KADASHEVICH, Yu.I. (Leningrad)

Interrelation of the two fundamental problems in the theory of flow allowing for residual microstrains. Prikl.mat.i mekh. 27 no.2:378-379 Mr-Ap '63. (MIRA 16:4)
(Strains and stresses)

KADASHEVICH, Yu.I.

Behavior of metals during relief and subsequent loading. Trudy LTITSBP no.14:224-226 '64.

Plasticity theory taking into account the Baushchinger effect with the initial flow surface in the Tresk form. Ibid.:227-228 (MIRA 18:5)

PILISHENKO, V.G.; SOBOLEVA, N.M.; PONOMAREVA, T.N.; KADATSKAYA, K.P.

Problem of natural foci of Brucella infections. Zhur. mikrobiol. epid. i immun. no.1:82-87 Ja '55. (MLRA 8:2)

1. Iz Stavropol'skogo nauchno-issledovatel'skogo instituta Ministerstva zdravookhraneniya SSSR (dir. V.N.Ter-Vartanov, nauchnyy rukovoditel' prof. M.P.Pokrovskaya)
(BRUCELLOSIS, epidemiology,
in Russia, natural foci)

KADATSKAYA, K. P.

USSR/Zooparasitology - Acarina and Insect-Vectors of Disease Pathogens. G-4

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10098

Author : Nel'zina, E.N., Slinko, L.I., Kadatskaya, K.P., Ivanov, K.A., Yamshchikova, Kh.G., Poltavtsev, N.N., Skirda, G.I.

Inst : -

Title : Ixodic Ticks (Parasitiformes, family Ixodidae) of Rodents in Northwestern Caspian Coast.

Orig Pub : Sb. tr. Astrakhansk. protivochumn. st., 1955, No 1, 416-433

Abstract : The fauna of ixodic ticks in the district studied is comparatively sparse (5 species, more or less, are numerous); individual specimens may be regarded as of Kirgiz and European-Siberian origin. Closest biocenotic ties with rodents are found in Ixodes laguri laguri and Thipicephalus schulzei. The first of these (steppe species) is connected with rodents who build deep, comparatively

Card 1/2

Card 2/2

DARSKAYA, N.F.; BAKEYEV, N.N.; KADATSKAYA, K.P.

Study of the yearly cycle of the gerbil flea Xenopsylla conformis Wagn. in Azerbaijan. Med.paraz.i paraz.bol. no.3: 342-346 '62. (MIRA 15:9)

1. Iz Nauchno-issledovatel'skogo protivochumnogo instituta Kavkaza i Zakavkaz'ya i Azerbaydzhanskoy protivochumnoy stantsii.

(AZERBAIJAN—FLEAS AS CARRIERS OF DISEASE)

KADATSKAYA, K.P.; SHIROVA, L.F.

Ixodid ticks and fleas in a tularemia focus of the Nakhichevan A.S.S.R. Dokl. AN Azerb. SSR 19 no.4:79-83 '63. (MIRA 16:12)

1. Institut zoologii AN Azerbaydzhanskoy SSR. Predstavleno akademikom AN Azerbaydzhanskoy SSR A.N.Derzhavinym.

KADATSKAYA, K.P.

Distribution of fleas of the suslik depending on ecological conditions. Trudy Nauch.-issl. protivochum. inst. Kav. i Zakav. no.5:40-61 '61.

Collection and count of fleas in human dwellings and sheep pens by using small flannel flags. Ibid.:74-75
(MIRA 17:1)

1. Azerbaydzhanskaya protivochumnaya stantsiya.

GADZHIYEV, A.T.; KADATSKAYA, K.P.

Gamasid mites of the rodents of Kobystan. Izv.AN Azerb. SSSR. Ser.biol. i med.nauk no. 12:47-53 '61. (MIRA 17:5)

KADATSKAYA, K.P.; SHASHNIKOVA, N.V.

Ecology of the tick Alectorobius alactagalis in Azerbaijan in relation to its epidemiological importance. Med. paraz. i paraz. bol. 32 no.3:320-323 My-Je'63 (MIRA 17:3)

1. Iz Azerbaydzhanskoy protivochumnoy stantsii (nachal'nik M.G.Akhundov).

KADATSKIY, G.M.
CA

/10

Sulfonation and sulfonic acids of acidophobic compounds. XVII. Sulfonation of 2-chloro-, 2-bromo-, and 2-iodothiophenes. A. P. Terent'ev and G. M. Kadatskii (Moscow State Univ.). *Zhur. Obshchei Khim.* (J. Gen. Chem.) 21, 1524-8(1951); cf. C.A. 40, 2018.—Thiophene with SO_2Cl_2 yields *2-chlorothiophene*, b_{760} 127.9°, n_D^{20} 1.5476. This (1.9 g.) and 8 g. pyridine-SO_3, heated 8 hrs. at 120-5° in a sealed tube, then treated with $BaCO_3$, give 91.8% *Ba 5-chloro-2-thiophenesulfonate*, plates (from aq. EtOH), giving $BaSO_4$ on treatment with Br water, while with $1\text{-}C_{10}H_7CH_2SC(NH_2):NH.HCl$ it gives the *S-(1-naphthylmethyl)thiuronium salt*, cryst. ppt., $C_{16}H_{15}O_3ClN_2S_3$, m. 138-9° (from MeOH). 2-Bromothiophene (2.0 g.), 15 g. pyridine-SO_3, and 15 ml. $(CH_2Cl)_2$ after 10 hrs. at 100-5° in a sealed tube similarly gave 90% *Ba 5-bromo-2-thiophenesulfonate*, plates (from aq. EtOH); *S-(1-naphthylmethyl)thiuronium salt*, m. 142-3°, the corresponding *sulfonamide* (from the crude sulfonyl chloride), m. 141-2°, while the *sulfonanilide* (from the crude sulfonyl chloride and $PhNH_2$), m. 94-5°. 2-Iodothiophene (7.0 g.) and 17.0 g. pyridine-SO_3 in 8 hrs. at 100-10°, followed by the usual treatment, involving quenching with H_2O and extn. with Et_2O, gave 0.9 g. unreacted iodothiophene and 0.13 g. *2,5-diiodothiophene*, m. 35-9°, and 77% *Ba 5-iodo-2-thiophenesulfonate*, plates (from H_2O). *K salt*, plates (from H_2O). *S-(1-naphthylmethyl)thiuronium salt*, m. 151-2°; *sulfonyl chloride*, m. 50-1°; *sulfonamide*, m. 163-4°; *sulfonanilide*, m. 124-5° (from aq. EtOH). Heating 4.5 g. 2-iodothiophene with 11 g. pyridine-SO_3 and 0.5% free SO_3 12 hrs. at 100° and 2 hrs. at 130° gave 1.05 g. 2,5-diiodothiophene and 0.5 g. mixed *Ba salts* of *thiophene* and *2-iodothiophenedisulfonic acids*; the mixture is sepd. only with difficulty, but some iodothiophene deriv., $C_4HO_6IS_3Ba$, was obtained in pure state, plates sol. in hot H_2O, by crystn. from H_2O. G. M. Kosolapoff

— Inst. Org. Chem. im. Zelinskiy

CA KADATSKIY, G.M.

(Organic Chemistry)

Sulfonation and sulfonic acids of antidiophobic substances. XVIII. Sulfonation of thiophene. A. P. Terent'ev and G. M. Kadatskii (Moscow State Univ.). Zhur. Obshchei Khim. (J. Gen. Chem.) 22, 153-6(1952); cf. C.A. 46, 8077f.—Thiophene (2.75 g.) and 5.1 g. SO_3 after 1 month in a sealed tube at room temp. gave 50% *2-thiophenesulfonic acid*, isolated as the *Na salt*. The original mixt. at the end of the reaction is a solid mass. To 3.2 g. pyridine-SO_3 was added 1.6 g. SO_3 in 16 ml. $(CCl_2H)_2$, the mixt. treated with 2.1 g. thiophene, let stand 10 hrs., and worked up as usual, giving 80% Na 2-thiophenesulfonate, powder, sol. in H_2O, yielding $BaSO_4$ with Ba water; *S-(1-naphthyl)thioronium salt*, m. 174.5–5.0° (from H_2O). The K salt with PCl_5 in 2 hrs. at 100° yields the *sulfonyl chloride*, m. 31–2°. Pyridine-SO_3 (prepn. as above), m. 83–5°, treated with thiophene, and after 10 hrs. with PCl_5 yields the sulfonyl chloride just as readily. The latter with $(NH_4)_2CO_3$ gave the *sulfonamide*, m. 144.5–46.0° (from Et_2O); $PhNH_2$ gave the *sulfonanilide*, m. 99.5–100° (from dil. EtOH). Sulfonation at 100° yields a *disulfonate*.

G. M. Kosolapoff

Rb. Org. Chem.
in Zelinskij.

KADATSKIY, G. M.

Chemical Abst.
No. 6

Sulfonation and sulfonic acids of acidophobic compounds XXI. Sulfonation of 2,3-dimethylthiophene. Comparison of the sulfonating action of pyridine-sulfotrioxide, pyridine bis(sulfotrioxide) and dioxane-sulfotrioxide. ... and G. M. Kadatskii (Moscow ...). Zhur. Obshchei Khim. 23, 251 ...

... phene ... 94 ...

... dimethyl ... thiophene ...

Ba salt, water soluble plates ... the ... ammonium salt m. ... from ...

... from 4.8 g. pyridine SO_3 ... $(CH_2Cl)_2$ was added 3.36 g. 2,5-dimethylthiophene ... mixt. treated after 3 days with ... g. ... hrs. on ice and the org. layer treated with ... and evapd. with NH_4OH ... thiophenesulfonamide, m. 141-2° (from Pr...)

KADATSKIY, N. G. and BAKEYEV, N. N.

"Daily Activity of Red-Tailed Gerbils of Azerbaydzhan SSR."

Tenth Conference on Parasitological Problems and Diseases with Natural Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of Sciences, USSR, Moscow-Leningrad, 1959.

Antiplague Institute of Caucasia and Transcaucasia (Stavropol') Azerbaydzhan Antiplague Station (Baku) and Ural Section VNIIZhP

KADATSKIY, N.G.

Rodents of the Talysh Mountains and the Lenkoran Lowland and their distribution in various landforms and geographical areas. Zool. zhur. 43 no.11:1693-1707 '64. (MIRA 18:11)

1. Azerbaydzhanskaya protivochumnaya stantsiya, Baku.

KADAVY, F.

"Twenty-fifth anniversary of the Popular Observatory in Prague." p. 129. (Rise Hvezd. Vol. 34, no. 6, July 1953. Praha.)

SO: Monthly List of East European Accessions, Vol. 3, No. 2, Library of Congress, Feb. 1954, Uncl.

S/035/62/000/007/038/083
A001/A101

AUTHOR: Kadavý, František

TITLE: Observation of a solar eclipse in Bulgaria

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 7, 1962, 66, abstract 7A454 ("Říše hvězd", 1961, v. 42, no. 4, 65 - 68, Czech)

TEXT: The work of the Czechoslovakian expedition which observed the total solar eclipse of October 2, 1961, in Bulgaria is described. Astronomers-amateurs and staff workers of popular observatories participated mainly in the expedition organized by the Ministry of Education and Culture. The scientific program was devised by the Astronomical Institute of the Czechoslovakian Academy of Sciences. The expedition carried out meteorological observations, and observations of atmospherics and cosmic radio emission. The optical program remained unfulfilled due to poor weather. One of the expedition members was invited by the Bulgarian Academy of Sciences for a flight in a special aircraft, and he succeeded in taking a photograph of the corona.

M. Kopetskiy

[Abstracter's note: Complete translation]

Card 1/1

KADAYEV, A.

Economic and cultural development and the budget of the Daghestan A.S.S.R. Fin.SSSR 16 no.12:39-41 D '55. (MLRA 9:2)

1.Zamestitel' Ministra finansov Dagestanskoy ASSR.
(Daghestan--Budget)

KADAYEV, G.N.

Practice training in pharmacognosy in higher pharmaceutical educational institutes. Apt. delo 12 no.5:68-70 S-O'63 (MIRA 17:11)

1. Farmatsevticheskiy fakul'tet Vitebskogo meditsinskogo instituta.

*

KADAYEV, G.N.

Medicinal plant collections of Karachay-Cherkess Autonomous Province.
Trudy Ian. khim.-farm. inst. no.17:275-283 '64. (MIRA 18:1)

SEREDIN, R.M.; KADAYEV, G.N.

Plants used in popular medicine in the Karachay-Cherkess Autonomous Area. Trudy Len. khim.-farm. inst. 12:367-382 '61. (MIRA 15:3)

1. Kafedra botaniki Pyatigorskogo farmatsevticheskogo instituta i kafedra farmakognozii i botaniki Leningradskogo khimiko-farmatsevticheskogo instituta Ministerstva zdravookhraneniya RSFSR.
(KARACHAY-CHERKESS AUTONOMOUS AREA--BOTANY, MEDICAL)
(MEDICINE, POPULAR)

VITEK, Jan, inz., CSc.; KADECKA, S.

Cantilever assembling of bridges with dry joints. Inz stavby 11 no.8:317-318 Ag '63.

VITEK, J., inz., C.Sc.; KADECKA, S., inz.

Construction of the Medway bridge in England. Inz stavby 11 no.1:36-37 Ja '63.

GORGOL, Vaclav, inz.; KADECKA, Slavos,; POSEJPAL, Miroslav.

Sealing cracks in concrete structures by injecting epoxy resins. Pos stavby 11 no.11:608-609 '63.

1. Stavby silnic a zeleznic, Praha.

Instruments and Equipment

CZECHOSLOVAKIA UDC 539.1.074.24 621.374.33

KADECKA, Vincenc; Krajska Station of Hygiene and Epidemiology (Hygienicko-Epidemiologicka Stanice), Prague.

"A Simple Anticoincidence Device."

Prague, Jaderna Energie, Vol 12, No 12, Dec 66, pp 460 - 461

Abstract: [Author's English summary modified]: The use of special counting tubes reduces the volume and weight of anticoincidence devices. A simplifying circuit covered by a Patent is discussed. The apparatus is based on the Geiger-Müller counter principle. 7 Figures, 2 Western references. (Manuscript received 7 Mar 66).

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Kadečka V.

CZECH/37-59-2-5/20

AUTHORS: J. Hladký, P. Chaloupka, V. Kadečka, T. Kowalski *) and P, Mokrý

TITLE: Three Variations in the Intensity of Cosmic Radiation in the First Half of 1958

PERIODICAL: Československý Časopis Pro Fysiku, 1959, Nr 2, pp 150-156

ABSTRACT: Research into variations of the primary component of cosmic radiation as a function of changes in the atmosphere of the sun, is expected to lead to useful information on the origin of cosmic radiation. To get a full picture of this variation, a large number of observations in varying geographical positions is necessary. From the regular and irregular variations of intensity of cosmic radiation, the influence of the sun is obvious. This may, in principle, have the following two reasons. The sun may be a source of the primary particles and may modulate them by its magnetic field. They are further modulated by changes in the Earth's magnetic field. Within the framework of the International Geophysical Year, a constant registration of the intensity of the penetrating component and of the neutron component of cosmic radiation was undertaken in two observatories. These are

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CZECH/37-59-2-5/20

Three Variations in the Intensity of Cosmic Radiation in the First Half of 1958

Lomnicky stit (2,634M above sea level: geomagnetic latitude 48°N) and Prague (228M above sea level: geomagnetic latitude 48°N). The apparatus in both stations is similar. The penetrating component (μ-mesons) were measured by two counting telescopes with geometry recommended by C.S.A.G.I. (Ref 4). The effective area of the set of counters was 2500 cm^2 at Lomnicky stit and 3600 cm^2 in Prague. For the detection of neutrons, both stations used a monitor described by Simpson (Ref 5) and recommended by C.S.A.G.I. The continuous registration was carried out by two independent instruments in each station. The location of the stations determined the lower threshold of energies of primary particles which produced the measured components of the cosmic radiation. The range of energies can only be very roughly estimated. The average pressure at Lomnicky stit is 550 mm Hg. The minimum energy of μ-mesons capable of penetrating the given amount of air and the absorber (10cm Pb) is about 1.8 GeV (Ref 6). The energy of the primary particles must be higher, i.e. about 20 GeV. ✓

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Three Variations in the Intensity of Cosmic Radiation in the First Half of 1958

For sea level, the minimum energy of primary particles must be about 30 GeV. For the neutron monitor, the situation is more complicated because the atmospheric processes involving nucleons are complicated. We may assume (Refs 8,9,10) that the particles have energies around 3 GeV for Lomnicky stit and 7 GeV for sea level. During the first half of 1958, both stations registered three large variations in intensity of the penetrating and the neutron component. These were on the 25th March, 25th April and 7-9th May. These variations are shown in Figs 3, 4 and 5, together with the measurements on the intensity of the Earth's magnetic field. Table 1 shows the main characteristics of these variations. The magnetic and ionospheric data are taken from a publication by the Geophysical Institute of the Czechoslovak Academy of Science (Ref 11). The Prague data of the intensity of cosmic radiation are in good agreement with those measured in Moscow (Ref 12). The intensities of the various components of cosmic radiation are shown relative to the mean frequency of registered particles and only the

Three Variations in the Intensity of Cosmic Radiation in the First Half of 1958

barometric effect has been corrected for. The barometric coefficient at Lomnicky stit is 0.299%/mm Hg for the penetrating component and 1.058%/mm Hg for the neutron component. The same corrections in Prague are 0.218 and 0.95%/mm Hg respectively. The statistical error of the measurements was $\sigma = 0.28\%$ for the meson telescopes on Lomnicky stit and $\sigma = 0.41\%$ for the neutron monitors. In Prague, the errors were $\sigma = 0.21\%$ for mesons and $\sigma = 0.96\%$ for neutrons. All other errors were considerably smaller than the statistical error, with the exception of a possible error introduced by changes in the geometry due to replacements of counters. All the reported measurements were taken without such replacements. The variation on the 25th March 1958 (Fig 3) is a typical variation associated with a magnetic storm. It has an accurately defined beginning which coincides with the beginning of the storm and lasts many days. The intensity of the meson component shows an increased daily variation. The neutron component showed this increased daily variation only at the Prague station. The amplitude of the disturbance was

Three Variations in the Intensity of Cosmic Radiation in the First Half of 1958

extraordinarily large and related to the intensity of the magnetic storm. Before the variation, an intensive eruption was observed on the sun (Ref 13) starting on the 23rd March at 0950 hours GMT. The variation on the 25th April (Fig 4) was a relatively small one. The state of the Earth's magnetic field was practically undisturbed until the next day. No eruption was observed on the sun. The May variation (Fig 5) showed a short increase in the neutron intensity at Lomnicky stit on the 7th May at 2300 hours GMT. This was followed on the 9-10th May by a short decrease with a badly defined beginning, registered by all detectors. It is possible that the effect is due to a direct emission of particles with energies smaller than 7 GeV, possibly from a small eruption observed on the sun at 2335 hours GMT. During the following decrease, no large magnetic disturbance was observed. These measurements are for the period from 1st January to 30th June 1958. Measurements in both stations are being continued.

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CZECH/37-59-2-5/20

Three Variations in the Intensity of Cosmic Radiation in the First Half of 1958

There are 5 figures, 1 table and 13 references, of which 5 are German, 5 English, 2 Soviet and 1 Czech.

ASSOCIATION: Fysikální ústav ČSAV, Praha
(Institute of Physics, Czechoslovak Ac. Sc., Prague)
*) Akademia Górniczo-Hutnicza, Kraków
(Mining-Metallurgical Academy, Cracow)

Card 6/6

SUBMITTED: November 4, 1958

[redacted], F.

Interpretation of the pattern of the cell arrangement in the root apical meristem of Cyperus gracilis L. var. alternifolius. Acta soc botan Pol 32 no.2:295-301 '63.

1. Department of Anatomy and Cytology of Plants, University, Wroclaw.

KADEJ, F.

Creative activity of the cells of the constructional centrum of top root meristems. Wiadom botan 8 no.2:131-139 '64.

1. Department of Plant Anatomy and Cytology, M. Curie-Sklodowska University, Lublin.

ACCESSION NR: AP4030782 S/0020/64/155/004/0839/0842

AUTHOR: Lepin', L. (Academician); Kadek, V.

TITLE: Conditions for the rupture of the primary film formed by the oxidation of aluminum in neutral solutions.

SOURCE: AN SSSR. Doklady*, v. 155, no. 4, 1964, 839-842

TOPIC TAGS: aluminum, aluminum oxidation, aluminum oxide film, electrode potential, aluminum oxidation kinetics, oxide coating rupture, electrochemical behavior, oxidation rate, aluminum oxychloride film, hydrated aluminum oxychloride film, dehydrated aluminum oxychloride film

ABSTRACT: The oxidation of aluminum in neutral solutions was investigated to establish a relationship between the oxidation kinetics (L. K. Lepin', A. Ya. Vayvade, Izv. AN LatvSSR, ser. khim. no. 3, 297, 1963) and the change of the electrode potential with time, depending on the temperature and the concentration of the solution. The potentials of degreased and pickled aluminum electrodes were measured in 0.001-4 N KCl solutions for periods up to 30 days. After preliminary variations essentially constant potential values were established which were

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related to the chloride concentration by the logarithmic relationship:

$$\varepsilon = \varepsilon_0 + k \lg C_{KCl}$$

where ε_0 = 500 millivolts (20C) and 520 millivolts (30C) and k is about 60-70 millivolts. This indicates the aluminum electrode in the initial phases (see left portion of figures 1 and 2 of enclosure) functions as a complex electrode with an indestructible film partially transformed at its surface into complex hydrated or dehydrated oxychlorides:

$$(Al_2O_3)_n (Al(OH)_3)_m \cdot Al_x (OH)_{3x-1} Cl$$

$$(Al_2O_3)_n \cdot Al_x O_x Cl_x.$$

Further observation of the aluminum electrodes shows differences in the behavior in solutions of different concentration at different temperatures (see right portion of figures 1 and 2 of enclosure), showing rupture of the primary oxide film with intense hydrogen evolution and formation of α -Al(OH)$_3$ and boehmitic γ -AlO(OH) in changing ratios leading to a decrease of the electrode solubility with time. Comparison of the kinetics and the electrochemical behavior shows

ACCESSION NR: AP4030782

oxidation rate is not synonymous with the electrochemical behavior of the metal under the conditions investigated. It is assumed this is due to the mixed mechanisms of aluminum oxidation (because of the oxygen and water) and the development of conditions for diffusion through the thickness of the deposit. Orig. art. has: 3 figures and 1 equation.

ASSOCIATION: Institut khimii, Akademii nauk LatvSSR (Institute of Chemistry, Academy of Sciences, LatvSSR)

SUBMITTED: 25Dec63 DATE ACQ: 30Apr64 ENCL: 02

SUB CODE: MM,GC NO REF SOV: 005 OTHER: 001

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ENCLOSURE: 01

ACCESSION NR: AP4030782

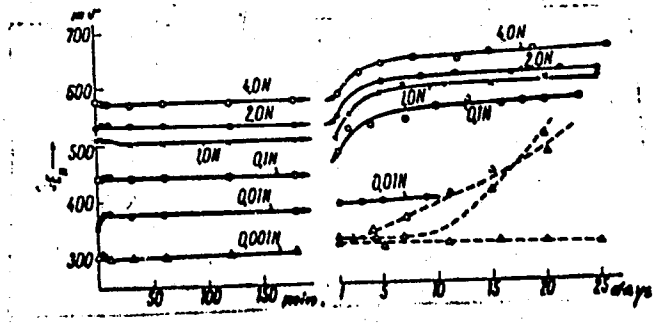

Fig. 1. Electrode potentials of aluminum in KCl solutions at 20C. The dotted lines show potentials of single samples in 0.001 N KCl solution.

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ACCESSION NR: AP4030132

ENCLOSURE: 02

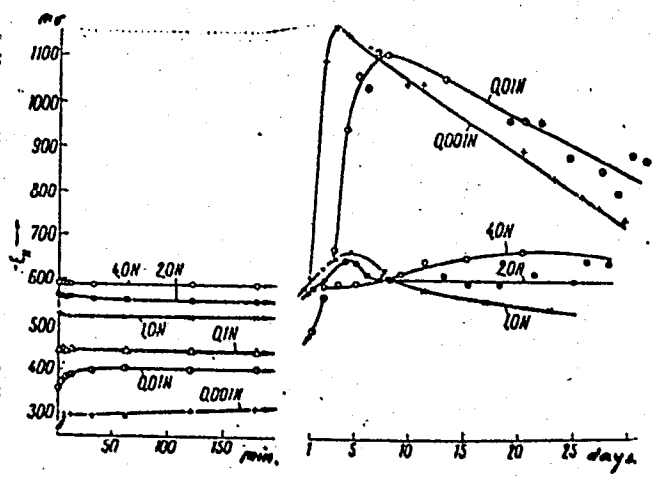

Fig. 2. Electrode potentials of aluminum in KCl solutions at 30C.

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KADEK, V.M., Cand Chem Sci —(diss) " Electrode potentials and ~~polarity~~ of copper oxidation in aqueous solutions of electrolytes." Riga, 1957. 20 pp with graphs (Latvian State Univ. Chemical Faculty). 150 copies (KL, 20-58, 93)

KADEK V.M.

USSR/Physical Chemistry - Electrochemistry. B-12

Abs Jour: Referat. Zhurnal Khimiya, No 3, 1958, 7303.

Author : V.M. Kadek, L.K. Lepin'.
Inst : Academy of Sciences of Latvian SSR.
Title : Electrode Potentials and Copper Oxidation Rate in Aqueous Solutions of Alkali and Alkali-Earth Metal Chlorides.

Orig Pub: Izv. AN LatvSSR, 1957, No 5, 107-118.

Abstract: The dependence of the electrode potential (φ) and corrosion rate (CR) of sheet Cu on time (up to 120 hours) was determined at 25° in solutions of Li, Na, K, Mg and Ca chlorides (concentrations from 0.001 n. to saturated solutions); pH and the concentration of Cu ions in the solutions were also measured. CR decreases in the initial period, and φ shifts to the negative side. Later CR increases at the formation of soluble complex polychlorides (satur. KCl, NaCl, 1 n. $CaCl_2$), but CR decreases at the formation of insoluble CuCl deposits

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Card : 2/2 -6-

5 (4)

AUTHORS: Lepin', L. K., Kadek, V. M. SOV/76-33-7-17/40

TITLE: The Dependence of the Oxidation Rate and Electrode Potential of Copper on the pH of the Solutions

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 7, pp 1560 - 1565 (USSR)

ABSTRACT: As the composition of copper oxidation products depends on the composition of the electrolyte and electrodes of second order are formed by insoluble deposits on the copper surface, the oxidation rate and the copper potential consequently depend also on the concentration of electrolyte anions. The authors closely investigated the dependence of the electrode potential (EP) and corrosion rate of copper on the pH of the medium, using NaCl- and Na_2SO_4 solutions (0.01 n) with hydrochloric acid, sulphuric acid or sodium hydroxide as well as pure acid or lye. The measuring method applied hereto was described in (Ref 8). In calculating theoretical potential values some assumptions were made. The resultant diagrams potential - pH_o (pH_o = initial pH-value) and rate of copper oxidation - pH_o

may be divided into three parts: (1) at $pH_o < 2(3)$; (2) from $pH_o = 3$ to $pH_o = 11(12)$; and (3) at $pH_o > 12$ (the second part may be subdivided into two parts). In the first part, the (EP) and oxidation rate (OR) of copper vary with the pH_o and depends on the acid anion. In the second part, the pH is stabilized and attains a constant value ($pH_s = 6.4 - 7.2$) during copper oxidation, the (EP) and (OR) not depending on the pH_o or the electrolyte composition, but only on this pH_s-value. In the third section (strongly alkaline solutions), the (EP) is distinctly shifted toward negative values, while the (OR) attains a maximum and drops again to zero. The authors found that the kind of deposits on the copper surface exercises great influence upon the (EP) and (OR) during oxidation. At small pH-values the (EP) and (OR) are also affected by the concentration of copper ions accumulated in the solution during oxidation. There are 3 figures and 10 references, 8 of which are Soviet.

The Dependence of the Oxidation Rate and Electrode Potential of Copper on the pH of the Solutions SOV/76-33-7-17/40

ASSOCIATION: Akademiya nauk LatvSSR, Institut khimii (Academy of Sciences of the Latvian SSR, Institute of Chemistry)

SUBMITTED: January 6, 1958

Card 3/3

S/076/61/035/003/023/023
B121/B206

AUTHORS: Groskaufmanis, A. Kadek, V., Lokenbakh, A.

TITLE: Lidiya Karlovna Lepin' (on the occasion of her 70th birthday)

PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 3, 1961, 699-701

TEXT: Lidiya Karlovna Lepin' celebrated her 70th birthday and the 45th anniversary of her scientific and pedagogical activities on April 4, 1961. Her scientific work is linked mainly with problems of adsorption and reactions on the surface of solid bodies. In 1916 she began her scientific work under the guidance of Professor Nikolay Aleksandrovich Shilov. In 1920 she published comprehensive studies on the distribution of components among two solvents. During the following years she worked together with G. V. Strakhova on problems of the formation of surface compounds. Taking into consideration interfacial phenomena and assuming that higher oxides are formed on the surface, she explained the passivity of metals and the stability of noble metals in acid solutions. Together with A. V. Bromberg she studied the mechanism of the coagulation of hydrophobic sols by mixtures of electrolytes. A new method for determining the deviation from additivity in the coagulation of

Lidiya Karlovna ...

soles by binary electrolyte mixtures was elaborated. At the Voyennaya akademiya khimicheskoy zashchity im. K. Ye. Voroshilova (Military Academy of Chemical Defense imeni K. Ye. Voroshilov) where she was Head of the Department of Colloid Chemistry, she worked on the synthesis of some inorganic compounds, especially in the field of the chemistry of peroxides. These studies were compiled in 1932 in the book "Neorganicheskiy sintez" ("Inorganic Synthesis"). In 1946 she was appointed Head of the Laboratory of Physical and Colloid Chemistry at the Institut khimii Akademii nauk Latviyskoy SSR (Institute of Chemistry of the Academy of Sciences Latviyskaya SSR). There she studied mainly the oxidation of metals in aqueous electrolyte solutions. She developed the hydride theory which offers an explanation of the reactions between metal and water. Jointly with A. P. Tetere and A. Shmit she formulated a kinetic equation for the determination of the reaction rate of metals with water. In collaboration with A. Ya. Vayvade, A. Stiprays, A. K. Lokenbakh, V. M. Kadek, and B. A. Purin she conducted systematic investigations on the oxidation kinetics of numerous metals as well as on their electrochemical behavior and changes in solutions. The oxidation of metals in neutral electrolyte solutions obeys the diffusion kinetics, and depends on composition and properties of the resulting insoluble oxidation products.

S/076/61/035/003/023/023
B121/B206

Lidiya Karlovna ...

L. K. Lepin' jointly with Z. F. Oshis has found that by changing the temperature and the composition and concentration of the electrolyte, the chemical and phase compositions of the oxidation products of Fe and Al can be altered. With her collaborators A. Ya. Groskaufmanis, A. Ya. Vayvade, and A. R. Veys she conducted detailed studies on the basic salts of aluminum and iron, and on the sorptive properties of hydroxides and oxides of iron and aluminum. Jointly with B. P. Matsiyevskiy she studied the kinetics of the oxidation of divalent iron by oxygen in electrolyte solutions. In collaboration with N. P. Myagkov she conducted studies on the colloid-chemical properties of corrosion-resistant plastic coatings on metals. L. K. Lepin' worked in both scientific and pedagogical respect. She delivered lectures at the Institut narodnogo khozyaystva im. G. V. Plekhanova (Institute of National Economy imeni G. V. Plekhanov), and was the first female teacher at the Moscow School of Higher Technical Education. For some time she was also Head of the Department of General Chemistry at Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov). In 1934 L. K. Lepin' became a professor, and in 1937 the Presidium of the Academy of Sciences USSR made her a Doctor of Chemical Sciences. In 1945 she became Head of the Department of Physical Chemistry at the Chemical Division of

Card 3/4

S/076/61/035/003/023/023
B121/B206

Lidiya Karlovna ...

Latviyskiy gosudarstvennyy universitet (Latviyskaya State University) and subsequently at the Rizhskiy politekhnicheskiy Institut (Riga Polytechnic Institute). At present, she is Head of the Commission for Corrosion Protection at the Scientific and Technical Committee of the Council of Ministers of the Latviyskaya SSR. She also works actively at the Vsesoyuznoye khimicheskoye obshchestvo im. D. I. Mendeleyeva (All-Union Chemical Society imeni D. I. Mendeleyev) and for many years has been Chairman of the Presidium of the Latviyskoye SSR Branch of this Society. Academician L. K. Lepin' was decorated with the Order of the Red Banner of Labor in 1960. Academician V. A. Kistyakovskiy is mentioned. There is 1 figure.

Card 4/4

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000519820020-4"

[illegible] because the [illegible] [illegible] with lead corrosion products. [illegible]

KADEKIN, V.P.; PETROV, A.N.

Large reinforced concrete sheet pile. Transp. stroi. 11 no.5: 20-22 My '61. (MIRA 14:6)

1. Nachal'nik UNR No.376 Baltmorgidrostroya (for Kadekin).
2. Instruktor Rizhskoy normativno-issledovatel'skoy stantsii Orgtransstroya (for Petrov).
(Sheet piling) (Concrete piling)

KADELA, J., 'RAZDA, R., BOHUSLAV, V.

Organization of the sale of electric power and steam and rates in the decade of 1954-1955. p.192. ENERGETIKA. (Ministerstvo paliv a energetiky. Hlavni sprave elektraren) Praha. Vol. 5, no. 5, May 1955

SOURCE; East European Accessions List, (EEAL), Library of Congress, Vol. 4, No. 12, December 1955

KADEKLA, Jan, inz.

Change of electric power and heat supply rates for socialist enterprises beginning April, 1964. Energetika Cs 14 no.6: 295-296 Je '64

1. Czechoslovak State Power Distribution Agency, Prague.

KADEMIN, M.

Concentrated loading of automobiles. Sots.trud no.2:127-130 F '57. (MLRA 10:5)

1.Nauchnyy sotrudnik Kazanskogo nauchno-issledovatel'skogo instituta okhrany truda.

(Automobiles--Transportation)

KADEMIN, N., tekhnolog-normirovshchik.

The technologist is the work norm specialist of the shop. Sots. trud. no.1:125-127 Ja '57. (MLRA 10:4)

1. Gor'kovskiy avtozavod imeni Molotova.
(Gorkiy--Automobile industry--Production standards)

~~None Given.~~ KADEN, G

AUTHOR: None Given.

108-10-11/11

TITLE: New Books (Novyye knigi).

PERIODICAL: Radiotekhnika, 1957, Vol. 12, Nr 10, pp. 101-101 (USSR)

ABSTRACT: Koshcheyev, I. A.: Fundamental Theory of Electrical Compounds. Volume III. Non-Linear Systems, 1957, 187 pages, Rb 5,40

Ioffe, A. F.: Physics of Semiconductors. Edition of the AN USSR, 1957, 491 pages, Rb. 20.-

Kaden, G.: Electromagnetic Screens. 1957, 327 pages, ~~Rb. 10, 75.~~

The basic problems within the frequency range of quasi-stationary operations are investigated. In part I: Screening of Interference Fields. In part II: Screening of Interference Currents.

Polivanov, K. M.: Ferromagnetics. Fundamental theory for their technical use. 1957, 256 pages, Rb. 13,70.

CARD 1/2

Some Problems in Impulse Techniques and High-Frequency Techniques.
Works of the Moscow Institute for Aviation, volume 83, 1957.
Blagoveshchenskiy, V. P., Sidorenko, V. V., Measurements in Impulse-Radio Apparatus. 1957, 264 pages, Rb. 6, 65.
Teaching facility.

AVAILABLE: Library of Congress

CARD 2/2

KADEN, M. M.

"Phenomenon of Para-Agglutination." Thesis for degree of Dr. Medical Sci. Sub 23 Jun 50, Acad Med Sci USSR

Summary 71, 4 Sep 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1950. From Vechernyaya Moskva, Jan-Dec 1950.

KADEN, M. M.

Jul 53

USSR/Medicine - Dysentery

"The Water Factor in the Epidemiology of Dysentery," M. M. Kaden

Zhur Mikro, Epid, i Immun, No 7, pp 24-26

Dysentery infections due to water contamination are no less important and perhaps more important than typhoid-paratyphoid infections from contaminated water supply. If the dysentery infections are due to this cause, the disease has an atypical character. The incubation period for dysentery is shorter than that for typhoid and paratyphoid, so that dysentery appears first and typhoid-paratyphoid afterward. When dysentery infections are caused by contaminated water, adults rather than children are affected. Furthermore, it is characteristic that the dysentery bacteria isolated from the patients belong to a variety of species and types. The outbreaks studied occurred in cold weather.

267T40

KADEN, M.M.; RUTUZOVA, L.P.

Effect of antibiotic therapy on typhoid and paratyphoid pathogens. Antibiotiki 5 no. 5:77-79 S-O '60. (MIRA 13:10)

1. Moskovskiy institut vaktsin i syvorotok imeni I.I. Mechnikova.
(SALMONELLA) (ANTIBIOTICS)

KADEN, M.M., prof.; KHAZANOV, M.I., kand.meditsinskikh nauk; PANFILOVA, Z.V.

Typhoid and paratyphoid fevers in the USSR and means for a further morbidity. Sov. med. 24 no. 5:17-21 My '60. (MIRA 13:10)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta vaktsin i syvorotok imeni I.I. Mechnikova (dir. A.P. Muzychenko) Ministerstva zdravookhraneniya SSSR.
(TYPHOID FEVER) (PARATYPHOID FEVER)

KADEN, M.M.; TIMEN, Ya.Ye.; MOROZOVA, M.M.; SHIGANOVA, V.L.; BUTUZOVA, L.P.

Effect of antibiotic therapy on the clinical course and immunological reactivity of the organism of patients with typhoid and paratyphoid fevers. Antibiotiki 6 no.1:50-54 Ja '61. (MIRA 14:5)

1. Moskovskiy nauchno-issledovatel'skiy institut vaktsin i syvorotok imeni I.I.Mechnikova i 2-ya klinicheskaya gorodskaya infektsionnaya bol'nitsa.
(CHLOROMYCETIN) (TYPHOID FEVER) (PARATYPHOID FEVERS)

[illegible], N. S.

"Comparative Morphology of the Fruits and Seeds of the Central Russian Crowfoot Family." Thesis for degree of Candi. Biological Sci. Sub 2 May 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.

KADEN, N. N.

N. N. Kaden. Co-fruits and inflorescence. (The "complex fruits formed from whole racemes" as stated in the article.) P. 89.

Chair of Higher Plants, Aug. 5, 1950

SO: Herald of the Moscow University, Series of Physics-Mathematics and Natural Sciences, No. 4, No. 6, 1951

KADEN, N. N.

Kaden, N. N., Aleksandrov, V. G. and Konovalov, I. N. (Reviews and Bibliography) "The Morphological Essence of the Fruits of Rosaceae and Corylus and the Nature of the Fruit of some Rosaceae". P. 143

Chair of Higher Plants
Aug. 5, 1950

SO: Herald of the Moscow University, Series on Physics-Mathematics and Natural Sciences, No. 3, No. 5, 1951

KADEN, N.N.

Fruit and seeds of hornworts of Central Russia. Biul.MOIP Otd.biol. 58 no.3:82-85 '53. (MLRA 6:6)
(Herbs)

KADEN, N.N.

Hornworts of European Russia. Biul.MOIP Otd.biol. 58 no.3:86-89 '53.
(MLRA 6:6)
(Herbs)

KAIDEN, N.N.; TIKHOMIROV, V.N.

Morphology of the ovary and seeds of Umbelliferae. Biul. MOIP. Otd. biol. 59 no.3:79-83 My-Je '54. (MLRA 7:7)
(Umbelliferae) (Botany--Morphology)

KADEN, N.N.

About Z.T. Artiushenko's and I.N. Konovalov's articles on fruit morphology. Biul.MOIP.Otd.biol. 60 no.6:115-119 N-D '55.(MLRA 9:3)
(BOTANY--MORPHOLOGY) (FRUIT) (ARTIUSHENKO, Z.T.) (KONOVALOV,I.N.)

KAIDEN, N.N.

Apocarpous gynoecia and fruit in gramineous plants according to comparative morphological data. Nauch.dokl.vys.shkoly;biol. nauki no.3:113-123 '58. (MIRA 11:12)

1. Predstavlena kafedroy vysshikh rasteniy Moskovskogo gosudarstvennogo universiteta imeni M.V.Lomonosova.
(Grasses) (Flowers--Morphology)

KADEN, N.N.

Apocarpous gynoecia and fruit in gramineous plants according to teratological data. Nauch.dokl.vys.shkoly;biol.nauki no.4:111-117 '58. (MIRA 11:12)

1. Rekomendovana kafedroy vysshikh rasteniy Moskovskogo gosudarstvennogo universiteta imeni M.V.Lomonosova.
(Grasses) (Flowers--Morphology) (Abnormalities (Plants))

KADEN, N.N.

Apocarpy of gynoecium and fruit in gramineous plants according to the data of vascular anatomy and ontogeny. Nauch.dokl.vys.shkoly; biol.nauki no.3:147-159 '59. (MIRA 12:10)

1. Rekomendovana kafedroy vysshikh rasteniy Moskovskogo gosudarstvennogo universiteta im. M.V.Lomonosova.
(Grasses) (Flowers--Anatomy)

KADEN, M.N.; TIKHOMIROV, V.N.

"Fruit types and their classification" by R.E. Levina. Reviewed by M.N.Kaden, V.N.Tikhomirov. Nauch. dokl. vys. shkoly; biol. nauki no.3:217-219 '60. (MIRA 13:8)
(Fruit--Anatomy) (Levina, R.E.)

ALEKSANDROV, V.G., prof., red.; DVORYANKIN, F.A., prof., red.; KADEN, N.N., kand. biol. nauk, red.; KUPERMAN, F.M., prof., red.; L'VOVA, I.N., kand. biol.nauk, red.; PALAMARCHUK, I.A., kand.biol.nauk, red.; PODDUBNAYA-ARNOL'DI, V.A., prof., red.; PRONIN, V.A., kand.biol.nauk, red.; RZHANOVA, Ye.I., kand. biol.nauk, red.; ROSTOVTSEVA, Z.P., kand. biol.nauk, red.; SEREBRYAKOV, I.G., prof., red.; USTINOVA, Ye.I., kand. biol.nauk, red.; CHELYADINOVA, A.I., kand. biol.nauk, red.; YERMAKOV, M.S., tekhn. red.

[Morphogenesis in plants; transactions dedicated to the 100th anniversary of the publication of Darwin's "Origin of species."] Morfogenez rastenii; trudy posveshchaiutsia 100-letiiu so dnia vykhoda v svet truda Charlza Darvina "Proiskhozhdenie vidov." Moskva, Izd-vo Mosk. univ. Vol.1. 1961. 683 p. (MIRA 14:9)

1. Soveshchaniye po morfogenezu rastenly, 1959.
(Botany—Morphology)

KADEN, N.N.

Some cardinal problems in the classification, typology, and nomenclature of fruits. Bot. zhur. 46 no.4:496-504 Ap '61. (MIRA 14:3)

(Fruit--Morphology)

KADEN, N.N. (Moskva)

Types of longitudinal dehiscense of fruits. Bot.zhur. 47 no.4:495-505 Ap '62. (MIRA 15:8)
(Fruit--Morphology)

KADEN, N.N.; LANOVAYA, V.P.

Morphology of the gynoecium and the fruit of geranium. Nauch. dokl. vys. shkoly; biol. nauki no.4:104-109 '63. (MIRA 16:11)

1. Rekomendovana kafedroy vysshikh rasteniy Moskovskogo gosudarstvennogo universiteta im. Lomonosova.

KADEN, N. N.

"Fundamental problems of evolutionary carpology."

report submitted for 10th Intl Botanical Cong, Edinburgh, 3-12 Aug 64.

Moscow State Univ.

KADEN, N.N.

Morphology of geranium seeds. Nauch. dokl. vys. shkoly; biol. nauki no. 2:97-102 '64. (MIRA 17:5)

1. Rekomendovana kafedroy vysshikh rasteniy Moskovskogo gosudarstvennogo universiteta im. M.V.Lomonosova.

KADEN, N.N.

Schizocarpes. Bot. zhur. 49 no.7:966-973 Jl '64
(MIRA 17:8)

1. Moskovskiy gosudarstvennyy universitet.

KADEN, N.N.

More on the ways the fruit open. Bot. zhur. 49 no.12:1776-1779
D '64 (MIRA 18:2)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

KADEN, N.N.; ZAKALYUKINA, T.P.

Morphology of the gynoecium anf fruit in borage and mint families.
Vest. Mosk. un. Ser.6: Biol., pochv. 20 no.3:31-41 My-Je '65.
(MIRA 18:7)

1. Kafedra vysshikh rasteniy Moskovskogo universiteta.

KADEN, N.N.

New carpological classification by R.E.Levina. Bot. zhur. 50 no.4:579-581 Ap '65. (MIRA 18:5)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

KADEN, N.N.

Fruit types of plants inhabiting the middle zone of the European part of the U.S.S.R. Bot. zhur. 50 no.6:775-787 Je '65. (MIRA 18:7)

1. Moskovskiy gosudarstvennyy universitet.

KADEN, O. F.

(1)

Journal of the Science of Food and Agriculture Jan. 1954 Foods

Treatment of cacao beans and raw material derived therefrom. O. F. Kaden (B.P. 693,666, 27.6.51. Ger., 15.7.50).—The defects of diseased or underfermented beans are removed and the aroma and quality improved by treating the beans under pressure (2 atm.) with water containing 0·1—0·2% of a mixture of alcohol and acetic acid, followed by reducing the pressure (10—20 mm. water) and then redrying. J. H. Bushill

38001. KADEN, R. YU

OB ELYETROPROVODNOSTI SYELYENA. SOOBSHCH. 134. TRUDY NIKFI (NAVCH-ISSLYED. KINOFOTOIN-T) VYP. 10, 1949. S. 265-79 - BIBLIOGR: 9 NAZV.

Kaden R Y

38063. KADEN, R.YU. AND KOMAR, V. G.

Starenie selenovykh vypryamiteley. soobsh. 135. Trudy nikfi (Nauch. - issled. kinofotoih-t), vyp, 10, 1949, s. 280-92. -- bibliogr: 5 nazv.

Selenium Rectifiers

KADEN, R. Yu.

USSR/Physics - Selenium, Inertia Mar/Apr 52

"Instability of the Electric Conductivity of Selenium," R.Yu. Kaden

"Iz Ak Nauk, Ser Fiz" Vol XVI, No 2, p 230

Brief contents of a report. Thermal dependence of elec cond of gray cryst selenium has considerable inertia. Anomalous increase of cond was observed at cooling, decreasing thereafter isothermally and obeying the bimol law. This anomalous cond proved to be electronic. It is assumed that formation of quasimetallic bonds between sep chains contributes to transition of a part of electrons to the upper zone. Later electrons recombine with holes. 220T99

KADEN, R. Yu.

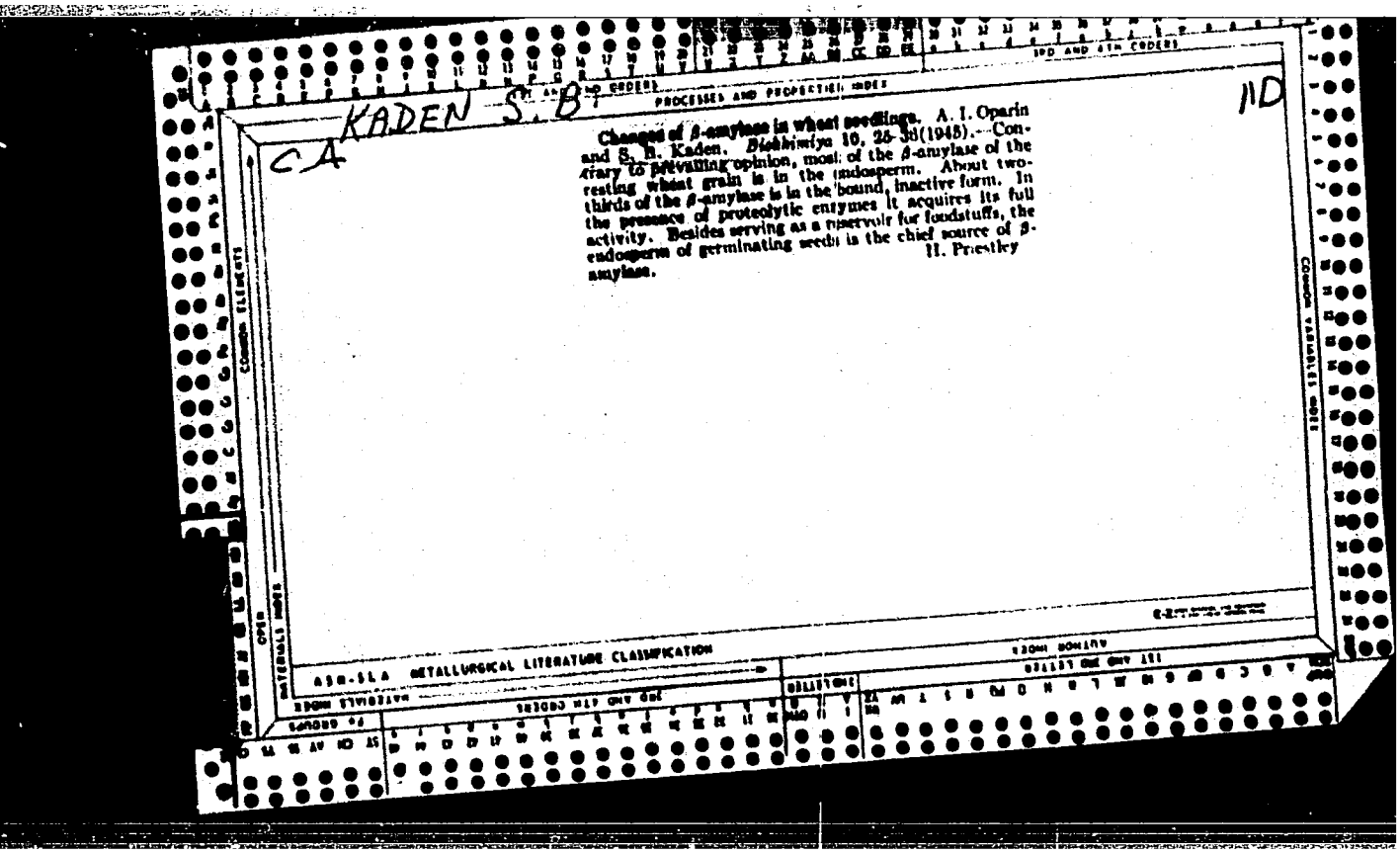
537.311.33

USSR • 11059. The instability of the electrical conductivity of selenium. R. YU. KADEN. *Zh. Eksper. teor. Fiz.*, 24, No. 6, 71 - 80 (1953) *In Russian.*

Presents in graphed form the results of an investigation on the electrical conductivity (in the dark) of grey Se between 0 and 130°C. The specimens were prepared so as to exclude any possibility of contamination by halogens; after crystallization, they were subjected to a 2-3 hours' heat treatment at 210-215°C. It was found that, while between 100 and 130°C the dark conductivity rapidly attained a reproducible value, no constant value could be obtained for it at room temperature. When the specimen was cooled, its conductivity rapidly increased instead of falling off in accordance with the known exponential law; the increase of conductivity was reversible. The sign of the thermal e.m.f. showed that this anomalous conductivity was of electronic nature. When the cooled specimen was left to itself at constant temperature, the conductivity decreased in accordance with a hyperbolic relationship consistent with a bimolecular recombination mechanism of electrons and holes.

F. LACHMAN

BB BW



CA KADEN S. B.

11D

PROCESSES AND PROPERTIES INDEX

Changes of β-amylase in wheat seedlings. A. I. Oparin and S. B. Kaden. *Biokhimiya* 10, 26-38(1945).—Contrary to prevailing opinion, most of the β-amylase of the resting wheat grain is in the endosperm. About two-thirds of the β-amylase is in the bound, inactive form. In the presence of proteolytic enzymes it acquires its full activity. Besides serving as a reservoir for foodstuffs, the endosperm of germinating seeds is the chief source of β-amylase. H. Priestley

ASB-61A METALLURGICAL LITERATURE CLASSIFICATION

Kaden, S.B

USSR/ Analytical Chemistry - Analysis of Inorganic Substances G-2

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 12097

Author : Sokolov D.F., Kaden S.B.
Inst : Laboratory of Sapropelic Deposits of the Forest Institute of the Academy of Sciences USSR
Title : Determination of Carbon Dioxide of Carbonates in Sapropels by the Titration Method

Orig Pub : Tr. Labor. sapropel. otlozheniy. In-t lesa AN SSSR, 1956, No 6, 65-68

Abstract : A method has been worked out for the determination of CO_2 in sapropels, which is based on determination of the amount of HCl used up in the decomposition of carbonates. An 0.2-1.5 g, weighed sample of comminuted and screened (0.5 mm) sapropel under study is placed into a 100 ml measuring flask, 25 ml 0.5 N HCl are added, stirring is continued until the carbonates are completely decomposed, the solution is diluted with water to the mark, stirred

Card 1/3

USSR/ Analytical Chemistry - Analysis of Inorganic Substances G-2

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 12097

again, filtered through a dry filter of medium porosity. First portions of the filtrate are discarded and thereafter 25 ml samples are collected, which are titrated with 0.1 N solution of NaOH after addition of 3-4 drops of methyl orange. The CO_2 content (x) of absolutely dry sapropel is calculated according to the formula: $x = (31.25 - mk)\ 42.2 \cdot 100 \cdot 100/a\ (100 - w) \cdot 1000$, wherein 31.25 is the number of ml 0.1 N HCl corresponding to $\frac{1}{4}$ of the volume of HCl taken to neutralize the carbonates; m -- number of ml 0.1 N NaOH used up in the titration of 25 ml of the solution tested; k -- correction coefficient of 0.1 N NaOH; a -- weight of the sample of air-dry sapropel (g); w -- moisture content of the sapropel (%); 4 -- conversion factor (from 100 ml solution 25 ml were used for titration), 2.2 -- amount of CO_2 (mg) that corresponds to 1 ml 0.1 N HCl. Comparative determinations of

Card 2/3

ZHABROVA, G. M., KADENATSI, B. M.

"Study of the Coke Formation and Divinyl Polymerization on the Catalyst of S. V. Lebedev."

Problems Kinetics and Catalysis, v. 9, p. 187-200, 1957, and Isotopes in Catalysis, Moscow, Izd-vo AN SSSR, 1957, 442p.

Most of the papers in this collection were presented at the Conf. on Isotopes in Catalysis which took place in Moscow, Mar 31 - Apr 5, 1956.

5(4) SOV/20-121-4-28/54

AUTHORS: Roginskiy, S. Z. Corresponding Member, Academy of Sciences, USSR, Yanovskiy, M. I., Zhabrova, G. M., Vinogradova, O. M., Kadenatsi, B. M., Markova, Z. A.

TITLE: A Catalytic Synthesis of Unsaturated Hydrocarbons of the Series C_4, Labelled by the Radioactive Carbon C^{14}, With the Use of Vapor Phase Distributive X-Ray Chromatography (Kataliticheskiy sintez nepredel'nykh uglevodorodov ryada C_4, mechennykh radiouglerodom C^{14}, s ispol'zovaniyem parofaznoy raspredelitel'noy radiokhromatografii)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 121, Nr 4, pp 674-677 (USSR)

ABSTRACT: This paper reports on the results of the production of labelled unsaturated hydrocarbons on the basis of ethyl alcohol labelled by C^{14}. It is a peculiarity of this method that all the labelled molecules are produced simultaneously by the same catalytic process which develops under the influence of S. V. Lebedev's catalyst for the synthesis of divinyl.

Card 1/4

A Catalytic Synthesis of Unsaturated Hydrocarbons of the Series C_4, Labelled by the Radioactive Carbon C^{14}, With the Use of Vapor Phase Distributive X-Ray Chromatography

This paper discusses a special case of the general principle of the synthesis of labelled molecules. This principle consists of the carrying out of a group synthesis (which gives a mixture of some substances with an unusual isotopic composition) and of the subsequent application of physical-chemical separation methods. Especially interesting is the separation of the labelled hydrocarbons of the C_4 series with various degrees of saturation and with various structural-isomeric shapes. Such hydrocarbons are butadiene (divinyl), α-butylene, β-butylene (cis-variant), β-butylene (trans-variant). The catalytic synthesis was carried out by means of S. V. Lebedev's catalyst at 390°. A labelled ethyl alcohol $C^{14}H_3C^{14}H_2OH$ with the specific radioactivity 0,724 Curie/ml was used for the synthesis. The chromatographic separation of the marked gaseous labelled products is then discussed. A figure shows a typical chromatogram of the mixture of the gaseous radioactive products of the synthesis of divinyl from

A Catalytic Synthesis of Unsaturated Hydrocarbons of the Series C_4, Labelled by the Radioactive Carbon C^{14}, With the Use of Vapor Phase Distributive X-Ray Chromatography

the labelled alcohol ($C_2^{14}H_5OH$). According to this chromatogram, the main gaseous product is divinyl (81,3 %). The percentage of butylene is not higher than 4,7 %. The composition of the products may be changed by a heat treatment of the catalyst. The specific activities of the hydrocarbons have approximately the same values. In order to identify the individual fractions, their infrared absorption spectra were taken; they are shown by a figure. The combination of chromatography with rectification, extraction and with a counterflow distribution is very promising. These methods are very productive and may be used for the preliminary group separation of a mixture into some fractions with a subsequent extraction of the individual components. The catalytic experiment takes 1 hour and the chromatographic separation - 2 - 2,5 hours. There are 4 figures and 9 references, 7 of which are Soviet.

SOV/2o-121-4-28/54

A Catalytic Synthesis of Unsaturated Hydrocarbons of the Series C_4, Labelled by the Radioactive Carbon C^{14}, With the Use of Vapor Phase Distributive X-Ray Chromatography

ASSOCIATION: Institute fizicheskoy khimii Akademii nauk SSSR
(Institute of Physical Chemistry, AS USSR)

SUBMITTED: April 16, 1958

Card 4/4

KADENATSIY, A. N.

"On the Natural Focalization of Alveolar Echinococcosis in Omsk Oblast'."

Tenth Conference on Parasitological Problems and Diseases with Natural Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of Sciences, USSR, Moscow-Leningrad, 1959.

Omsk State Veterinary Institute

ROGINSKIY, S.Z.; YANOVSKIY, M.I.; LU PEY-CHZHAN; GAZIYEV, G.A.; ZHABROVA, G.M.; KADENATSI, B.M.; BRAZHNIKOV, V.V.; NEYMARK, I.Ye.; PIONTKOVSKAYA, M.A.

Chromatographic determination of the adsorption isotherms of gases and of the specific surface of solids. Kin.i kat. 1 no.2:287-293 Jl-Ag '60. (MIRA 13:8)

1. Institut fizicheskoy khimii AN SSSR.
(Adsorption)

ROGINSKIY, S.Z.; YANOVSKIY, M.I.; LU PEY-SHZHAN; GAZIYEV, G.A.; ZHABROVA, G.M.; KAMENATSI, B.M.; BRAZHNIKOV, V.V.

Rapid chromatographic method of measuring the adsorption isotherms of gases and vapors. Dokl.AN SSSR 133 no.4: 878-881 Ag '60. (MIRA 13:7)

1. Institut fizicheskoy khimii Akademii nauk SSSR. 2. Chlen-korrespondent AN SSSR (for Roginskiy).
(Adsorption)

KADENATSI, B. M.

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B004/B067

AUTHORS: Roginskiy, S. Z., Corresponding Member of the AS USSR, Yanovskiy, M. I., Lu Pey-chzhan, Gaziyev, G. A., Zhabrova, G. M., Kadenatsi, B. M., and Brazhnikov, V. V.

TITLE: Rapid Chromatographic Method of Measuring the Adsorption Isotherms of Gases and Vapors

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 4, pp. 878-881

TEXT: Since in heterogeneous catalysis the dimensions of the specific surface are of great importance, the authors attempted to develop a rapid method of determining the specific surface. Their studies were based on a paper by J. N. Wilson (Ref. 1) where the relation between the chromatographic curve and the form of the isotherm is theoretically studied. The results were compared with those of the ordinary vacuum technique. Fig. 1 shows the scheme of the experimental apparatus. The gas analyzer was an ionization detector on the basis of Pm^{147} (Ref. 5). The adsorption of heptane was measured. Nitrogen and sometimes argon were used as carriers.

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The height of the steps recorded corresponds to the initial concentration C_o of the adsorbate. The desorption curves recorded on blowing the pure carrier gas through the column permit the calculation of the isothermal line of adsorption. In a variation of this method, the column is not saturated, but the sample is periodically injected into the column through which the carrier gas flows. The experiment then lasts only 10-15 min. On the assumption of an immediately established equilibrium and the absence of longitudinal diffusion, the adsorption was calculated from the following equations: $f(C) = \omega kS_1/ug$ (2), where f(C) is the amount of the substance adsorbed by 1 g of adsorbent (mmole/g) in which C is the equilibrium concentration; k is the constant of the detector ($mmole/cm^3 \cdot cm$); u is the speed of the recorder tape; g is the weight of the adsorbent (g); and S_1 is the area below the desorption curve. The following adsorbents were used: refractory diatomite bricks, silica gel of the type E (Ye), nickel-hydroxide gel, nickel catalyst, MgO produced from $Mg(NO_3)_2$, $ZnO+14.5\ ZnSO_4$, and carbon black. The values for MgO, silica gel Ye, nickel hydroxide, and diatomite were in good agreement with those obtained by the vacuum technique. For adsorbents with a large number of very narrow pores (active

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coal) the results were unsatisfactory. The range of application of the chromatographic method must be further studied. The authors thank I. Ye. Neymark and M. A. Piontrovskiy for preparing the coarse-pored silica gel Ye and nickel-hydroxide samples. There are 4 figures, 1 table, and 5 references: 2 Soviet, 1 US, 1 British, 1 Dutch, and 1 Hungarian.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry of the Academy of Sciences USSR)

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Legend to Fig. 1: 1: cylinder with carrier gas; 2: bubbler with adsorbate; 3: chromatographic column; 4: gas analyzer; 5: recording potentiometer; 6-10: fine-regulating valves; 11: four-way cock; 12-15: rheometers.

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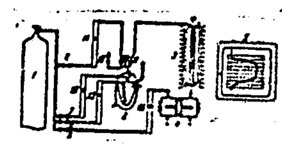

GORDEYEVA, V.A.; YEGOROV, Ye.V.; ZHABROVA, G.M.; KADENATSI, B.M.; KUSHNEREV, M. Ya.; ROGINSKIY, S.Z.

Use of ionizing radiation in the study of the decomposition processes of copper and nickel oxalates. Dokl. AN SSSR 136 no.6:1364-1367 F '61. (MIRA 14:3)

1. Institut fizicheskoy khimii AN SSSR. 2. Chlen-korrespondent AN SSSR (for Roginskiy).
(Copper oxalate)
(Nickel oxalate)
(Radiation)

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E075/E436

1.1600

AUTHORS: Zhabrova, G.M., Kadenatsi, B.M., Zvonov, N.V., Yegorov, Ye.V., Azizov, T.S., Batalov, A.A., Gordeyeva, V.A., Glazunov, P.Ya.

TITLE: Preparation of finely divided metals and oxides by radiation

PERIODICAL: Kinetika i kataliz, v.3, no.4, 1962, 610-613

TEXT: A possibility was investigated of preparing metals and oxides in a finely divided form by irradiation of $Zr(OH)_4$, $Al(OH)_3$, $Fe(OH)_3$, Ni and Cu oxalates and basic copper carbonate with accelerated electrons having the energy of 0.8 Mev. The temperature of the samples during irradiation (1 to 2 g) did not exceed 40 to 50°C. Thermal decomposition at 400 to 500°C was also carried out for comparison with the irradiated materials. The decomposition of all the compounds commenced at radiation doses exceeding 10^8 rads and was intense at 10^9 to 10^{10} rads. At the latter doses the compounds were almost completely

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