82671
S/080/60/033/007/018/020
A003/A001

5.2100

AUTHORS: Markovskiy, L. Ya., Markevich, G. S.

TITLE: The Determination of the Softening Temperatures in the Beryllium-Boron System in the Region Rich in Beryllium

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol. 33, No. 7, pp. 1667-1669

TEXT: The diagram of fusibility of a beryllium-boron system in the region rich in beryllium (up to 50 atomic % B) was studied. The experiments were carried out on preparations obtained by sintering powders of boron and beryllium. The borides were synthesized from pure B and Be containing 99.4% B and 99.8% Be, respectively. The samples with a cross section of 2 x 2 mm and 10-15 mm long were heated by electric current. The measurements were carried out in a flow of chemically pure argon with a МОП-48 (МОР-48) microoptical pyrometer. The softening temperature was determined for all compositions starting from pure beryllium to a compound with 50 atomic % B. To the composition BeB_2 (66.6% atomic % B) this method is not applicable due to semiconductor properties of this compound. Samples with the composition BeB_6 have such a high electric resistance that they cannot be heated by current to the temperature required.

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S/080/60/033/007/018/020
A003/A001

The Determination of the Softening Temperature in the Beryllium-Boron System in the Region Rich in Beryllium

The curve obtained has extrema for the compositions Be_5B and Be_2B. The data show that the melting point of borides is 70-80°C above their softening temperature. The comparison of the softening temperature with the data obtained by metallographic investigation shows that the eutectics corresponds to the minimum of the curve (~ 11 atomic % B), and the individual chemical compounds to the maxima (16.5 atomic % B and 33.0 atomic % B). The eutectics which consists, according to roentgenographic data, of beryllium metal and the δ-phase, is a mixture of blue-silvery grains of beryllium and rose-colored grains of the δ-phase. There is 1 graph and 8 references: 7 Soviet and 1 German.

ASSOCIATION: Gosudarstvennyy institut prikladnoy khimii (State Institute of Applied Chemistry)

SUBMITTED: December 21, 1959

Card 2/2

MARKEVICH, G. S. Cand Chem Sci -- "Study of the beryllium-boron system." Len, 1961 (Len Order of Lenin State Univ im A. A. Zhdanov). (KL, 4-61, 187)

L 2178-66 EWT(1)/FCC GW
ACCESSION NR: AP5021079 UR/0288/65/000/002/0123/0131
625.164

AUTHOR: Markevich, G. S.

TITLE: Aerodynamic properties of wind directing snow shields

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya tekhnicheskikh nauk, no. 2, 1965, 123-131

TOPIC TAGS: snow, aerodynamic design, wind direction instrument, wind velocity

ABSTRACT: Wind directing devices are used extensively for the snow protection of roads and enterprises in the Far North of the Soviet Union. The protection is based on the efficient use of the power of wind for the removal of snow from the guarded section. A general description of the experimental procedures is followed by a presentation and discussion of the results of experiments within wind tunnels and the results of test operation of wind directing snow shields. Results show that: 1) such devices exhibit good aerodynamical properties; 2) the efficiency of such devices is determined by the magnitude of the maximum velocity increase behind the shield and the length of the snow-free region; 3) panel inclinations up to 30° from the vertical do not affect significantly the performance of the shield. Angles beyond 30° result in a sharp decline in efficiency; 4) auxiliary wind

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ACCESSION NR: AP5021079

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directing fixtures on top of vertical panels (as designed by M. G. Potapov) do not increase significantly the efficiency of the panels; 5) best results were obtained with vertical grid-like panels with a 25% transparency; and 6) satisfactory operation of wind-directing snow shields requires a normal wind with velocities above 10-12 m/sec. "These investigations were carried out by G. S. Markevich and V. V. Kolmakov under the supervision of A. A. Komarov." Orig. art. has: 3 formulas, 5 figures, and 8 tables.

ASSOCIATION: Sibirskiy nauchno-issledovatel'skiy institut energetiki, Novosibirsk (Siberian Scientific Research Power Institute)

SUBMITTED: 03Nov64 ENCL: 00 SUB CODE: GO, ES

NO REF SOV: 000 OTHER: 000

Card 2/2

MARKEVICH, I. S.

131-23-5-3/16

AUTHORS: Kvitchenko, I. P., Markevich, I. S. Shaferman, M. Ya.

TITLE: Application of Natural Gas in the Manufacturing of Fire-Clay Products (Primeneniye prirodnogo gaza v proizvodstve shamotnykh izdeliy)

PERIODICAL: Ogneupory, 1958, Vol. 23, Nr 5, pp. 201-204 (USSR)

ABSTRACT: The thermal power of the natural gas from the Stavropol' place of discovery is 8500 kcal/ m^3. Its chemical composition in % is: CH_4 -97,8; C_2H_6 -0,5; C_3H_8 -0,3 C_4H_{10} -0,1; N_2 -1,3. The work department n. 5 of the Semiluksk works has rotary driers, air heaters for tunnel drying plants, periodic kilns for burning products and clay into fire-clay, shaft furnaces, an annular kiln and a central boiler plant. The department needs 4500 m^3 of natural gas per hour for firing the above aggregates. The pressure in the gas line for natural gas is 4-6 atmospheres excess pressure. In the heat plants with high gas consumption RD pressure regulators are used additionally. In figure 1 such a pressure regulator, built into an annular kiln, is shown. Periodic kilns and rotary driers are equipped with low-pressure torches which permit to regulate the gas

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Application of Natural Gas in the Manufacturing of Fire-Clay Products 131-23-5-3/16

supply from 1o to 6o m^3 / per hour (figure 2). The firings of the steam boilers as well as of the rotary driers and heaters are equipped with gas burners of the type Tsarik as can be seen from figure 3. In figure 4 the scheme of the gas supply to the chamber of an annular kiln is shown. A gas firing for a 1oo ton periodic kiln can be seen in figure 5, and in figure 6 a gas firing for a rotary drier of an output of 12-14 tons per hour is shown. Furthermore the equipment of kilns with gas burners is described in detail. In figure 7 curves of the burning of products by means of generator and natural gas in annular kilns is shown and in figure 8 the same curves by means of solid fuel and natural gas. By the change-over to natural gas the finish of the products improved and also the waste portion has been reduced to about half its value. Also the quality of fire-clay improved considerably, the same as its water-absorbing capacity. The drying period in the tunnel drying plants was reduced by 6% the same as the waste. There are 8 figures.

ASSOCIATION: Semilukskiy ogneupornyy zavod (Semiluki Works for Refractories)

AVAILABLE: Library of Congress

Card 2/2 1. Metallurgy 2. Fuels 3. Natural gas - Applications

15(2) SOV/131-59-8-5/14

AUTHORS: Kvitchenko, I. P., Markevich, I. S.

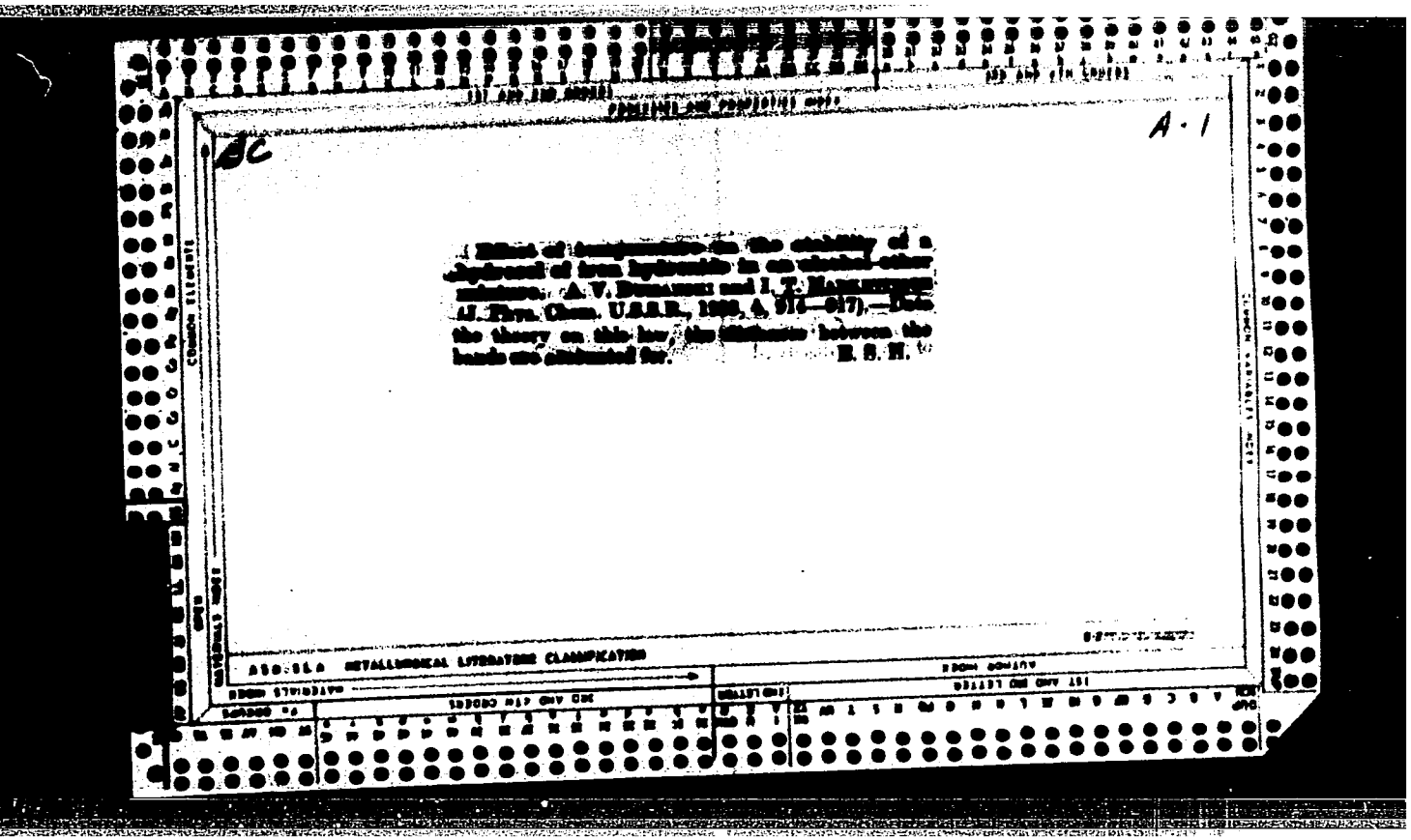
TITLE: Machine for Setting Glass Beams

PERIODICAL: Ogneupory, 1959, Nr 8, pp 350-354 (USSR)

ABSTRACT: In the Semiluki Plant a machine for setting glass beams was designed in 1955 following a suggestion by T. Ye. Trofimov, which however proved to be imperfect. At present, a second improved model has been designed, by means of which the furnace can be filled up to the vault, thus leading to an increase in the output. Figure 1 shows the appearance of such a setting machine. Its capacity amounts up to 40 t per seven-hour shift. Figure 2 gives a general view of the machine, and figure 3 illustrates the kinematic scheme of the latter; finally, it is described in detail. Its small size and high mobility are particularly pointed out. It is capable of lifting a glass beam from any position and placing it up to a height of 3 m. The machine is operated by one person. There are 3 figures.

ASSOCIATION: Semilukskiy ogneupornyy zavod (Semiluki Plant for Refractory Products)

Card 1/1



PROCESSES AND PROPERTIES INDEX

ca

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The colloidal properties of albumin in the presence of alcohol and sugar. I. T. Markevich. *Bull. inst. colloides Voronezh* 1934, No. 1, 22-8; *Chem. Zentr.* 1936, II, 1318.— The effect of sucrose on the temp.-coagulation curve of albumin in the presence of alc. was studied. A stabilizing action of the sucrose could be established. The coagulation of the albumin depends on the degree of hydration of the micelle. The dehydrating action of the alc. thereon increases with rise in temp., while the stabilizing action of the sucrose decreases.

M. G. Moore

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

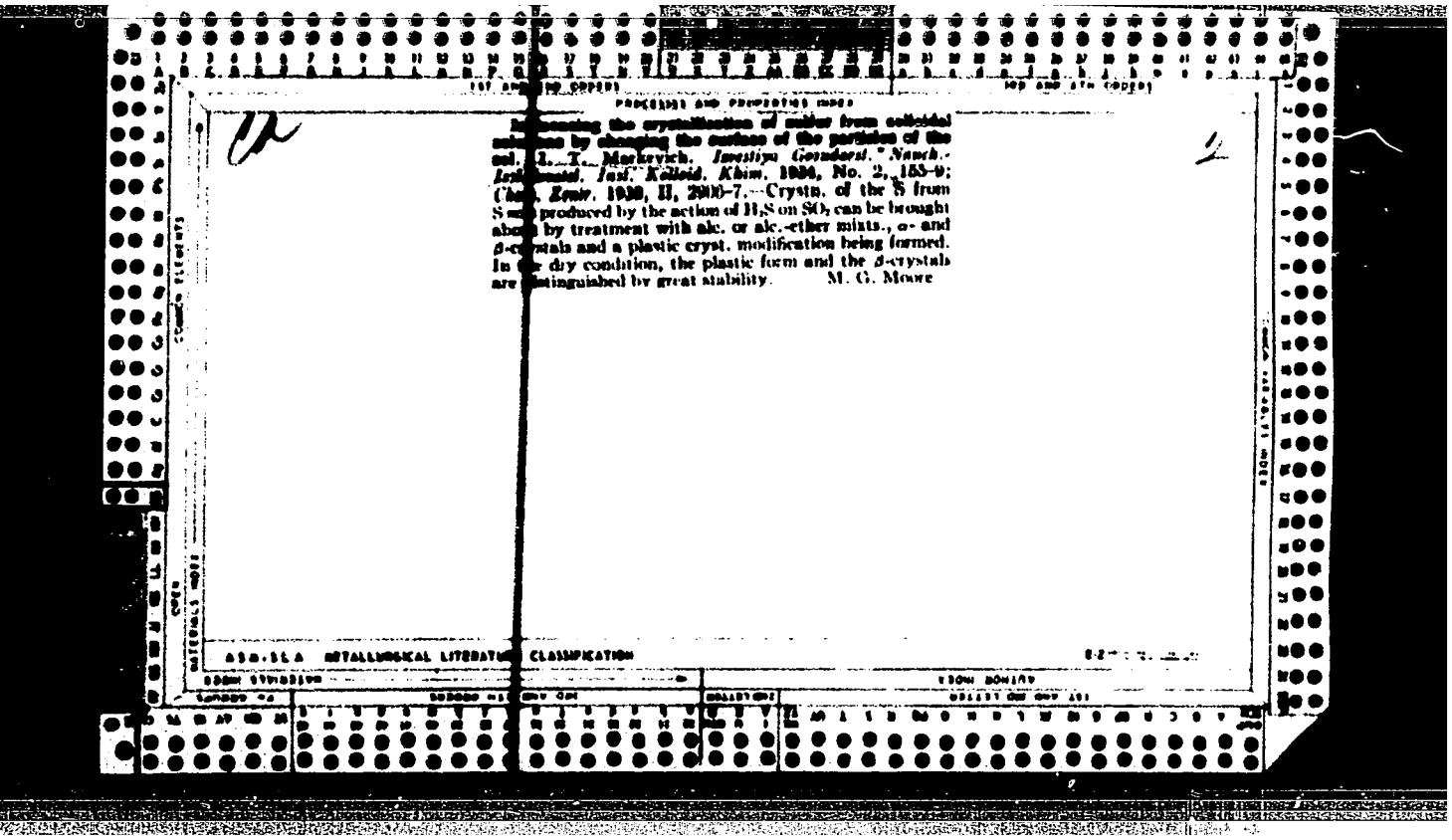
Cl

2

Dehydration of albumin sols by alcohols. I. T. Mochr-... Inzheltya Gosudarst. Nauch.-Issledovatel. Inst. Kol-... Khim. 1934, No. 2, 142-7; Chem. Zentr. 1935, II, ...; cf. C. A. 32, 4046.—The actions of Me, Et and Pr ..., of glycerol, and of mannitol on albumin sols were investigated. The results were compared by the use of ... triangular diagrams. The alcs. exerted a sensitizing action which increased with increase in the dipole moment of the alc. mol. Mannitol and glycerol exerted a stabilizing action, the effect of mannitol being more marked than that of glycerol. The conditions necessary to stability of the system are better observed at higher temps.

M. G. Moore

METALLURGICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX

...ncing the crystallization of sulfur from colloidal ... by changing the nature of the particles of the sol. I. I. Markevich. *Izvestiya Gosudarst. Nauch.-Issledovatel. Inst. Kolloid. Khim.* 1930, No. 2, 153-9; (*Chem. Zentr.* 1930, II, 2000-7.—Crystn. of the S from S sols produced by the action of H_2S on SO_2 can be brought about by treatment with alc. or alc.-ether mixts., α- and β-crystals and a plastic cryst. modification being formed. In the dry condition, the plastic form and the β-crystals are distinguished by great stability. M. G. Moore

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

MARKEVICH, I. T.

Markevich, I. T.: "The problem of the physico-chemical characteristics of blood serum in the presence of avitaminosis B_1," Isvestiya akad. nauk Latv. SSR, 1949, No. 5, p. 105-112, (Resume in Latvian), - Bibliog: 29 items

SO: U-5240, 17 Dec. 53, (Letopis 'Zhurnal 'nykh Statey, No. 25, 1949).

AUTHOR:

TITLE: Investigation of photocurrent noise of CdS single crystals with ... contacts

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 10, no. 1, 1965, 27-38

TOPIC TAGS: cadmium sulfide, single crystal, photocurrent, noise spectrum, photoresponse spectrum

ABSTRACT: The contact noise of CdS single crystals equipped with various ohmic electrodes was investigated. Unlike in other studies, the contact noise was separated from the volume noise by using a probe method of noise measurement. ... spectrum of the photoresponse to a weak sinusoidally modulated light of ... intensity was plotted simultaneously with the noise spectrum measurements. The methods of preparing the photosensitive CdS crystals and of depositing the current contacts on the crystals are described. The form of the investigated samples and their electrodes is illustrated in Fig. 1 of the Enclosure, which shows also the

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L 31048-65
ACCESSION NR: AP5004320

block diagram of the measurement set-up. The noise and photoresponse spectra were taken in the frequency range from 2 cps to 1 kcs. At 2 cps the equivalent noise impedance of the measuring set-up was [illegible]. The results indicate that it is possible to obtain [illegible] either by welding-on indium or by the [illegible] of cadmium. [illegible] electrode preparation resulted in noisy contacts. The noise spectrum and the square of the photoresponse were found to differ from theoretical, and large values of $\Delta N^2/N \gg 1$ (N -- number of carriers in the sample, ΔN^2 -- dispersion of the carrier number) were observed, whereas ordinary theory yields $\Delta N^2/N = 1$. The measurements have shown that the value of $\Delta N^2/N$ is not connected with the [illegible] of the contacts, since values [illegible] were obtained which appreciably [illegible] unity (for example, 500). Many facts indicate that the variations in these quantities are due to inhomogeneities in the crystals. "The authors are thankful to Academician V. Ye. Lashkar'ov for valuable remarks." Orig. art. has: 6 figures, 7 formulas, and 1 table.

ASSOCIATION: Institut [illegible]

Card 2/4

ACCESSION NR: AP5004320

SUBMITTED: 07May64 ENCL: 01 SUB CODE: SS, GP

NR REF SOV: 006 OTHER: 016

Card 3/4

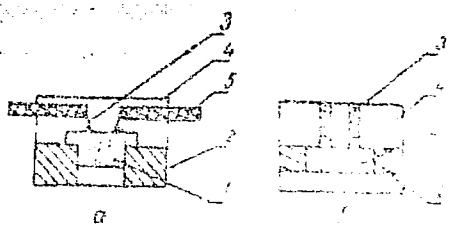

Fig. 1. Sections through measured samples with electrodes.

a - Thin single-crystal plates [illegible] thick),

[illegible] single crystal [illegible],

1 - [illegible] crystal, 2 - [illegible], 3 - [illegible], 4 - mica, copper foil

Card 4/4

L 36260-66 T/EWP(t)/ETI IJP(c) JD

ACC NR: AP6018336 SOURCE CODE: GE/0030/66/013/001/0025/0036 76

AUTHOR: Korsunskaya, N. E.; Markevich, I. V.; Sheinkman, M. K. (VR) 73 B

ORG: Institute of Semiconductors, Academy of Sciences of the Ukrainian SSR, Kiev

TITLE: Photochemical reactions in CdS single crystals at low temperatures

SOURCE: Physica status solidi, v. 13, no. 1, 1966, 25-36

TOPIC TAGS: photoconductivity, recombination reaction, electron trapping, low temperature effect, photochemical reaction, cadmium sulfide, crystal, [illegible], photochemistry

ABSTRACT: The investigation of glow curves under various illumination conditions in cadmium sulfide single crystals (previously annealed at high temperatures) shows that the photochemical formation of new trapping centers arises at +20 to -100C. In the same temperature range, the new "sensitizing" recombination centers, having small capture cross sections for electrons, also arise due to the photo-

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ACC NR: AP6018336 3

chemical reaction. This causes the photoconductivity to be increased by a factor of 2 to 100. The investigation of the kinetics of trapping and recombination processes by various methods makes it possible to determine a number of parameters for the new trapping and recombination centers. The authors thank Professor V. E. Lashkarev for his interest in this work and valuable discussions and Dr. W. Borchardt and Dr. J. Voigt for helpful discussions. Orig. art. has: 6 figures, 2 formulas, and 1 table. [Based on authors' abstract] [NT]

SUB CODE: 20/ SUBM DATE: 03Sep65/ ORIG REF: 006/ OTH REF: 015

ns

Card 2/2

ACC NR: AP7006037 SOURCE CODE: UR/0381/66/000/002/0037/0039

NAUMOV, S. L., MARKEVICH, K. V., Kiev Institute of Engineers of Civil Aviation (Kiyevskiy institut inzhenerov grazhdanskoy aviatsii)

"Electroinductive Inspection of Work Parts Subjected to Tensile Stresses"

Sverdlovsk, Defektoskopiya, No 2, 1966, pp 37-39

Abstract: The Scientific Research Laboratory of the Kiev Institute of Engineers of Civil Aviation used EMID-type devices, serially manufactured by the Kontrol'pribor Plant, for contactless determination of residual stresses in specimens and work parts subjected to tensile stresses, such as the fastening bolts of aircraft engine cylinders. The dimensions of the specimens (made of steel 40) were taken so as to suit the dimensions of the device's pickups, and a groove serving as a stress concentrator was cut in the specimens. These tests showed that EMID type devices are sensitive to changes that occur in a metal on the elastic-deformation section of the P-Δl diagram (stress-stain diagram). The findings are in satisfactory agreement with the conclusions of K. P. Belov (Uprugiye, Teplovyye i Elektricheskiye Yavleniya v Ferromagnitnykh Metallakh, M., Gostekhizdat, 1951) that elastic stresses cause the processes of reorientation of spontaneous magnetization which may involve irreversible changes in the magnetization vector of the domains, changes that cause magnetoelastic hysteresis.

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UDC: 620.179.14

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ACC NR: AP7006037

Thus, EMID-type devices display a definite sensitivity to changes in the mechanical parameters of the material of specimens and bolts during their loading. The interaction between the device's readings and the change in the strength properties of the material may be explained by a theory suggested by N. A. Akulov (Dislokatsii i Plastichnost', Minsk, Izd. AN BSSR, 1961) according to which the patterns of variation in mechanical parameters as a function of the stress applied are largely analogous to the patterns of variation in the corresponding magnetic characteristics.
Orig. art. has: 4 figures. [JPRS: 36,728]

TOPIC TAGS: tensile stress, elastic deformation, magnetization

SUB CODE: 20 / SUBM DATE: 08Dec65 / ORIG REF: 004

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L 10943-67 EWT(l)/EWT(m)/EWP(t)/ETI IJP(c) JD/JW

ACC NR: AP7000538 SOURCE CODE: UR/0386/66/004/010/0409/0413

AUTHOR: Markevich, L. A.; Sokolova, Ye. S.

ORG: State Institute of Nitrogen Industry (Gosudarstvennyy institut azotnoy promyshlennosti)

TITLE: Gas-liquid coexistence curve for sulfur hexafluoride near its critical point

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 4, no. 10, 1966, 409-413

TOPIC TAGS: critical point, critical pressure, phase transition, sulfur compound, fluoride, phase diagram

ABSTRACT: In connection with numerous recent attempts to determine the shape of the coexistence curve near the critical point, the authors obtained exact data on the gas-liquid equilibrium of specially purified (99.995% or better) SF_6 in the temperature interval $T_{cr} - T \approx 0.001 - 0.800C$. The investigations were made with previously-described apparatus (Zh. Fiz. khimii v. 40, 264, 1966), which was improved to increase the experimental accuracy. The absolute temperature, the temperature of the vanishing of one of the phases, the volume, and the critical molar volume were measured accurate to 0.002C, 0.002C, ±0.05% and ± 0.2% respectively. The value obtained by the authors for the critical temperature, pressure, and molarvolume are 45.560 ± 0.005, 38.328 ± 0.005, and 198.0 ± 0.4, respectively. The results show that the coexistence curve of SF_6 is given in the interval $T_{cr} - T \approx 0.000 - 0.050C$ by the equation $T - T_{cr} = a(v - v_{cr})$. On going beyond 0.050C from the critical point, the curve

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ACC NR: AP7000538 2

changes smoothly to form $T - T_{cr} = \beta(v - v_{cr})^3$, and retains this form up to $T_{cr} - T \approx 0.5C$. It is concluded that to obtain a single equation for the coexistence curve near the critical point it is necessary to take into account higher terms in the series of the function $(\partial p/\partial v)_T$, a task beyond the scope of this investigation. The authors thank I. R. Krichevskiy and G. D. Yefremova for interest and advice. Orig. art. has: 2 figures and 1 table.

SUB CODE: 20/ SUBM DATE: 29Aug66/ ORIG REF: 005/ OTH REF: 008

Card 2/2 bjp

ROGOZKIN, V.; MARKEVICH, L. Ya.

Effect of phosphate administration on the biochemical changes in working muscles. Ukr.biokhim.zhur. 32 no.1:77-82 '60.
(MIRA 13:6)

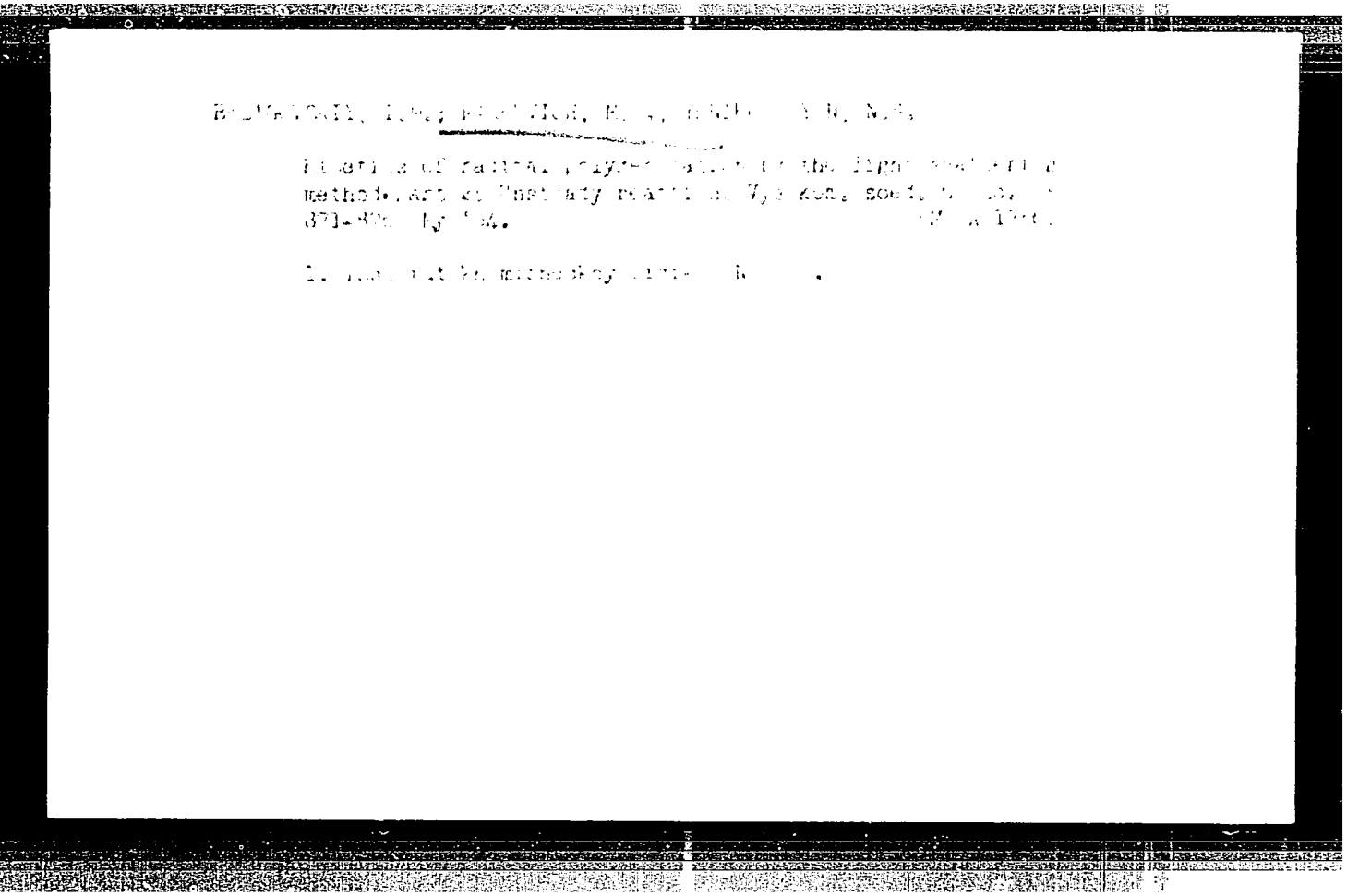
1. Section of Biochemistry of the Leningrad Research Institute of Physical Culture.

(PHOSPHATES) (MUSCLES)

MARKEVICH, L.Ye.; ROGOZKIN, V.A.

Influence of the use of phosphates on the amount of phosphocreatine, glycogen, and lactic acid in the muscles in animals. Biul. eksp. biol. i med. 49 no. 6:58-61 Je '60. (MIRA 14:4)

1. Iz sektora biokhimii (zav. - prof. N.N. Yakovlev) Leningradskogo nauchno-issledovatel'skogo instituta fizkul'tury (dir. - kand.meditsinskikh nauk V.Ye. Ryzhkova). Predstavlena deystv. chlenom AMN SSSR S.V. Anichkovym.
(PHOSPHATES) (MUSCLE) (GLYCOGEN) (LACTIC ACID)
(CREATINEPHOSPHORIC ACID)



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SOV/170-59-8-12/18

16(1)

AUTHOR: Markevich, M.G.

TITLE: On Some Problems of Geometry of Masses

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1959, Nr 8, pp 95 - 102 (USSR)

ABSTRACT: The author studies geometrical configurations connected with distribution of masses in a solid body. He introduces a new conception of the main point of a plane defined as the projection onto this plane of its pole constructed relative to the central gyration inertia ellipsoid of a solid body. He introduces a new definition of the permanent axis as an arbitrarily chosen axis in space, passing through one main point. He studies distribution of permanent axes in space by considering a bundle of straight lines with a center in point K with co-ordinates x_k, y_k and z_k relative to the coordinate system superposed on the main central axes of inertia of the body. It is shown that the problem of finding the main axes of inertia for a chosen pole is reduced to the problem of constructing an autopolar right-angled tetrahedron relative to the central gyration ellipsoid of inertia of the body with an apex of a right trihedral angle in the given pole. A new curve of the third order is obtained, shown in Figure 1, the

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shape of which depends on the distribution of masses in the solid body. This curve represents the locus of the main points of a bundle of straight lines passing through the point K.
There are: 1 graph and 6 references, 3 of which are Soviet and 3 French.

ASSOCIATION: Vsesoyuznyy zaochnyy institut inzhenerov transporta (All-Union Correspondence-Course Institute of Transport Engineers), Brest.

MARKEVICH, N. M.

33899. Ryeshyeniye Zadachi O Napolnyenii I Oporozhnyenii Sosudov Pyeryemyennogo Ob'yema Szhimayemym Gazom, Svyazannoy S Raschyetom Nyekotorikh Myekhanizmov Upravlyeniya. Uchyen. Zapiski, (Lyeningr. Gos. Un-t Im. Zhdanova), Syeriya Matyem. Nauk. VLP. 17,1949, C. 217-58.

SO: Letopis' Zhurnal'nykh Statey, Vol. 46, Moskva, 1949.

MARKEVICH, N.M.

Solving the problem of filling and emptying variable-volume vessels with compressed gases in connection with calculation of some servomechanisms. Uch.zap.Len.un. no.114:217-258 '49.

(MLRA 10:3)

(Gases, Kinetic theory of) (Servomechanisms)

Markevich, N. M.

DULOV, V.G.; MARKEVICH, N.M.

Reflection of a shock wave from a wall weakened by an aperture [with summary in English]. Vest. LGU no.19:98-105 '57. (MIRA 11:1)
(Shock waves)

SOV/124-58-11-12399

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 11, p 64 (USSR)

AUTHOR: Markevich, N. M.

TITLE: Experimental Investigation of the Unsteady Motion of a Gas During Leakage From a Pressure Vessel (Eksperimental'noye issledo·a· niye neustanovivshegosya dvizheniya gaza pri istechenii iz sosuda)

PERIODICAL: Uch. zap. LGU, 1957, Nr 217, pp 185-194

ABSTRACT: The paper describes the schematic arrangement of an experimental equipment and the methodology of conducting the experiment. A comparison between the experimental results and the results of theoretical calculations, which was made on the assumption of a quasi-stationary leakage process, gave sufficiently good agreement with a 5% degree error of measurement.

A. I. Loshkarev

Card 1/1

MARKEVICH, N.M.

10(3) PHASE I BOOK EXPLOITATION SOV/3518

Kovalev, Maksim Antonovich, Aleksandra Vasil'yevna Belova, Natal'ya Mikhaylovna Markevich and Vera Gennadiyevna Landman

Rukovodstvo k laboratornym rabotam po aerogazodinamike (Laboratory Practice Manual on Aero-Gas-Dynamics) [Leningrad] Izd-vo leningradskogo univ., 1959. 175 p. 2,500 copies printed.

Sponsoring Agency: Leningrad. Universitet.

Ed. (Title page): I. P. Ginzburg, Professor; Ed. (Inside book): N. I. Rusorgina; Tech. Ed.: Ye. G. Zhukova.

PURPOSE: This is a textbook for university students. It may also be useful to students of schools of higher technical education and to engineering and technical workers of scientific research laboratories.

COVERAGE: The book describes basic laboratory experiments in applied aerodynamics and gas dynamics. It contains a detailed description of 26 experiments, 14 experiments in subsonic aerodynamics (Part I) and 12 experiments

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in gas dynamics (some of which are supersonic) and hydrodynamics (Part II). Each description contains basic theoretical principles, experimental methods, and the data obtained. Part I was written by M. A. Kovalev. Part II and Experiments 1, 2, 3 and 4 by V. G. Landman; Experiment 5 by A. V. Belova and V. G. Landman; Experiments 6, 8, 9 and 10 by A. V. Belova; and Experiments 7, 11 and 12 by N. M. Markevich. Other authors in this field mentioned are A. K. Martynov, D. S. Gershenin, D. S. Vil'ker, and S. G. Popov.

TABLE OF CONTENTS:

Laboratory Practice Manual (Cont.) SOV/3518

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MARKEVICH, N. N.
p. 1 + 2

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 conference on electrography, the first to be held in the Soviet Union and evidently in the world. It was organized in Vil'nyus on December 16-19, 1958 by the Soviet narodnogo khozyaystva Litovskoy SSR (Council for National Economy of the Lithuanian SSR), the Gosudarstvennyy 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 workers, 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) development 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.Hryun'ko, N.N.Markevich, E.I. Kalinauskens 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 electrophotographic layers and an electrophotocopying device, and reviewed the formation process of the latent electrophotographic 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.N. 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 K.I. Rautkauskas) reported on the use of electrographic methods in recording oscillographs and other recording instruments.

V.P. Yurchenko (speaking also for L.N. Salin) 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, N.K. Maynens, I.I. Zhilevich 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. Ckman) 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.S. Gorevey, 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 sensitisation of the internal photoeffect in ZnO. M.M.Gol'vidis then gave a report on the depositing of charges by a corona discharge. A.I. Kaminskas and A.P. Yargulis 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 m μ. S.M. Kayman 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. Kaynise, 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.

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L 10838-63 EWP(j)/EWT(m)/BDS--AFFTC/ASD--Pc-4--RM

ACCESSION NR: AP3001488 S/0195/63/004/002/0307/0311

62
59

AUTHOR: Markevich, N. N.; Putseyko, Ye. K.

TITLE: The effect of oxygen from the air on the adsorption of dyes by zinc oxide

SOURCE: Kinetika i kataliz, v. 4, no. 2, 1963, 307-311

TOPIC TAGS: oxygen, polyvinylbutyril, adsorption of dyes, zinc oxide

ABSTRACT: The effect of oxygen from the air with an admixture of polyvinylbutyril on the adsorption of acid and basic dyes was investigated on the sensitive microcyrstals of zinc oxide. It was found that in contrast to the principal dyes which affect the character of the adsorption isotherms of acidic dyes with zinc oxide, oxygen from the air also affects the adsorption. On the basis of these experiments, the conclusion was drawn that the centers responsible for the adsorption of acidic dyes which sensibilized the photoeffect of these dyes and of zinc oxide, are the chemosorbed particles containing oxygen in their composition. The admixture of polyvinylbutyril not only lowers the adsorption on the zinc oxide, but also changes the direction of the adsorption isotherm. Apparently the observed effects are due to the fact that molecules of polyvinylbutyril are adsorbed on the surface of zinc oxide causing a partial displacement of oxygen.

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L 10838-63
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3

The authors express their gratitude to A. N. Terenin for his interest in this work and for valuable discussions, and also to D. P. Dobychin for his valuable advice. Orig. art. has: 3 figures.

ASSOCIATION: Gosudarstvenny*y opticheskiy institut im. S. I. Vavilova (State Optical Institute)

SUBMITTED: 01Feb62 DATE ACQD: 10Jun63 ENCL: 00

SUB CODE: 00 NO REF SOV: 012 OTHER: 007

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Card 2/2

S/181/63/005/004/036/047
B102/B186

AUTHORS: Markevich, N. N., and Putseyko, Ye. K.

TITLE: Effect of binders on the kinetics of zinc oxide photoconductivity

PERIODICAL: Fizika tverdogo tela, v. 5, no. 4, 1963, 1189 - 1193

TEXT: The kinetics of photocurrent increase and decrease in microcrystalline ZnO films (10 - 50μ) was studied in air, in high vacuum and also in the presence of a high-molecular binder. The film investigated were produced from pure ZnO powder (brands M-1 and Kahlbaum) and ZnO obtained by burning pure zinc in air and by decomposition of zinc carbonate at 600 - 650°C. The films were deposited as ethanol suspensions on glass or quartz plates provided with Pt contacts. Polyvinylbutyral, polyvinylacetate, polyvinylacetate-methylmethacrylate copolymer, vynalite, and others were used as binders. Photoconduction relaxation was measured with a taumeter (time interval $5 \cdot 10^{-6}$ - 10^{-2} sec). The samples were irradiated with monochromatic modulated (100 cps) light from a Hg-lamp filtered with an УФС-2 (UFS-2) filter, at intensities of 10^{-3} - 10^{-4} w/cm^2. The results obtained speak in

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favor of a bimolecular-recombination mechanism of ZnO photoconduction. The small inertia of the processes in the first stages of current increase and decrease, which is independent of the surrounding gases or vapors, indicated that UV illumination induces primary electron processes in the ZnO layers. The distinct dependence of photoconduction relaxation on the adsorbed gases and vapors with electron-acceptor properties indicates the production of electron adhesion levels on the surface of this semiconductor. From the sharp decrease of photocurrent inertia in the presence of insulating binders it is concluded that the binder molecules do not only not hinder the electron displacement in the conduction band but reduce inertia what is of great interest for electrophotography. There are 3 figures.

ASSOCIATION: Gosudarstvennyy opticheskiy institut im. S. I. Vavilova Leningrad (State Optical Institute imeni S. I. Vavilov, Leningrad)

SUBMITTED: July 17, 1962 (initially)
December 4, 1962 (after revision)

MARKEVICH, N.N.

Manufacture of electrophotographic papers with increased sensitivity. Zhur.nauch. i prikl. fot. i kin. 8 no.2:135-137 Mr-Ap '63. (MIRA 16:3)

1. Nauchno-issledovatel'skiy institut elektrografii, Vil'nyus.
(Photography—Printing papers) (Xerography)

MARKEVICH, N.N.; PUTSEYKO, Ye.K.

Optical sensitization of the photo effect of zinc oxide and the adsorption isotherms of dyes. Zhur. fiz. khim. 36 no.11:2393-2399 N'62. (MIRA 17:5)

MARKEVICH, O.P., professor.

Helminthic fauna in Dnieper fishes in the region of the city of Kanev. Nauk.zap.Kiev.un. 8 no.6:1-12 '49. (MLRA 9:10)

(Dnieper River--Parasites) (Parasites--Fishes)

KARKEVICH, O. F.

Zoology

Stalin Plan for transformation of nature and the task of the zoologists. Trudy Inst. zool. AN URSR 3, 1950

Monthly List of Russian Accessions, Library of Congress, July 1952. Unclassified.

MARKEVICH, O.P.

Urgent tasks in controlling parasite infestations in farm animals. Trudy Inst. zool. AN URSR 8:5-14 '52. (MLRA 9:9)

(Parasites--Domestic animals) (Veterinary medicine)

MARKEVICH, O.P.

Materials on parasitic Copepoda of the fishes of the Black Sea.
Trudy Inst.zool.AN URSR 8:91-99 '52. (MLRA 9:9)
(Black Sea--Copepoda) (Parasites--Fishes)

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 4, p 17 (USSR) 15-57-4-4153

AUTHOR: Markevich, O. P.

TITLE: The Development of Zoological Phylogenetics in the USSR (Razvitiye zoologicheskoy filogenetiki V SSSR)

PERIODICAL: Tr. In-tu zool. AN URSR, 1956, Vol 13, pp 3-31.

ABSTRACT: The author gives a brief survey of the work of Soviet Scientists, chiefly paleozoologists, in general, and specific phylogenetics. A bibliography with 260 references is furnished.

Card 1/1

M. K.

MARKEVICH, O.P. [Markevych, O.P.]

Zoology at the Kiev University during the years of the Soviet rule. Nauk. zap. Kyiv. un. 16 no.20:5-15 '57 (MIRA 13:3)
(Ukraine--Zoological research)

MARKEVICH, O.P. [Markevych, A.P.]

Faunistic research within the territory of the Ukrainian S.S.R.
Zbir. prats' Zool. mus. AN URSR no.28:3-19 '57. (MIRA 11:5)
(Ukraine--Zoological research)

MARKEVICH, O.P. [Markevych, O.P.]

Ukraine's achievements in biological sciences during the years of Soviet rule. Visnyk Kyiv. un. Ser. biol. no.1:5-17 '58. (MIRA 15:6)

(UKRAINE--BIOLOGICAL RESEARCH)

MARKEVICH, O.P. [Markevych, O.P.], akademik; CHOPIK, V.I. [Chopyk, V.I.], kand.biolog.nauk

Land with fabulous nature. Nauka i zhittia 11 no.10:32-36 O '61. (MIRA 15:1)

1. AN USSR (for Markevich).
(Transcarpathia--Description and travel)

MARKEVICH, O.P. [Markevych, O.P.]

Summary of the work of the 15th International Congress of Zoologists. Visnyk. Kyiv. un. no.2. Ser. biol. no.2:96-100 '60. (MIRA 16:8)

(ZOOLOGY—CONGRESSES)

MARKEVICH, O.P. [Markevych, O.P.]

Parasitological research in the Czechoslovak People's Republic. Visnyk. Kyiv. un. no.2. Ser. biol. no.2:106-109'60. (MIRA 16:8)
(CHECHOSLOVAKIA—PARASITOLOGICAL RESEARCH)

MARKEVICH, S.F., kand. tekhn. nauk

Static and dynamic strength tests of locomotive frames.
Trudy DIIT no.24:37-62 '54. (MIRA 16:11)

MARKEVICH, S.I.

Mineral and organic forms of phosphorus and its total amount in Turf-Podzolic soils. Vestsi AN BSSR. Ser.biial.nauk. no.3:22-34 '58. (MIRA 11:11)
(Phosphorus) (Podsol) (Minerals in soil)

MARKEVICH, S. I.: Master Agric Sci (diss) -- "The phosphoric-acid conditions in sod-podzolic soils". Minsk, 1959. 23 pp (Acad Agric Sci Beloruss SSR, Beloruss Sci Res Inst of Agric), 150 copies (KL, No 15, 1959, 118)

MARKEVICH, S.I., kand.sel'skokhoz.nauk

Effect of organic fertilizers on the nitrogen content of turf-Podzolic soils. Vestsi AN BSSR.Ser.biial.nav. no.2:115-121 '62. (MIRA 15:8)

(WHITE RUSSIA--SOILS--NITROGEN CONTENT) (COMPOST)

MARKEVICH, S.M.; POLYANSKIY, N.G.; POTUDINA, N.L.

Cation exchangers as catalysts in the dehydration of tert-amyl alcohol. Neftekhimiia 1 no.2:230-234 Mr-Ap '61. (MIRA 15:2)

1. Nauchno-issledovatel'skiy institut sinteticheskikh spirtov i organicheskikh produktov, Novokuybyshevskiy filial.
(Dehydration (Chemistry))
(Amyl alcohol)

MAYOROV, V.I.; KONAREVA, Z.P.; MARKEVICH, S.M.; TALISMAN, L.V.

Homogeneous pyrolysis of a raw hydrocarbon stock to ethylene and acetylene. Khim.prom. no.6:379-380 Je '61. (MIRA 14:6)
(Hydrocarbons) (Ethylene) (Acetylene)

MARKEVICH, S.M.; POLYANSKIY, N.G.; BUZLANOVA, M.M.; SAFRONENKO, Ye.D.

Rapid mercurimetric method for the determination of isobutylene in cracking fractions. Zhur. anal. khim. 16 no. 4:489-493 Jl-Ag '61. (MIRA 14:7)

1. Scientific-Research Institute of Synthetic Alcohols, Branch in Novokuybyshevsk.

(Propene)

MARKEVICH, S.M.

POL'YANSKII, N.G., MARKEVICH, S.M.,

Catalytic separation of tertiary amylenes from industrial pentane-amylene fractions.

Report presented at the 12th Conference on high molecular weight compounds, devoted to monomers, Baku, 3-7 April 62

POLYANSKIY, N.G.; MARKEVICH, S.M.; KOZLOVA, T.I.; POTUDINA, N.L.

Selective extraction of isoamylenes from hydrocarbon mixtures.
Neftekhimiia 2 no.2:164-169 Mr-Ap '62. (MIRA 15:6)
(Propene) (Hydrocarbons)

POLYANSKIY, N.G.; MARKEVICH, S.M.; POTUDINA, N.L.; BUROVA, A.N.

Dehydration of dimethylphenylcarbinol with the use of cation exchangers as catalysts. Neftekhimiia 2 no.3:348-354 My-Je '62. (MIRA 15:8)

1. Nauchno-issledovatel'skiy institut sinteticheskikh spirtov i organicheskikh produktov, Novokuybyshevskiy filial.
(Methanol) (Dehydration (Chemistry)) (Ion exchange resins)

IYERUSALIMOV, M.Ye., kand.tekhn.nauk; MARKEVICH, V.P.

Number of insulators and insulator chains on a 35 to 110 kv. power transmission line. Energ. i elektrotekh. prom. no.3:74-75 Jl-S '63. (MIRA 16:10)

1. Kiyevskiy politekhnicheskiy institut (for Iyerusalimov).
2. Kiyevskoye energoupravleniye Glavenergo Ministerstva elektrostantsiy SSSR (for Markevich).

POLYANSKIY, S.M.; MARKEVICH, S.M.; POTUDINA, N.L.; KOZLOVA, T.I.

Hydration of tertiary amylenes in the presence of a KU-2 cation exchanger and accompanying reactions. Kin. i kat. 4 no.4:614-619 Jl-Ag '63. (MIRA 16:11)

1. Novokuybyshevskiy filial Nauchno-issledovatel'skogo instituta sinteticheskogo spirta.

POLYANSKIY, N.G.; MARKEVICH, S.M.; SAFRONENKO, Ye.D.; BUZLANOVA, M.M.

Use of bivalent mercury sulfate in the quantitative analysis of olefins and tertiary alcohols. Report No.1: Quantitative determination of α-methylstyrene and dimethylphenylcarbinol present simultaneously. Trudy Kom.anal.khim. 13:93-98 '63. (MIRA 16:5)

1. Nauchno-issledovatel'skiy institut sinteticheskikh spirtov, Novokuybyshevskiy filial.
(Styrene) (Alcohols) (Mercury sulfates)

L 13293-66 EWT(m)/ETC(F)/EWG(m)/EWP(j) RM

ACC NR: AP6000327 (A) SOURCE CODE: UR/0286/65/000/021/0014/0014

INVENTOR: Markevich, S. M.; Polyanskiy, N. G.; Kozlova, T. I.

ORG: none

TITLE: A method for producing tertiary isoamyl alcohol. Class 12, No. 175939

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 21, 1965, 14

TOPIC TAGS: alcohol, ion exchange resin, HYDRATION

ABSTRACT: This Author's Certificate introduces a method for producing tertiary isoamyl alcohol by hydrating pentane amyl cracking fractions on a catalyst. The quality of the product is improved and the yield is increased by using a cation exchange resin in the H form subjected to waterproof treatment by trioctyl amine.

SUB CODE: 07/ SUBM DATE: 28Jul62/ ORIG REF: 000/ OTH REF: 000

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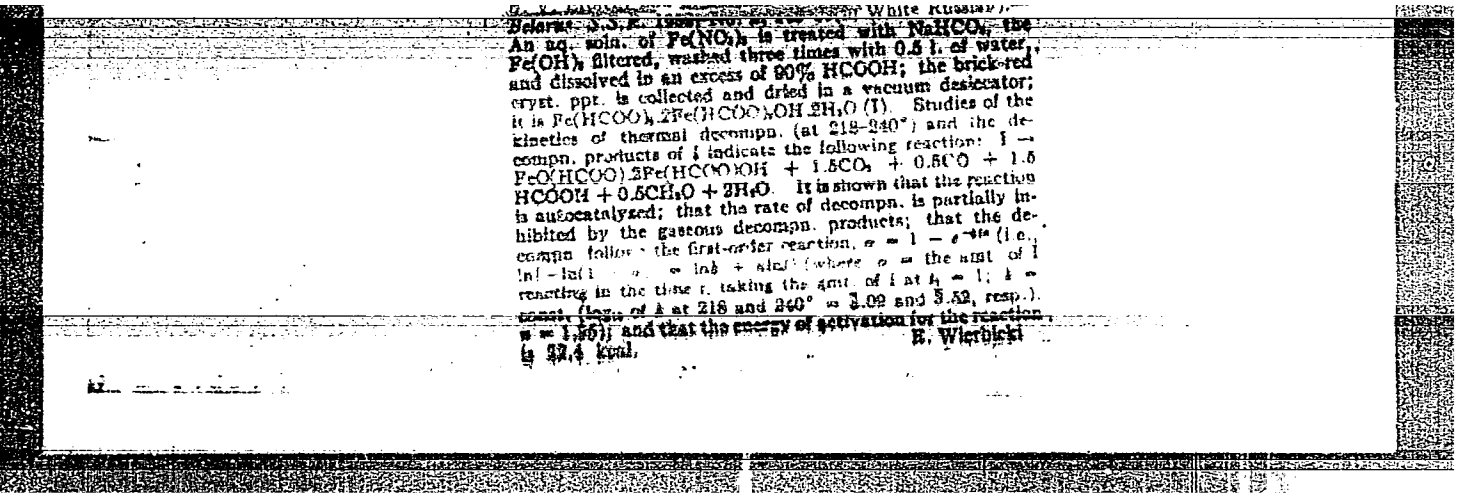
Card 1/1 UDC: 547.265-125.07

MARKEVICH, S. V.

"Investigation of the Thermal Decomposition of Ferrous and Ferric Formiates." Thesis for degree of Cand. Chemical Sci. Sub 28 Sep 49, Moscow Order of Lenin State U imeni M. V. Lomonosov.

Summary 82, 18 Dec 52, Dissertations Presented For Degrees in Science and Engineering in Moscow in 1949. From Vechernyaya Moskva, Jan-Dec 1949.

Thermal decomposition of formate of ferric oxide. I. P. V. Frolov and S. V. Markevich. *Vestsi Akad. Navuk Belorus. S.S.R.* 1952, No. 2, 169-[illegible] (in White Russian).— An aq. soln. of $Fe(NO_3)_3$ is treated with $NaHCO_3$, the [illegible] with 0.5 l. of water,



Belarus. S.S.R. [illegible] White Russian).
An aq. soln. of $Fe(NO_3)_3$ is treated with $NaHCO_3$, the $Fe(OH)_3$ filtered, washed three times with 0.5 l. of water, and dissolved in an excess of 90% HCOOH; the brick-red cryst. ppt. is collected and dried in a vacuum desiccator; it is $Fe(HCOO)_3.2Fe(HCOO)_2OH.2H_2O$ (I). Studies of the kinetics of thermal decompn. (at 218–240°) and the decompn. products of I indicate the following reaction: $I \rightarrow FeO(HCOO).2Fe(HCOO)OH + 1.5CO_2 + 0.5CO + 1.5HCOOH + 0.5CH_2O + 2H_2O$. It is shown that the reaction is autocatalyzed; that the rate of decompn. is partially inhibited by the gaseous decompn. products; that the decompn. follows the first-order reaction, $x = 1 - e^{-kt^n}$ (i.e., $\ln[-\ln(1-x)] = \ln k + n\ln t$) (where x = the amt. of I reacting in the time t, taking the amt. of I at $t_0 = 1$; k = const. (log. of k at 218 and 240° = 3.09 and 3.52, resp.). $n = 1.50$)] and that the energy of activation for the reaction is 32.4 kcal.

E. Wierbicki

MARKEVICH, S.V.

USSR.

The [illegible] Mendeleev's periodic system of the elements. [illegible] Markevich. [illegible] (Bed. [illegible] Belarus. S.S.R. [illegible] discussion. Data are given for the [illegible] isotopic [illegible] of A, K, [illegible] and [illegible] and for the occurrence of the [illegible] He, Ne, A, Kr, Xe, and Rn in the atm. Reasoning is presented for the formation of the atm. A from K according to the equation: $K^{40} + e^{-} = A^{40} + h\nu$. The abnormalities in the periodic arrangement of the elements are discussed. [illegible] W. [illegible]

MARKEVICH, S.V.; YERAFEYEU, B.V.

Thermal disintegration of ferric formate. Vestsi AN BSSR no.1: 108-121 Ja-F '54. (MLRA 8:1)
(Ferric formate)

Markevich, S. V.

Manufacturing nitrogen fertilizers from peat. A. P. Katkouski and S. V. Markevich. *Vestsi Akad. Navuk Belarus. S.S.R.* 1954, No. 5, 117-22.—Peat contains from 0.9 to 4% N (dry basis) depending on the peat origin. Four ways of utilization of this N for the manufg. of NH_4SO_4 are discussed. These include the binding of the free NH_3 generated in the plants utilizing peat as fuel and the catalytic prepn. of NH_3 by dry distn. of peat (the gas, produced by a carburation of a peat sample by H_2O_2 blasts under pressure, showed the following chem. compns: CO_2 2.5, CO 19.8, H 67.1, CH_4 14.4, C_2H_4 1.5, other C_nH_m 1.0, and N 3.7 vol. %, resp.). B. Wierbicki

(1)

MARKEVICH, S. V.

Investigation of physicochemical properties of montmorillonite in White Russian S.S.R. S. V. Markevich, A. I. Verzal, and E. E. Litvinenko. *Izvest. Akad. Nauk Belorussk. S.S.R.* 1955, No. 1, 63-72(in Russian).—Chem. compn. and phys. properties of montmorillonite of the village Malinovka, district of Divinsk, White Russia, are described. As an adsorbent, the montmorillonite can be used in reclaiming industrial oils. E. Wierbicki

(2)

MARKEVICH, S. V.

Investigation of the physicochemical characteristics of the montmorillonite clays of White Russian (Byelorussian) S.S.R. S. V. Markevich and E. E. Litvinenko. *Izvest. Akad. Nauk Belorussk. S.S.R.* 1955, No. 6, 75–80 (in Russian).—The clays investigated contained SiO_2 51.96–52.37, TiO_2 0.35, Al_2O_3 13.23–22.65, Fe_2O_3 5.07–7.74, CaO 2.30–3.50, MgO 3.44–5.87, Na_2O 0.39–0.47, and K_2O 0.25–0.62%, resp. The 0.01-mm. fractions contained slightly more metallic oxides (except TiO_2 and Al_2O_3) and slightly less SiO_2 than the original clay samples. The loss of wt. on heating, x-ray diagrams, and electron-microscope photographs of the elementary clay particles are also given. Transformer oil in contact with the clay particles at 150–5° becomes dark and shows an increased acid no.; the amt. of clay in the regenerative oil was 5–0%. R. Wierbicki

MARKEVICH, S. M.

USSR/Chemical Technology - Chemical Products and Their Application. Industrial Organic Synthesis I-1

Abs Jour : Ref Zhur - Khimiya, No 1, 1958, 2144

Author : Dalin, M.A., Markevich, S.M., Borisov, A.M., Mamedova, V.M.,

Inst : Academy of Sciences USSR

Title : Technological Development of the Synthesis of Ethyl Alcohol by Direct Hydration of Ethylene.

Orig Pub : Sb.: Khim. pererabotka neft. uglevodorodov. M., AN SSSR, 1956, 568-577

Abstract : Description of the technological system and of results of the experiments on direct hydration of C_2H_4 to C_2H_5OH (I), in an experimental industrial unit with a reactor of 0.5 m in diameter and 8 m high, using H_3PO_4 as a catalyst. During the experiments the following optimal conditions of

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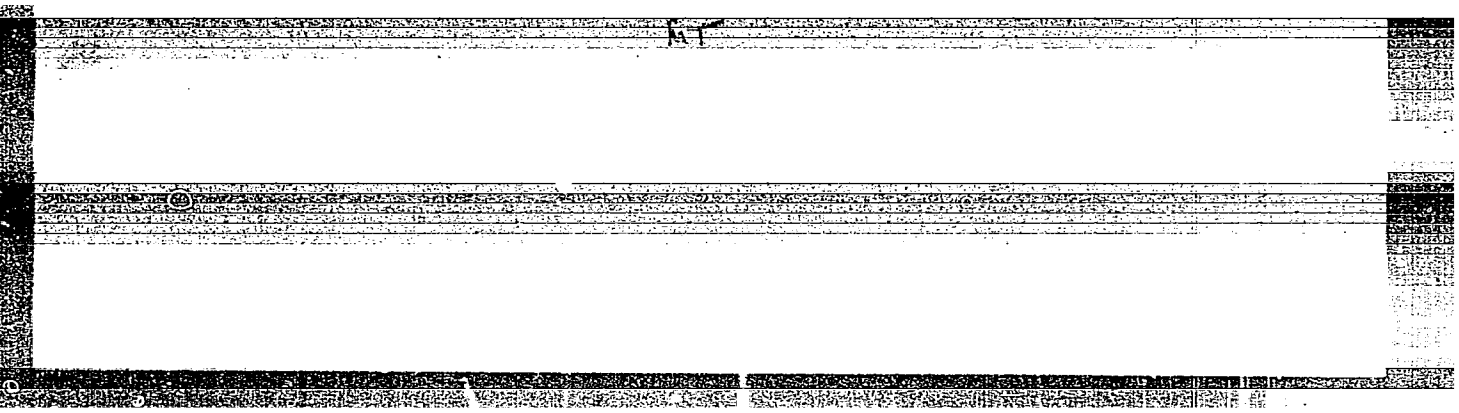

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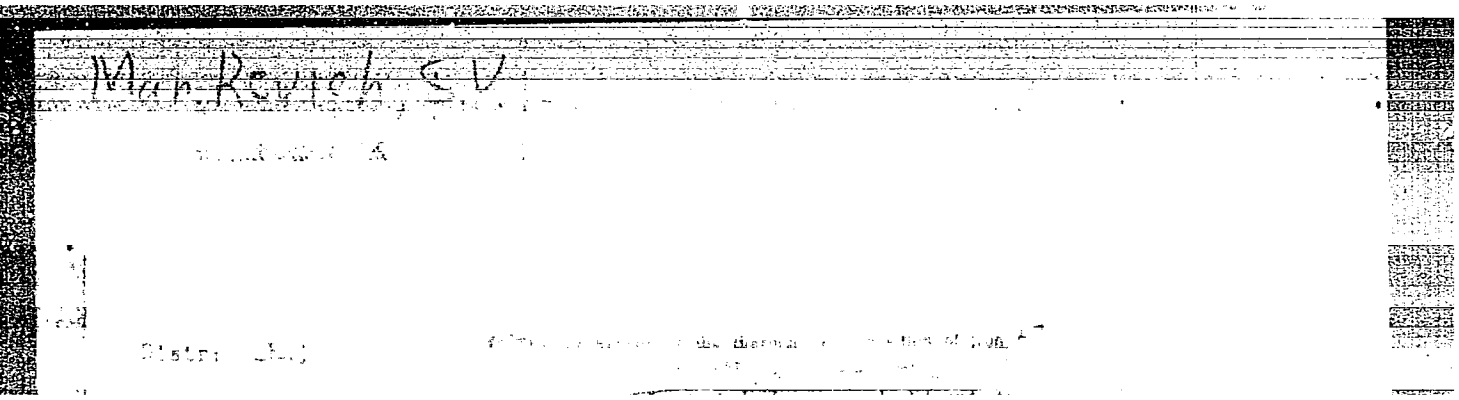
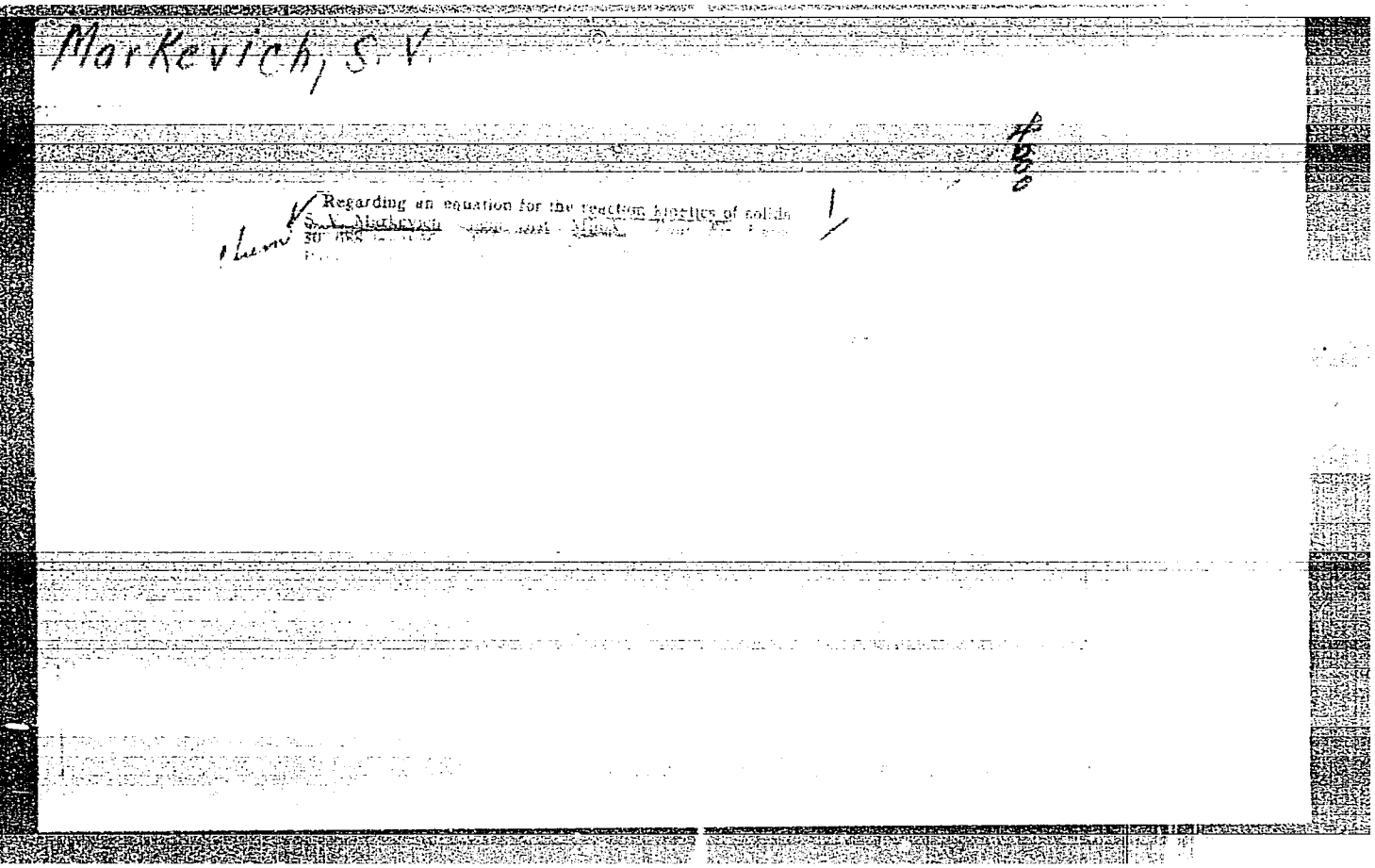


curred to a slight extent (2-3% of total C). It is supposed that the Ni and Co compds. also react by stages.



MARKEVICH, S.V.

D.I. Mendeleev's ~~periodic system~~ in the light of recent researches. Vestsi AN BSSR. Ser. fiz.-tekh. nav. no.2:5-19 '57. ~~(MIRA 11:1)~~
(Periodic law)

MARKEVICH, S. V.

USSR / Cultivated Plants, Cereals. M

Abs J ur : Ref Zhur - Biol., No 8, 1953, No 34672
:
Authors : Kryuk, I. F.; Markevich, S. V.
Inst : Byelo-Russian Institute for Agriculture.
Title : Effect of γ-Radiation with Radioactive Cobalt (Co^{60}) on Certain Properties of the Pea.

Orig Pub : Uch zap. Belorussk. in-t nar. kh-va, 1957, vyp. 3, 253-257.

Abstract : A study was made of the sprouting and of certain other physical properties of the seeds of the pea after exposure to 450 t of Co^{60}. The following effects have been ascertained: increase in germination energy and sprouting, increase in the percentage of combined water, sharp weakening of resistance to crushing. The theory is advanced that radiation changes the structure of seeds. Bibliography with 10 titles. -- I. N. Zaikina.

Card 1/1

MARKEVICH, S.V.

AUTHOR: Markevich, S.V. 76-12-25/27

TITLE: Once Again on an Equation From the Kinetics of Reaction of Solid Substances (Yeshche raz po povodu odnogo uravneniya kinetiki reaktsiy tverdykh veshchestv)

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1957, Vol. 31, Nr 12, pp.2763-2764 (USSR)

ABSTRACT: Recently a discussion was held between S.V.Markevich and M.I. Pavlyuchenko on an equation from the kinetics of reactions of solid substances. The subject of the discussion is the question to what an extent the equation applied by Pavlyuchenko is identic with that by Bradley, Colvin and Hume [Ref. 3]. Since these debates deliver no new ideas, the editors close the debates by the two last letters of the two contractors.
The author states here that Pavlyuchenko refers to the work of B.V. Yerofeyev [Ref. 5] from 1937, whereas the work by Pavlyuchenko was published in 1955. The equation is not "similar", but "identic". It is additionally proved that the formula delivered by Pavlyuchenko for the volume of the substance which was already in reaction after having attained the maximum speed, is wrong. There are 5 references, 4 of which are Slavic.

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Once Again on an Equation From the Kinetics of Reaction of Solid Substances 76-12-25/27

ASSOCIATION: AN Belorussian SSR. Institute of Chemistry (Akademiya nauk BSSR. Institut khimii).

SUBMITTED: November 12, 1956

AVAILABLE: Library of Congress

Card 2/2

MARKEVICH, S.V

5(3) PHASE I BOOK EXPLOITATION SOV/1285

Akademiya nauk Belorusskoy SSR. Institut khimii

Sbornik nauchnykh rabot, vyp. 6 (Collection of Scientific Works of the Institute of Chemistry, Belorussian SSR Academy of Sciences, Nr. 6) Minsk, Izd-vo AN Belorusskoy SSR, 1958. 271 p. 1,100 copies printed.

Ed.: Yerofeyev, B.V., Academician, BSSR Academy of Sciences; Tech. Ed.: Volokhanovich, I.

PURPOSE: The book is intended for chemists engaged in research in specialized fields.

COVERAGE: The book is a collection of scientific articles dealing with varied subjects, such as problems in electron theory of semiconductors, catalysis, autoxidation of abietic acid, thermodynamics of some reactions of sulfur organic compounds and reactions of alkyl, aryl, acyl-oxy radicals in the liquid phase. Personalities are mentioned in the individual articles. There are 331 references, of which 215 are Soviet, 75 English, 30 German, 10 French, and 1 Finnish

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Collection of Scientific Works (Cont.) SOV/1285

TABLE OF CONTENTS:

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MARKEVICH, Sergey Vasil'yevich; GOLUBTSOVA, P. [Halubtsova, P.], red.; STEPANOVA, N. [Stsiapanava, N.], tekhn.red.

[Peaceful uses of atomic energy] Mirnae vykarystanne atamnai energii. Minsk, Dziarsh.vyd-va BSSR. Red.navukova-tekhn.lit-ry, 1959. 178 p. (MIRA 14:1)
(Atomic energy)

5(0) SOV/76-33-5-32/33

AUTHOR: Markevich, S. V.

TITLE: Boris Vasil'yevich Yerofeyev (On His Fiftieth Birthday) (Boris Vasil'yevich Yerofeyev (k 50-letiyu so dnya rozhdeniya))

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 5, pp 1155 - 1156 (USSR)

ABSTRACT: B. V. Yerofeyev, Doctor of Chemical Sciences, was born on May 10, 1909. He studied at the University of Moscow and in 1930 he was employed at Professor V. K. Semenchenko's laboratory where he was concerned with measuring the conductivity of electrolyte solutions. In 1931 he published a short paper on the periodical condensation of gases and vapors. From 1931 on Yerofeyev worked on heterogeneous catalysis at the newly established Institut azota (Institute of Nitrogen), now Institut azotnoy promyshlennosti (Institute of Nitrogen Industry). Together with N. I. Kobozev he investigated the reaction kinetics of the thermal decomposition of iron nitrides. From 1936 - 1938 he works at the Laboratory of Organic Catalysis of the Institut organicheskoy khimii AN SSSR (Institute of Organic Chemistry of the AS USSR)

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Boris Vasil'yevich Yerofeyev (On His Fiftieth Birthday) SOV/76-33-5-32/33

under the direction of Academician A. A. Balandin. In 1939 Yerofeyev defends his thesis on the Reaction Kinetics of Solid Bodies. He deals with the kinetics of the catalytic synthesis of hydrocarbons from CO and H influenced by Academician N. D. Zelinskiy. In 1939 he moves to Minsk and becomes the director of the institut khimii Akademii nauk BSSR (Institute of Chemistry of the Academy of Sciences of the Belorussian SSR). During the war, Yerofeyev directs the Department of Chemistry of the pedagogicheskiy institut im. M. Gor'kogo (Pedagogical Institute imeni M. Gor'kiy) in Kuybyshev. Until 1950 he directs the new laboratory of the Vsesoyuznyy institut aviatsionnykh materialov (All-Union Institute of Aviation Material). In 1950 Yerofeyev is back in Minsk and is a Member of the Presidium and from 1953 to 1956 he is vice president of the Akademiya nauk BSSR (Academy of Sciences of the Belorussian SSR). At the same time he directs the Department of Catalysis of the Belorusskiy gosudarstvennyy institut im. V. I. Lenina (Belorussiya State Institute imeni V. I. Lenin). Yerofeyev's works on the kinetics of autooxidation of hydrocarbons at low temperatures lead to important discoveries: the cobalt and manganese salts

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Boris Vasil'yevich Yerofeyev(On His Fiftieth Birthday) SOV/76-33-5-32/33

of carboxylic acids act as initiators and not as catalysts as had been so far assumed. Together with N. I. Mitskevich and T. I. Soroko, Yerofeyev discovers the decarboxylation. Together with S. F. Naumova he investigates the inhibiting effect of hydroquinone. Yerofeyev published more than 110 scientific papers. In 1940 he became corresponding member of the Akademiya nauk BSSR (Academy of Sciences of the Belorussian SSR), and in 1947 Academician of this Institute. He was honored by two Orders of the Red Banner of Labor, the Badge of Honor, medals, and an Honorary Diploma by the Supreme Council of the Belorussian SSR. In the years 1951 and 1955 he was elected Deputy of the Supreme Council of the Belorussian SSR. His cooperation in popular-scientific institutions is mentioned: VKhO (Vsesoyuznoye obshchestvo khimii im. D. I. Mendeleyeva - All-Union Society of Chemistry imeni D. I. Mendeleyev) and Obshestvo "Znaniye" (Society "Knowledge"). There is 1 figure.

Card 3/3

MARKEVICH, S.V.; IVKO, A.A. [Iuko, A.A.]; KOZLYAK, M.I.

Deuterium exchange on solid surfaces in the gas phase. Part 3: Effect of an admixture of potassium oxide in silica gel on the reaction of deuterium and ethylene. Vestsi AN BSSR. Ser. Fiz.-tekh. nav. no. 4:46-52 '60. (MIRA 14:1)
(Deuterium) (Ethylene) (Potassium oxide)

KRYUK, I.F., kand.tekhn.nauk; MARKEVICH, S.V., kand.khimicheskikh nauk

Effect of gamma radiation on some properties of pulse crop seeds. Trudy VNIIZ no.38:105-121 '60. (MIRA 15:12)

1. Belorusskiy gosudarstvennyy institut narodnogo khozyaystva imeni V.V.Kuybyasheva.
(Legumes) (Plants, Effect of gamma rays on) (Seeds)

33497
S/195/61/002/005/024/027
E040/E485

5.1190

AUTHORS: Markevich, S.V., Ivko, A.A.

TITLE: H-D exchange in the C_2H_4-D_2 system in the presence of alumina-silica catalysts

PERIODICAL: Kinetika i kataliz, v.2, no.5, 1961, 788-793

TEXT: In spite of the numerous investigations of catalytic cracking of petroleum hydrocarbons and the immense industrial importance of such processes, their mechanism is still far from being fully elucidated. The solution of this problem should be sought in studies of deuterium reaction with individual hydrocarbons because although these reactions are comparatively simple, they nevertheless involve many elementary stages characteristic of the kinetics of ordinary reactions. A brief review of previously reported investigations of the reaction of deuterium with various hydrocarbons, e.g. in the CD_4-CH_4 system, is followed by consideration of the results obtained by the authors in their study of deuterium-ethylene mixtures heated to 350°C in the presence of alumina-silica catalysts containing from 10 to 70% Al_2O_3. Detailed test procedures used in the investigations were described

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H-D exchange in the C_2H_4-D_2 system ...

previously (Ref.15: The present authors and M.I.Kozlyak, Izv. AN BSSR, no.4, 1960, 46) and involved the preparation of D_2 and its reaction with ethylene in the 3:1 mixture ratio, at a total pressure in the system of 300 mm Hg and in the presence of 4 g of catalyst. Results of mass-spectrographic analyses of the products are reported for reaction times ranging from 30 to 150 min. It is clear from the data that the reaction of deuterium with ethylene under the above conditions is limited to isotopic exchange only because no indication was found of the presence of hydrogenation, cracking, polymerization, isomerization or cyclization reactions. Curves plotted for kinetics of the deuterium exchange as a function of the alumina concentration in the catalyst show it to be of the first order. The velocity constant of the deuterium exchange reaction rises steadily with increasing alumina content in the catalyst. An attempt is made to formulate the mechanism of the isotopic exchange involved and to calculate the velocity constants of reactions on seven catalyst mixtures with variable alumina contents. The value of the velocity constants was found to rise progressively with increasing alumina content in the alumina-silica

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H-D exchange in the C_2H_4-D_2 system ...

catalyst. Because the acidity of the catalyst passes through a maximum corresponding to 20 - 40% of Al_2O_3 concentration in the catalyst, it is concluded that there is no correlation between the surface acidity of the catalyst and the catalytic activity with respect to isotopic hydrogen exchange reactions. There are 3 figures, 1 table and 19 references: 10 Soviet-bloc, 2 Russian translations of non-Soviet-bloc work and 7 non-Soviet-bloc. The four most recent references to English language publications read as follows: Ref.8: S.G.Hindin, G.A.Mills, A.S.Oblad, J. Amer. Chem. Soc. a) v.73, 1951, 278; b) v.77, 1955, 543; Ref.9: V.C.Holm, R.W.Blue, Ind. Eng. Chem. a) v.43, 1951, 494; b) v.43, 1951, 501; Ref.10: K.S.Hansford, Ind. Eng. Chem., v.44, 1952, 1108; Ref.18: K.J.Laidler, M.C.Wall, M.C.Markham, J. Chem. Phys., v.20, 1952, 1331.

ASSOCIATION: Institut fiziko-organicheskoy khimii AN BSSR
(Institute of Physical and Organic Chemistry AS BSSR)

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