SHIKLOSH, T.

SHIKLOSH, T. -- "On the Theory of Spontaneous Magnetization of Ferromagnetic Semiconductors as a Function of Temperature in the Low-Temperature Region." Moscow Order of Lenin and Order of Labor Red Banner State U imeni M. V. Lomonosov. Moscow, 1955. (Dissertation for the Degree of Candidate of Physicomathematical Sciences.)

SO: Knizhnaya letopis', No. 4, Moscow, 1956

SHIKLOSH, T.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1471
AUTHOR KONDORSKIJ,E.I., PACHMOV,A.S., ŠIKLOŠ,T.
TITLE On the Theory of the Spontaneous Magnetization of Ferromagnetic Semiconductors within the Domain of Low Temperatures.
PERIODICAL Dokl.Akad.Nauk, 109, fasc.5, 931-934 (1956)
Issued: 10 / 1956 reviewed: 11 / 1956

Here the temperature dependence of spontaneous magnetization is computed by the method of second quantization in the form worked out by N.N.BOGOLJUBOV and S.V.TJABLIKOV. On the occasion of an indirect exchange, as e.g. in ferrites, the HAMILTONIAN can be represented by the introduction of the so-called integrals of indirect exchange in the same manner as in the case of direct exchange interaction. This HAMILTONIAN is explicitly given. The crystal lattice of the ferrite examined on this occasion can be represented as the totality of two inversely magnetized not equivalent sub-lattices A and B. For the energy of the ground level (the lowest level) an expression is given. The energy spectrum of the system, which is necessary for the determination of the temperature dependence of the spontaneous magnetization, is determined in the state near the ground level E_o of energy, i.e. for weakly excited states. The HAMILTONIAN is transformed by transition from spin operators to FERMI operators.
The eigenvalues E_k of the HAMILTONIAN are determined from the conditions for the solution of several equations mentioned here and from normalization conditions. The solution results in 2 systems of equations for the determination of the ccefficients. The two solution ansatzes for $E_k^{(1)}$ and $E_k^{(2)}$ are written down for

the here investigated case of two nonequivalent sub-lattices. These solutions for ferromagnetic lattices differ essentially from the corresponding expressions for the antiferromagnetic lattice mentioned by N.N.BOGOLJUBOV and S.V.TJABLIKOV, Zurn.eksp.i teor.fis,19, 251,256 (1949).

By transition to approximation of the next neighbors the formulae: $E_k^{(1)} = \varepsilon_0 + \varepsilon_1 a^2 |k|^2$, $E_k^{(2)} = \varepsilon_2 a^2 |k|^2$ are obtained by the development in series of the coefficients according to low values of the wave number k restricted to terms of second order (with respect to k). Here a denotes the distance between the next neighbors; ε_0, ε_1 and ε_2 are expressed by the integrals of the direct exchange among the next neighboring ions. Now the effect produced by an exterior magnetic field on the system of electrons of the ferrite is taken into account, and, after carrying out the usual statistical thermodynamical computations, the expression is obtained for the temperature dependence of the spontaneous magnetization of the ferrite within the range of low temperatures.

In the same manner it is possible to deal with ferrite, the crystal lattice of which consists of a totality of three nonequivalent sublattices.

INSTITUTION: Moscow State University "M.V.LOMONOSOV".

SHIKLOSH,T.

PA - 2595

AUTHOR: KONDORSKIY,E.I., PAKHOMOV,A.S., SHIKLOSH,T.

TITLE: Theory of Spontaneous Magnetization of Ferrites. (Teoriya spontannoy namagnichennosti ferritov, Russian)

PERIODICAL: Radioteknika i Elektronika, 1957, Vol 2, Nr 3, pp 334-341 (U.S.S.R.)

Received: 5 / 1957 Reviewed: 7 / 1957

ABSTRACT: Lecture delivered at the All-Union Conference for Semiconductors in November 1955 at Leningrad.
Two possible ferrite models are investigated. The first is the totality of two inversedly magnetized non-equivalent sublattices and the second is a totality of three non-equivalent sublattices, one of which has antiparallel magnetization with respect to the two others.
It is assumed that in each metal ion there is only one electron which participates actively in ferromagnetism. The HAMILTONIAN for the ferrite lattice is written down and the output equations for further computations are derived from this function. Dependence of spontaneous magnetization of the ferrite on temperature is investigated for both models. For this purpose the corresponding shape of the HAMILTONIAN is first derived and the lowest energy

Card 1/2

S/058/61/000/007/059/086
A001/A101

24,2200

AUTHORS: Tyablikov, S.V., Shiklosh, T.

TITLE: Quantum theory of monoaxial anisotropic ferromagnetics

PERIODICAL: Referativnyy zhurnal, Fizika, no. 7, 1961, 285, abstract 7E495 ("Acta phys. Acad. scient. hung.", 1960, v. 12, no. 1, 35 - 46, Engl. summary)

TEXT: The dependence of magnetization of anisotropic ferromagnetics on temperature and magnetic field was calculated by the method developed earlier (RZhFiz, 1960, no. 5, 10938) with the aid of Green's two-time retarded and advanced functions. Anisotropy of magnetic properties is considered as a consequence of the angular dependence of electrons exchange interaction in incomplete shells. The results obtained are valid for the entire region of temperatures from absolute zero to Curie point.

[Abstracter's note: Complete translation.]

Card 1/1

S/048/62/026/008/016/028
B104/B102

24.6300

AUTHORS: Veresh, T., Solov'yev, V. G., and Shiklosh, T.

TITLE: Study of properties of the transuranic elements

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 8, 1962, 1045 - 1060

JB

TEXT: The properties of nuclei in the range of $225 \leq A \leq 255$ were studied by an improved calculation scheme (V. G. Solov'yev et al., Izv. AN SSSR. Ser. fiz., 25, 1198 (1961); Mat.-Fys. Skr. Dan. Vid. Selsk., 1, no. 11 (1961); Mat.-Fys. Skr. Dan. Vid. Selsk., 31, no. 2, (1959); OIYaI Preprint P-801 (1061)) using parameters based on experimental data of single-quasiparticle levels of odd nuclei and pairing energies. The probabilities of β-transitions are analyzed and the energies of two-quasiparticle levels are calculated for a series of even-even nuclei. The results are given in extensive diagrams and tables. Good agreement between experiment and calculation is achieved on the basis of the superfluidity model of the nucleus. Further investigations into the excited states of the transuranium elements must depend on getting additional experimental data. There are 8

Card 1/2

SHIKNO, K.; STAKHURSKIY, A.Ye., red.; ARKHAROVA, L.Ya., red.izd-va; VLASENKO, L.N., tekhn.red.

[Automatic models; electromagnetic toys] Modeli-avtomaty; elektromagnitnye igrushki-avtomaty. Moskva, M-vo kul'tury RSFSR, Izd-vo "Detskii mir." (Prilozhenie k zhurnalu "IUnyi tekhnik," no.21(87)) No.2. 1960. 1 fold. (MIRA 14:1)

1. TSentral'naya stantsiya yunykh tekhnikov, Moscow.
(Electric toys)

CHIYC, I. V.

Dissertations defended at the Institute of Mechanics for the academic degree of Candidate of Physiomatheratical Sciences: 1962

"Velocity Fields Under the Condition of the Plasticity of the General View."

Vestnik Akad Nauk, No. 4, 1963, pp. 119-145

ACC NR: AR6034977 (N) SOURCE CODE: UR/0272/66/000/008/0167/0167

AUTHOR: Shikorad, B. V.

TITLE: The nearly periodic conditions of motion of a gyroscope control device

SOURCE: Ref. zh. Metrologiya i izmeritel'naya tekhnika, Abs. 8.32.1273

REF SOURCE: Tr. Un-ta druzhby narodov im. Patrisa Lumumby, no. 10, 1965, 23-31

TOPIC TAGS: gyroscope, direction finder, antenna, direction finder antenna, gyrostabilizer

ABSTRACT: The motion of a direction finder antenna mounted on a mobile base in a gimbal is investigated. It is shown that during the vibration of the external frame of the gimbal, the antenna will drift with a fixed base provided the gyrostabilizer is equipped with pneumatic release devices with jet distributors. This would produce nearly periodic conditions with two independent frequencies. One illustration. Bibliography of 5 titles. [Translation of abstract] [DW]

SUB CODE: 17/

Card 1/1 UDC: 531.383

IVANOV, I. M.; SHIKOV, A. A.

Vegetable Gardening

Leading vegetable gardening brigade; Sad. i og. no. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1952, Uncl.

KULESKO, I.I.; SHIKOV, A.T., mladshiy nauchnyy sotrudnik; YARNYKH, V.S., kand. veter. nauk

Aerosol immunization of baby pigs against hog cholera. Veterinariia 40 no.5:30-32 My '63. (MIRA 17:1)

1. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni Lenina (for Kulesko). 2. Ukrainskiy nauchno-issledovatel'skiy institut eksperimental'noy veterinarii (for Shikov). 3. Vsesoyuznyy nauchno-issledovatel'skiy institut veterinarnoy sanitarii (for Yarnykh).

SHIKOV, G.T., dotsent, (Moskva)

Dispensary services for the rural population. Klin. med. 32 no.8: 14-19 Ag '54. (MLRA 7:10)

1. Iz Instituta organizatsii zdravookhraneniya i istorii meditsiny imeni N.A.Semashko AMN SSSR (dir. Ye.D.Ashurkov)
(OUTPATIENT SERVICES,
in Russia, dispensary serv. for rural population)
(RURAL CONDITIONS,
in Russia, dispensary serv. for rural population)

SHIKOV, Grigoriy Terent'yevich; ASHURKOV, Ye. D., redaktor; VINOGRADOV, N.A., redaktor; KHESIN, Ye. Ya., redaktor; YEVDOKIMOVA, Z.N., tekhnicheskiy redaktor.

[Organization of medical services for workers in industrial enterprises; a lecture] Organizatsiia meditsinskogo obsluzhivaniia rabochikh promyshlennykh predpriiatii; lektsiia pod obshchei red. E.D.Ashurkova i N.A. Vinogradova. Moskva, Ges.izd-vo meditsinskoi lit-ry, 1955. 40 p. (MLRA 9:5)
(INDUSTRIAL MEDICINE)

Shikov, G. T.

USSR/Medicine - Health service, virgin and idle lands FD - 1925

Cards 1/1 Pub 102-6/12

Author : Shikov, G. T., Ratgaus, L. G., and Anan'yevskiy, N. S.

Title : Organization of therapeutic and preventive medical service to population in areas where virgin and idle lands are under cultivation

Periodical : Sov. zdrav., 1, 29-34, Jan-Feb 1955

Abstract : Organization of therapeutic and preventive medical aid to thousands of newcomers to Altay kray and Turkmen SSR, where attempts are made to bring virgin and idle lands under cultivation, has been fought with difficulties. Sparsity of population and lack of roads have been the main stumbling block. The Ministry of Agriculture USSR and Ministry of State Farms USSR made provisions for construction of temporary and permanent buildings to house hospitals and feldsher-midwife posts; the intention was to provide each state farm and machine and tractor station containing 800 or more workers with a hospital of 20-25 cot capacity and each one having less than 800 workers, with a feldsher-midwife post. This kind of medical service was deemed to be necessary to supplement health service provided by the existing medical district hospitals and agencies of the sanitary-epidemiological service. Delay encountered in putting into operation additional medical facilities has been due to a considerable extent to poor management on the part of local health agencies.

Submitted : July 22, 1954

TIMOSHENKO, V.V.; MARTYNISHKIN, A.M.; TSUKANOV, V.P.; GANGO, Ya.V.; SHIKOV, I.P.; NIKONOV, A.V.; POSTNIKOV, V.P.; KOROLEV, G.D.; ARTAMONOV, A.M.; TEMNIKOV, S.N.; KABLUKOVSKIY, A F.; MAKHOV, A.Kh.; KOTIKOV, A.Kh.; ZNAMENSKIY, B.A.; ZUYEV, T.I.; POZDNYAKOV, A.P.; BALASHOV, G.A.; YERMOKHIN, I.P.

New design of electrode holders for electric-arc smelting furnaces. Prom. energ. 15 no.8:13-14 Ag '60. (MIRA 15:1)
(Electric furnaces)

YEFROYMOVICH, Yu.Ye.; MARTYNUSHKIN, A.M.; TSUKANOV, V.P.; SHIKOV, I.P.; NIKONOV, A.V.; KABLUKOVSKIY, A.F.; KOTIKOV, A.N.; KOLCHANOV, V.A.; VINOGRADOV, V.M.; GENISHT, Ye.S.

VU-5086 computer and high-speed electronic automatic controller for regulating power supply to electric arc furnaces. Prom. energ. 18 no.7: 7-8 Jl '63. (MIRA 16:9)

(Electric furnaces)

SHIKOV, K.

Studies on the quantity of fir-tree bark.

p. 251 (GORSKO STOPANSTVO) Vol. 13, no. 6, June 1957,
Sofiia, Bulgaria

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 3,
March 1958

SHIKOV, N., inzh.

Automation of production processes in certain branches of industry. Tekh delo 501: 1, 30 N '63.

1. St. inzh. po avtomatizatsiiata pri DKNTP.

SHIKOV, V.N.

Device for detecting static electrical charges. Neft. khoz. 40 no.8: 70-72 Ag '62. (MIRA 17:2)

LGOTAK, Iržhi [Lgotak, Jiri], inzh.; SHIKOVA, Lidiya [Sikova, Lidia]

KNK-6S type six-channel multiplex apparatus. Vest. sviazi 24 no.10:10-13 O '64. (MIRA 17:12)

1. Glavnyy konstruktor zavoda Tesla Strashnitse (for Lgotak).
2. Starshiy inzh. NIIT, Praga (for Shikova).

SHIKOVA, Marfa Ustinovna; SHVYDKO, Z.A., red.; ZLOBIN, M.V., tekhn. red.

[For an average daily weight increase of 1,000 grams for each calf] Za 1000 grammov srednesutochnogo privesa kazhdogo telenka. Alma-Ata, Kazakhskoe gos. izd-vo, 1956. 19 p. (MIRA 11:7)

1. Telyatnitsa kolkhoza "Luch Vostoka", Alma-Atinskoy oblasti (for Shikova).

(Calves—Feeding and feeding stuffs)

COUNTRY : Bulgaria
CATEGORY : GENERAL & SPEC. ZOOLOGY. INSECTS
Insect and Mite Pests.
ABS. JOUR : Ref Zhur -Biologiya, No. 4, 1959, No. 16333

AUTHOR : Shikrenov, D.
INST. :
TITLE : Fig Leaf-Roller Moth and Struggle with It.

ORIG. PUB.: Byul. zashtit. zashchita, 1957, 6, No.4, 60-63)

ABSTRACT : The fig leaf-roller moth has been found recently in Bulgaria. A single spraying with emulsions of T-605 (0.03% according to the compound) and DDT (0.05%) or dusting with DDT brought about the complete extermination of first generation caterpillars.

CARD: 1/1

SHIKRENOV, Dim., prepodavatel

The foodstuff pests. Priroda Bulg 10 no.5:75-78 S-O '61.

1. Visshi institut po khranitelna i vkusova promishlenost, Plovdiv.

SHIKSHNYUS, V.[Siksnius, V.]

Meeting of Lithuanian radio amateurs. Radio no.7:13 Jl '62.
(MIRA 16:6)

1. Otvetstvennyy sekretar' prezidiuma Federatsii radiosporta Litvy.

(Radio operators—Congresses)

SHIKSHNYUS, V. [Siksnius, V.] (UP2AV)

Design bureau of a radio amateur club. Radio no.1:11 Ja '64.
(MIRA 17:8)

1. Otvetstvennyy sekretar' prezidiuma Federatsii radiosporta Litovskoy SSR, vneshtatnyy korrespondent zhurnala "Radio".

NOVIKOV, I.T.; NEPOROZHNIY, P.S.; LAVRENENKO, K.D.; BONDAREV, N.M.; MINOGENOV, Ya.I.; PLATONOV, N.A.; SHIKHOROV, I.S.; BELYAKOV, A.A.; SEV ST'YANOV, V.I.; ERISTOV, V.S.; ERISTOV, V.S. KAZIN, N.V.; MNATSAKANOV, L.N.; PLATONOV, V.A.; SHKUDLIN, B.M. SHKUDLIN, B.M.; ROZANOV, K.A.; LIVSHITS, A.Ya.; LOPATIN, N.A.; BYSTROV, P.S.

Sergei Borisovich Fogel'son. Gidr. stroi. 31 no. 1:59-60 Ja '61. (MIRA 14:2)

(Fogel'son, Sergei Borisovich, 1911-1960)

68945
SOV/81-59-24-85079

24.7700

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 24, p 56 (USSR)

AUTHORS: Brazdzhunas, P.P., Shiktorov, N.K.

TITLE: Electrical Properties of Zinc Antimonide (SbZn)

PERIODICAL: Uch. zap. Vil'nyussk. un-t, 1958, Vol 25, pp 159 - 172 (Lithuanian summary)

ABSTRACT: Hall's constant and the electric conductivity were measured on SbZn alloys of stoichiometric composition. Hall's constant was measured by the method of a constant magnetic field and a-c. It has been shown that the electric conductivity of SbZn samples within the range from -200° to 100°C has a metallic, and from 100 to 400°C a semiconductor character; the admixture conductivity of the SbZn lattice is masked by the metallic electroconductivity of excess Zn or Sb. The change in the concentration of charge carriers in the SbZn samples has a semiconductor character in the whole temperature range of measurements; the constancy of concentration in the range from -40° to 180°C, which was indicated earlier, is not confirmed. The activation energies of the admixture levels ΔE_1 and ΔE_2 in

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Electrical Properties of Zinc Antimonide (SbZn)

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SbZn have values from 0.012 to 0.016 ev and from 0.003 to 0.007 ev, respectively. The mobility of the SbZn charge carriers within the range from 20 to 400°C varies according to the $T^{-3/2}$ law; within the range from -200° to +20°C the dependence has a more complicated character.

L. Andreyev

4

Card 2/2

SHIKTOROV N.K.
p. 3

SOV/77-4-2-15/18

23(4) 23 (5)

AUTHOR: Lyalikov, K.S.

TITLE: Successes of Soviet Electrophotography (Uspekhi sovetskoy elektrofotografii) A Scientific and Technical Conference on Questions of Electrography (Nauchno-tekhnicheskaya konferentsiya po voprosam elektrografii)

PERIODICAL: Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, 1959, Vol 4, Nr 2, pp 149-152 (USSR)

ABSTRACT: This is an account of a scientific and technical con-
ference on electrography, the first to be held in the
Soviet Union and evidently in the world. It was organ-
ized in Vil'nyus on December 16-19, 1958 by the Soviet
narodnogo khozyaystva Litovskoy SSR (Council for
National Economy of the Lithuanian SSR), the Gosudarst-
vennyy nauchno-tekhnicheskiy komitet Soveta ministrov
Litovskoy SSR (State Scientific and Technical Committee
of the Council of Ministers of the Lithuanian SSR) and
the Nauchno-issledovatel'skiy institut elektrografii
(Scientific Research Institute of Electrography).
The conference, attended by over 300 scientific wor-
kers, was opened by the Deputy Chairman of the Council
for National Economy of the Lithuanian SSR P.A.
Kul'vets, after which the director of the Institute
for Electrography, I.I.Zhilevich, reviewed the state
and prospects for development of electrography in the
USSR. He stated that research in this field should be
carried out along the following lines: a) a search
for new photo-active materials with high dark resitance;
b) physical research into the internal photoeffect;
c) development of photosemiconductor layers; d) de-
velopment of the theory of the electrophotographic
process. K.S. Lyalikov (speaking also for O.G. Popova)
gave a report in which he suggested determining the
light sensitivity of electrophotographic layers in GOST
units. N.Z. Plavina (speaking also for I.I.Zhilevich,
L.I.Nyun'ko, N.N.Markevich, E.I. Kalinauskene and O.M.
Suveyzdis) reported on some research on the sensitization
of a semiconductor in electrophotographic layers. V.M.
Fridkin gave a report on highly sensitive electrophoto-
graphic layers and an electrophotocopying device, and
reviewed the formation process of the latent electro-
photographic image on the basis of the zonal theory.
He also described the design of an electrosensitometer
for determining sensitivity by the relaxation period of
a charge on the surface of the layer, and the circuit
of an electrophotographic copying device. Anfilov
finished describing the latter and then spoke on the
mechanics and kinetics of the development of the latent
electrophotographic image in liquid developers.

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SOV/77-4-2-15/18

Successes of Soviet Electrophotography; A Scientific and Technical Conference on Questions of Electrography

K.M. Vinogradov described some of the features of the cascade and liquid methods of electrophotographic development. Yu.Ye. Karpeshko devoted his report to the criterion of light sensitivity of the elctrophotographic process. After the reports, a discussion took place on methods of determining the light sensitivity of electrophotographic layers. A.N. Chernyshev spoke on the prospects of developing polygraphic processes using electric and magnetic forces. O.V. Gromov (speaking also for I.I. Zhilevich, A.A. Sukhiy, V.A. Gordeyeva, A.S. Pauzha and Yu. I. Kevalaytis) reported on the development of elctrophotographic reproducing equipment. A.S. Pauzha (speaking also for I.I. Zhilevich, A.S. Borisovich, N.M. Gal'vidiks and M.I.Rautkauskas) reported on the use of electrographic methods in recording oscillographs and other recording instruments.
V.P. Yurchenko (speaking also for L.N.Balin) spoke on the possibility of electrophotographically recording images from electron-beam tubes. L.S. Korol' (speaking also for N.N. Markevich, T.I. Kozlovskaya, B.I. Kalinauskene, M.K. Maynens, I.I. Zhilevich[redacted] and E.A. Montrimas) gave a detailed description of laboratory and machine methods of producing photosemiconductor papers (zinc oxide was used). A.A. Sukhiy (speaking also for I.I. Zhilevich, O.V. Gromov, V.A. Gordeyev , N.V. Fedotov and T.N. Ger) described a laboratory and industrial machine for producing photosemiconductor papers. T.A. Shishkina (speaking also for Ya.A. Okman) reported on a method of examining electrophotographic materials using an a/c bridge. S.I. Khotyanovich (speaking also for A.I. Gikens and I.S. Shileykens) spoke on developing materials for electrophotography and ferromagnitography, including developers giving a "reverse" image. B.I. Tikhonov reviewed methods of measuring the electrostatic potentials of electrophotographic layers, stressing that the oscillating electrode should not be placed above a layer with varying potential as this causes self-discharge. E.V. Krukovskis (speaking also for R.G.Gorevoy, A.V.Osipov and Ye. S. Kheyfets) spoke on the practice of producing velveteen papers in an electrostatic field, and showed samples produced by the Grigishskaya paper factory. Ye.L. Nemirovskiy then gave a historical review of the development of electrographic methods in which he paid tribute to the work of the Scientific Research Institute of Electrography in Vil'nyus and the Institut poligraficheskogo mashinostroyeniya (Moskva)-(Polygraphic Machine-Building Institute (Moscow)). Debates were then held

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on methods of measuring the potential of charged electrophotographic layers, the vibration pick-up most-used was shown in B.I. Tikhonov's report to be not always accurate. S.G.Grenishin stated that the bad influence of the oscillating electrode can be eliminated if the electrode probe above its surface is fixed and the pick-up is connected to it by a shielded cable. In the debate on Ye.L. Nemirovskiy's report it was stated that the research of Academicians A.N. Terenin and Ye.K. Putseyko should be considered as the basis of all work on electrophotographic papers with ZnO, as they were the first to show the possibility of optical sensitization of the internal photoeffect in ZnO. N.M.Gol'vidis then gave a report on the depositing of charges by a corona discharge. A.I. Kaminskas and A.P. Yanulis reviewed some of the results of the use of electrographic methods in radiography. L.I. Nyun'ko (speaking also for I.I. Zhilevich, I.Z. Plavin, Yu.K. Vishchakas and Yu.A.Zibuts) reported on relaxation processes in semiconductor layers, using a vibration electrometer. Yu.K.Vishakas gave a report on research on some physical properties of the polycrystalline layers of selenious cadmium. M.P. Mikalkyavichyus spoke on some of the photoelectric properties of Sb_2S_3 and Sb_2Se_3: the absorption maximum of the latter is about 900 mμ. S.M. Neyman reported on methods of obtaining selenium light-sensitive layers, including sublimation and thermal treatment; it was also found that the sensitivity of the layers increased after storage for 1.5 to 2 months at room temperature. P.M. Podvigalkin (speaking also for S.G.Grenishin) spoke on research into the electrical properties of electrophotographic layers of amorphous selenium and powdered zinc oxide. N.K. Shiktorov (speaking also for A.S. Tauraytis) discussed the production of selenium layers and some of their properties. Finally the following reports on ferromagnetography were delivered; 1) B.Ya. Kaznacheyev, V.M.Zhogina, "Electrodeposition of Magneto-Hard Alloys with Given Magnetic Characteristics" 2) M.T.Arutyunov, "Visualization of Magnetic Oscillograms by the Ferrographic Method" 3) V.T.Patrunov, "Ferrographic Recording of Facsimile Images" 4) I.I.Zhilevich, I.I. Gikis, B. Ye. Buchek, I.I. Naynise, A.K.Kizhis, "Mock Experiments in Non-Pressure Ferromagnetic Printing". There was also an exhibition showing the work of the Electrographic Institute. The most important conclusion of the conference was that a solid approach had been made to the possibility of wide technical use of the methods of electrography. It was considered that although work in this field actually started only in 1955-56 it has covered as much ground as the USA in 10 years. While admitting that it was easier to reproduce results already achieved than to be the first to arrive at them, the conference observed that the Americans took good care that no important information appeared in the literature available.

Card 10/10

SHIKTOROVA, Ye.V.

Pharmacognostic study of some Turkmenian Ferula species. Trudy Len. khim.-farm. inst. 12:111-118 '61. (MIRA 15:3)

1. Kafedra farmakognozii i botaniki Leningradskogo khimiko-farmatsevticheskogo instituta.
(TURKMENISTAN--FERULA)
(BOTANY--ANATOMY)

CHIKUTA, Iosef

Volume recombination in the base of a transistor at a random injection level. Izv. vys. ucheb. zav.; radiofiz. 8 no.2: 204-212 Mr-Ap '65. (MIRA 18:7)

SHIKULA, N. K. Cand Agr Sci -- "Agricultural-production characteristics of the eroded soils of the Donbass and means of raising their fertility." Khar'kov, 1960 (Min of Agr UkSSR. Khar'kov Order of Labor Red Banner Agr Inst im V. V. Dokuchayev). (KL, 1-61, 203)

SHIKULA, N.K.

Direction of sowing rows may prevent the washing off of soil.
Zemledelie 24 no.8:41-46 Ag '62. (MIIA 15:9)

1. Ukrainskiy nauchno-issledovatel'skiy institut pochvovedeniya.
(Ukraine—Soil conservation)

SHIKULA, N.K.

Hydrophysical properties of eroded soils in the Donets Basin.
Pochvovedenie no.2:99-104 F '62. (MIRA 15:3)

1. Ukrainskiy nauchno-issledovatel'skiy institut pochvovedeniya.
(Donets Basin--Erosion) (Soil physics)

BOBKOV, K.N., agronom; SHIKULA, N.K., kand.sel'skokhoz. nauk

State farm improves soil fertility. Zemledelie 25 no.10:14-21 O '63. (MIRA 16:11)

1. Ukrainskiy nauchno-issledovatel'skiy institut pochvovedeniya imeni A.N. Sokolovskogo.

SHIKULA, V.K.

Mechanical interlocking gear of a pneumatic disconnecting switch with a VMG-133 lubricant releasing device. Transp. i khran. nefti i nefteprod. no.9:32-33 '64. (MIRA 17:10)

Shikula, Ya.

USSR/Fitting Out of Laboratories - Instruments, Their Theory, Construction, and Use, H

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62046

Author: Shikula, Ya.

Institution: None

Title: New Type of Barocalcinometer

Original Periodical: Za sots. s.-kh. nauku (Praga), ser. A, 1954, No 1, 20-30

Abstract: Description of an instrument for the determination of the content of carbonic acid salt of calcium in the soil. The principle of operation of the instrument is based on measurement of pressure of carbon dioxide liberated from a weighed sample of soil by action of hydrochloric acid. Pressure is measured by means of a Bourdon manometer. The division scale shows directly the percentage of carbonic acid salts. Proposed are 2 modifications of the instrument for laboratory and field determinations. Output capacity of the instrument is of >100 samples daily. Tables are provided for making corrections for changes in temperature and atmospheric pressure.

Card 1/1

L 63858-65

ACCESSION NR: AP5014883 UR/0142/65/008/002/0204/0212 12 B
621.382.3

AUTHOR: Shikula, Y.

TITLE: Volume recombination in the trasistor base with an arbitrary injection level

SOURCE: IVUZ. Radiotekhnika, v. 8, no. 2, 1965, 204-212

TOPIC TAGS: transistor, volume recombination

ABSTRACT: Based on the W. Shockley and W. Read model (Phys. Rev., 1952, Sept 1, v. 87, no. 5, 835), the volume recombination in a transistor base, with arbitrary concentrations of minority carriers, is described. Both cases, (a) the uniform minority-carrier concentration throughout the volume and (b) the linear distribution of this concentration along the x-axis are considered. A differential equation describing the distribution of carriers in the transistor base, allowing for the recombination loss, is derived; the equation was solved by the method of successive approximations on an electric integrator; a particular solution is shown in a diagram. The recombination loss in the transistor base is presented as a function of the recombination intensity, χ-parameter, and relative concentration. Orig. art. has: 7 figures and 32 formulas.

ASSOCIATION: none
SUBMITTED: 02Dec63
ENCL: 00
NO REF SOV: 002
SUB CODE: EC
OTHER: 006

Card 1/1 dm

SHIKUNINA, N.M.; ZOLOTAREVSKIY, V.S.

Possible causes for reduction of economic efficiency of a throttled gasoline engine. Trudy Lab.dvig. no.5:127-144 '60. (MIRA 14:3)

(Gas and oil engines)

SHIKUNINA, N.M.; ZOLOTAREVSKIY, V.S., kand.tekhn.nauk; CHERNYAK, B.Ya.

Increasing the economic efficiency of a carburetor engine operating on partial loads. Avt.prom. no.12:9-12 D '60. (MIRA 13:12)

1. Laboratoriya dvigateley AN SSSR.
(Automobiles--Engines)

SHIKUNINA, N. M., CAND TECH SCI, "~~INVESTIGATION~~ Study OF THE ECONOMY OF A CARBURETOR ENGINE at THROTTLE-~~OPERATED~~ rates AND ~~DOING~~ ECONOMIC MIXTURE ~~COMPOUNDS~~ Combustions." MOSCOW, 1961. (MIN OF HIGHER AND SEC SPEC ED RSFSR. MOSCOW ~~AUTOMOBILE~~ Motor Vehicle HIGHWAY INST). (KL-DV, 11-61, 223).

SHIKUNOV, I. (Baku).

Parts made of glued shavings. Kryl. rod. 9 no.2:insert:14 F '58.
(Airplanes--Models) (MIRA 11:2)

SHIKUNOV, I., inzh.

"Poroizol" for sealing joints in precast houses. Zhil.stroi. no.8:12-13 Ag '61. (MIRA 14:8)
(Building materials) (Precast concrete construction)

SHIKUNOV, I., inzh.

Seams of large-panel buildings. Zhil. stroi. no.4:17-18 '62.
(MIRA 15:5)

(Architecture—Details)

SHISHKIN, A., doktor tekhn.nauk; ARIYEVICH, E., kand.tekhn.nauk; TOLSTYKH, L., kand.tekhn.nauk; SHIKUNOV, I., inzh.

Extending the life of steel braces in the walls of large-panel buildings. Zhil. stroi. no.1:6-8 '62. (MIRA 16:1)
(Building—Details) (Corrosion and anticorrosives)

USHKOV, F., kand.tekhn.nauk; SHIKUNOV, I., inzh.

Device for testing air and water tightness of joints in large-panel buildings. Zhil. stroi. no.9:31 '62. (MIRA 16:2)
(Testing machines) (Buildings—Details)

MOROZOV, N.V., kand. tekhn. nauk; MKRTUMYAN, A.K., kand. tekhn. nauk; ANTIPOV, T.P., arkh.; KOCHESHKOV, V.G., inzh.; LISAGOR, I.A., inzh.; TSAPLEV, N.N., inzh.; IVASHKOVA, V.K., kand. tekhn. nauk; SHIKUNOV, I.K., inzh.; FILIN, Yu.D., inzh.; MOSTAKOV, V.I.; BURLACHENKO, P.Ye., kand. khim. nauk[deceased]; PANKRATOV, V.F., inzh.; RUBANENKO, B.R., glav. red.; ROZANOV, N.P., zam. glav. red.; ONUFRIYEV, I.A., red.; YUDIN, Ye.Ya., red.; NASONOV, V.N., red.; ISIDOROV, V.V., red.; MAKARICHEV, V.V., red.; POLUBNEVA, V.I., red.

[Ways of improving design details for the seams of exterior wall slabs] Puti uluchsheniia konstruktivnykh reshenii stykov panelei naruzhnykh sten. Moskva, TSentr. biuro tekhn. informatsii i nauchno-issl. in-ta organizatsii, mekhanizatsii i tekhn. pomoshchi stroit., 1962. 78 p. (MIRA 16:8)

1. TSentral'nyy nauchno-issledovatel'skiy i proyektno-eksperimental'nyy institut industrial'nykh zhilykh i massovykh kul'turno-bytovykh zdaniy (for TSaplev). 2. Nauchno-issledovatel'skiy institut betona i zhelezobetona Akademii stroitel'stva i arkhitektury SSSR, Perovo (for Mostakov). 3. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroitel'nykh materialov Akademii stroitel'stva i arkhitektury SSSR (for Pankratov).

(Walls)

SHIKUNOVA, L.G.; GURVICH, A.M.

Conference devoted to the problem of pathophysiology and therapy of terminal states in the clinic and in emergencies. Vest.AMN SSSR no.4: 53-55 '53. (MLRA 7:1)

1. Iz laboratorii eksperimental'noy fiziologii po ozhivleniyu organizma (zaveduyushchiy - professor V.A.Negovskiy) Akademii meditsinskikh nauk SSSR.

(Death (Biology))

SHIKUNOVA, L.G.; NEGOVSKIY, V.A., professor, zaveduyushchiy

New data on the treatment of patients in terminal states; from data presented at a conference on the problem of pathophysiology and therapy of terminal states in the clinic and in the administration of first aid. Sov.med. 17 no.6:23-26 Je '53. (MLRA 6:6)

1. Laboratoriya eksperimental'noy fiziologii po ozhivleniyu organizmov Akademii meditsinskikh nauk SSSR.
(Death, Apparent) (First aid in illness and injury)
(Medicine--Practice)

SHIKUNOVA, L.G.

BAKULEV, A.N., redaktor; GAYEVSKAYA, M.S., redaktor; GORIZONTOV, P.D., redaktor; GULYAYEV, A.V., redaktor; DOBRODEYEV, A.V., redaktor; MIL'CHENKO, I.T., redaktor; NEGOVSKIY, V.A., redaktor; NYROVA, P.F., redaktor; PETROV, B.A., redaktor; SARKISOV, S.A., redaktor; SEVERIN, S.Ye., redaktor; SHIKUNOVA, L.G., redaktor; NEYMAN, I.M., redaktor; BOBROVA, Ye.N., tekhnicheskiy redaktor

[Transactions of the conference dedicated to problems of pathological physiology and therapy of the terminal states in the clinic and in first aid practice; December 10-12, 1952] Trudy Konferentsii posvia-shchennoi probleme patofiziologii i terapii terminal'nykh sostoianii v klinike i praktike neotlozhnoi pomoshchi, 10-12 Dekabria 1952 g. Moskva, Gos. izd-vo meditsinskoi lit-ry, 1954. 329 p. (MLRA 8:3)

1. Konferentsiya posvyashchennaya probleme patofiziologii i terapii terminal'nykh sostoyanii v klinike i praktike neotlozhnoi pomoshchi, Moscow, 1952.
(Physiology, Pathological) (Death, Apparent)

SHIKUNOVA, L.G.

Ways for studying the problem of resuscitation. Vest.AMN SSSR 11 no.5:80-82 '56. (MIRA 12:10)
(RESUSCITATION)

SHIKUNOVA, L.G.

Use of oxygenated blood in the restoration of the vital functions of the body under experimental conditions [with summary in English]. Biul.eksp.biol. i med. 44 no.9:31-35 S '57. (MIRA 10:12)

1. Iz laboratorii eksperimental'noy fiziologii po ozhivleniyu organizma (zav. - prof. V.A.Negovskiy) AMN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR S.Ye.Severinym.

(RESUSCITATION, experimental,
with oxygenated blood (Rus))
(BLOOD,
oxygenated in exper. resuscitation (Rus))

SHIKUNOVA, L. G., Cand Med Sci -- (diss) "Effect of the intra-arterial pressure of oxygenerated blood on the process of restoration of vital functions of the organism." Mos, 1958, 18 pp. (Acad Med Sci USSR), 200 copies. (KL, 9-58, 124)

SHIKUNOVA, L.G.

Comparative effectiveness of the action of arterial and venous blood in intra-arterial transfusion [with summary in English]. Eksper.khir. 3 no.5:47-51 S-O '58 (MIRA 11:11)

1. Iz laboratorii eksperimental'noy fiziologii po ozhivleniyu organizma (zav. - prof. V.A. Negovskiy) AMN SSSR.
(BLOOD TRANSFUSION, exper.
intra-arterial, comparative effectiveness of arterial & venous blood in dogs (Rus))

SHIKUNOVA, L.G.,

Use of oxygenated blood for forced intra-arterial injection in treatment of terminal states [with summary in English]. Vest.khir. 81 no.8 24-30 Ag '58 (MIRA 11:9)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. prof. A.V. Gulyayev) pediatricheskogo fakul'teta 2-go Moskovskogo meditsinskogo instituta khirurgicheskogo otdeleniya (zav. - prof. A.S. Rovnov) 6-y gorodskoy klinicheskoy bol'nitsy i laboratorii eksperimental'noy fiziologii po ozhivleniyu organizma (zav. - prof. V.A. Nevgovskiy) AMN SSSR. Adres avtora: Moskva, ul. 25 Oktyabrya d. 9, Laboratoriya eksperimental' noy fiziologii po ozhivleniyu orgnizma AMN SSSR.

(BLOOD TRANSFUSION,
oxygenated, intra-arterial foced admin. of oxygenated blood in agonal states (Rus))
(RESUSCITATION,
same (Rus))

SHIKUNOVA, L.G.; KISELEVA, K.S.

Characteristics in the development of the terminal state arising following exclusion of respiration with diplacin and methods of its treatment. Eksper.khir.i anest. 6 no.4:2[redacted] '61. (MIRA 14:10)

(DIPLACIN) (APNOEA) (DEATH) (RESUSCITATION)

SHIKUNOVA, L.G., kand.med.nauk (Moskva)

Basic conclusions and problems in organizing control of terminal states. Sov. zdrav. 21 no.5:62-66 '62. (MIRA 15:5)

1. Iz laboratorii eksperimental'noy fiziologii po ozhivleniyu organizma (zav. - prof. V.A.Negovskiy) AMN SSSR.
(DEATH, APPARENT) (RESUSCITATION)

SHIKUNOVA, L.G., kand.med.nauk

Second All-Union Conferences on the Pathology and Treatment of Terminal States. Sov.med. 26 no.10:150-152 O '62. (MIRA 15:12)
(DEATH, APPARENT—CONGRESSES)

SHIKUNOVA, L.G.; FAYNBRUN, O.D.; GURVICH, A.M. (Moskva)

Effect of prolonged cardiac massage on the process of restoration of vital body functions. Pat. fiziol. eksp. ter. 7 no.5: 16-21 S-O'63 (MIRA 17:2)

1. Iz Laboratorii eksperimental'noy fiziologii po ozhivleniyu organizma (zav. - prof. V.A. Negovskiy) AMN SSSR.

SHIKUNOVA, L.G., kand. med. nauk; TABAK, V.Ya.

First aid management of terminal conditions. Sov. med. 27 no.8:97-100 Ag '64. (MIRA 18:3)

1. Laboratoriya eksperimental'noy fiziologii po ozhivleniyu organizma (zav. - prof. V.A. Negovskiy) AMN SSSR i Stantsiya skoroy meditsinskoy pomoshchi (nachal'nik L.B. Shapiro) Moskvy.

SHIKUNOVA, L.G.

Substitution of the blood in the restorative period following prolonged fibrillation and consecutive heart massage. Pat. fiziol. i eksp. terap. 8 no.4:33-37 Jl-Ag '64. (MIRA 18:2)

1. Laboratoriya eksperimental'noy fiziologii po ozhivleniyu organizma (zav.- prof. V.A. Negovskiy) AMN SSSR, Moskva.

SHIKURINA, YE. A., [illegible] ROV, L. S., [illegible]LOVA, N. A., KUCHMA, [illegible],
SELITRENNIKOVA, [illegible]

"Hygienic norms for rendering harmless the refuse under conditions of the Uzbekistan."

Report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Infectionists, 1959.

PRUTSKOVA, M.G., kand. sel'khoz. nauk; UKHANOVA, O.I.; SAKHAROVA, L.I.; BOLSUNOVSKAYA, O.V.; IVANOVA, N.Ye.; LOVCHIKOV, I.S.; ZALKIND, G.N.; IL'IN, M.I.; KOZ'MINA, K.A.; SHIKUT', V.A.; PETROVA, Z.V.; GENERALOV, G.F.; BUDYUK, V.P.; GOMENYUK, L.I., red.

[New highly productive varieties of grain crops] Novye vysokoproduktivnye sorta zernovykh kul'tur. Moskva, Kolos, 1965. 319 p. (MIRA 18:8)

SHIL', V. N.

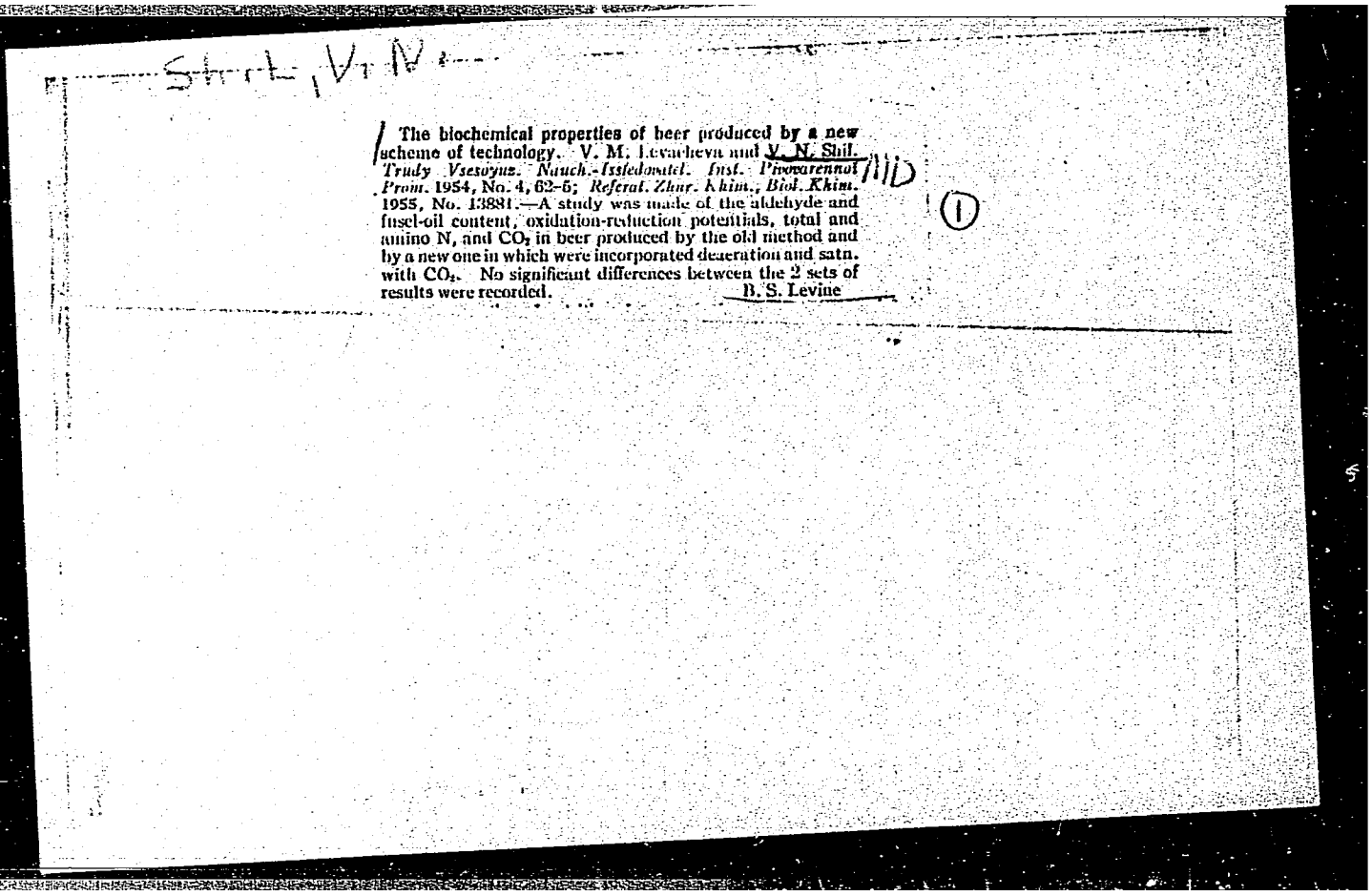
Plevako, Ye. A. and Shil', V. N. "Use of starch- containing waste for growing yeast," error in 1st autor: Ye. A. Plevako. Vkusovaya prom-st' SSSR, no. 1, 1949, p. 24-28

SO: U-3264, 10 April 1953, (Letopis 'Zhurnal 'nykh Statey, No. 3, 1949)

SHIL', V. N.

Dissertation: "The Importance of the Raising Capacity of Yeasts of the Fungus Mycotoril for the Quality of Yeast Used in Bread and Food." Cand Tech Sci, Moscow Inst of National Economy, Moscow, 1953. (Referativnyy Zhurnal--Khimiya, No 5, Mar 54)

SO: SUM 243, 19 Oct 1954



The biochemical properties of beer produced by a new scheme of technology. V. M. Levacheva and V. N. Shil. *Trudy Vsesoyuz. Nauch.-Issledovatel. Inst. Pivovarennoi Prom.* 1954, No. 4, 62–6; *Referat. Zhur. Khim., Biol. Khim.* 1955, No. 13881.—A study was made of the aldehyde and fusel-oil content, oxidation-reduction potentials, total and amino N, and CO_2 in beer produced by the old method and by a new one in which were incorporated deaeration and satn. with CO_2. No significant differences between the 2 sets of results were recorded. B. S. Levine

SHIL, V. N., VESELOV, I. Y., POKROVSKAYA, N. V., and RYLKIN, S. S.

"Certain data concerning the physiology of yeast in fermentation of malt must," a paper submitted at International Conference on Radioisotopes in Scientific Research, Paris, 9-20 Sep 57.

SHIL, V.N.

Microbiology - Industrial Microbiology.

Abs Jour : Ref Zhur - Biol., No 5, 1958, 19446

Author : Veselov, I.Ya., Shil, V.N.

Inst : -

Title : Comparison of Biological Stability and Beer Microflora, Determined by New and Old Methods.

Orig Pub : Tr. Vses. n.-i. in-t pivovar. prom-sti, 1957, No 6, 3-7

Abstract : No abstract.

Card 1/1

VESELOV, I.Ya.; SHIL', V.N.

Propagation of yeasts sown in a minute amount, and their fermenting power in a long series of transplants with deaeration of the wort saturated with carbonic acid. Trudy VNIIPP no.7:82-89 '59. (MIRA 13:5)
(Yeast)

SHILAGYI, Janos, dr.; MESZAROS, Lajos, dr.

Experience with simultaneous antimicrobial and histamine therapy of tuberculosis. Tuberkulozis 13 no.10:297-300 O '60.

1. A Debreceni Orvostudomanyi Egyetem Tbc Klinikajanak (mb.igazgato: Pongor Ferenc dr.) kozlemenye.
(HISTAMINE pharmacol)
(ANTITUBERCULAR AGENTS pharmacol)

SHILAGYI, Jenone

Child care problems on the eve of the summer. Munka 13 no.6:26-27 Je '63.

1. Danuvia Muvelodesi Haz igazgatoja.

KUDRA, O.K.; GITMAN, Ye.B.; SHILAK, N.S.

Relation between current density, time, and concentration in electro-precipitation of lead. Ukrain. Khim. Zhur. 16, No.5, 477-83 '50.(MLRA 6:4) (CA 47 no.22:12054 '53)

1. Inst. Gen. Inorg. Chem., Acad. Sci. Ukr. S.S.R., Kiev.

KUDRA, O.K.; GITMAN, Ye.B; SHILAK, N.S.

Relation between concentration, current density, and time in electroprecipitation of cobalt. Ukrain. Khim. Zhur. 16, No.5, 484-91 '50. (MLRA 6:4)
(CA 47 no.22:12053 '53)

1. Inst. Gen. Inorg. Chem., Acad. Sci. Ukr. S.S.R., Kiev.

SHILAK, V., traktorist

More attention to the trade-union organizations in the country.
Sov.profsoiuzy 7 no.4:35 Mr '59. (MIRA 12:4)

1. Profgruporg kolkhoza im. Lenina Zaslavskogo rayona, Minskoy oblasti.
(Farm mechanization) (Trade unions)

24770

S/181/62/004/006/033/051
B108/B138

AUTHORS: Pozhela, Yu. K., and Shilal'nikas, V. I.

TITLE: Emission of hot electrons from germanium

PERIODICAL: Fizika tverdogo tela, v. 4, no. 6, 1962, 1601-1603

TEXT: Experimental evidence has been found that in a strong electric field the carriers in valency semiconductors attain high temperatures. The thermo-emf may then cause emission of hot carriers from the surface of p-type semiconductors. Experiments with germanium, however, failed unless the specimens were treated in cesium vapor to reduce the work function. There is 1 figure.

ASSOCIATION: Institut fiziki i matematiki AN Lit. SSR, Vil'nyus
(Institute of Physics and Mathematics AS LithSSR, Vil'nyus)

SUBMITTED: February 12, 1962

Card 1/1

BANIS, T.Ya.; VEBRA, A.I.; POZHELA, Yu.K.; REPSHAS, K.K. [Repsas, K.]; SHILAL'NIKAS, V.I. [Silalnikas, V.]

Heating of the current carriers in semiconductors in strong electric fields. Radiotekh. i elektron. 7 no.9:1519-1522 S '62. (MIRA 15:9)

1. Institut fiziki i matematiki AN Litovskoy SSR.
(Electric fields) (Semiconductors)

L 30080-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD

ACCESSION NR: AT5002022 S/2910/64/004/003/0399/0403

28
26
B+1

AUTHOR: Shilal'nikas, V. I. (Silalnikas, V.); Pozhela, Yu. K. (Pozela, J.)

TITLE: Hot electron emission from silicon

SOURCE: AN LitSSR. Litovskiy fizicheskiy sbornik, v. 4, no. 3, 1964, 399-403

TOPIC TAGS: silicon, hot electron emission, semiconductor, microwave field, electron temperature

ABSTRACT: The theory of hot electron emission predicts that an emission current from silicon must be observed in electric fields on the order of a few kv/cm under the condition that $W_i > \chi$ (W_i is the energy which is necessary for impact ionization; χ is the electron affinity). Assuming that

$$\frac{\mu(E)}{\mu(o)} = \left(\frac{T_o}{T_e}\right)^2$$

where $\mu(E)$ and $\mu(o)$ are the mobilities of the current carriers in the electric field E and in the absence of the field, respectively, one may predict the emission current of hot electrons from silicon by determining the electron temperature, us-

Card 1/3

L 30080-65

ACCESSION NR: AT5002022

2

ing the experimental dependence of their mobility on the electric field intensity. This estimate gives 10^4 ma/cm^2 when the field intensity is 3 kv/cm. In this work, the emission of hot electrons from a homogeneous n-type silicon specimen was observed. The surface of the crystal was treated with cesium to reduce the surface barrier. The hot electron emission current was 0.6 A/cm^2. Similar emission was observed in silicon crystals not treated with cesium. The dependence of the hot electron emission current on the electric field intensity is shown in Fig. 1 of the Enclosure. Orig. art. has: 4 figures and 1 formula.

ASSOCIATION: Institut fiziki i matematiki Akademii nauk Litovskoy SSR (Physics and mathematics institute, Academy of sciences, Lithuanian SSR)

SUBMITTED: 30Dec63 ENCL: 01 SUB CODE: SS, EC

NO REF SOV: 003 OTHER: 002

Card 2/3

L 30080-65

ACCESSION NR: AT5002022 ENCLOSURE: 01

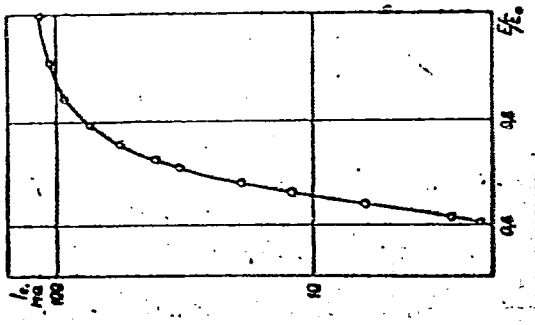


Figure 1. Hot electron emission current from n-silicon as a function of the field intensity.

Card 3/3

S/181/63/005/003/005/046
B102/B180

AUTHORS: Pozhela, Yu. K., and Shilal'nikas, V. I.

TITLE: The problem of hot electron emission from germanium

PERIODICAL: Fizika tverdogo tela, v. 5, no. 3, 1963, 730-733

TEXT: New experiments were made in order to investigate the recently discovered phenomenon of an emission of hot electrons from Si or SiC p-n junctions and from germanium surfaces after treatment in cesium vapors (FTT, 4, 1601, 1962). A sample of n-type germanium was placed in a vacuum waveguide and exposed to intense h-f pulses (60 kw, pulse duration 0.5 μsec, repetition frequency 10-50 cps, carrier frequency 10^{10} cps, field in the sample 3.5 kv/cm) and, from resistance measurements with and without field, the characteristicsof I the emission current were obtained. As a function of the field amplitude I shows a similar course as for Si, Ge, or SiC p-n junctions; it tends to, but does not reach saturation. As a function of the anode voltage I does reach saturation; B = R(E)/R(0) as a function of E increases linearly and

Card 1/2

The problem of hot electron emission ...

$I/B = f(1/B^2)$ shows an exponential decrease. The results agree with the relation $I = b\sqrt{E}\exp(-c/E^2)$, (FTT, 4, 2015, 1962), which, since $B \sim E$ and $T_e = \alpha B^2$ can be modified: $I = A\sqrt{T_e}\exp(-\varphi/kT_e)$. φ is the electron work function. On the assumption that $\varphi \approx 2$ ev, $\alpha = (4 - 9)T_o$, where T_o is the lattice temperature; $A = 1.6 \cdot 10^{-1}$ a/deg$^{1/2}$. There are 6 figures.

ASSOCIATION: Institut fiziki i matematiki AN Lit.SSR, Vil'nyus
(Institute of Physics and Mathematics AS LitSSR, Vil'nyus)

SUBMITTED: September 18, 1962

Card 2/2

27917
S/096/61/000/011/002/006
E194/E155

11.0910

AUTHORS: Ivanov, K.I., Doctor of Chemical Sciences, Vilyanskaya, Ye.D., Candidate of Chemical Sciences, Kazanskiy, K.M., Engineer, Shilankov, B.F., Engineer, and Fedorova, I.V., Engineer

TITLE: Service test results with fire resistant turbine oil "Ivviol' 1A"

PERIODICAL: Teploenergetika, no. 11, 1961, 27-29

TEXT: Work on fire-resistant hydraulic fluids and lubricants for turbines is proceeding in several countries. For example, Pydraul F-9 is suitable as a hydraulic fluid but not as a bearing lubricant. In 1958-59 the Laboratoriya nefti (Petroleum Laboratory) of VTI developed a fire-resistant substitute for turbine oil, grade Ivviol' 1A, intended for use both as hydraulic fluid and lubricant. Laboratory test results were published by two of the present authors (Ref.3: K.I. Ivanov, Ye.D. Vilyanskaya, Teploenergetika no.9, 1959) and then an experimental batch of the material was made for field tests. The viscosity of the material was 20 centistokes at 50 °C, the flash point was 238 °C, open cup,

Card 1/3

Service test results with fire ....

and the fire point in air 740 °C. The specific gravity at 20 °C is 1.17. The material meets the requirements of the conventional turbine oil specification in respect of stability and neutrality. Before the charge was put in the turbine certain changes were made: the cylindrical filters in the oil tank were replaced by gauze screens which could be cleaned during operation of the turbine; the design of one of the main glands was improved. In the early period of operation with Ivviol' 1A, foaming was observed but was cured by the addition of a silicone anti-foam agent to the amount of 0.1% by weight. After two or three months' service the brass gauze screens in the oil tank were attacked by the fluid. During the entire service period the make-up of fire-resistant fluid was 200 kg, whereas the amount of oil that had been required in a corresponding period was 800 kg. The difference is presumably due to the lower volatility of the fire-resistant material. After a period of service the viscosity and neutrality of the fluid were unchanged and all parts of the turbine, which were carefully examined, were in good condition. The fluid was on test for 5400 hours, during which the turbine ran without stopping for 120 days, at 18 hours a day for 110 days,

Card 2/3

Service test results with fire ....

and at 12 hours per day for 45 days. The water content of the fluid ranged from 0.02 to 0.2%. Water is easily removed from the fire-resistant fluid because it accumulates on the surface of the oil tank from which it readily evaporates. The results indicate that the oxidation stability of the synthetic fluid is better than that of the usual mineral oil. The fire-resistant fluid darkened in colour because it attacked the protective paint used in the system. Ivviol' 1A is toxic if ingested, but if normal hygienic precautions, typical of those used with similar fluids elsewhere, are observed there is no risk on this account. The difficulties with foaming and corrosion of brass can easily be overcome and it is considered that Ivviol' 1A can replace mineral oil in turbine lubricating and hydraulic systems of the type considered.
There are 1 figure, 2 tables and 3 references: 2 Soviet-bloc and 1 English. The English language reference reads as follows:
Ref.1: Harris Product Engineering, vol. XX, 1954.
ASSOCIATION: Vsesoyuznyy teplotekhnicheskiy institut - Mosenergo
(All-Union Heat Engineering Institute and Mosenergo)

Card 3/3

IVANOV, K.I., doktor khim.nauk; VILYANSKAYA, Ye.D., kand.khim.nauk; KAZANSKIY, K.M., inzh.; SHILANKOV, B.F., inzh.; FEDOROVA, I.V., inzh.

Results of the operational tests of "Ivviol' 1A" nonflammable turbine oil. Teploenergetika 8 no.11:27-29 N '61. (MIRA 14:10)

1. Vsesoyuznyy teplotekhnicheskiy institut i Moskovskoye rayonnoye upravleniye energeticheskogo khozyaystva.
(Steam turbines—Lubrication)
(Lubrication and lubricants—Testing)

TELEGDY-KOVATS, Laszlo, dr.; SHILAS, Elemerne; SZIJJARTO, Gyula

Storage tests performed with packed foods. Elelm ipar 13 no.8:251-256 Ag '59.

1. Budapesti Muszaki Egyetem Elelmiszerkemiai Tanszek.

IVANOV, K., inzhener; PARAMONOV, V., inzhener; SHIL'BERG, I., inzhener.

Metal props for thin seams. Mast.ugl. 5 no.7:23-24 Jl '56.
(Mine timbering) (MIRA 9:9)

9.6000 (1040, 1159)

27704
S/120/61/000/003/015/041
E073/E535

AUTHORS: Kolotov, O.S., Lobanov, Yu.N. and Shil'berskiy, Z.

TITLE: Generator of nanosecond pulses with continuous regulation of the pulse duration

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, No.3, pp.87-89

TEXT: The authors utilise the well known method of generation of pulses of microsecond duration with two thyratrons, the instants of triggering of which can be controlled for generating square topped voltage pulses with a maximum amplitude of 1.2 kV. Two thyratrons (Fig.1) feed a common load, the resistance in the cathode of one of the thyratrons $Л_4$ (L_4). If this thyratron is fired, a positive pulse of considerable duration with an amplitude of up to 500 V and a front of 5 nanosec will be generated, depending on the capacitance of the condenser in the anode circuit of this thyratron. After the second thyratron $Л_5$ (L_5) is fired a very similar pulse of negative polarity will flow through that resistance. A resultant voltage pulse will appear only if there is a time shift of the instants of ignition of the thyratrons. Pre-amplifying stages are

Card 1/4

provided for improving the shape of the pulse and increasing the amplitude of the triggering pulse. The stages with the tubes Π_2 (L_2) and Π_3 (L_3) have the additional function of reducing the mutual influence of the grid circuits of the thyratrons. The surge taken from the cathode load of the thyratrons will have a front with a rise time of 5 to 6 nanoseconds. To improve further the steepness of the front, the formed pulse is fed to the input of a limiter Π_6 (L_6) in which pulses with front rise times below 3 nanoseconds and an amplitude of 400 V can be generated using a relatively low anode load (50 Ohm cable). The amplitude of this pulse can be increased to 1200 V by using one amplifier stage, the load of which is a cable having a wave resistance of 75 Ohm. Since the tubes operate under surge conditions, only a negative polarity pulse can be generated in the anode circuits of the tubes under cut-off conditions. For triggering the tubes of the output stage, the negative pulse from the previous stage has to be inverted. This is done by means of a section of coaxial cable which is wound onto a ferrite core. The oscillator is triggered with pulses of 0.5 μsec and longer and with fronts of

Generator of nanosecond pulses ... S/120/61/000/003/015/041
E073/E535

0.25 μsec of a minimum amplitude of about 40 V. The pulse generator is stable in operation for pulse repetitions with frequencies up to 3 kc/s. The pulse duration can be controlled within the limits of 3 to 300 nanoseconds. Acknowledgments are expressed to A. A. Sanin for advice and comments. There are 3 figures and 2 references: 1 Soviet and 1 English which reads as follows: R. W. Rochelle, Rev. Scient. Instrum. 1952, 23, 298.

ASSOCIATION: Nauchno-issledovatel'skiy institut yadernoy fiziki MGU (Scientific Research Institute for Nuclear Physics, Moscow State University)

SUBMITTED: July 18, 1960

Card 3/4

KOLOTOV, O.S.; SANIN, A.A.; SHIL'BERSKIY, Z.

Device for the adjustment of a pulse equipment in the millimicrosecond range. Prib.i tekh.eksp. 6 no.5:82-86 S-O '61. (MIRA 14:10)

1. Nauchno-issledovatel'skiy institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta.
(Pulse techniques (Electronics))

SHIL'DINER, L. N.

"An Experimental Study of the Demagnetizing Action of Armature Reaction," Elektrichestvo, No. 6, 1949. Sand Tech Sci. -c1949-.

SHTEYNER, L. M.

"Electrification of Railroad Transport on 50 cycle Single Phase Current," No. 8, 1949.
Cand of Tech Sci Zakharchenko, D. D. Engr. -c1949-.

SHIL'DINER, L. M.

"An Analytical Method of Studying the Demagnetizing Action of Transverse Armature Reaction at Heavy Overloads," No. 10, 1949, Candidate of Technical Sciences Moscow. -c1949-.

SHIL'DINER, L. M.

USSR/Electricity - DC Machines May 51
Inductance

"The Effect of Mutual Inductance in DC-Machine Circuits and Determination of the Mutual Inductance of the Circuits," L. M. Shil'diner, Cand Tech Sci, Moscow

"Elektrichestvo" No 5, pp 48-51

Suggests 2 methods -- one exptl, the other analytical -- for detg the mutual inductance of elec circuits of dc machines, and supplies exptl data. Submitted 12 Aug 50.

189T25

SHIL'DINER, L.M., kandidat tekhnicheskikh nauk (Moskva); STASYUK, V.N., inzhener.

Problems related to the electrification of railroads. Elektrichestvo no.10:77-80 O '57. (MERA 10:9)

1. Tyazhpromelektroproyekt (for Stasyuk).
(Railroads--Electrification)

SHIL' DINER, L.M.

110-12-12/19

AUTHOR: Shil'diner, L.M., Candidate of Technical Sciences.

TITLE: Compensation of the Transformer e.m.f. of a 50 c/s Single-phase Commutator Motor (Kompensatsiya transformatornoy E.D.S. odnofaznogo kollektornogo elektrodvigatelya 50 gts)

PERIODICAL: Vestnik Elektropromyshlennosti, 1957, Vol.28, No.12, pp. 41 - 43 (USSR).

ABSTRACT: The amount of copper required in 50 c/s commutator traction motors is much greater than in motors for $16^2/3$ c/s. Moreover, the currents are higher in the 50 c/s motor so that cables and associated equipment require more copper. This is one of the main reasons why 50 c/s commutator motors are not widely used for main line electrification. French and other European firms are trying to improve their 50 c/s motors but the fundamental disadvantages remain. The author considers a new means of considerably increasing the transformer e.m.f., so improving the 50 c/s commutator motor. He has developed this new circuit into a number of variants, one of which is illustrated in Fig.1. The advantages of a 50 c/s commutator traction-type motor using the new circuit as compared with ordinary motors, and with the commutating conditions allowed for in the latest $16^2/3$ c/s motors on German locomotives are

Cardl/3 as follows: the flux and the transformer e.m.f. are increased

Compensation of the Transformer e.m.f. of a 50 c/s Single-phase Commutator Motor.

by a factor of 2.3 - 2.5 and the current and number of brushes are reduced by the same factors: the control apparatus is lighter and cheaper; the amount of copper required for the locomotive is reduced by at least a third; the range of sparkless commutation is extended by a factor of 1.5 despite the great increase in the transformer e.m.f., and the locomotive is more reliable; and the efficiency is somewhat higher because of reduced losses in the commutator and interpoles.

Fig.2 shows graphs of the remanent transformer e.m.f. of a normal 50 c/s commutator traction motor from the "Dynamo" Works with a transformer e.m.f. of 3 V (Curve 1), and the corresponding value for the new motor (Curve 2). The increase in the zone of sparkless commutation is clearly seen.

The effectiveness of the proposed circuit was confirmed by tests made on a 400 kW motor in 1954. Even though the motor was an old one and not specially adapted to the requirements of the new circuit, the results were very satisfactory.

It is concluded that the improved 50 c/s commutator traction motor could be used in the development of a very satisfactory locomotive. There are 2 figures.