITSKAYA, Ye.M. (g. Babushkin Moskovskoy oblasti)

Methods for the numerical solution of chemical problems. Khim.v shkole
10 no.3:27-30 My-Je '55. (MLRA 8:8)
(Chemistry--Problems, exercises, etc.)

KOVIZA, A.N.

Forecast of advection cooling fogs and low clouds in coastal areas.
Meteor. i gidrol. no.1:19-26 Ja '62. (MIRA 15:1)
(Cloud physics)

KOVIZA, A.N.

Typification of synoptic processes in fogs and low clouds in the
Baltic Sea region. Trudy TSIP no.122:21-41 '63. (MIRA 16:9)

KOVIZA, A.N.

Thermodynamic characteristics of a boundary layer of air when
there is fog and low clouds. Meteor. i gidrol. no.12:21-25 D
'62. (MIRA 15:12)

1. Gidrometeorologicheskoye byuro, g. Kaliningrad.
(Atmospheric temperature)

PROSHKIN, A.A.; VDOVICHENKO, V.T.; GALENKO, N.P.; GLUKHOMANYUK, A.M.;
KOVKA, B.M.

Production of carbon tetrachloride. Gaz.prom. 6 no.8:31-34 '61.
(MIRA 14:10)

(Carbon tetrachloride)

КОВХУТО, М. Г.

FURSENKO, A.V., KOVKHUTO, M.G.

Fauna of Frasnian and Famennian deposits in the Polesye area of the
Pripet Marshes. Paleont. i stratigr. BSSR no. 1:60-107 '55.
(Polesye--Paleontology, Stratigraphic) (MIRA 10:1)

SEREBRYAKOV, V.V.; SHIRKOV, D.V.; KOVKOVA, V.I., red.

[Some resonance solutions to equations of low-energy pion-pion scattering] Nekotorye rezonansnye reshenia uravnenii nizkoenergeticheskogo pion-pionnogo rasseianiia (TF-3). Novosibirsk, Akad. nauk SSSR, Sibirskoe otd-nie In-t matem.s vychislitel'nyh tsehtrom, 1961. 24 p. (MIRA 15:7)
(Integral equations) (Mesons--Scattering)

KOVLIGIN, P.S.

~~_____~~
Economic and efficient utilization of raw hides. Leg.prom. 15 no.5:
4-8 My '55. (MLRA 8:7)

1. Zamestitel' nachal'nika planovo-proizvodstvennogo upravleniya
Ministerstva promyshlennykh tovarov shirokogo potrebleniya SSSR.
(Hides and skins)

KOVLENKO, M. P.; DOBRYNIN, F. D.

Afforestation - Ul'yanovsk Province

Spot-seeded oak plantations in Ul'yanovsk Province. Dokl. Ak. sel'khoz., 17, No. 7, 1952.

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

KOVLER, B., inzhener.

Converting two-row barns into three-row barns. Sel'.stroitel'no.3:
17 Mr '56. (MIRA 9:7)

1.Glavnoye upravleniye kapital'nogo stroitel'stva Ministerstva
sevkhozov SSSR.
(Dairy barns)

KOVLER, B., inzhener.

Economical swine houses. Sel'.stroi. 11 no.2:20 F '56. (MIRA 9:7)

1. Glavnoye upravleniye kapital'nogo stroitel'stva Ministerstva sovkhozov
SSSR.

(Swine houses and equipment)

KOVLER, B., inzhener.

Remodeling swine houses and equipping them with automatic feeders
and waterers. Sel'.stroitel' no.11:18-21 N '56. (MIRA 10:1)

1. Glavnoye upravleniye kapital'nogo stroitel'stva Ministerstva
sovkhozov SSSR.

(Swine houses and equipment)

KOVLER, B., inzhener.

Automatic feed dispenser in three-row barns. Sel'.stroj. 11
no.3:22-24 Mr '57. (MLRA 10:5)

1.Upravleniye kapital'nogo stroitel'stva Ministerstva sovkhozov
SSSR.

(Dairy barns) (Farm equipment)

KOVLER, B., inzhener.

~~Platform for the temporary storage of grain. Sel'. stroi, 12 no.7:~~
17-18 JI '57. (MIRA 10:8)

(Grain--Storage)

KOVLER, B., inzh.

Economical use of wood. Sel', stroi, 12 no.3:26-28 Mr '58.

(MIRA 11:3)

1. Upravleniye kapital'nogo stroitel'stva Ministerstva sel'skogo
khozyaystva SSSR.

(Building, Wooden)

KNYAZEV, Nikolay Kuz'mich, kand. sel'khoz. nauk; KOVLER, B.A., inzh.-
arkhitektor; TASHCHEV, Ye.N., kand. ekonom. nauk; LAPIDUS, M.A.,
red.; GUREVICH, M.M., tekhn. red.

[Economic livestock buildings] Ekonomichnye zhivotnovodcheskie po-
meshchenia. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1960. 109 p.
(MIRA 14:11)

(Farm buildings)

KOYLER, B.; STARCHIKOV, A., inzh.

Information. Sel'. stroi. 15 no.12:29 D '60. (MIRA 13:12)

1. Glavnyy spetsialist otdela sel'skogo stroitel'stva Gosstroya
RSFSR.

(Building)

POGORELKO, N.I., inzh.; KOVLER, B.A., inzh.

Introduce reed into construction elements, for farm buildings and structures. Stroi. mat. 7 no.7:10-12 J1 '61. (MIRA 14:7)
(Reed products) (Farm buildings)

KOVLER, B.

Annular conveyor milking unit. Sel'. stroi. no.7:10-12 '62.

(MIRA 15:8)

1. Glavnyy spetsialist otdela sel'skogo stroitel'stva Gosudarstvennogo
komiteta Soveta Ministrov RSFSR po delam stroitel'stva i arkhitektury.
(Milking machines)

KOVLER, B.

Circular conveyor-type milking units. Sel'. stroi. 17 no.2:8-9
F '63. (MIRA 16:3)

1. Glavnyy spetsialist otdela sel'skokhozyaystvennogo stroitel'stva
Gostroya RSFSR.

(Milking machines)

KOVLER, I

84-5-39/42

AUTHOR: Kovler I., (pilot)

TITLE: A Foremost Aircraft Mechanic (Perodovoy aviatekhnik)

PERIODICAL: Grazhdanskaya Aviatsiya, 1957, Nr 5, p. 35 (USSR)

ABSTRACT: Comrade German Pogodin has worked as an aircraft mechanic for more than 10 years. Recently he mastered servicing and repairing the AN-2 plane. A photo shows G. Pogodin.

AVAILABLE: Library of Congress

Card 1/1

KOVLER, I.

Smoke above the forest. Grazhd.av. 19 no.7:21 J1 '62.

(MIRA 15:8)

(Aeronautics in forestry)
(Forest fires--Prevention and control)

KOVLER, M.L.; GULIDA, A.G.

Stand for running in and testing worm reducing gears for traction
winches by means of the closed-contour method. Mashinostroitel'
no.5:25 My '60. (MIRA 14:5)

(Winches—Testing)

KOVLER, Nadeshda

Goat as a conductor. IUn. nat. no.12:30-31 D '62. (MIRA 16:1)
(Animals, Training of)
(Durov, Vladimir Leonidovich, 1863-1934)

KOVLER, S.

Trailer with a mechanism for loading and unloading turbodrills.
Nov.neft.tekh.: Nefteprom.delo no.6:26-29 '54. (MIRA 14:10)
(Truck trailers)

14(2)

AUTHORS:

Baskevich, Ya.E., Lysak, G.D., and Kovler, S.Ya. SOV/127-59-2-11/21

TITLE:

A Stopping Device for Mine-Shaft Cages With Friction Pulleys (Ulavlivayushcheye ustroystvo dlya kletey shakhtnogo pod"yema so shkivami treniya)

PERIODICAL:

Gornyy zhurnal, 1959, Nr 2, p 54 (USSR)

ABSTRACT:

Author's Certificate Nr 106717, class 35a, 16⁰⁵. This is a description of a device ensuring additional safety in case the rope of a double-way shaft elevator breaks. It consists in an additional rope connecting the 2 cages, and passing, on the surface, thru 2 combined pulleys. There is 1 diagram.

Card 1/1

KOVLEV, F. L.

Excavation

Method of Engineer F. L. Kovlev in excavating work. P. N. Evstigneyev., Mekh. stroi.,
no. 2, 1952.

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

YUDIN, A., KOVLEV, F. Ya.

Beeswax

Rationalizing artificial beeswax production. Pchelovodstvo 29, No. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 195~~3~~², Uncl.

KOVLEVA A.A.

KUBLANOVSKIY, Lev Borisovich; KOVLEVA, A.A., inzh., vedushchiy red.;
POLOSINA, A.S., tekhn.red.

[Automatization and remote control in petroleum engineering]
Avtomatizatsiia i telemekhanizatsiia dobychi nefi. Moskva,
Gos. nauchno-tekhn. izd-vo nefi. i gorno-toplivnoi lit-ry, 1958.
316 p. (MIRA 11:4)
(Petroleum engineering--Equipment and supplies)

KOVLYASHENKO, N. N.

ca

21

Determination of the degree of compression and volume of the combustion chamber by means of chemical analysis. N. N. Kovlyashenko, *Zarodskaya Lab.* 11, 1113-15 (1945). --The method for detg. the degree of compression consists in filling the compression chamber of the motor with some gas (CO₂) whose compn. can be detd. easily by chem. analysis. Any gas analyzer can be used to det. the CO₂ in the gas mixt. and to calc. the degree of compression and the vol. of the combustion chamber. The vol. of the combustion chamber is given by the equation $V_c = V_a CO_2 / (100 - CO_2)$ (V_c is the vol. of the combustion chamber, V_a the working vol., and CO₂ the percentage content of CO₂). The accuracy of results obtained was sufficient for tech. calcs. W. R. Henn

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

KOVLYASHENKO, N. N.

PA 153T40

USSR/Engineering - Piston Cylinders
Instruments

Dec 49

"Determination of the Magnitude of the Clearance
Space," N. N. Kovlyashenko, 2 1/2 pp

"Energet Byul" No 12

Describes apparatus for determining clearance
volume between top of piston and bottom of
cylinder head. Quantity of air is forced into
the space and the rise in pressure measured by a
manometer. Includes two sketches.

FDD

153T40

KOVLYASHENKO, N. N.

Cylinders

"Determining the dimensions of volumetric elements of a piston engine cylinder by air flow." Energ. biul. no. 4, 1952.

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

1. KOVLYASHENKO, N. N.
2. USSR (600)
4. Compressors
7. Utilization of the natural sources of cold to increase the efficiency of compressors. Energ. biul., no. 12, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

Kovlyashenko, N. N.

USSR/Processes and Equipment for Chemical Industries-- K-2
Control and measuring devices. Automatic regulation.

Abs Jour: Ref Zhur-Khimiya, No 3, 1957, 10653

Author : Kovlyashenko, N. N.
Inst : ~~Donets Industrial Institute~~
Title : Hydraulic Devices for the Measurement and Control of
Various Volumes

Orig Pub: Tr. Khim.-tekhnol. fak. Donetsk. industr. in-ta, 1956,
No 1, 96-103

Abstract: Two types of devices designed for the measurement and control of the magnitude of various volumes (V) by the relative and by the absolute methods are discussed. One of the devices consists of two identical transparent lengths of tubing, mounted in parallel and connected at their lower end to a leveling tank by means of a T and a piece of rubber tubing. The upper ends of the tubes are connected by airtight connections to the calibrated V and the V under control. The operation of the device

Card 1/2

USSR/Processes and Equipment for Chemical Industries-- K-2
Control and measuring devices. Automatic regulation.

Abs Jour: Ref Zhur-Khimiya, No 3, 1957, 10653

Abstract: is as follows: the V to be controlled is connected to the system and the leveling tank is raised to a specified height; the rise of the liquid flowing out of the leveling tank into the tubes and through them into the calibrated and unknown volume is observed; when the levels of the liquid in the tubes are equal, the two volumes are equal. In the second version of the device, two transparent parallel interconnected tubes, connected at their upper ends to a calibrated V and the V under control, are lowered into a vessel made of transparent material and filled with water. When the tubes are immersed in the water, the water levels in the two tubes will be adjusted to heights which are proportional to the ratio of the volume of the calibrated vessel to that of the unknown. The devices described can be applied to the determination of the specific volume and bulk density of rocks, minerals, various types of free-flowing materials, fibrous materials, fissured materials, and other materials.

Card 2/2

KOVLASHENKO, N.N., kand.tekhn.nauk, dots.

Errors in determining indices of piston-engines connected with the conversion of the coordinates. Izv.vys.ucheb.zav.; energ. 3 no.6:97-103 Je '60. (MIRA 13:6)

1. Donetskij ordena Trudovogo Krasnogo Znameni industrial'nyy institut. Predstavlena kafedroy teplotekhniki.
(Engines)

KOVLASHENKO, N.N., kand.tekhn.nauk, dotsent

Study of the effect of leakage on the indicating parameters of
internal combustion engines. Izv.vys.ucheb.zav.; energ. 4 no.5:
82-88 My '61. (MIRA 14:6)

1. Donetskii ordena Trudovogo Krasnogo Znameni politekhnicheskii
institut. Predstavlena kafedroy teplotekhniki.
(Gas and oil engines)

KOVLASHENKO, N.N., kand.tekhn.nauk, dotsent

Thermophysical factors affecting the change of polytropy indices
in internal combustion engines. Izv.vys.ucheb.zav.; energ. 5
no.11:91-98 N '62. (MIRA 15:12)

1. Donetskii ordena Trudovogo Krasnogo Znameni politekhnicheskii
institut. Predstavlena kafedroy teplotekhniki.
(Gas and oil engines)

KOVLYASHENKO, N.N., kand. tekhn. nauk, dotsent

Heat of compressed air as a source for increasing the productive capacity of pneumatic machinery. Izv. vys. ucheb. zav.; energ. 6 no.9:90-98 S '63. (MIRA 16:12)

1. Donetskij ordena Trudovogo Krasnogo Znameni politekhnicheskij institut. Predstavlena kafedroy teplotekhniki.

KOVLASHENKO, N.N., kand. tekhn. nauk, dotsent

Efficiency of using compressed air. Ugol' 38 no.11:22-24 N '63.
(MIRA 17:9)

1. Donetskij politekhnicheskij institut.

KOVLASHENKO, N.N., kand. tekhn. nauk, dotsent

Standardization of heat transfer functions taking into account variable speeds of a moving gas in a cylinder and polytropic indices. Izv. vys. ucheb. zav.; energ. 7 no.8:115-121 Ag '64. (MIRA 17:12)

1. Donetskii ordena Trudovogo Krasnogo Znameni politekhnicheskii institut. Predstavlena kafedroy teplotekhniki.

КОУНАК, Н. Я.

TABLE I BOOK CITATIONS 807/1012

Исследования в области физики элементарных частиц. Очерки по физике элементарных частиц. Издательство Академии Наук СССР, 1958. 128 с. 2,500 copies printed.

Бесп. Ed.: M. V. Pashchik, Doctor of Physics and Mathematics; Editorial Board: Candidates of Physics and Mathematics, M. V. Pashchik, Doctor of Physics and Mathematics; Ed. of Publishing House: E. K. Resnaiski; Tech. Ed.: M. P. Babitska.

NOTE: This collection of articles is intended for physicists and scientific personnel working in nuclear research.

CONTENTS: The articles in this collection discuss linear proton accelerators, electron accelerators, electrostatic accelerators, interaction of charged particles and neutrons with matter, the production of tagged atoms in physics research, and experimental methods. Some of the articles are descriptions of already existing nuclear installations and experimental apparatus. No personal files are mentioned. There is a bibliography of printed and non-printed sources at the end of most of the articles.

Ed.: M. V. Pashchik, Doctor of Physics and Mathematics; Editorial Board: Candidates of Physics and Mathematics, M. V. Pashchik, Doctor of Physics and Mathematics; Ed. of Publishing House: E. K. Resnaiski; Tech. Ed.: M. P. Babitska.

Исследования в области физики элементарных частиц. Очерки по физике элементарных частиц. Издательство Академии Наук СССР, 1958. 128 с. 2,500 copies printed.

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BALIKHIN, Mikhail Ivanovich, kand. ekon. nauk; KOVNAT, Vitaliy
L'vovich [deceased]; GUREVICH, M.S.; Primal uchastiye
KUPERMAN, Ya.M., kand. ekon. nauk; LEYKIN, B.P., red.;
SHISHKOV, A.V., red. izd-va; SHERSTNEVA, N.V., tekhn.
red.

[Planning the production and economic activity of building
organizations] Planirovanie proizvodstvenno-khoziaistvennoi
deiatel'nosti stroitel'nykh organizatsii. 2. izd., perer. i
dop. Moskva, Gosstroizdat, 1962. 415 p. (MIRA 15:9)

(Construction industry)

KOVNATOR, B.Ya.

Methodology of detecting erythrocytes in fluorescent cytological studies. Lab. delo 10 no.5:263-265 '64. (MIRA 17:5)

1. Patologoanatomicheskaya laboratoriya (zaveduyushchiy - ~~and~~. med.nauk R.M.Sokolovskiy) Leningradskogo onkologicheskogo dispensara (glavnyy vrach S.S.Yaritsyn).

ALEKSANDROV, Pavel Sergeevich; NEMYTSKIY, Viktor Vladimirovich; VOVCHENKO,
G.D., professor, redaktor; GUKOVSKAYA, V.A., redaktor; KOVHATOR, B.A.,
redaktor; MULIN, Ye.V., tekhnicheskii redaktor.

Viacheslav Vasil'evich Stepanov. Moskva, Izd-vo Moskovskogo universi-
teta, 1956. 58 p. (MIRA 9:5)
(Stepanov, Viacheslav Vasil'evich, 1889-1950)

VARLAMOV, M.L., doktor tekhn. nauk, prof.; KRICHEVSKAYA, Ye.L.;
~~KOVNATSKAYA, B.S.~~; MANAKIN, G.A.; LIMONOV, V.Ye.; ENNAN, A.A.;
KOZAKOVA, L.M.; ZEROZHEK, L.S.

Study of the absorption towers of the granulation shops of a
superphosphate plant. Nauch. zap. Od. politekh. inst. 40:
62-72 '62. (MIRA 17:6)

CHARNOVSKI, V.; KOVNATSKI, A.

For a reliable performance of loading winches. Mor. flot 23
no.5:29 '63. (MIRA 16:9)

1. Glavnyy inzh. Tsentral'nogo konstruktorskogo sudostroitel'nogo
byuro No.1 (for Charnovski). 2. Glavnyy inzh. zavoda sudovykh
elektroustroystv, Gdan'sk (for Kovnatski).
(Winches--Design and construction)

ACC NR: AP6033548

SOURCE CODE: UR/0101/66/008/010/2887/2891

AUTHOR: Gurevich, L. E.; Ioffe, I. V.; Kovnatskiy, A. M.

ORG: Physicotechnical Institute im. A. F. Ioffe, AN SSSR, Leningrad (Fiziko-
tekhnicheskii institut AN SSSR)

TITLE: Excitation of oscillations in semiconductors at strong inhomogeneity of the
current density

SOURCE: Fizika tverdogo tela, v. 8, no. 10, 1966, 2887-2891

TOPIC TAGS: semiconductor carrier, minority carrier, semiconductor theory, solid
state plasma, plasma oscillation, *current stabilization*

ABSTRACT: This is an extension of earlier work by the authors (FTT v. 8, 1234, 1966
and earlier) dealing with current instability in semiconductors, to include cases when
the wavelength of the oscillations in the semiconductor is not much smaller than the
inhomogeneity causing the instability. This makes it necessary to construct a linear
theory for the self excitation of the oscillations in the semiconductor for the case
when the semiclassical approach used in the earlier papers is no longer valid. Con-
ditions are derived for the occurrence of growing oscillations when the inhomogeneity
is brought about by a change in the transverse cross section of the sample, and the
frequency of the oscillations is determined. Although the theory is not sufficiently

Card 1/2

ACC NR: AP6033548

accurate to permit comparison with experiment, it does explain why current oscillations occur only when the cross section changes along the length of the sample and minority carriers are injected (the "sogicons" observed by M. Kikuchi and Y. ABe, J. Phys. Soc. Japan 17, 881 and 1268, 1962), and do not occur in a semiconductor with only one type of carrier (electron or hole). The reason why a magnetic field parallel or transverse to the current can suppress the oscillations is also explained. Orig. art. has: 9 formulas.

SUB CODE: 20/ SUBM DATE: 07Feb66/ ORIG REF: 004/ OTH REF: 005

Card 2/2

L 6335-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD
ACCESSION NR: AP5019877

UR/0181/65/007/008/2527/2529/3

59
B

AUTHOR: Ioffe, I. V.; Kovnatskiy, A. M.

TITLE: Explanation of observed oscillations in the field distribution in germanium with injecting contact

SOURCE: Fizika tverdogo tela, v. 7, no. 8, 1965, 2527-2529

TOPIC TAGS: germanium, electric field, semiconductor carrier, carrier density, statistic distribution

ABSTRACT: It is shown, on the basis of an earlier result by one of the authors (I. V. Ioffe, with L. E. Gurevich, FTT v. 6, 2926, 1964) that the oscillations in the distribution of the electric field inside a sample of n-germanium placed in a constant mutually perpendicular electric and magnetic fields when holes are injected from one of the contacts, observed in experiments by Y. Migai and F. Nakashima (J. Phys. Soc. Japan v. 18, 1219, 1963) and others, are due to the inhomogeneity of the carrier distribution. The proof is based on an analysis of the differential equations for the density of the positive and negative carriers under the conditions of the material in question. A frequency of approximately $3 \times 10^5 \text{ sec}^{-1}$, a field of approximately 300 Oe, and an injection coefficient of approximately 1/3 are obtained from these calculations, and agree with the values observed experi-

Card 1/2

0702 0024

L 6335-66

ACCESSION NR: AP5019877

mentally. "The authors thank ⁵⁵ L. E. Gurevich for a discussion of their work." Orig. art. has: 3 formulas.

ASSOCIATION: Fiziko-tehnicheskiy institut im. I. F. Ioffe AN SSSR, Leningrad
(Physicotechnical Institute AN SSSR)

SUBMITTED: 15Mar65

ENCL: 00

SUB CODE: SS

NR REF SOV: 001

OTHER: 004

80
Card 2/2

L 18752-66 EWT(1)/T/EWA(h) IJP(c) AT

ACC NR: AP6003773 SOURCE CODE: UR/0181/66/008/001/0124/0130

AUTHORS: Gurevich, L. E.; Ioffe, I. V.; Kovnatskiy, A. M.

ORG: Physicotechnical Institute im. A. F. Ioffe, AN SSSR, Leningrad (Fiziko-
tehnicheskiy institut AN SSSR)

TITLE: Excitation of galvanomagnetic and coupled galvanomagnetic-
acoustic waves in an electric field

SOURCE: Fizika tverdogo tela, v. 8, no. 1, 1966, 124-130

TOPIC TAGS: galvanomagnetic effect, sound propagation, acoustic
wave, semiconductor carrier, carrier density, alternating electromag-
netic field, piezoelectric crystal

ABSTRACT: The article deals with the instabilities that can develop
in semiconductors placed in a strong electric field, if the carrier
density is not uniform, as a result of the occurrence of galvano-
magnetic waves which were defined and described by the authors earlier
(FIZ v. 4, 2641, 1962). The conditions under which instabilities
arise in different types of constant and alternating fields are de-

Card 1/2

ZHELYABIN, A.; KOVNATSKIY, I.; GROSS, K.; TULER, A.

Manual on machining flour mill rolls ("Polishing and grooving flour mill rolls" by L.I.Kotliar and N.IA.Kesterl'man. Reviewed by A.Zheliabin and others). Muk.-elev.prom. 25 no.2: 3 of cover F '59. (MIRA 12:4)

1. Glavnyy inzhener Moskovskogo oblastnogo upravleniya khlebo-
produktov (for Zhelyabin). 2. Glavnyy inzhener Moskovskogo
gorodskogo upravleniya khleboproduktov (for Kovnatskiy). 3.
Glavnyy inzhener mel'nitsy No.2 "Novaya Pobeda." (for Gross).
4. Glavnyy inzhener Novosibirskogo mel'nichnogo kombinata No.1
(for Tuler).

(Flour mills) (Kotliar, L.I.) (Kesterl'man, N.IA.)

KOVNATSKIY, I.A.

PETROV, Leonid Mikhaylovich; KOVNATSKIY, I.A., inzhener, redaktor; KEYZER, V.A., redaktor; GOLUBKOVA, L.A., tekhnicheskiy redaktor

[Safety engineering and industrial sanitation in elevators and flour, groats, and mixed feed mills] Tekhnika bezopasnosti i proizvodstvennaya sanitariia na elevatorakh, mukomol'nykh, krupianykh i kombikormovykh zavodakh. Pod red. I.A.Kovnat'skogo. Moskva, Izd-vo tekhn.i ekon. lit-ry po voprosam mukomol'no-krupianoj, kombikormovoi promyshl. i elevatorno-sklad'skogo khoziaistva, 1957. 227 p. (MLRA 10:8)
(Grain milling--Safety measures)

KOVNATSKIY, N.

~~_____~~
Putting suggestions of efficiency promoters into effect, Muk.-elev.
prom. 23 no.1:25 Ja '57. (MLRA 10:5)

1, Moskovskiy trest Rosglavmuki.
(Grain-milling machinery)

GULYAMOV, S.; KOVNATSKIY, S.; RASULOV, D.

Developments in passenger traffic. Avt. transp. 42 no.10:
12-14 O '64. (MIRA 17:11)

1. Nachal'nik upravleniya passazhirsikh perevozok Ministerstva avtotransporta i shosseynykh dorog Uzbekskoy SSR (for Gulyamov).
2. Zamestitel' nachal'nika upravleniya perevozok Ministerstva avtotransporta i shosseynykh dorog Moldavskoy SSR (for Kovnatskiy).
3. Direktor Ashkhabadskogo passazhirsikogo avtoparka No.3004 (for Rasulov).

L 21173-66 EWP(a)/EWT(m)/EWA(a)/T/EWP(t)/ETC(m)-6 IJP(c) M.W./J.D./W./J.G./D./W.
 ACC NR: AP6009609 (A) SOURCE CODE: UR/0369/66/002/001/0072/0077

AUTHOR: Preygerzon, Sh. I.; Kovnatskiy, V. S.; Genkin, V. A. 69

ORG: Belorussian Polytechnic Institute, Minsk (Belorusskiy politekhnicheskiy institut) 13

TITLE: Iron-containing cermet antifriction materials 14

SOURCE: Fiziko-khimicheskaya mekhanika materialov, v. 2, no. 1, 1966, 72-77 11

TOPIC TAGS: cermet, bearing, antifriction material, lubrication

ABSTRACT: The authors found that iron-containing cermets have high wear resistance and can function at higher loads than bronze; their running-in properties are poorer than those of bronze, however. This may be explained by the fact that the plasticity of cermets is lower than that of bronze. At sliding speeds of 2.5—3 m/sec and with abundant lubrication, the load-carrying capacity of cermet bearings is equal to that of bronze bearings; at lower speeds cermet bearings perform better. Under light loads and low speeds cermet bearings can function without additional lubrication; this is a substantial advantage over nonporous bearings. Addition of copper to the cermet lowers the load capacity of the bearing, but improves its wear resistance. Increasing the graphite content of the cermet above 2% impairs its antifriction properties. Of the materials tested, cermet ZhG-2 (98%Fe + 2%C) exhibited the best antifriction characteristics. Orig. art. has: 12 figures and 1 table. [VS]

SUB CODE: 11/ SUBM DATE: 15Oct64/ ATD PRESS: 4222

Card 1/1 CK

KOVNATSKIY, Ye. P.: Master Biol Sci (diss) -- "Hybridization and directed handling in the selection of the oak silkworm". Khar'kov, 1958. 14 pp (Min Higher Educ Ukr SSR, Khar'kov Order of Labor Red Banner State U im A. M. Gor'kiy), 150 copies (KL, No 7, 1959, 123)

GORYACHEV, P., master sporta; GRIGOR'YEV, G. (Stavropol'skiy kray);
KOVNATSKIY, Yu. (Krymskaya obl.)

Facts, events, people. Kryl. rod. 14 no.12:26-27 D '63.
(MIRA 17:2)

NAZAROV, A., inzhener-konstruktor; MIKHAYLOV, G.; KOVNATSKIY, Yu.;
BELOUSOV, A.

Facts, events, people. Kryl. rod. 14 no.10:28-29 0 '63.

(MIRA 16:11)

1. Pionerskiy lager' "Artek", Krymskaya oblast' (for Kovnatskiy).

KOVNER, A. A.

"Analysis of the Work of the Maxillo Facial Hospital and the Stomatological Center of the Moscow State Health Section in 1947." Stomatologiya, No. 2, 1949.

Cand. Med. Sci/

KOVNER, A.

Face - Surgery

Work of the Maxillofacial Department of the Moscow City Hospital in 1951. Stomatologia
No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Unclassified.

KOVNER, A.A.

VASIL'YEV, G.A., dotsent; EVDOKIMOV, A.I., professor, zaveduyushchiy; BELETSKIY, G.N., direktor; KOVNER, A.A., nachal'nik.

Plastic reconstruction of the duct of Steno. Stomatologiya no.3:39-42 '53.
(MLRA 6:7)

1. Kafedra khirurgicheskoy stomatologii Moskovskogo meditsinskogo stomatologicheskogo instituta (for Vasil'yev and Evdokimov). 2. Moskovskiy meditsinskiy stomatologicheskiy institut (for Beletskiy). 3. Moskovskiy gorodskoy chelyustno-litsevoy gosptal' (for Kovner and Vasil'yev).
(Parotid glands) (Fistula)

KOVNER, A.A., podpolkovnik meditsinskoy sluzhby, kandidat meditsinskikh nauk.

Prophylaxis and therapeutic services for disabled veterans of the Patriotic War given by the Moscow City Jaw and Face Hospital during the last 10 years. Stomatologiya 35 no.1:64-65 Ja-F '56. (MLRA 9:6)

1. Nachal'nik Moskovskogo gorodskogo chelyastno-litseвого gosпитalya.

(MOSCOW--HOSPITALS) (VETERANS, DISABLED)
(SURGERY)

KOVNER, A.A., dots., ROZANOVA, Ye.K., TOPEL'BERG, M.S.

Analysis of the operation of a stomatological polyclinic. Stomatologiya
37 no.6:53-56 N-D '58 (MIRA 11:12)

1. Iz kafedry organizatsii zdravookhraneniya Moskovskogo meditsinskogo
stomatologicheskogo instituta (zav. kafedroy i dir. instituta - dots.
G.N. Beletskiy).
(STOMATOLOGY)

KOVIEN, A.A., dotsent

Second plenum of the Board of directors of the All-Russian Medical Society of Stomatologists. Stomatologiya 39 no.1:77-79 Ja-F '60.

(MIRA 14:11)

1. Uchenyy sekretar' Vserossiyskogo nauchnogo meditsinskogo obshchestva stomatologov.

(STOMATOLOGICAL SOCIETIES--CONGRESSES)

KOVNER, B. D.

USSR/Chemical Technology - Chemical Products and Their Application. Silicates.
Glass. Ceramics. Binders, I-9

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62375

Author: Kovner, B. D.

Institution: None

Title: Experience with the Use of "Cold" Concrete

Original

Periodical: Beton i zhelezobeton, 1956, No 2, 47-49

Abstract: A description of the experience with the use of "cold" concrete for the making of filler-concrete of 110 grade and reinforced concrete of 140 grade, under the rigorous climatic conditions of Transbaykal region. Addition of calcium chloride at temperatures from -22° to -12° was of 10 to 4% and that of sodium chloride 5% of the weight of the water used in mixing. After 2-3 minutes of dry mixing in a concrete mixer of the gravel-sand mixture and cement, the aqueous solutions of the salts were added and mixing was continued for 2-3 minutes. Duration of transportation and placing did not exceed

Card 1/2

ACCESSION NR: AP4033054

S/0147/64/000/001/0170/0174

AUTHOR: Kovner, D. S.

TITLE: The turbulent flow of an electroconductive liquid in a longitudinal magnetic field

SOURCE: IVUZ. Aviatstionnaya tekhnika, no. 1, 1964, 170-174

TOPIC TAGS: turbulent flow, electroconductive liquid, longitudinal magnetic field, velocity profile, magnetic field, fluid mechanics

ABSTRACT: Applying the semi-empirical theory of turbulence, the author considers the development of turbulent flow conditions in a longitudinal magnetic field within a tube. Adopting an expression for the dissipation of the kinetic energy of the turbulent movement due to the magnetic field and on the basis of several assumptions, introduced for the purpose of simplifying the problem, a formula is derived for the profile of the mean velocity and the coefficient of hydraulic resistance. Criteria are obtained which define the velocity profile configuration and the dependence of the hydraulic resistance factor on the induction of the magnetic field in the case of turbulent flow conditions. This is of great utility in the correct processing of experimental data. Moreover, it is shown in the article that for highly-developed turbulent motion it is sufficient to determine experimentally the value of a single factor, for which an upper estimate has been made. Two
Card 1/2

L 00307-66 EWT(1)/EWP(m)/EPA(s)-2/EWT(m)/EPF(n)-2/EWA(d)/EWP(t)/PCS(k)/
 ACCESSION NR: AP5016647 EWP(b)/EWA(1) JD/WW/ UR/0382/65/000/002/0011/0018
 JG 538.4 : 532.542.4

45
 8

AUTHOR: Kovner, D. S.

TITLE: Application of the localization hypothesis in the turbulent flow of an electrically conducting liquid in a magnetic field

SOURCE: Magnitnaya gidrodinamika, no. 2, 1965, 11-18

TOPIC TAGS: MHD flow, turbulent flow, Reynolds number

ABSTRACT: Magnetohydrodynamic flow (with magnetic Reynold's number much smaller than unity) near a smooth wall or in a flat tube in the presence of longitudinal or transverse magnetic fields is studied theoretically and compared with the published experimental results. The effect of viscosity in a local mechanism of turbulent transfer is employed and a local Reynolds number is introduced. The study reveals the depressing effect of the magnetic field on various flow phenomena and shows when the turbulent flow can become laminar. Numerical solutions are obtained for various parameters and the results given graphically. "The author thanks the computer group for doing calculations on the BESM-2M computer of MAI. Orig. art. has: 27 formulas, 3 figures,

Card 1/2

L 00307-66
ACCESSION NR: AP5016647

ASSOCIATION: none

SUBMITTED: 03Sep64

NO REF SOV: 010

ENCL: 00

OTHER: 004

SUB CODE: ME, EM

dg
Card 2/2

L 2376-66

EWT(l)/EWP(m)/EPA(s)-2/EWT(m)/EPP(n)-2/EWA(d)/EWP(t)/FGS(k)/EWP(b)

ACCESSION NR: AP5021266 ETC(m)/EWA(l) LJP(o)
JD/WW/JG

UR/0020/65/163/005/1096/1099

AUTHORS: Kovner, D. S.; Krasil'nikov, Ye. Yu.

TITLE: Experimental study of turbulent flow of an electroconductive fluid in a pipe in a longitudinal magnetic field

SOURCE: AN SSSR. Doklady, v. 163, no. 5, 1965, 1096-1099

TOPIC TAGS: electromagnetic effect, flow research, flow in magnetic field, pipe flow, friction loss

ABSTRACT: A study was conducted on the characteristics of turbulent flow of an electroconductive fluid in a pipe with the presence of a magnetic field whose induction vector is parallel to the flow velocity. The conduct of experiments featured the use of a liquid-metal gallium loop described by D. S. Kovner, Ye. Yu. Krasil'nikov, and G. M. Mironov (Teplotfizika vysokikh temperatur, 3, No. 2, 1965). The loop contained an electromagnetic direct current conduction pump, a Venturi flowmeter, a cooler, and a working mechanism. The working mechanism was composed of pipes of seamless nonmagnetic steel with inner diameters 9.8 and 5.2 mm. The conduction of the steel is about 1/3 that of the gallium. Additional instrumentation was provided for measurement of static pressure. A description of the generation of the magnetic field is given. The study was directed toward

Card 1/2

KOVNER, F.

"The struggle for an improvement of the boiling acid," 1952.

USTINOV, Nikolay Petrovich, kand.tekhn.nauk, dotsent; DROBINSKIY,
Valentin Anisimovich, inzh.; KOVNER, G.M., kand.tekhn.nauk,
nauchnyy red.; KONTSEVAYA, E.M., red.; GAVRILOV, F.P., red.;
OSTRIROV, N.S., tekhn.red.

[Modern locomotives] Sovremennye lokomotivy. Moskva, Vses.
uchebno-pedagog.izd-vo Trudrezervizdat, 1957. 126 p.
(MIRA 12:11)

(Locomotives)

RUDAYA, K.I.; KOVNER, G.M.; KUZ'MICH, V.D.

Increasing the power of diesel locomotive generators by improvement of their ventilation. Trudy MIIT no.110:5-25 '59.
(MIRA 13:4)

(Diesel locomotives) (Electric generators)

KOVNER, G.M., dotsent; BORODULIN, I.P., inzh.; LISITSYN, Ye.V., inzh.

Investigating the smooth regulation of the magnetic flux of
the electric traction engines of diesel locomotives. Trudy
MIIT no.151:153-170 '62. (MIRA 16:2)
(Diesel locomotives) (Electric railway motors—Testing)

KOVNER, G.M., kand. tekhn. nauk; BORODULIN, I.P., aspirant

Traction engines with mixed excitation for the electric driving
of locomotives. Vest. TSNII MPS 23 no.4:24-28 '64.

(MIRA 17:8)

1. Moskovskiy institut inzhenerov zheleznodorozhnogo transporta.

KOVNER, L. A.

PA 53/49T95

USSR/Physics

Oct 48

Photoelectrons
Photography

"Disagreements With the 'Law of Relationships'
Caused by the Photographic Activity of Electrons,"
N. G. Sushkin, L. A. Kovner, Moscow Power Eng Inst
in *Imeni V. M. Molotov*, 2 $\frac{1}{2}$ pp

"Dok Ak Nauk SSSR" Vol LXII, No 5 p. 633-5

Investigations show that disagreements with the "law
of relationship" occurred in several types of film
produced by NIKFI (Sci Res Cine-Photo Inst), in
isochromatic film (Factory No 2), microfilm (NIKFI),
and other films. Further research is being conducted
on the role of various factors in upsetting subject
law. Submitted by Acad S. I. Vavilov, 16 Aug 48.

FBI

53/49T95

KOVNER, I. A.

Dec 49

USSR/Physics -- Electron Scattering
Electron Microscope

"Scattering of Electrons in Thin Layers," L. M. Biberian, Ye. N. Vtorov, I. A. Kovner, N. G. Sushkin, B. M. Yavorskiy, Moscow State U imeni V. M. Molotov, 4 pp

"Dok Ak Nauk SSSR" Vol LXIX, No 4

Results of experiments using electron microscope EM-100 to measure angular distribution of electrons passed through thin film and scattered in the interval from $3 \cdot 10^{-4}$ to $3 \cdot 10^{-2}$ radian showed measurements in this interval are quite reliable. However, number of 60 Kv-electrons scattered was much greater than number calculated for very small angles ($3 \cdot 10^{-3}$ radian). Submitted by Acad S. I. Vavilov 6 Oct 49.

PA--155T64

C. a.
1951Electron Phenomena
3

Departures from the reciprocity law in the photographic action of electrons. I. A. Kovner (Moscow Inst. Energetics). *Zhur. Eksp. Teor. Fiz.* 20, 401-10(1950).-- Optical densities D were detd. for different photographic emulsions as a function of the electron charge d , q (in 10^{-12} coulomb/sq. cm.) striking the emulsion. The energy E of the electrons was varied from 30 to 80 kv. The c.d. of the impinging electron beam was varied either by varying the length of exposure at const. intensity and const. diam. of the electron spot, or by varying that diam. at const. intensity and const. exposure. From the expl. $D(q)$ curves, plots of q corresponding to $D = 1$ were constructed as a function of the c.d. j , at const. E . Fulfillment of the reciprocity law calls for independence of q of j . Actually, this is fulfilled only (for diapos. plates) in the range of low and of high j , but not in an intermediate range, where q decreases with increasing j . The same behavior was found with a variety of emulsions, from the very slow diapos. to the fast electronic. For the diapos. plates, constancy of q is fulfilled up to $j = 15 \times 10^{-12}$ amp./sq. cm., and then from 50×10^{-12} up; for the electronic plates, up to 0.8×10^{-12} and then from 4×10^{-12} up. For Agfa Spektralblau-Rapid plates, q was decreased linearly with j increasing from 1×10^{-12} to 8×10^{-12} amp./sq. cm., at $E = 60$ kv.; i.e. at that E the reciprocity law does not hold at all, whereas it has been found to be valid at $E = 20$ kv. In general, the level position of q in the low- j range extends to higher j the lower E of the electrons. The existence of a region of nonfulfillment of the reciprocity law can mean only that the probability that a grain will be impressed by one single electron is less than unity. The D is detd. not only by the total no. of electrons striking the emulsion, but also by the intensity with which they strike. This in turn means that at least part of the grains are impressed only through the collective action of 2 or more electrons, specifically, that the 1st electron only creates conditions under which the grain can be successfully impressed by a 2nd electron. The intermediate range of j where the reciprocity law is not fulfilled corresponds to intensities where the probability of impression increases as the time lag between consecutive electron impacts decreases, i.e. increasingly fewer electrons are required to produce the same D . This means that the "preparatory" effect of the 1st electron is short-lived, and is annulled unless a 2nd electron strikes in time. This accounts for the low- j range of validity of the reciprocity law; in this range, the time interval between 2 consecutive impacts is too long for the preparatory effect of the 1st electron to survive. In the high- j range of validity, the 2nd electron always strikes fast enough, and the probability of collective impression becomes equal to the probability of any further increase of j . The reason unity, irrespective of any further increase of j . The reason these departures were not observed previously is that all previous work was done with low j , corresponding to the low- j range of validity of the reciprocity law. N. Thon

KOVNER, I. A.

N. G. SUSHKIN, I. A. KOVNER, YE. N. VTOROV

"Electron Sensitometry," *Izvestiya Akad Nauk USSR, Ser Fiz.* 15: 395-402, No. 4, 1951

The over-all quality of this work appears to be satisfactory. It is a straightforward job and involved no particular ingenuity since many other people have made similar measurements of electron sensitivity of emulsions. The results agree in general with those obtained by previous workers. The work was carried out on a regular electron microscope and required only familiarity with the operation of this instrument. Presumably the authors have had previous experience on the electron microscope.

V. A. Malozemov ENERGETICS Inst., Moscow

IX

KOVNER, I. A.

KOVNER, I. A. -- "Deviations From the Law of Reciprocity in Photographic
Action of Electrons." Sub 25 Apr 52, Moscow Order of Lenin Power
Engineering Inst imeni V. M. Molotov. (Dissertation for the Degree of
Candidate in Technical Sciences).

SO: Vechernaya Moskva, January-December 1952

KOVNER, I. A.

FD-624

USSR/Physics - Photographic Latent Image

Card 1/1 : Pub 146-14/18

Author : Biberman, L. M. and Kovner, I. A.

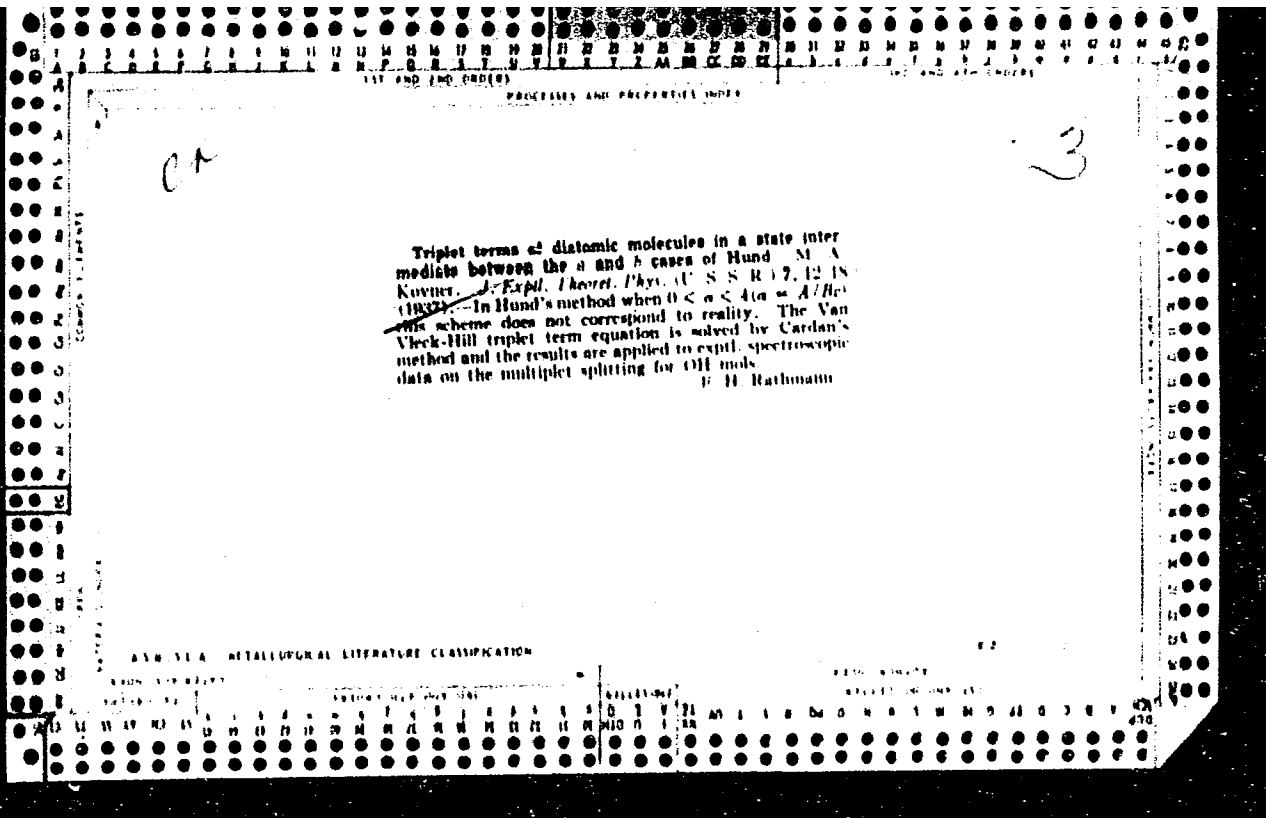
Title : The theory of the photographic action of electrons

Periodical : Zhur. eksp. i teor. fiz. 26, 234-241, February 1954

Abstract : An expression is deduced for the probability of formation of a latent image in a photoemulsion crystal taking into account the independent and collective actions of electrons which have passed through the crystal. The theoretical dependence of the density of blackening on the intensity of the electron beam for a constant number of electrons falling on a unit area of the photoemulsion during the time of exposure qualitatively coincides with experimental results. The authors thank Prof. V. A. Fabrikant and K. S. Bogomolov for their interest and suggestions.

Institution : Moscow Power Engineering Institute

Submitted : June 1, 1953



21

Combustion in a turbulent flow of heated air in a cylindrical carbon canal. M. P. Shirokov and M. A. Kovner. *J. Tech. Phys. (U. S. S. R.)* 11, 350-60 (1941). Theoretical research was undertaken with regard to underground gasification of the kinetics of oxidation in a stream of air moving in a turbulent (non-laminar) flow through a cylindrical channel of carbon, one starts with the partial differential equation of diffusion of oxygen in flowing air. A "turbulent diffusion coeff." D is defined phenomenologically by $\rho_0 \mu_0' = D \cdot \partial \gamma / \partial r$, where ρ is the density of the gas at a given point, γ the mean relative oxygen ($\gamma = c/\rho$), μ_0' its turbulent pulsation, μ_0' the turbulent pulsation of the velocity along the coordinate x . (1) An exact theory leads to an expression for γ^* , a function of x (the cylindrical coordinate along the axis of the channel), defined by $\gamma^* = (\gamma_0 - \gamma_w) / \gamma_w$, where γ_0 is the relative oxygen concn. at the outlet, γ_w its mean value over the cross section considered. The expression is $\gamma^* = [1 - \phi(s)] / [1 - \phi(s)] / (2lk)$, where $\phi(s)$ is an integral, involving as parameter R (Reynolds' no.) and the diam.; l its length; r the output of gas in l./min.; k the chem. reaction for oxidation of carbon spheres ($k_0 = 7.077 \times 10^3$ cm./sec.; $E = 38,000$ kg.-cal./mol.), the calcd. γ^* can be compared with expl. data obtained with Reynolds' nos. 0.805×10^3 to 2.20×10^3 . There is some accord, but the calcd. values drift away from expl. data especially with rising temp. (2) A more elementary derivation, formally patterned after the theory of heat exchange, leads to $\gamma^* = 1 - \exp[-(0.080/r_0) / (R/\gamma_0 + 0.04 (r/k))]$, which fits the expl. data a little better than the exact equation. The second expression has been obtained on the simplifying assumption that diffusion across a layer of laminar flow can be disregarded; it also does not presuppose constancy of γ at the wall. (3) An expression is also derived for the length of the "oxygen zone" defined as the distance in the channel where the oxygen concn. is $1/100$ of the original concn.: $L_0 = R \gamma_w / (k/\gamma_0 + (0.04 r/k))$. N. Thon

ASB-314 METALLURGICAL LITERATURE CLASSIFICATION

30000 00 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

By Lib

NE-2, Molecular etc

Theory of colour of organic compounds. M. A. Kovner (*Compt. rend. Acad. Sci. U.R.S.S.*, 1942, **23**, 31, 252). The energy levels and spectrum of hexatriene are determined and the position of the absorption band is calc. by a method due to Sklar (*A.*, 1937, **1**, 547) to be at 2370 Å., in good agreement with experiment (2600 Å.). There is a displacement of absorption bands towards longer λ as the no. of conjugated linkings in a series of compounds is increased.
A. J. M.

PROCESSES AND PROPERTIES INDEX

137 AND 138 ORDERS

24

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Absorption spectra of molecules with conjugated double bonds and electronic resonance. M. Kovner, *Acta Physicochim. U.R.S.S.* 10, 385-90(1944).—1,3-Butadiene (I), 1,3,5-hexatriene (II), and 1,3,5,7-octatetraene (III) on the basis of the quantum mech. theory of electronic resonance have 2, 5, and 14 valence structures resp. The differences between levels which correspond to the transition frequencies or the wave lengths of the absorption max. are calcd. to be I - 1.732 α - 1.738 α , 1900 A. (exptl. 2100 A.); II - 0.126 α - 2.485 α , 2570 A. (exptl. 2600 A.); III 1.012 α - 3.077 α , 3117 A. (exptl. 3020 A.). The energies of some excited states are II - 1.053 α , 2.285 α , α ; III - 2.900 α , -1.800 α , -0.470 α , 0.500 α . (to is the exchange integral between 2 electrons forming a bond with wave function perpendicular to the line joining the nuclei.) The shift of the absorption band to longer wave lengths, and the drawing together of these bands with increasing no. of conjugated double bonds are thus explained by the application of the theory of electronic resonance to phenomena of light absorption. Janet E. Austin

ABB-31A METALLURGICAL LITERATURE CLASSIFICATION

E-2

137 AND 138 ORDERS

137 AND 138 ORDERS

KOVNER, M.A.

Selection rules for the electron-vibrational spectrum and the symmetry of the allene molecule. *Zhur. eksp. i teor. fiz.* 17 no.4:351-354 '47.
(MLBA 6:7)

1. Institut mekhaniki i fiziki Saratovskogo gosudarstvennogo universiteta im. N.G.Chernyshevskogo. (Spectrum analysis) (Allene)

KOVNER, M.

PA 9T21

USSR/Spectrum Analysis
Spectrochemical analysis

Feb 1947

"The Symmetry of the Molecule and the Selection
Rules for the Electronic Vibration Spectrum of
Allene," M. Kovner, 6 pp

"Acta Physicochimica" Vol XXII, No 2

Consideration of the electronic vibration spectrum
of allene, to account for some of its chemical
properties, based on the structures developed by
Syrkin, Linnett and Every.

9T21

CA

3

The theory of the absorption spectrum of fulvene. I.
M. Sverdlov and M. A. Kovner (N.G. Chernishev Univ.,
Saratov). *Izvest. Akad. Nauk S.S.S.R., Ser. Fiz.* 12,
382-5(1948).—The method of Goepfert-Mayer and Sklar
(GMS) (C.A. 32, 8930⁹) has been extended to mols. with
C atoms of different statistical wt. according to position,
the simplest colored carbohydrate being fulvene. The
energy levels, their symmetry, and the wave length of al-
lowed electronic transitions are calcd. The results are
compared to previous results by Sklar (C.A. 31, 7758⁹) and
by the authors and to exptl. identified lines in dimethyl-
fulvene vapor. The calcd. levels by the GMS method are
lower than the exptl. The method used by Sklar gives 2
lines instead of 3 but the correspondence with the exptl
levels is good. All transitions corresponding to the exptl
lines can be identified. S. Pakswar

2

Valence states of the carbon atom. M. A. Kovner
 (State Univ., Saratov). *J. Phys. Chem. (U.S.S.R.)*
 22, 120-31(1948).—If the resonance with the sp^2 states
 is neglected, the energy V of C in its valence state can be
 calculated from Van Vleck's equations (C.A. 24, 4309) and
 Word's integrals (C.A. 23, 3078). If the above reso-

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KOVNER, M.A.

Chemical Abst.
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Electronic Phenomena and Spectra

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~~Simple method for the calculation of triplet states of complicated molecules. M. A. Kovner and L. M. Sverdlov. Doklady Akad. Nauk. S.S.S.R. 59, 1120-1132(1948).~~

The graphic rules of Rumer for the calcul. of singlet states of mols. are extended to the case of triplet states of complicated mols. The following rules now apply: (I) Construct in a circle all the singlet canonical structures according to the rules of Rumer. (II) If the no. r of expanded traits in the structure is even and not equal to zero then such structures are rejected. (III) If r equals zero and the no. n of atoms in the circle is not divisible by 4, then all the nonexpanded traits blow up (tripletize). (IV) If r is not even and n is not divisible by 4, then all the expanded and the nonexpanded traits blow up with the exception of the nonexpanded traits whose distribution lies on one side of the expanded traits. (V) If r is not even or r equals zero and n is divisible by 4, then (a) the expanded traits blow up, and (b) after this the first and last atoms are joined by a trait. To the resulting structure apply rules II, III, and IV. When the above rules are applied for the cases of n equals 4, 6, 8, and 10, then 3, 9, 29, and 90 canonical triplet structures are obtained, resp. The matrix elements for the triplet energy levels of the mol. are obtained by the cyclic method and applied to the case of fulvene. The method shows promise for the calcul. of energy levels in excited mols. and in biradical states. Gerald Oster