33661
S/058/61/000/012/015/083
A058/A101

21.7200 also 4112 3212

AUTHORS: Ablyayev, Sh.A., Generalova, V.V., Starodubtsev, S.V.

TITLE: Concerning gamma-dose measurement from variation in optical activity of carbohydrates

PERIODICAL: Referativnyy zhurnal. Fizika, no. 12, 1961, 70, abstract 12B230 (Tr. Tashkentsk. konferentsii po mirn. ispol'zovaniyu atomn. energii, 1959, v. 1, Tashkent, AN UzSSR, 1961, 159 - 163)

TEXT: Radiation effects in sugar and glucose solutions were investigated in the dose range 0-200 million roentgens. The coefficient of optical activity was monitored by means of a sensitive polarimeter. Results showed that the angle of rotation of the polarization plane decreases linearly with irradiation dose. The effect of concentration incident to this variation of the specific rotation was investigated. Glucose solutions are recommended as dosimetric liquids in view of their long preservability, the constancy of the changes that take place in them and their insensitivity to temperature.

[Abstracter's note: Complete translation]

X

Card 1/1

54600

33100
S/638/61/001/000/025/056
B104/B138

AUTHORS: Ablyayev, Sh. A., Yermatov, S. Ye., Starodubtsev, S. V.

TITLE: Variation in adsorption properties of silica gel during gamma irradiation

SOURCE: Tashkentskaya konferentsiya po mirnomy ispol'zovaniyu atomnoy energii. Tashkent, 1959. Trudy, v. 1. Tashkent, 1961, 174 - 177

TEXT: The adsorption properties of industrial KCK (KSK) silica gel were determined from the amount of gas absorbed, and by measurements with thermocouple and ionization manometers. Before the experiments, the samples were carefully heat-treated, sealed in evacuated ampoules, and exposed to gamma rays. Radiation dose was 150 - 350,000 r/hr reaching a total of up to 2 million r. The adsorption properties of silica gel increase considerably during irradiation, and differ for different gases. Some gases, such as argon or hydrogen sulfide, are hardly adsorbed at all. Amounts of gas additionally adsorbed during irradiation:

Card 1/3

Variation in adsorption...

Gas	Additionally adsorbed gas amount, moles/g
Hydrogen	12
Nitrogen	8
Carbon dioxide	18
Ammonia gas	1
Ethylene	0.5

When the silica gel is heated to 100°C, its properties return to their initial state, i.e. annealing occurs. The increase in adsorption power remains practically constant at room temperature. The lower the temperature (down to -150°C), the more rapid the adsorption process. The adsorption power of silica gel increases with decreasing temperature, but the increase is greater during gamma irradiation. Results are explained as follows: (1) The hydroxyl group is destroyed by irradiation, and free valences are formed; (2) electrically charged active centers are formed; (3) the bonds between free radicals are ruptured. A. N. Terenin et al. (DAN SSSR, 66, 885, 1949) are mentioned. There are 3 figures, 1 table, and 6 references: 5 Soviet and 1 non-Soviet.

Card 2/3

33100
S/638/61/001/000/025/056
B104/B158

Variation in adsorption...

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UzSSR (Physicotechnical Institute AS Uzbekskaya SSR)

Card 3/3

22970
S/166/61/000/002/001/006
B112/B217

5.4500 (B)

AUTHORS: Stapodubtsev, S. V., Member of the Academy of Sciences Uzbekskaya SSR, Ablyayev, Sh. A., Bukhramov, F., Keitlin, L. G., Yusova, E. N.

TITLE: Study of molecular conversions in a natural gas, produced by high-frequency electric discharges

PERIODICAL: Izvestiya Akademii nauk UzSSR. Seriya fiziko-matematicheskikh nauk, no. 2, 1961, 3-11

TEXT: The study of chemical conversions is to continue studies of different radiation effects on methane. A high-frequency device of the type ЛГЕ-3Б (LGE-ZB) was used for heating the dielectrics. The experimental arrangement is schematically represented in Fig. 1: A is a gas tank, B a rheometer, T a discharge tube, Л (L) a trap, P a reservoir, M a manometer, H a bulb, and D_1 and D_2 are catarrhometers. The reaction products were analyzed spectroscopically. The ИКС-14 (IKS-14) spectrograph used has a measuring range of 600-10000 cm^{-1} and prisms of LiF and

Card 1/5

Study of molecular conversions in a...

KCl.. The gas contained 98 % methane. The amount of energy absorbed on passage through the gas discharge tube was determined from the temperature difference $T_2 - T_1$ at the ends of the discharge tube.

$$E = 2.6\ 10^{19} M\ C_p (T_2 - T_1)\ ev,$$

where M is the mass of the gas, and C_p the specific heat at constant pressure. Fig. 2 shows the absorption spectrum of the gas. The dashed line (1) refers to a gas not subjected to electric discharge, whilst line (2) refers to a gas subjected to electric discharge. The effect of electric discharge on the gas resulted in the formation of liquid products which turned out to be derivatives of alkyl benzenes. The basic products are formed as follows:

$$CH_4^+ + CH_4 \rightarrow CH_5^* + CH_3$$

$$CH_5^* \rightarrow CH_3 + H_2$$

$$CH_4^+ + e \rightarrow CH_4^* \rightarrow CH_3 + H$$

$$CH_3^+ + CH_4 \rightarrow C_2H_5^+ + H_2$$

Card 2/5

Study of molecular conversions in a...

$$C_2H_5^+ + e \rightarrow CH_3 + CH_2$$

$$CH + CH \rightarrow C_2H_2$$

$$CH_2 + CH_2 \rightarrow C_2H_4$$

$$CH_3 + CH_3 \rightarrow C_2H_4 + H_2.$$

There are 3 figures and 26 references: 8 Soviet-bloc and 18 non-Soviet-bloc.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UzSSR (Institute of Physics and Technology, Academy of Sciences Uzbekskaya SSR)

SUBMITTED: January 7, 1961

Study of molecular conversions in a...

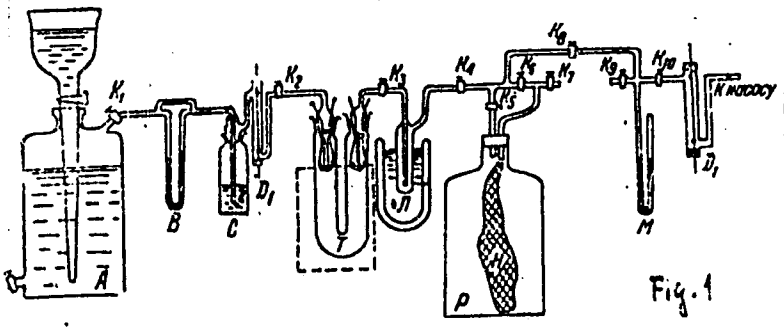
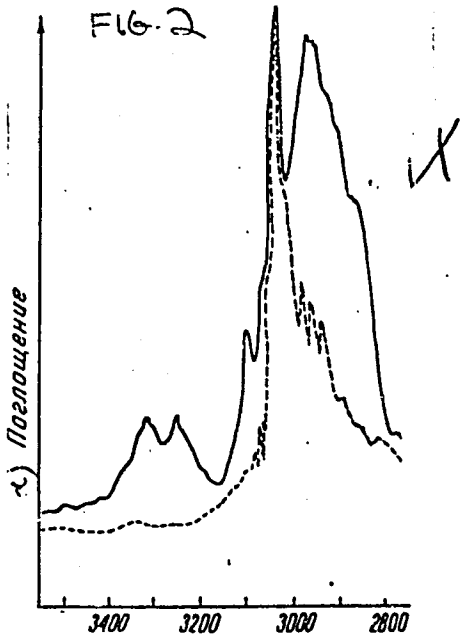


Fig. 1

Fig. 1

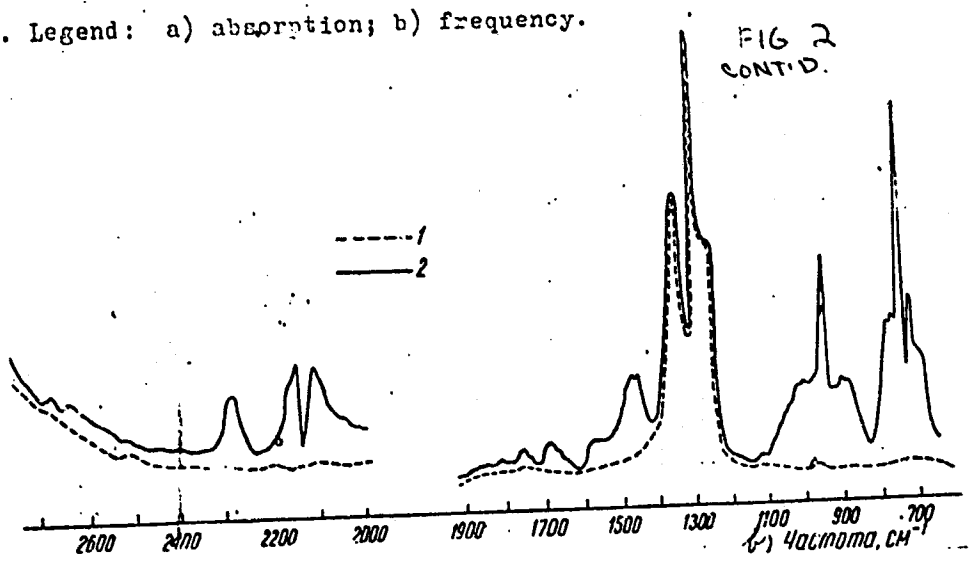


Card 4/5

Study of molecular conversions in a...

Fig. 2. Legend: a) absorption; b) frequency.

FIG 2 CONT'D.



Card 5/5

AHLYAYEV, SH. A.

90

SOV/6176

PHASE I BOOK EXPLOITATION

Konobeyevskiy, S. T., Corresponding Member, Academy of Sciences USSR, Resp. Ed.

Deystviye vadernykh izlucheniy na materialy (The Effect of Nuclear Radiation on Materials). Moscow, Izd-vo AN SSSR, 1962. 383 p. Errata slip inserted. 4000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye tekhnicheskikh nauk; Otdeleniye fiziko-matematicheskikh nauk.

Resp. Ed.: S. T. Konobeyevskiy; Deputy Resp. Ed.: S. A. Adasinskiy; Editorial Board: P. L. Gruzin, G. V. Kurdyumov, B. M. Levitskiy, V. S. Lyashenko (Deceased), Yu. A. Martynyuk, Yu. I. Pokrovskiy, and N. F. Pravdyuk; Ed. of Publishing House: M. G. Makarenko; Tech. Eds: T. V. Polyakova and I. N. Dorokhina.

Card 1/14

1 90

SOV/6176

The Effect of Nuclear Radiation (Cont.)

PURPOSE: This book is intended for personnel concerned with nuclear materials.

COVERAGE: This is a collection of papers presented at the Moscow Conference on the Effect of Nuclear Radiation on Materials, held December 6-10, 1960. The material reflects certain trends in the work being conducted in the Soviet scientific research orginization. Some of the papers are devoted to the experimental study of the effect of neutron irradiation on reactor materials (steel, ferrous alloys, molybdenum, avial, graphite, and nichromes). Others deal with the theory of neutron irradiation effects (physico-chemical transformations, relaxation of internal stresses, internal friction) and changes in the structure and properties of various crystals. Special attention is given to the effect of intense γ-radiation on the electrical, magnetic, and optical properties of metals, dielectrics, and semiconductors.

Card 2/14

The Effect of Nuclear Radiation (Cont.)

Card 13/14

S/844/62/000/000/119/129
D207/D307

AUTHORS: Starodubtsev, S. V., Ablyayev, Sh. A., Vasil'yeva, Ye. K. and Yermatov, S. Ye.

TITLE: Effect of γ radiation on adsorption properties of silica gels

SOURCE: Trudy II Vsesoyuznogo soveshchaniy po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 689-692

TEXT: Factory-made silica gel of КСК (KSK) grade was heat-treated in evacuated ampoules and then subjected to γ rays at dose rates up to 340,000 r/hour. Adsorption was then investigated by admitting a gas or vapor to the ampoules held at temperatures from +20°C to liquid-nitrogen temperature. On cooling, the adsorption ability of silica gel increased even without irradiation, but γ rays intensified this increase. The amount of oxygen adsorbed rose linearly with pressure of the admitted gas or vapor in unirradiated and irradiated silica gel, indicating the same nature of adsorption cen-

Card 1/2

Effects of γ radiation ...

ters in both cases. The silica gel surface became saturated with adsorption centers at doses of 2 - 3 x 10^6 r. Gamma irradiation raised the amount of heptane vapor that could be adsorbed on silica gel (this effect was smaller than for the majority of gases) but made no difference to the adsorption of benzene vapor. Irradiation of aqueous solutions of ammines of the $[Co(NH_3)_6]Cl_3$ type in direct contact with silica gel raised the amount of liquid adsorbed because of radiation-induced chemical reactions in the solutions rather than due to changes on the silica gel surface. Gamma-irradiation raised also the amounts of oxygen and hydrogen that could be adsorbed by aluminosilica gel. A practical application of these observations consisted of placing γ activated silica gel between the walls of a thermos flask. This improved the vacuum between these walls, by adsorbing more gas than unirradiated silica gel, and thus reduced heat transmsiion through the walls. Such thermos flasks were prepared at the Ashkhabadskiy stekol'nyy kombinat im. V. I. Lenina (Ashkhabad Glass Combine im. V. I. Lenin). There are 7 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UzbSSR (Physico-Technical Institute AS UzSSR)

Card 2/2

S/166/62/000/006/006/016
B101/B186

AUTHORS: Starodubtsev, S. V., Ahlyayev, Sh. A., Bakhramov, F., Ziyatdinov, Sh., Keytlin, L. G.

TITLE: Study of molecular conversions in natural gas under the action of electrodeless high-frequency discharges. III. Effect of the wattage of high-frequency discharges and gas pressure in the discharge tube on electrocracking

PERIODICAL: Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 6, 1962, 53 - 60

TEXT: To clarify the basic mechanism of electrocracking, methane was cracked at various wattages (20 - 180 w), pressures (20 - 60 mm Hg), and contact times τ (0.01 - 2.4 sec); total cracking and the yields of ethane, ethylene, acetylene, propane, propylene, butylenes, and hydrogen was determined. Total cracking increased with wattage: the rise was gradual up to ~30 w, τ = 0.05 sec, steep between 30 and 100 w, and then gradual again. The steep section of the curve corresponds to the range where a chain mechanism operates. The threshold limit of the wattage at which the steep rise sets in decreases with increasing τ. The yields of ethane and

Card 1/3

Study of molecular conversions...

ethylene fall with increasing wattage for τ = const. No C_2H_6 or C_2H_4 is formed at 140 - 150 w. The yield of acetylene increases with the wattage, passes a maximum at a certain wattage depending on τ, and then falls steadily. The maximum C_2H_2 yield is 11% at 50 w and τ = 0.8 sec, and 22.5% at 100 w and τ = 0.3 sec. Diacetylene forms at low wattages. More and more liquids are formed with increasing wattage, and diacetylene disappears due to formation of cyclohydrocarbons. For propane and propylene, there is also a maximum at 50 w and τ = 0.4 sec which vanishes at high wattages, probably being shifted toward very short τ. The yield maxima for C_3H_8 and C_3H_6 lie in the range where intense decomposition of C_2H_6 and C_2H_4 begins. Butylenes form only at low wattages, they are no longer detectable at 140 w. The hydrogen yield, however, rises continuously with w and τ. The specific energy consumption for a tube 2.5 cm in diameter and for τ = 0.3 sec was 70 w·hr per mole of cracked CH_4, and 280 w·hr per mole of resulting C_2H_2. The corresponding values for a diameter of 9.1 cm and τ = 0.3 sec were 65 and 260 w·hr. Increasing pressure has the same effect as increasing wattage on the cracking and the yield of decomposition products. Experiments with tubes of different diameters d showed that total cracking depends linearly

Study of molecular conversions...

on the surface/volume ratio. Total cracking in two tubes of different d in proportional to d_2^2/d_1^2, which may be explained by the termination on the walls of the tubes. Furthermore, the yield of the individual products depends on d, and this requires further investigation. There are 7 figures and 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UzSSR (Physicotechnical Institute AS UzSSR)

SUBMITTED: July 13, 1962

Card 3/3

S/166/62/000/006/007/016
B104/B186

AUTHORS: Starodubtsev, S. V., Ablyayev, Sh. A., Alimova, L. Ya., Sokolova, Yu. B.

TITLE: An investigation of the molecular transformations in natural gas occurring under the action of electrodeless high-frequency discharges. IV. Study of the kinetics of transformation and destruction of some free radicals

PERIODICAL: Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 6, 1962, 61-65

TEXT: An investigation with the ИСП-51 (ISP-51) spectrograph is made to elucidate the formation and destruction of the radicals H, C_2, and CH which are formed in natural gas, containing 96% methane, at 0.2 - 30 mm Hg under electrodeless high-frequency discharges. Results: The CH radical is formed principally from the methane molecule by electron bombardment. The acetylene molecule is formed from this radical. The C_2 radical results from the HC_2 radical by splitting off the H atom. The acetylene

molecule is formed also from the C_2 radical. There are 3 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UzSSR
(Physicotechnical Institute AS UzSSR)

SUBMITTED: July 13, 1962

STARODUBTSEV, S.V.; ABLIAYEV, Sh.A.; KEYTLIN, L.G.

Study of molecular transformations in a natural gas caused by electrodeless high-frequency discharges. Izv. AN Uz. SSR. Ser. fiz.-mat. nauk 6 no.5:50-57 '62. (MIRA 15:11)

1. Fiziko- tekhnicheskiy institut AN UzSSR.
(Gas, Natural) (Electric discharges)

S?ARODUBTSEV, S.V.; ABLYAYEV, Sh.A.; BAKHRAMOV, F.; ZIYATDINOV, Sh.; KEYTLIN, L.G.

Study of molecular transformations in a natural gas caused by electrodeless high-frequency discharges. Part 2. Effect of certain physical factors and impurities on electric cracking. Izv. AN Uz. SSR. Ser. fiz.-mat. nauk 6 no.5:58-65 '62. (MIRA 15:11)

1. Fiziko-tekhnicheskiy institut AN UzSSR.
(Cracking process)

STARODUBTSEV, S.V.; ABLYAYEV, Sh.A.; BAKHRAMOV, F.; ZIYATDINOV, Sh.; KEYTLIN, L.G.

Molecular transformations in a natural gas produced by electrodeless high-frequency discharges. Izv. AN Uz. SSR. Ser. fiz.-mat. nauk 6 no.6:53-60 '62. (MIRA 16:2)

1. Fiziko-tekhnicheskiy institut institut AN UzSSR.
(Electric discharges through gases)
(Cracking process)

STARODUBTSEV, S.V.; ABLYAYEV, Sh.A.; ALIMOVA, L.Ya.; SOKOLOVA, Yu.B.

Molecular transformations in a natural gas produced by electrodeless high-frequency discharges. Part 4. Kinetics of the formation and destruction of certain free radicals. Izv. AN Uz. SSR. Ser. fiz.-mat. nauk 6 no.6:61-65 '62. (MIRA 16:2)

1. Fiziko-tekhnicheskiy institut AN UzSSR.
(Radicals (Chemistry))
(Electric discharges through gases)

L 2442-66 EWT(m)/EPF(c)/EPF(n)-2/EWP(t)/EWP(b) LJP(c) JD/GG/GF

ACCESSION NR: AT5023820 UR/0000/62/000/000/0366/0369

AUTHOR: Starodubtsev, S. V.; Ablyayev, Sh. A.; Yermatov, S. Ye.

TITLE: Effect of gamma fluxes on the adsorptive properties of vacuum materials

SOURCE: Soveshchaniye po probleme Deystviye yadernykh izlucheniy na materialy. Moscow, 1960. Deystviye yadernykh izlucheniy na materialy (The effect of nuclear radiation on materials); doklady soveshchaniya. Moscow, Izd-vo AN SSSR, 1962, 366-369

TOPIC TAGS: silica gel, aluminum silicate, gamma irradiation, irradiation effect, gas adsorption

ABSTRACT: The article continues the study of γ-ray-induced changes in the adsorptive properties of KSK and ASM silica gel and plant-produced aluminosilicates. Oxygen and hydrogen were used as the adsorbed gases, and the radiation dose rate was (150-350) 10^3 r/hr. All the results showed an increase in adsorptive capacity that was much more pronounced in silica gels than in aluminosilicates. The temperature dependence of this radiation effect was investigated between +100 and -130C, and the adsorptive capacity was found to increase with decreasing temperature (this increase was much greater than that of nonirradiated samples). The adsorption isotherms were found to be linear both at room temperature and at the

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L 2442-66
ACCESSION NR: AT5023820

liquid nitrogen temperature. Curves of the time dependence of the adsorption showed that equilibrium pressure is established after a certain time interval, i.e., the adsorption is not instantaneous. The data indicate that to a first approximation the additional active adsorption centers produced by the γ rays obey the same laws as ordinary centers on silica gel. The property of silica gels to thus increase their adsorptive capacity was utilized for the creation of a greater vacuum in Dewar flasks and thermos bottles. Tests showed that the rate of cooling of hot water in pre-irradiated thermos bottles containing a silica gel compartment was slower, and after 20 hr. the temperature of the water was 5 to 8° higher than in nonirradiated bottles. Orig. art. has: 7 figures.

ASSOCIATION: none

SUBMITTED: 18Aug62 ENCL: 00 SUB CODE: NP, MT

NO REF SOV: 001 OTHER: 000

BVK

Card 2/2

ACCESSION NR: AT3007249 S/2952/63/000/000/0019/0021

AUTHORS: Starodubtsev, S. V.; Ablyayev, Sh. A.; Yermatov, S. Ye; Azizov, S. A.

TITLE: Effect of gamma radiation on the adsorptional properties of synthetic zeolites

SOURCE: Radiatsion. effekty* v tverd. telakh. Tashkent, Izd-vo AN UabSSR, 1963, 19-21

TOPIC TAGS: adsorption, ordinary adsorption, supplementary adsorption, radiation-induced adsorption, zeolite, gamma ray, gamma-ray-induced adsorption, radiation, gamma radiation, temperature effect, isotherm

ABSTRACT: The paper describes an experimental investigation of the effect of gamma rays on the adsorptivity of synthetic zeolites. The tests were performed by the ordinary volumetric method on 3 Gor'kovskoye specimens of the types 4Å (NaA), CaA 5Å, and 13x (Nax), and two Groznoye specimens 4Å (NaA) and CaA 5Å. The zeolite specimens were first heat-treated thoroughly at temperatures of 350-400°C at pressures between 10^{-1} and 10^{-6} mm Hg for several hours. The zeolites were then exposed to gamma rays of a radiation dosage rate of 150 to 350,000 r/hr, with a total dose of 2 to $3 \cdot 10^6$ r. The adsorptivity of the zeolites was found to be

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ACCESSION NR: AT3007249

significantly increased; the increase grew to a certain limit depending on the intensity of the radiation dose. The effect of the glass on the test results was determined by identical control ampoules with O and H, with and without adsorbents, exposed to gamma radiation. It was found that the ampoules not containing adsorbents maintained a constant gas pressure. Therefore, the effect of the glass was found to be nil. It was found that the adsorption temperature affects the magnitude of the gamma-ray effect substantially. The radiational effect decreases at elevated temperatures, that is, a radiational anneal occurs. The effect disappears completely at 300-400°C. It is noted that following an anneal the limiting pressure occurs at lower values of the radiational dose. Comparative isotherms of supplementary and ordinary adsorption of an irradiated zeolite were plotted for dry air at -196° and at room temperature. The nature of the radiation effect observed is explained by the knocking out of a Compton electron by a primary gamma quantum, whereupon the fast electrons pass along a path of 2-3 mm within the zeolite. Having expended their energy on the ionization of the matter, they form a large number of relatively slow electrons with energies of the order of tens of ev. The resulting strong ionization forms negative and positive ions which produce excitations and other defects of various kind. The number of possible defects per gamma quantum ordinarily amounts to several tens of thousands; these defects do not differ from those obtainable by UV and X-ray impingement. The supplementary

Card 2/3

ACCESSION NR: AT3007249

adsorption of gases on the zeolites occurs in such defects. Orig. art. has: 3 figs.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 14Oct63 ENCL: 00

SUB CODE: MA, PA, EE, CH NO REF SOV: 005 OTHER: 000

Card 3/3

ACCESSION NR: AT3007248 S/2952/63/000/000/0011/0018

AUTHORS: Starodubtsev, E.S. V.; Ablyayev, Sh. A.; Yermatov, S.Ye.; Pulatov, U.U.

TITLE: Changes in adsorptivities of silicagels and zeolites under the action of high-frequency discharges

SOURCE: Radiatsion. effekty* v tverd. telakh. Tashkent, Izd-vo AN UzbSSR, 1963, 11-18

TOPIC TAGS: adsorption, adsorptivity, silicagel, zeolite, electric discharge, slow electron, gamma ray, cosmic radiation, temperature effect, isotherm, high-frequency discharge

ABSTRACT: The paper reports the basic results of an experimental investigation of the effect of fluxes of slow electrons on the adsorption properties of synthetic zeolites and silicagels. Test objects were: Silicagel Mark KSK and synthetic zeolites of the types 4Å (NaA) Gor'kovskoye, CaA 5Å Gor'kovskoye, 13x(Nax) Gor'kovskoye, 4Å (NaA) Groznoye, and CaA 5Å Groznoye. High-frequency electric discharges served as slow-electron sources. The changes in the adsorptional properties were investigated experimentally by the adsorption of gases by adsorbents measured by manometric tubes. The specimen adsorbent, contained in a glass ampoule (A), is

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ACCESSION NR: AT3007248

first heated to 350-400°C under continuous evacuation. The A is then filled with the test gas from a reservoir V, following the evacuation of the air from the entire system down to 10^{-3} to 10^{-4} mm Hg. The gas is permitted to enter the adsorbent container A up to a specified pressure, whereupon A is soldered tight and thus cut off from the vacuum equipment and held at room temperature until the establishment of an equilibrium pressure, which is of the order of 10^{-1} mm Hg. The instrument is then exposed to the action of the high-frequency discharges. Zeolites: Test results, plotted in the form of curves, show that all types of zeolites gain in adsorptional capacity under the effect of slow electrons. These changes increase with increasing irradiation time up to a specified limit and then achieve saturation after about 6 to 10 min. Optimal results were obtained with the Gor'kovskoye zeolites of the types 13x(Nax) and CaA 5Å. Isotherms of ordinary and induced adsorption of zeolites with reference to dry air at temperatures of 20 and −196°C were derived. Silicagels: Exposure to the discharges increased the adsorptivity of silicagel substantially. Saturation at any given oscillatory power was achieved after 8-15 minutes. Isotherms of ordinary and induced adsorption of silicagel with respect to dry air in the 10^{-1} to 10^{-3}-mm-Hg range were obtained at temperatures of 0, +30, +60, and −196°C. Adsorbent temperature exerted a noticeable effect on the magnitude of both ordinary and induced adsorption. The adsorptivity of silicagel and zeolites increases with decreasing temperatures even without irradiation.

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ACCESSION NR: AT3007248

However, the changes are substantially greater under irradiation, and the adsorption is much more permanent. The effect of lower temperatures is stronger on zeolites than on silicagels. Some light is shed on the effect of slow electrons and gamma-ray radiational effects on the surface layer and into the depth of an adsorbent. Orig. art. has: 7 figures.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 14Oct63 ENCL: 00

SUB CODE: PH, EE, MA NO REF SOV: 006 OTHER: 000

Card 3/3

S/109/63/008/002/019/028
D413/D308

AUTHORS: Starodubtsev, S.V., Ablyayev, Sh.A., Yermatov, S.Ye. and Pulatov, U.

TITLE: The effect of radio-frequency discharges on the adsorption properties of silica gel

PERIODICAL: Radiotekhnika i elektronika, v. 8, no. 2, 1963, 328-330

TEXT: The authors have earlier (Dokl. AN SSSR, v. 129, no. 1, 1959, 72; Izv. AN UzSSR, Ser. fiz.-mat. nauk, no. 6, 1960, 93; etc) shown the effect of γ-radiation in enhancing the adsorption of various gases by silica-gel: since this surface effect is known to be due to slow electrons arising from ionization processes, it should also be produced in an RF discharge. Samples of KCK (KSK) industrial silica-gel were exposed after baking to an RF field of intensity 45 - 60 v cm-1 derived from an ИГЕ -3Б (IGYe-3B) equipment with nominal power output 2 kw and working frequency 25-30 mc/s; the adsorption of air, H_2, CH_4, CO_2 and He after various exposure

Card 1/2

The effect of radio-frequency ...

times was measured by manometer tubes. The resulting curves show increases in adsorption closely similar to those obtained by the action of γ-radiation, ranging from zero for He to a saturation value of 0.4 μ mole g^{-1} for H_2. The induced adsorption disappears completely on baking at 350°C. Isotherms are also given for the induced adsorption of dry air at 0°, 30° and 60°C over the range 10^{-1} - 10^{-3} mm Hg. It is suggested that the effect is due to removal of part of the OH-groups normally covering the surface of the silica-gel. There are 3 figures.

SUBMITTED: March 19, 1962

Card 2/2

STARODUBTSEV, S.V.; ABLYAYEV, Sh.A.; BAKHRAMOV, F.; KEYTLIN, L.G.; YUSOVA, E.N.

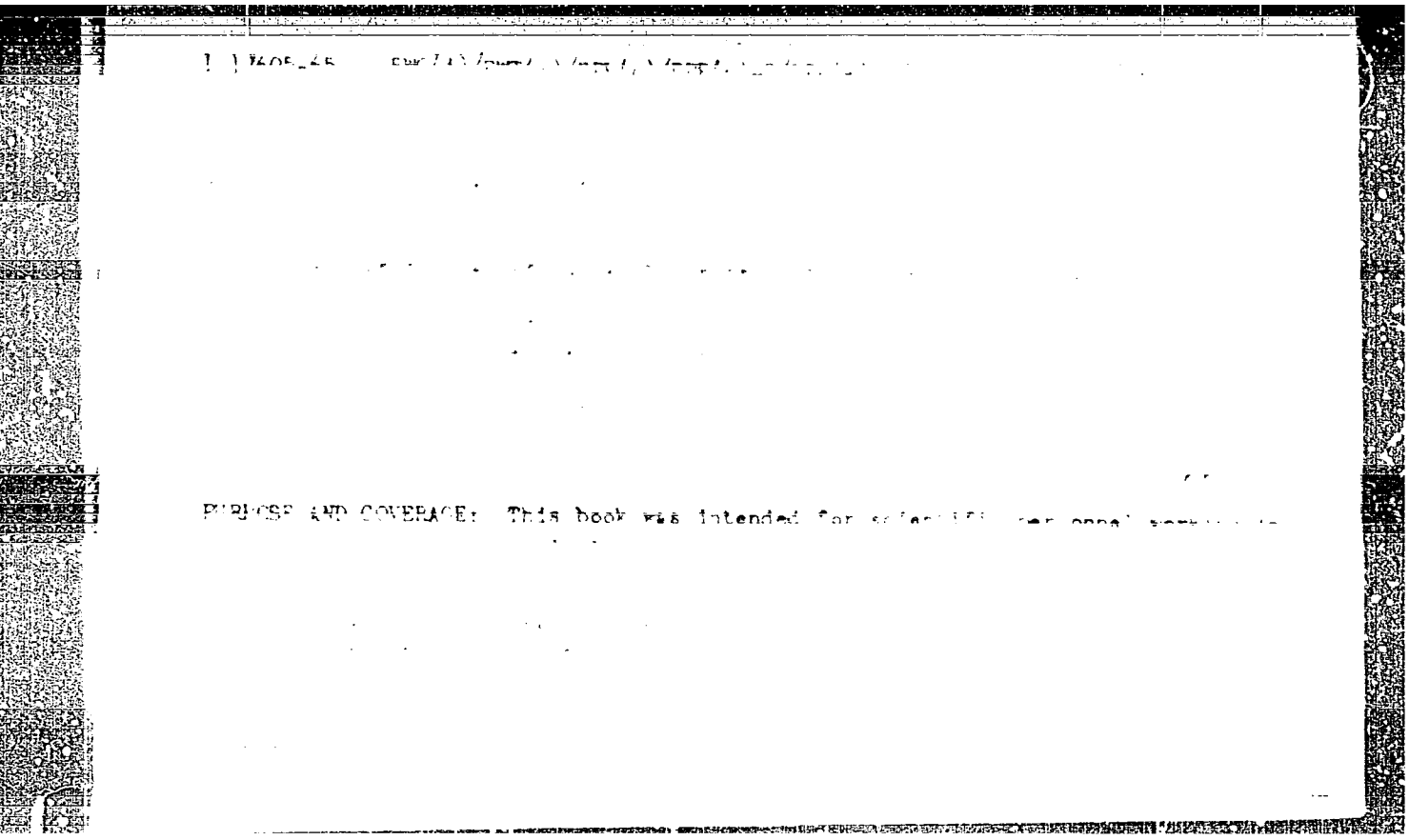
Study of the electrocracking of natural gas by the method of vibrational spectra. Zav. lab. 29 no.6:707-708 '63. (MIRA 16:6)

1. Fiziko-tekhnicheskiy institut AN UzbSSR.
(Gas, Natural—Absorption spectra)
(Cracking process)

STARODUBTSEV, S.V., akademik; ABLYAYEV, Sh.A.; YERMATOV, S.Ye.; PULATOV, U.U.

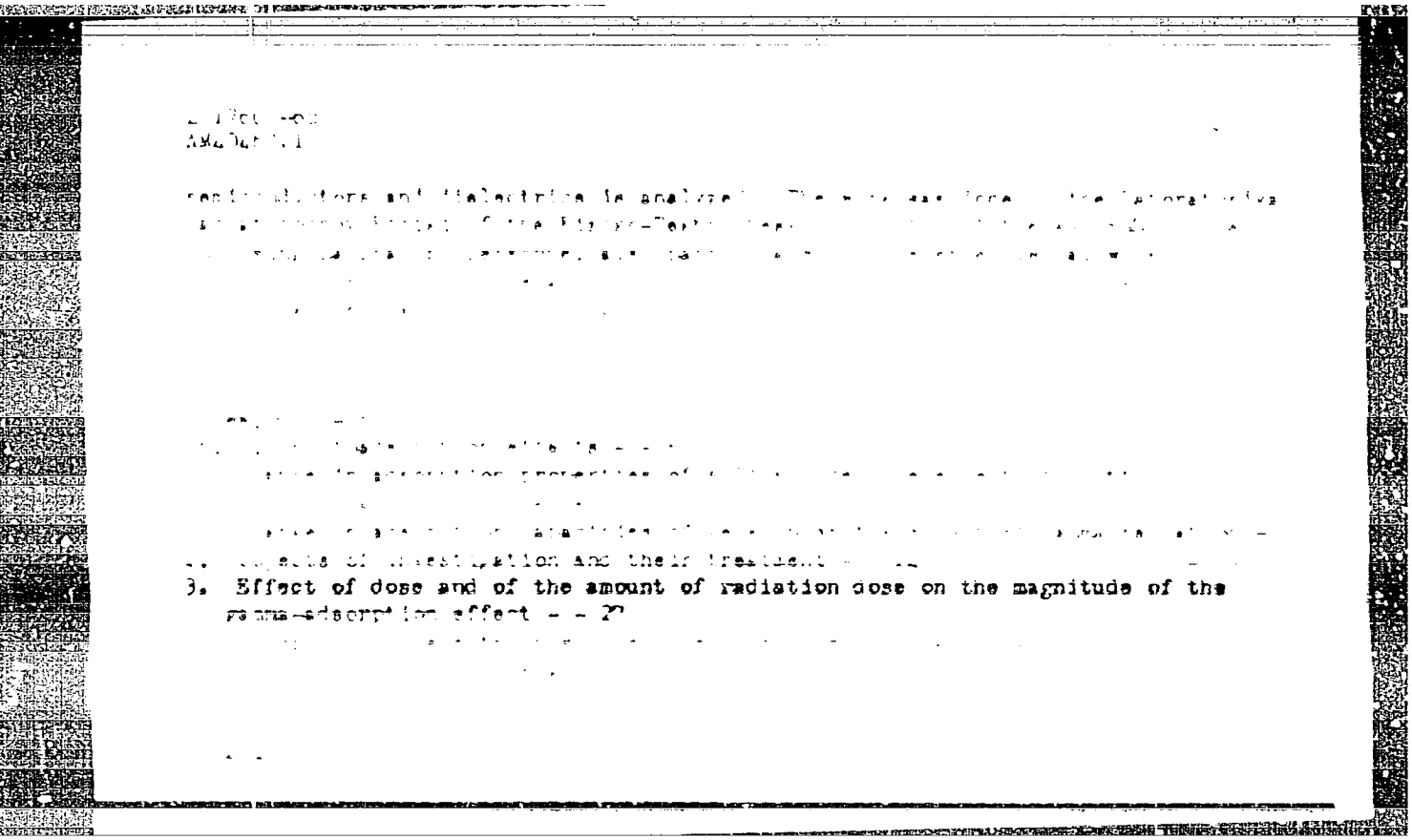
Change in the adsorbing capacity of silica gel induced by high-frequency discharges. Izv. AN Uz. SSR. Ser. fiz.-mat. nauk no.6:77-78 '61. (MIRA 16:12)

1. Fiziko-tekhnicheskiy institut AN UzSSR. 2. Akademiya nauk UzSSR (for Starodubtsev).



PURPOSE AND COVERAGE: This book was intended for

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R000100130007-9"



L 7605-65

7. Exciton mechanism of the formation of active ...

SUB CODE: NP SUBMITTED: ... OTH REF SOV: ...

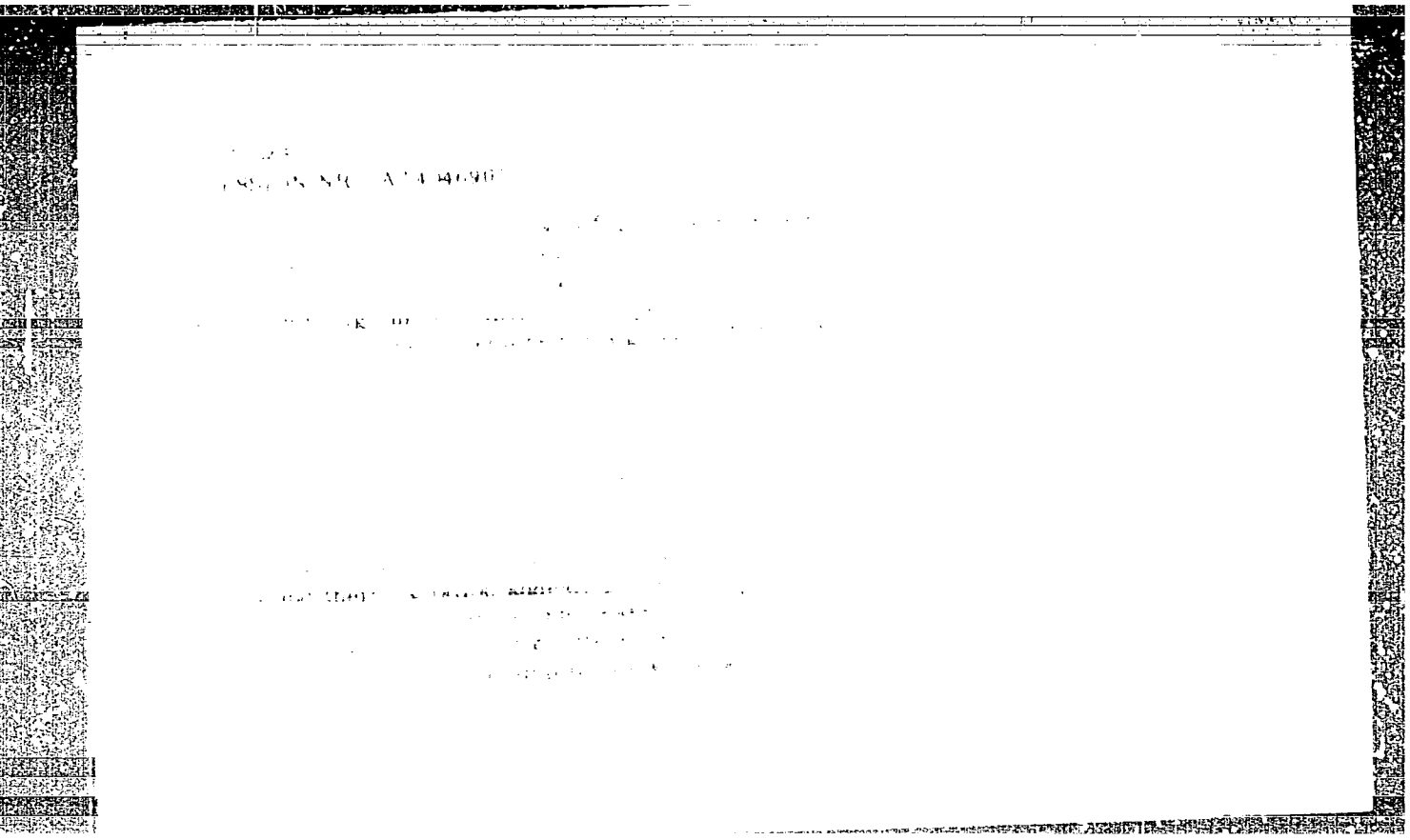
OTHER: 031

Starodubtsev, S. V., Abiyayev, Sh. A.

Investigation of the gamma adsorption effect ... silica gel by the electron para... resonance method

... EPR method, radiation ... electron para...

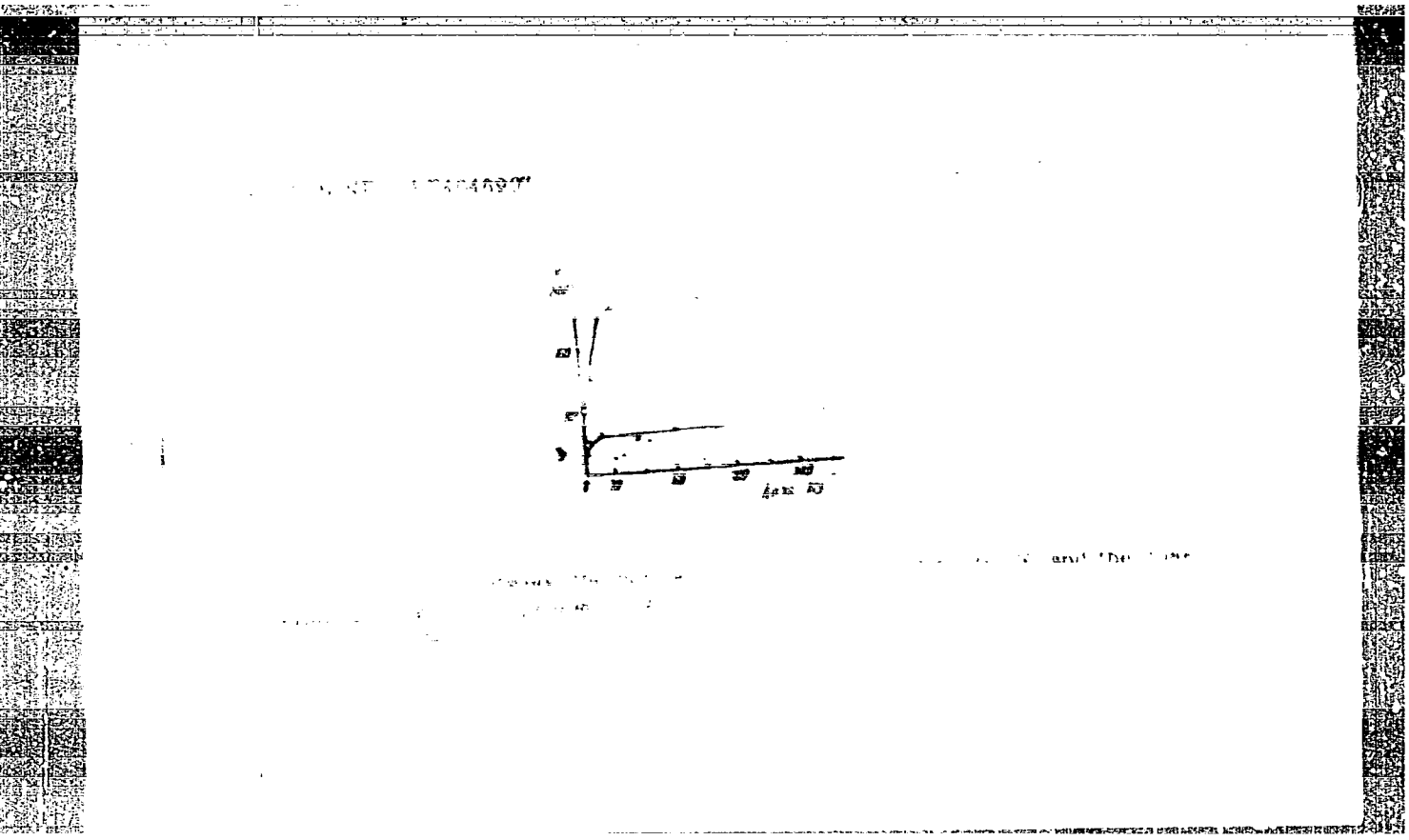
... adsorption capacity of silica gel ...



temperature defects occurring simultaneously with the disappearance of the ... defects. Orig. art. has: 3 figures.

... vadernoy fiziki AN UzSSR (Nuclear Physics Institute, AN UzSSR)

... TED: 01Feb64 ENCL: ...



APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R000100130007-9"

/0000/64/000/000/0023/0029

AUTHOR: Starodubtsev, S. V.; Ablyayev, Sh.A.; Pulatov, U.U., Rasulev, U. Kh.

... the adsorption and desorption processes ... means of ... surfaces of irradiated and non-irradiated ... Zeolite ...

samples were subjected to thermal ... and exposed to the gas mixtures, in which the partial ... γ-ray dose, and exposed to the gas mixtures ... was performed ... was changed ...

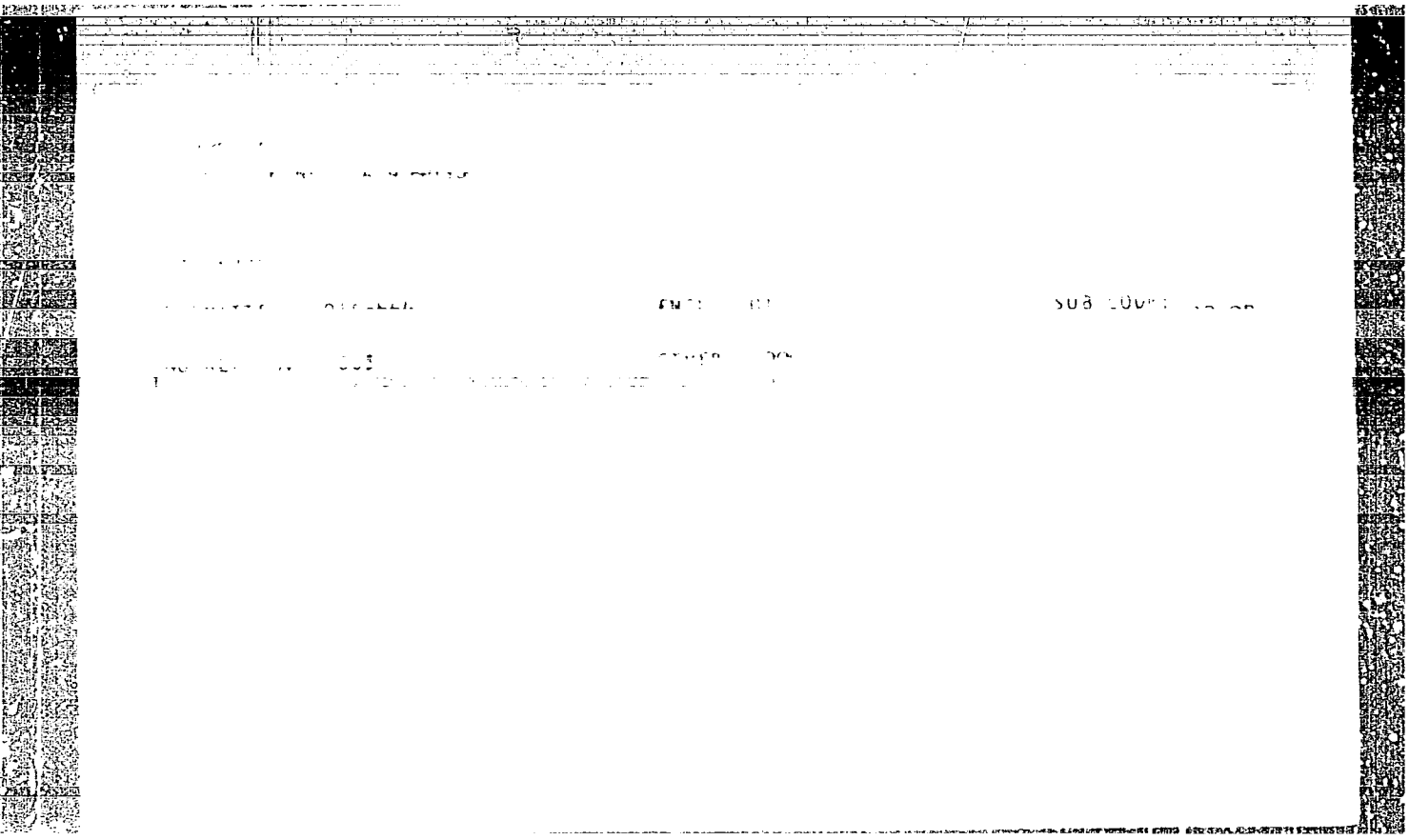
L 9967-65
ACCESSION NR. AT4046952

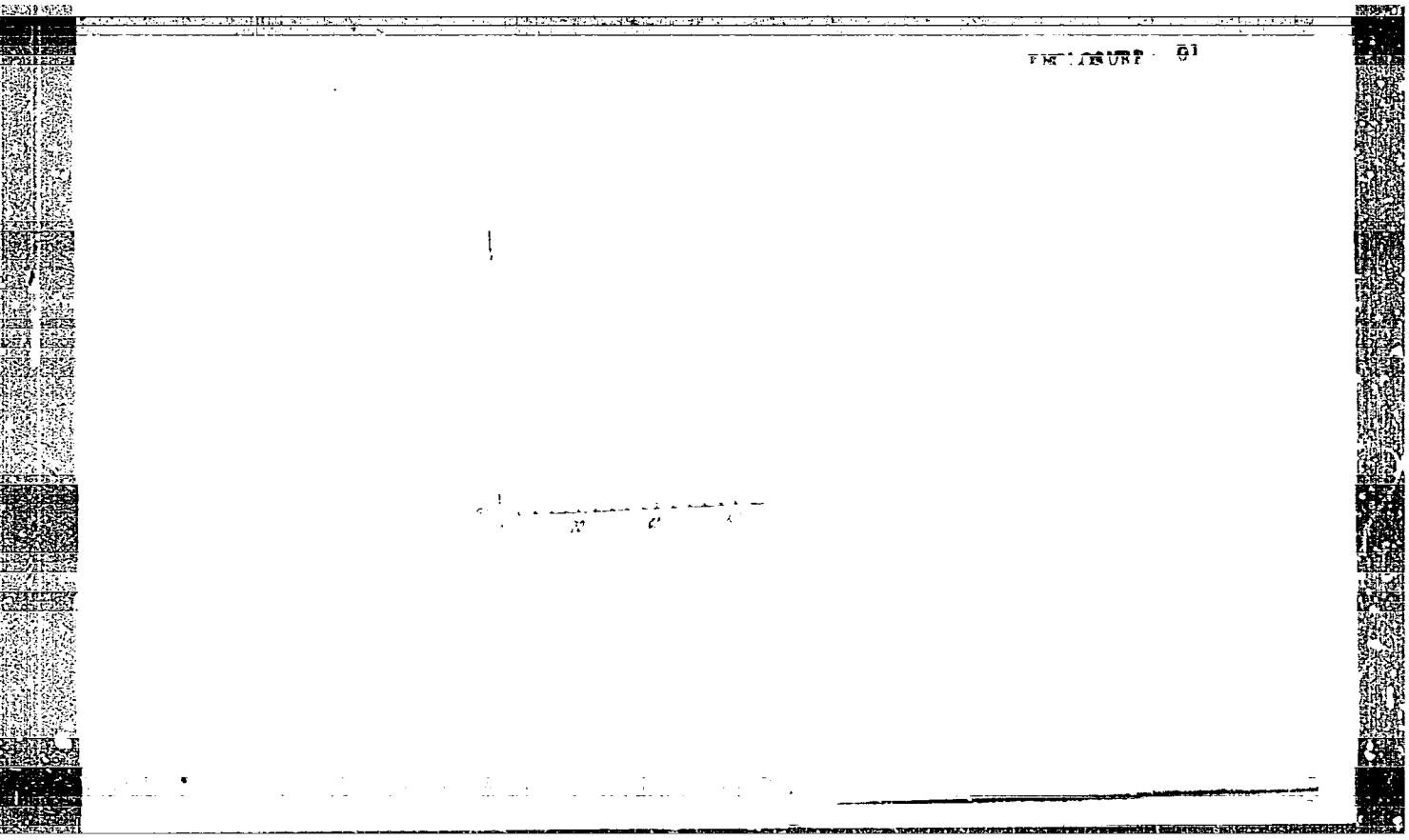
that the ratio

$$\left(\frac{\Delta P}{P_o}_{O_2}\right) / \left(\frac{\Delta P}{P_o}_{N}\right)$$

varies from a value of 0.7 for non-irradiated zeolite to 1.5-2.5 for irradiated

[illegible] considerably and [illegible] an intense desorption [illegible]





ACCESSION NR: AP4038425 S/0166/64/000/002/0090/0091

AUTHOR: Ablyayev, Sh. A.; Pulatov, U. U.

TITLE: The effect of the degree of silicagel porosity on the value of its induced adsorption

SOURCE: AN UzSSR. Izv. Seriya fiziko-matematicheskikh nauk, no.2, 1964, 90-91

TOPIC TAGS: silicagel, silicagel porosity, pulverized silicagel, induced adsorption, nitrogen, KSK silicagel, adsorption gas

ABSTRACT: Based on the method described by the authors in a previous paper (Radiatsionny*ye effekty* v tvyerdy*kh tyelakh, Izd-vo AN UzSSR, Tashkent, 11, 1963) the authors studied the effects of pore dimension and pulverization of various types of industrial silicagels. The adsorption gas used in the experimental effort was nitrogen. The authors found that the value of specific adsorption is at a maximum in the case of KSK silicagel, which has the largest pores (~100Å). The greater the silicagel specific surface, the less the value of the induced adsorption per unit of working surface. The greater the geometrical surface the larger the surface subjected to direct bombardment by slow electrons; i.e., the number of active centers on the surface of the adsorbent will increase. Orig. art. has: 1 table, and 2 figures.

Card 1/2

ACCESSION NR: AP4038425

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UzSSR (Physical Engineering Institute, Academy of Sciences, UzSSR)

SUBMITTED: 17Oct63 DATE ACQ: 26Jun64 ENCL: 00

SUB CODE: PH, MM NO REF SOV: 003 OTHER: 000

Card 2/2

ACCESSION NR: AP4038426 S/0166/64/000/002/0091/0093

AUTHOR: Ablyayev, Sh. A. Pulatov, U. U.

TITLE: Concerning silicagel cathodoluminescence

SOURCE: AN UzSSR. Izv. Seriya fiziko-matematicheskikh nauk, no.2, 1964, 91-93

TOPIC TAGS: silicagel, silicagel cathodoluminescence, luminescence intensity, high frequency discharge, attenuation curve

ABSTRACT: The purpose of this paper is to study the cathodoluminescence of silicagel occures as an effect of high-frequency discharges on its surface. The authors obtained a spectrum of cathodoluminescence and plotted an attenuation curve after illumination at room temperature. The relationship of luminescence intensity to the discharge duration was determined. KSK industrial, pulverized silicagels, having an average granule size of 0.5 to 1mm were used in the experiment. Based on the experimental results, the authors conclude that the maximum intensity range is produced by high-frequency discharge activity within 500-550 millimicrons; the attenuation process lasts for approximately 10 sec. After meeting the described conditions, the attenuation curve can be expressed as the sum of two exponential curves. Orig. art. has: 2 figures.

Card 1/2

ACCESSION NR: AP4038426

ASSOCIATION: Fiziko-tekhnickeskiy institut AN UzSSR (Physical Engineering Institute, AN UzSSR)

SUBMITTED: 27Jan64 DATE ACQ: 26Jun64 ENCL: 00

SUB CODE: OP NO REF SOV: 006 OTHER: 000

Card 2/2

L 9168-65

TITLE: Gamma-adsorption effects in gels

SOURCE: AN UzSSR Institut yadernoy fiziki. Radiatsionnyye effekty v poluprovodnikakh (Radiation effects in semiconductors). Tashkent, Izd-vo Nauka UzSSR, 1964, 30-43

TOPIC TAGS: radiation defect, silica gel

ABSTRACT: The increase in absorption

L 59-8-65

the probability of atom displacement by 1.5 Mev

written in final form as

$$\beta = \frac{1}{\alpha N \gamma}.$$

Some parameters in this equation have to be determined [illegible]

ACCESSION NR: AP4025895 S/0166/64/000/001/0035/0041

AUTHORS: Ablyayev, Sh. A.; Vinokurova, T. Z.

TITLE: Study of high frequency plasma parameters by probe techniques

SOURCE: AN UzSSR. Izv. Seriya fiziko-matematicheskikh nauk, no. 1, 1964, 35-41

TOPIC TAGS: probe technique, high frequency plasma parameter, high frequency discharge, cracking, methane, silica gel, synthetic zeolite, adsorption, desorption, ion current, electron temperature, double probe characteristic, molybdenum, high frequency generator LGE 3B, milliammeter M 82, electronic voltmeter VLU 2

ABSTRACT: It was shown that under the influence of high-frequency discharges the nature of methane cracking depends significantly on the power of the discharge. At low powers the cracking was observed to be superficial, while at high powers the cracking was deep, due to a radical-chain decomposition mechanism. In order to explain the mechanism of molecular decomposition of methane, the significance of electron temperature was investigated. Studies conducted by the authors showed that under the action of a high-frequency discharge the adsorption power of silica gel and zeolite increased considerably. However, the effect of increase of

Card 1/5

adsorption power was observed only up to a certain maximum value of the high-frequency field, beyond which desorption started. Because of the high frequencies involved, the double probe method was used for measuring the electron temperature. The electron temperature is given by the formula

$$T_e = \frac{eI_{i0}}{\left[2\left(\frac{dI}{dV}\right)_{V=0} - \frac{dI_i}{dV}\right] \cdot k}$$

where e is the electron charge, I_{i0} - the ion current in the absence of any external field, I - the total current, V - the voltage, and k - the Boltzmann constant. In the experimental setup for the determination of the electron temperature in the tube containing the silica gel and zeolite, the probes were made of molybdenum wire, 0.4 mm in diameter and a bare exposed length of 5 mm. The probes were embedded to a distance of 10 mm. An LGE-3B h-f generator with an operating frequency of 30 megacycles was used. The tube was vacuum sealed at 10^{-2} mm Hg. The current in the probe circuit was measured by an M-82 milliammeter, and the voltage was measured by a VLU-2 type electronic voltmeter. The results are given in Table 1 on the Enclosures. As can be seen from these results, the adsorption properties increased up to 115 000K, corresponding to a mean energy of 9 ev;

ACCESSION NR: AP4025895

beyond this desorption started. To determine the electron temperature in methane, the discharge tube employed had a length of 70 cm and a diameter of 3.6 mm. In the middle part of the probe two molybdenum probes were sealed in (each having a diameter of 0.4-0.5 mm and a length of 5mm) and separated by a distance of 5 mm. Methane was admitted into the discharge tube at a rate of 100 ml/min, and the tube pressure was between 4 and 20 mm Hg. The results (given in Table 2 on the Enclosures) show that at electron temperatures of 30 000K the cracking was light, while for higher values it was deep. Orig. art. has: 16 formulas, 5 figures, and 2 tables.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UzSSR (Physicotechnical Institute, AN UzSSR)

SUBMITTED: 06Jun63 ENCL: 02

SUB CODE: EE, GC NO REF SOV: 007 OTHER: 002

Card 3/5

ACCESSION NR: AP4025895

ENCLOSURE: 01

Table 1

Field	U, KV	p, Mm·Hg	Iio in scale divisions	$\frac{dI}{dV}$	$\frac{dI_i}{dV}$	T_e, K	kT_e/ev	
B	2,3	$1\cdot10^{-2}$	53	2,4	0,56	$145\cdot10^3$	13	Adsorption Desorption
	3,4	$1\cdot10^{-2}$	90	3	0,35	$185\cdot10^3$	16	
	3,4	$1\cdot10^{-2}$	100	3,2	0,43	$213\cdot10^3$	18	
A	3,4	10^{-2}	32	1,75	0,3	$115\cdot10^3$	9	
	3,4	10^{-2}	27,5	1,55	0,3	$115\cdot10^3$	9	

Card 4/5

ACCESSION NR: AP4025895

ENCLOSURE: 02

Table 2

U, KV	p, mm·Hg	Io in scale divisions	$\frac{dI}{dV}$	$\frac{dI_i}{dV}$	T_e °K	kT_e (eV)	Cracking
2,2	5	30	4,8	0,8	39 100	3,16	Medium
2,2	13	21	3,5	1	40 250	3,5	
2,2	22	11	2	0,66	37 720	3,36	
2,8	5	20	2,5	0,7	50 475	4,65	Deep
2,8	13	22	4	0,6	30 000	3,025	Superficial
2,8	22	25	3	0,75	54 740	4,38	Deep

Card 5/5

L 3549-66 EWT(l)/EWT(m)/EPF(n)-2/T/EWA(m) IJP(c) DS/WW/GG/AT

ACC NR: AP5026348 SOURCE CODE: UR/0166/65/000/005/0063/0070

AUTHOR: Arondv, D. A.; Ablyayev, Sh. A.; Pilatov, U. U.; Shamasov, R. G.

ORG: Physicotechnical Institute, AN UzSSR (Fiziko-tekhnicheskiy institut AN UzSSR)

TITLE: Theory of the adsorption effect on the surfaces of semiconductors and gels due to effects of ionizing radiation

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 5, 1965, 63-70

TOPIC TAGS: adsorption, gel, chemosorption, semiconductor

ABSTRACT: The electronic theory of chemosorption is used to determine the sign of the adsorption effect as a function of the parameters of the semiconductor (or gel) and the experimental conditions. The case considered is limited to that of a strong absorption when the ionizing radiation generates electron-hole pairs near the surface. The expression for the adsorption effect, which determines its sign, is then applied to several special cases. It is shown that adsorption occurs more readily when volume recombination of carriers is low in comparison with surface recombination. This is the case of a gel with a strongly developed surface. Such effects have been observed experimentally in gels irradiated with slow electrons. Orig. art. has: 30 formulas and 2 figures.

[CS]

SUB CODE: SS/ SUBM DATE: 23Feb65/ ORIG REF: 009/ ATD PRESS: 4157

Card 1/1 UDC

NABIYEV, M.N., akademik; ABLYAZINA, R.A.; KASYMOVA, M.A.

Degree of separation of iron and aluminum during nitric acid decomposition of Kara-Tau phosphorites. Uzb. khim. zhur. no.2: 6-11 '59. (MIRA 12:7)

1.AN UzSSR (for Nabiyev). 2.Institut khimii AN UzSSR.
(Kara-Tau--Phosphorites) (Iron) (Aluminum)

ABLYAZOV, P.I., aspirant; [illegible], V.V., assistant, nauchnyy rukovoditel'

Prophylaxis of sterility in cows in winter. Veterinariia 41 no.57-58 D '64. (MIRA 18:9)

1. Ul'yanovskiy sel'skokhozyaystvennyy institut.

6 (7) SOV/112-57-5-11191

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1957, Nr 5, p 234 (USSR)

AUTHOR: Ablyazov, V. S., Kirillov, K. A.

TITLE: Checking Equipment for a Mine-Shaft Telephone-Communication System (Kontrol'no-poverochnaya apparatura dlya sistemy shakhtnoy svyazi)

PERIODICAL: Sb. statey nauch.-stud. o-va Mosk. energ. in-ta, 1956, Nr 9, pp 99-106

ABSTRACT: A block diagram of mine-shaft carrier telephone communication between the dispatcher and locomotive machinists via the trolley network is presented. The dispatcher's station operates at 58 kc, subscribers' stations operate at 100 kc. The dispatcher can selectively call the subscribers' stations; the dispatcher's carrier is modulated by the call frequency to which the called station is tuned. The call frequencies lie within the band of 300-3,000 cps. To prevent short-circuiting of the carrier voltage through supply sources, trolleys, and locomotive motors, the filters tuned to the average frequency of 76 kc are cut in.

M.A.K.

Card 1/1

LOKHANIN, K.A., inzhener; ABMOSHEV, V.I., inzhener.

Loading machine for work in inclined mine stopes. Mekh.trud.rab. 7 no.9:22-26 S '53. (MLRA 6:9)
(Coal-mining machinery)

ABMORSHEV, V.I.

CHUGUNIKHIN, Sergei Ivanovich; STALIN, Viktor Mikhailovich; POVOLOTSKIY, Igor' Aleksandrovich; ABMORSHEV, Valentin Ivanovich; BAZER, Iakov Isayevich; LADYGIN, A.M., redaktor; ANDREYEV, G.G., tekhnicheskiy redaktor

[Mine rock and coal loading machines]Shakhtnye porodopogruzochnye i uglepogruzochnye mashiny. Moskva, Ugletekhizdat, 1955. 379 p. (Coal mining machinery) (MLRA 8:11)

LOKHANIN, K.A., inzh.; ABMORSHEV, V.I., inzh.

The PK-3 cutter-loader for mining. Mekh.trud.rab. 11 no.7:37-39 Jl '57. (MIRA 10:11)

(Mining machinery)

ABMORSHEV, Valentin Ivanovich; LOKHANIN, Konstantin Anatol'yevich; ASTAKHOV, A.V., otv.red.; LOMILINA, L.N., tekhn.red.

[PK-3 cutter-loader] Prokhodcheskii kombain PK-3. Moskva, Ugletekhizdat, 1959. 173 p. (MIRA 12:12)
(Coal mining machinery)

ABMORSHEV, Valentin Ivanovich; LOKHANIN, Konstantin Anatol'yevich; SOSNOV, V.D., otv. red.; ABARBARCHUK, F.I., red. izd-va; OVSEYENKO, V.G., tekhn. red.

[PK-3 (PK-3m) cutter-loader]Prokhodcheskii kombain PK-3 (PK-3m). 2. izd., dop. i perer. Moskva, Gosgortekhizdat, 1962. 219 p. (MIRA 16:1)
(Coal mining machinery)

KUNNAP, E.; SILLAMAA, H., kand. tekhn. nauk, retsenzent; ABO, L., red.; PILL, A., tekhn. red.

[Automatic control] Automaatreguleerimine. Tallinn, Eesti Riiklik Kirjastus, 1960. 279 p. [In Estonian]
(MIRA 15:1)

(Automatic control)

SARV, V.; ABO, L., red.; LAOS, H., tekhn. red.

[Regulating the speed of electric motors by means of magnetic amplifiers] Elektrimootorite kiiruse reguleerimine magnetvoimendajate abil. Tallinn, Eesti NSV Ministrite Naukogu Riiklik Teaduslik-Tehniline Komitee, 1960. 29 p. (MIRA 15:2)

(Electric motors) (Magnetic amplifiers)

KAASIK, U.; SALUM, H.; SINISOO, M.; SILLAMAA, H., kand. tekhn. nauk, retsenzent; ARO, L., red.; LAUL, U., tekhn. red.

[Electronic calculating machines] Elektron-arvutusmasinad. Tallinn, Eesti Riiklik Kirjastus, 1960. 194 p. (MIRA 15:2)
(Electronic calculating machines)

VORK, Hnas, prof.; POBUL, G., kand. tekhn. nauk, retsenzent; ABO, L., red.; TIMMER, K., tekhn. red.

[Steel overhead lines] Ohuliinid terasjuhtmeist. Teine, umbertootatud trukk. Tallinn, EEsti riiklik kirjastus, 1961. 78 p. (MIRA 15:5)

(Electric lines—Overhead)

ALT, Eduard; JAKOOBI, Eduard; VINKEL, A., retsenzent; ABO, L., red.; LUMET, E., tekhn. red.

[How to handle a television set]Televiisori kasitsemine. Tallinn, Eesti Riiklik Kirjastus, 1962. 138 p. (MIRA 15:12)
(Television---Handbooks, manuals, etc.)

HALLIKSOO, Villu; ISOTAMM, A., retsenzent; TISLER, J, retsenzent; VELMRE, E., retsnzent; ABO,L., red.; VAHTRE, L., tekhn. red.

[Use of transistors in radio receivers] Transistoride kasutamine raadioseadmetes. Tallinn, Eesti riiklik kirjastus, 1962. 140 p. (MIRA 15:5)

(Transistor radios)

AGUR, Ustus; TIISMUS, Hugo; TAMKIVI, P., kand. tekhn. nauk, retsenzent; ABO, L., red.; LUMET, E., tekhn. red.

[Electric drives] Elektriajamid. Tallinn, Eesti Riiklik Kirjastus, 1963. 625 p. (MIRA 16:12)
(Electric driving) (Electric motors)

ABO, Yu.M.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1624
AUTHOR ABO,JU.M.
TITLE A Method for the Investigation of the Radial Phase Oscillations of Electrons in a Synchrotron.
PERIODICAL Žurn.eksp.i teor.fis,31,fasc.3, 533-534 (1956)
Issued: 12 / 1956

The method employed here permits the experimental investigation of the radial phase oscillations of electrons if the latter are accelerated to high energies in synchrotrons. This method makes use of the optic radiation of electrons in the synchrotron. Because of its marked directivity this radiation can be observed in form of short light pulses (fine structure of radiation) along each tangent to the electron orbit. The duration and form of these light impulses are determined by the distribution of the electrons over the amplitudes of the radial phase oscillations. Here a Kerr cell with nitrobenzol is used for the purpose of watching the light impulses (and thus for the study of oscillations). The relaxation time in nitrobenzol (from 10^{-9} to 10^{-12} sec) can be neglected at least up to shutter frequencies of the order of 100 ko.
The Kerr coll used here is illustrated in form of a drawing; it consists of two crossed Nicols N_1 and N_2, between which a condenser, which is steeped in nitrobenzol., is fitted. The condenser plates are connected with a direct current voltage and, at the same time, with an alternating current voltage U_{HF} coming from the generator and used for the excitation of the synchrotron resonator.

Žurn.eksp.i teor.fis,31,fasc.3, 533-534 (1956) CARD 2 / 2 PA - 1624

On the occasion of the passage of the light radiation, which is caused by condensation of the electrons, through such a Kerr cell, the radiation energy receiver registers the light flux J, which is averaged in time, with a sufficiently high time constant. J depends on the displacement Θ with respect to time between the response of the shutter and the occurrence of the light impulse, and it holds that:

$J(\Theta) = (1/T)\int_0^T f(t - \Theta)\, \Psi(t)\, dt$. Here $\Psi(t)$ and $f(t)$ denote the functions for the description of the form of the light impulse and the curve of the transmissivity to light of the Kerr cell respectively, and T denotes the rotation period of the electrons in the synchrotron.

$J(\Theta)$ is determined experimentally by measuring J at different values of Θ between zero and T. Also $f(t)$ is determined experimentally and the required function $\Psi(t)$ is then found by solving the aforementioned integral equation. This method was applied to the synchrotron of the Physical Institute of the Academy of Science of the USSR. According to results obtained by preliminary experiments the azimuthal extent of electron condensation at the end of the cycle of acceleration amounts to $100 \pm 10^{\circ}$.

INSTITUTION: Physical Institute "P.N.LEBEDEV" of the Academy of Science in the USSR

GORBACHEV, S. V.; ABOIMOV, A. M.

Kinetics of electrochemical redox processes of some organic compounds in acetic acid at high temperatures. Zhur. fiz. khim. 37 no. 3:696-698 Mr '63. (MIRA 17:5)

1. Khimiko-tekhnologicheskiy institut imeni D. I. Mendeleyeva.

ABOIMOV, A.V., inzh.; ROSLAYKOV, V.V., inzh., otv. red.

[Machine tools; brief technical characterizations]Metallorezhushchie stanki; kratkie tekhnicheskie kharakteristiki (uchebnoe posobie). Razrabotal A.V.Aboimov. Otv. red. V.V.Rosliakov. Kuibyshev, 1962. 59 p.
(MIRA 16:12)

1. Russia (1917- R.S.F.S.R.) Sredne-Volzhskiy ekonomicheskiy rayon. Upravleniye kadrov i uchebnykh zavedeniy. Uchebno-metodicheskiy kabinet.

(Machine tools)

OZHIGANOV, V.S.; LEVANTO, M.A.; KOROLEVA, V.A.; Prinimali uchastiye: KOZLOVSKIY, N.I.; ABOIMOV, P.S.; STARTSEVA, G.B.; KRIVOMOSOVA, R.B.; SHERSTYUK, M.I.; KONOVALOVA, T.S.; ZHABOTINSKIY, I.M.; RADIN, F.A.

Improving the technology of producing electrical steel. Stal' 22 no.4:343-346 Ap '62. (MIRA 15:5)

1. Verkh-Isetskiy metallurgicheskiy zavod.
(Steel—Electric properties)

ABOKUMOVA, Ye.A., kandidat meditsinskikh nauk

X-ray characteristics of periapical tissues and roots following pulpotomy of permanent teeth in children. Stomatologiia no.5:13-17 S-O '55. (MLRA 9:2)

1. Iz kafedry terapevticheskoy stomatologii (i.o.zav.-kandidat meditsinskikh nauk T.T. Shkolyar) Leningradskogo meditsinskogo stomatologicheskogo instituta (dir.-doktor meditsinskikh nauk R.I. Gavrilov)

(ROOT CANAL THERAPY,
postop. x-ray of permanent teeth in child.)

ABOL, assistent

Selecting the location of the main truck route for removing the crop from a large field. Trudy MIMESKH 6:281-289 '59.
(MIRA 14:5)

(Field crops--Transportation)

ABOL', A. V.

"The Rhythmic Nature of Growth in Swine of the Novocherkas Variety." Cand Agr Sci, Novocherkas Zoove terinary Inst, Novocherkas, 1954. (RZhBiol, No 4, Feb 55)

SO: Sum. No. 631, 26 Aug 55- Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions. (-4-)

USSR/ Farm Animals. Swine. Q

Abs Jour: Ref Zhur-Biol., No 9, 1958, 40478.

Author : ~~Abol' A. V.~~
Inst : Not given.
Title : The Increase of the Productivity of Swine of the Northern Caucasian Breed under Directed Feeding, in Accordance with the Rhythm of Growth.

Orig Pub: Tr. Novocherkasskogo zootekhn.-vet. in-ta, 1957, vyp, 10, 67-74.

Abstract: The rhythmicity of the growth of swine of the Northern Caucasian breed and the influence of directed feeding (taking into account the rhythm of the growth) on the intensiveness of growth was studied at the Experimental Training Farm of the Novocherkassk Zooveterinary Institute and at the Sovkhoz No 9 of the Combine

Card 1/2

USSR/ Farm Animals. Swine. Q

Abs Jour: Ref Zhur-Biol., No 9, 1958, 40478.

Abstract: "Rostov-Ugol'". The 1st experiment was carried out on 18 animals for a period of 121 days, and the 2nd one, on 28 animals, for a period of 131 days. The feeding of the animals was identical both as to the amount and the selection of feeds. A regular wave-like rhythm of the growth, with an average wave length of 8 days, was established. A regular range of the variations of the weight gain could also be noticed. The regularities in the rhythmicity of the growth of swine of the Northern Caucasian breed should be utilized in the planning of practical measures for the control of the process of their growth.

Card 2/2

USSR/Cultivated Plants - Medicinal. Essential Oil-Bearing. Toxins. M

Abs Jour : Ref Zhur Biol., No 12, 1958, 53876

Author : Abol', E.Ya.

Inst : Tbilis Scientific Research, Chemical Pharmaceutical Institute.

Title : Pharmacognostic Study of the Leaf of Ungern Rhododendron

Orig Pub : Sb. Tr. Tbilissk. n.-i. khim.- farmatsevt. in-ta, 1956, kn. 8, 37-41

Abstract : Ungern rhododendron a species endemic to Eastern Trans-Caucasia, is encountered only in Adzhiria and in Turkish Lazistan. A preparation, made from it, is used for hypertonia. The article gives the macroscopic and microscopic description of the leaf. The microscopic picture of the lateral slices of the leaf blade and the structure

Card 1/2

USSR/Cultivated Plants - Medicinal. Essential Oil-Bearing. M
Toxins.

Abs Jour : Ref Zhur Biol., No 12, 1958, 53876

of the lower and upper epidermises are illustrated with six microphotographs. -- An.A. Zaytseva

Card 2/2

ABOL', I. P.

"Investigation of the Effect of the Character of Snow Portages on the Traction of a Skidding Tractor KT-12." Sub 2 Apr 51, Moscow Forestry Engineering Inst.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

A:OL', I.P.

"Tractive Performance of the KT-12 Tractor on Show Trails. 'the Logging Industry' (USSR) 1951, 1, 7-8.

SO: Translation-252467, 30 Apr 1954.

1. ABOL', I. P.

2. USSR (600)

4. Lumbering

7. Diagram for sectoring the felling area for winch skidding, Les. prom., 13, no. 4, 1953.

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ABOL', I.P., ALYAB'YEV, V.I., RANTSEV, A.A.; TSAREV, B.S.; KRASHEVSKIY, V.V., red.; FEDOROV, B.M., red. izd-va,; BACHURINA, A.M., tekhn. red., VORONITSYN, K.I., red.

[Skidding timber by means of winches in the U.S.S.R.] Nazemnaia trelevka lesa lebedkami v SSSR. [Moskva] M-vo lesnoi promyshl. SSSR, 1957. 33 p. (MIRA 11:11)

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PROCESSES AND PROPERTIES INDEX

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B-III-4

BC

Improvement in the fat quality of bacon pigs receiving linseed cake by supplementary feeding of barley and skim milk. T. Abol (Arb. Abt. Tierzucht West-Russ. Versuchs-Stat., Horzevka, 1931, 36—46; Biol. Zentr., 1935, A, 5, 369—380).—When fed in amounts < 10% of the ration linseed cake produced no adverse effects. In a 10% ration replacement by skim milk caused a hardening of the fat. Small amounts of linseed cake accelerate the fattening process.

A. G. P.

METALLURGICAL LITERATURE CLASSIFICATION

1. ABOL, T.P., SHUTOVA, V.A.

2. USSR (600)

4. DAIRYING: Feeding and Feeding Stuffs

7. Effect of succlent fodders on quality of milk and meat. Sov.zootekh. 7 no. 5:61-66 My'52
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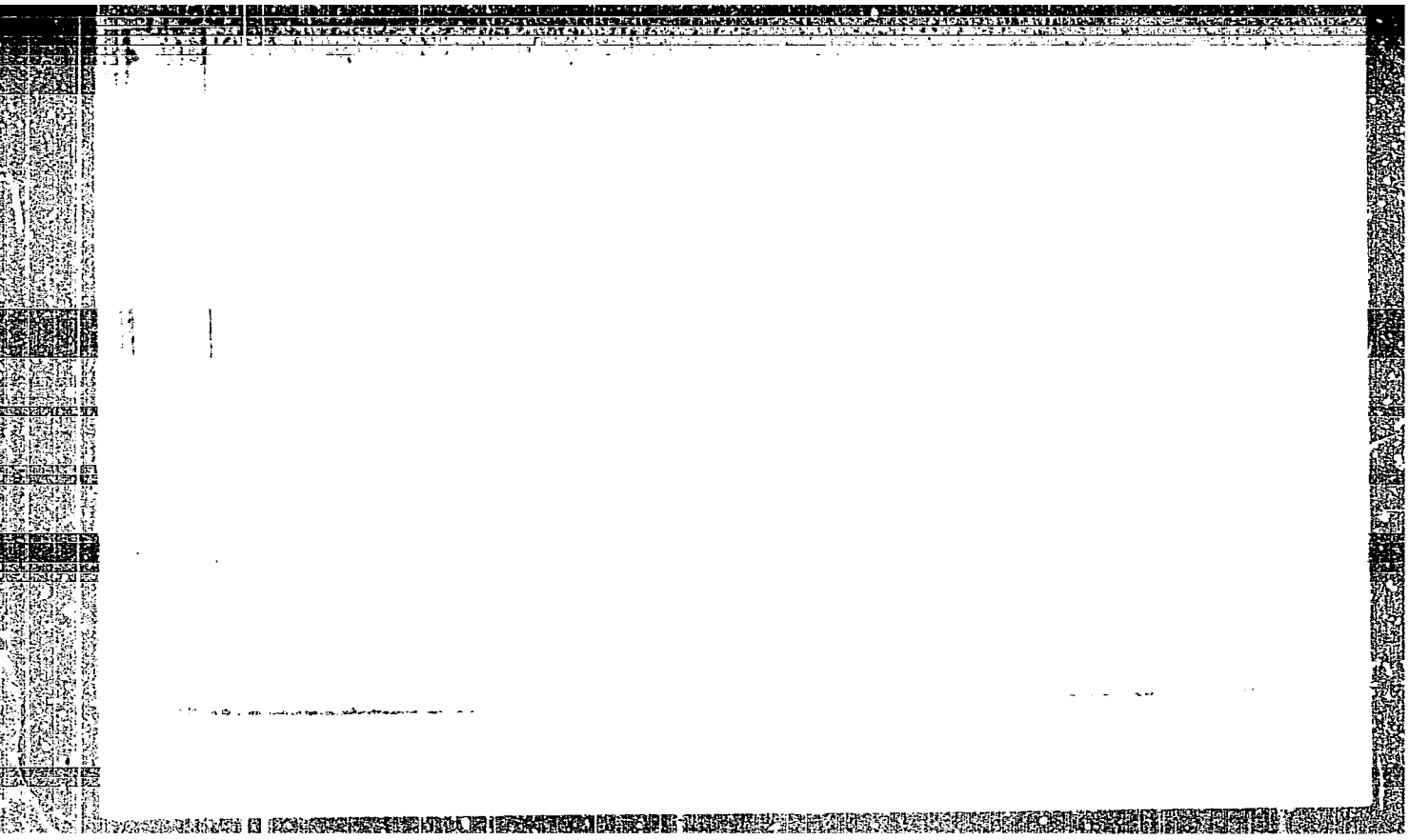

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USSR/Astronomy Jan/Feb 1948
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Navigation

"Plan for an Independent Soviet Latitude System," V. K. Abol'd, Irkutsk, 4 pp

"Astr Zhur" Vol XXV, No 1

Suggests setting up two stations in the USSR in order to insure that the country is not dependent on international cooperation. One station would determine the latitude and amplitude of the first polar coordinate, and the other for the second polar coordinate.

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(Latitude) (Stars--Observations)

PESHKOV, Yevgeniy Onisimovich; YAKOBSON, M.O., nauchn. red.; ABOLEMOV, V.P., red.; NESTYSLOVA, L.M., tekhn. red.

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