MIRZOYAN, E.T.; KUZNETSOVA, Ye.S.

Desensitizing effect of streptomycin on specific hyperergia in experimental tuberculosis. Antibiotiki 10 no.3:235-240 Mr '65. (MIRA 18:10)

1. Klinike-diagnosticheskaya laboratoriya (zav. - Ye.D. Timasheva) Tsentral'nogo instituta tuberkuleza Ministerstva zdravookhraneniya SSSR, Moskva.

L 17467-66 EWT(m)/EWG(m)/EWP(t)/ETC(f) IJP(c) RDW/JD SOURCE CODE: UR/0363/66/002/002/0245/0248

ACC NR: AP6007247

AUTHOR: Kharakhorin, F. F.; Glukhov, A. A.; Kuznetsova, Ye. S.; Potapov, V. I.

ORG: none

TITLE: Some properties of tellurium doped indium and gallium arsenides

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 2, 1966, 245-248

TOPIC TAGS: semiconducting material, gallium arsenide, indium compound, indium arsenide, single crystal, electric property, activated crystal, tellurium activator

ABSTRACT: Electron carrier concentration in relation to Te dopant content in the charge and Hall mobility of electrons in relation to the carrier concentration have been studied in indium arsenide and gallium arsenide single crystals grown by the Czochralski-Gremmelmayer technique and, in the case of GaAs, by oriented crystallization. This latter technique was used to exclude interference of Si acceptor impurity (from the quartz container) with electrical characteristics of GaAs. In the Czochralski process, 99.999% Te was introduced directly into the melt. Hall coefficient and resistivity were measured at 300K. In both indium and gallium arsenides, carrier concentration increased with the increase in Te content of the charge up to a certain value ("saturation" point), then leveled off. However, the "saturation" point was reached with ten times higher Te content in InAs than in GaAs.

UDC: 546.682'191+546.681'191+546.24

Card 1/2

ACC NR: AP6007247

Consequently, the limit (maximum) carrier concentration was about an order of magnitude higher in InAs than in GaAs ($\sim 2 \times 10^{19}$ versus 3.1×10^{18} at/cc). These data were in satisfactory agreement with the literature. Presumably, the "saturation" in carrier concentration was reached at a point when Te atoms form electrically inactive Te-Te bonds. The Hall mobility in both arsenides studied displayed a similar pattern of gradual decrease with increased concentration. A wide dispersion of mobility data at a given carrier concentration for GaAs crystals prepared by Czochralski technique and by oriented crystallization was explained by the compensating effect of the uncontrollable acceptor impurity. Orig. art. has: 5 figures.

SUB CODE: 20 SUBM DATE: 12Jul65/ ORIG REF: 002/ OTH REF: 007/ ATD PRESS: 4206

[JK]

Pure metal

Card 2/2

L 20466-66 EWT(m)/EWP(t) IJP(c) JD
ACC NR: AP6011317 SOURCE CODE: UR/0363/66/002/003/0461/0463

AUTHOR: Kharakhorin, F. F.; Kuznetsova, Ye. S.; Potapov, V. I.; Glukhov, A. A.

ORG: none

TITLE: Relation between mobility and concentration of carriers in indium arsenide

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 3, 1966, 461-463

TOPIC TAGS: indium compound, arsenide, indium arsenide, semiconductor single crystal, electron mobility, carrier concentration

ABSTRACT: Variations of Hall mobility at different carrier (electron) concentrations ($n = N_D + N_A$) in the $4 \cdot 10^{15}$—10^{17}/cc range have been studied at 300K in indium arsenide, as one of the most promising $A^{III}B^{V}$ compounds. The theoretical plot of mobility versus n was calculated using the Brooks formula for uncompensated ($N_A = 0$) and compensated materials which cover concentration regions with nondegenerated and weakly degenerated states, respectively. Comparison was made of the calculated data with the experimental data from literature and with the authors' own data. The latter were obtained with single

Card 1/2 UDC: 546.682'191:537.311.33

L 20010-66

ACC NR: AP5011317

crystals grown either by oriented crystallization or by Czochralski-Gremmelmayer technique. Most of the data for the samples grown by the first technique ($n = 3 \cdot 10^{16}$—$8 \cdot 10^{16}$/cc and mobility = 29,700—22,000 $cm^2/v/sec$) were in agreement with the calculated data. Data obtained with the samples grown by Czochralski technique ($n = 5 \cdot 10^{16}$—10^{17}/cc and mobility = 24,300—20,000 $cm^2/v/sec$) were somewhat lower and the literature data were considerably lower than theoretical. The discrepancy between theoretical and some of the experimental data was attributed to a variable degree of compensation by impurities. Orig. art. has: 2 figures and 3 formulas. [JK]

SUB CODE: 20/ SUBM DATE: 12Jul65/ OTH REF: 008/ ATD PRESS: 4225

Card 2/2

L 32043-66 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6013335 SOURCE CODE: UR/0363/66/002/004/0582/0584

AUTHOR: Kharakhorin, F.F.; Kuznetsova, Ye. S.; Glukhov, A.A.; Potapov, V.I.

ORG: none

TITLE: Purification of arsenic by sublimation

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 4, 1966, 582-584

TOPIC TAGS: arsenic, sublimation, metal purification

ABSTRACT: A process and the corresponding equipment have been developed for purifying arsenic by sublimation. Usually, one or two sublimations are performed, impurities of low vapor pressure such as copper, iron, and aluminum being thus removed. More sublimations are required to remove impurities having a substantial vapor pressure (zinc, cadmium, sulfur, selenium, tellurium). The process avoids contamination of the arsenic by eliminating its transfer from one ampoule to another. Radioactivation analysis has shown that after 4-5 sublimations, for a threefold decrease in the total impurity content, the amount of sulfur decreased by a factor of 6 — 10. Arsenic obtained after five sublimations was used to synthesize indium arsenide with a carrier concentration of $4 \times 10^{16} cm^{-3}$ and a mobility of 29,000 cm^2/V sec at 300K, which also indicates that the

Card 1/2

UDC: 546.19

Card 2/2

SOV/137-58-12-25510

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 12, p 201 (USSR)

AUTHORS: Kuznetsova, Ye. T., Talalayeva, O. D., Tikhonov, A. S.

TITLE: Rapid Method for the Analysis of a Cadmium Alloy Using Sodium Versenate (Uskorennyy metod analiza kadmiyevogo splava s primeneniyem trilona B)

PERIODICAL: Sb. tr. Voronezhsk. otd. Vses. khim. o-va im. D. I. Mendeleyeva, 1957, Nr 1, pp 151-154

ABSTRACT: The analysis of the Cd-Sn-Pb alloy is based on the initial separation of Sn in the form of metastannic acid from a nitric-acid solution followed by the volumetric determination of Cd and Pb jointly and of Pb separately in separate portions of the solution. 0.5 g of the alloy are dissolved in 15 cc of HNO_3 (1 : 1), Sn is filtered off, and the filtrate is diluted to 250 cc. 10 cc of 10% KNa-tartarate solution and one drop of methyl red are added to 50 cc of the solution, whereupon it is neutralized with NH_4OH. 10 cc of an ammoniacal buffer solution (mixture of 350 cc of 25% NH_4OH and 54 g NH_4Cl in 1 liter of water), 10 cc of 10% NaCN, solid chromogen black and 100 cc of water are added, and the whole is titrated with sodium versenate (I). The Pb content is calculated according to the

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SOV/137-58-12-25510

Rapid Method for the Analysis of a Cadmium Alloy Using Sodium Versenate

formula: %Pb=5 V · M · 207.21 · 100/1000 D, where V is the volume of I used in the titration of Pb, M is the molarity of I, and D is the weight of the specimen of the alloy. To another 50 cc portion of the solution are added an excess of I solution and one drop of methyl red; it is neutralized with NH_4OH, 10 cc of the ammoniacal buffer and chromogen black are added, and the excess I is titrated with a solution of $MgSO_4$ until the color changes from blue-green to blue. In this way the sum total of Pb and Cd is determined. Cd is calculated by the following formula: %Cd = 5 $[(V_1M_1 - V_2M_2) - VM_1 \cdot 112.41 \cdot 100/1000D]$, where V_1 is the volume of I taken in excess, M_1 is the molarity of I, V_2 is the volume ["molarity" in Russ. Text; Transl.Note] of the $MgSO_4$ solution used for the back titration, and M_2 is the molarity of $MgSO_4$. Results are adduced for the analysis of the following alloys: (in %): Sn 46.5, Cd 17.3, and Pb 35.5 with an error for Cd from -0.29 to +0.36% and for Pb from -0.49 to +0.13%.

Z.G.

Card 2/2

VENGEROV, V.G., inzh.; KUZNETSOVA, Ye.V., inzh.

Potentialities of safety in large-scale electric blasting.
Vzryv. delo no.57/14:319-321 '65. (MIRA 18:11)

1. Permskiy politekhnicheskiy institut.

L 20622-66 EWT(d)/FSS-2/EWT(l)/EWT(m)/EWP(t)/EWP(h)/EWP(l) IJP(c) JD/WW/JW/JG/
ACC NR: AT6010028 JWD SOURCE CODE: UR/2996/65/000/057/0319/0321

AUTHOR: Vengerov, V. G. (Engineer); Kuznetsova, Ye. V. (Engineer)

ORG: Perm Polytechnical Institute (Permskiy politekhnicheskiy institut).

TITLE: Safety factors and quantity of electric detonations

SOURCE: Nauchno-tekhnicheskoye gornoye obshchestvo. Vzryvnoye delo, no. 57/14, 1965. Razvitiye vzryvnykh rabot v gornom dele (Development of blasting in the mining industry), 319-321

TOPIC TAGS: electric detonator, bridge detonator, detonation

ABSTRACT: The use of a tungsten bridge instead of the nichrome bridge in the ED-8-56 electric detonator was studied. Testing over a period of 10 years of the electric detonator with a tungsten instead of a nichrome bridge (4—5 mm long) showed a considerable decrease in the number of premature detonations by stray currents, a marked decrease in the number of misfires and incomplete detonations, and an increase (2.5—3 times) in the number of simultaneous firings of detonators

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L 20622-66
ACC NR: AT6010028

connected in series. Thus, the replacement of the nichrome bridge by a tungsten bridge increases the safety factor of electric detonation and increases the number of simultaneous detonations. [PS]

SUB CODE: 19/ SUBM DATE: none/ ORIG REF: 001/ ATD PRESS: 4224

Card 2/2 BK

TURGEL', Ye.O.; KUZNETSOVA, Ye.V.

Application of thin film chromatography for the analysis of mixtures of high-boiling alcohols formed in the synthesis of isoprene. Zhur. anal. khim. 20 no.12:1374-1378 '65.
(MIRA 18:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhimicheskikh protsessov, Leningrad. Submitted November 19, 1964.

BOGOYAVLENSKAYA, L.B.; VIL'SHANSKAYA, F.L.; MATVEYEVA, V.N.; SAKHAROVA, P.K.; KUZNETSOVA, Ye.V.; KAGAN, M.I.

Etiological structure of intestinal diseases of infants; author's abstract. Zhur.mikrobiol.,epid.i immun. 30 no.11:113 N '59. (MIRA 13:3)

1. Iz Moskovskoy gorodskoy sanitarno-epidemiologicheskoy stantsii.
(INFANTS--DISEASES) (INTESTINES--DISEASES)

KAGAN, M.I.; KUZNETSOVA, Ye.V.; VIL'SHANSKAYA, F.L.; BOGOYAVLENSKAYA, L.B.; MATVEYEVA, V.N.; SAKHAROVA, P.K.

Epidemiological observations on patients with colienteritis. Zhur. mikrobiol., epid. i immun. 32 no.10:78-80 O '61. (MIRA 14:10)

1. Iz Gorodskoy sanitarno-epidemiologicheskoy stantsii i sanitarno-epidemiologicheskoy stantsii Dzerzhinskogo rayona Moskvy.
(ESCHERICHIA COLI) (INTESTINES--DISEASES)

KUZNETSOVA, Ye.V.

Pegmatite formations of Transcaucasia. (In: Akademiia nauk SSSR. Voprosy petrografii i mineralogii. Moskva, 1953. Vol. 1, p.328-342)
(MLRA 7:4)

(Transcaucasia--Pegmatites) (Pegmatites--Transcaucasia)

GUREVICH, A.O.; KUZNETSOVA, Ye.Ye. kandidat meditsinskikh nauk; RUMELIS, I.L. ; YURUSHA, A.K.

Effects of phthivazid therapy under ambulatory conditions. Probl. tub. no.6:21-26 N-D '55. (MLRA 9:2)

1. Iz Respublikanskogo protivotuberkuleznogo dispansera v Rige (glavnyy vrach Ye. Ye. Kuznetsova)

(TUBERCULOSIS, ther.
isoniazid, under ambulatory conditions)
(NICOTINIC ACID ISOMERS, ther. use
isoniazid, in tuberc., under ambulatory conditions)

KUZNETSOVA, Ye. Ye.

Status of tuberculosis control in the Latvian S.S.R. Probl. tub. no.2:3-8 '62. (MIRA 15:2)

1. Iz Respublikanskogo protivotuberkuleznogo dispansera Latviyskoy SSR (glavnyy vrach Ye. Ye. Kuznetsova)

(LATVIA—TUBERCULOSIS—PREVENTION)

ROYAK, S.M.; KROYCHUK, L.A.; KUZNETSOVA, Yu.F.

Using belite sludge from the production of alumina. TSement 29 no.3:8-10 My-Je '63. (MIRA 17:1)

1. Vsesoyuznyy gosudarstvennyy nauchno-issledovatel'skiy institut tsementnoy promyshlennosti.

ZOLOTAREV, Ye.Kh.; KUZNETSOVA, Yu.I.

Entomological evaluation of the new repellent benzimine. Vest. Mosk. un. Ser. 6: Biol., pochv. 16 no.4:38-44 Jl-Ag '61. (MIRA 14:7)

1. Kompleksnaya laboratoriya po izucheniyu sredstv i sposobov bor'by s vrednymi zhivotnymi i boleznyami rasteniy Moskovskogo gosudarstvennogo universiteta.
(INSECT BAITS AND REPELLENTS)
(METHYLENIMINE)

L 04749-67 EWT(1) IJP(c) AT/GD

ACC NR: AT6020452 (N) SOURCE CODE: UR/0000/65/000/000/0204/0216

AUTHOR: Pavlichenko, O. S.; Dushin, L. A.; Kuznetosv, Yu. K.; Adamov, I. Yu. 63

ORG: none B+1

TITLE: Instability of plasma discharge with oscillating electrons

SOURCE: AN UkrSSR. Vzaimodeystviye puchkov zaryazhennykh chastits s plazmoy (Interaction of charged particle beams with plasma). Kiev, Naukova dumka, 1965, 204-216

TOPIC TAGS: plasma discharge, plasma instability, plasma interaction, plasma diffusion

ABSTRACT: The experiments described in the present work revealed that cyclotron harmonics found in radiation from plasma with oscillating electrons and radiations induced by plasma oscillations are of a non-thermal nature and that their source is plasma microinstability. Two types of experiments were performed: observation of microwave emission from the plasma, and determination of the diffusion rates in the plasma. The experiments were performed on a discharge column (hydrogen or helium) of relatively high density (10^{12} cm^{-3}) and high temperature (50 ev). The experimental results are described and analyzed to show the importance of the beam-plasma interaction. It is shown that although the instability is microscopic in nature, it cannot be explained in terms of the model of F. C. Hoh (*Phys. Fluids*, 1963, 6, 1184). The complex relation-

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L 04749-67

ACC NR: AT6020452

ship between the parameters of oscillating electron beams and the plasma gives only qualitative answers at present, but does not allow formulation of the rules for the observed anomalous diffusion. The authors also include a review of the most important experimental and theoretical results dealing with this problem. Orig. art. has: 11 figures, 3 formulas.

SUB CODE: 20/ SUBM DATE: 11Nov65/ ORIG REF: 007/ OTH REF: 007

Card 2/2 2B

L 01279-67 EWT(1) IJP(c) AT
ACC NR: AT6031154 SOURCE CODE: UR/3137/66/000/197/0003/0011

AUTHOR: Dushin, L. A.; Kuznetsov, Yu. K.; Pavlichenko, O. S. 56 53 B+1

ORG: none

TITLE: Drift instability of a discharge plasma with oscillating electrons

SOURCE: AN UkrSSR. Fiziko-tekhnicheskiy institut. Doklady, no. 197/P-063, 1966. Dreyfovaya neustoychivost' plazmy razryada s ostsilliruyushchimi elektronami, 3-11

TOPIC TAGS: discharge plasma, plasma oscillation, drift instability, oscillating electron, drift dissipation

ABSTRACT: A study is made of previously observed increases in charged particle flux across a magnetic field, created by the discharge of oscillating electrons which produce intense low-frequency plasma oscillations. A study of these oscillations, and their genesis and frequency of occurrence as a function of plasma parameters, suggests that they are caused by the drift-dissipation instability of nonhomogeneous plasma. The phenomenon had been earlier analyzed theoretically by

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L 01279-67
ACC NR: AT6031154

A. V. Timofeyev. The authors thank K. D. Sinel'nikov, V. T. Tolok, and Ya. B. Faynberg for their discussion of the results obtained. Orig. art. has: 5 figures. [Authors' abstract] [SP]

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 008/ OTH REF: 004

Card 2/2 mjs

LUIKOV, A.V., KUZNETSOVA, Yu.M.

Relation of threshold flash to its duration in peripheral vision.
Dokl.AN SSSR 103 no.5:819-821 Ag '55. (MLRA 9:1)

1.Predstavleno akademikom A.N.Tereninym.
(VISION,
relation of threshold flash to its duration)

KUZNETSOVA, Yu. M.

SOV/81-59-16-57432

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 16, p 260 (USSR)

AUTHORS: Kazennov, Yu.I., Shvarts, G.L., Akhmetseva, A.P., Kolesova, L.P., Kuznetsova, Yu. M.

TITLE: On the Application of Non-Stabilized Acid-Resistant Chromium-Nickel Steels Containing Copper

PERIODICAL: Sb. statey. Vses. n.-i. i konstrukt. in-t khim. mashinostr., 1958, Vol 25, pp 57-74

ABSTRACT: Experimental data have shown that: 1. The Kh23N23M3D3 steel with a content of C > 0.06% acquires an inclination to intercrystallite corrosion (IC) after short-time heating in the range of 600 - 900°C. The longer is the heating, the broader the dangerous temperature range. 2. The time of the stable state during heating in the dangerous range of temperatures is the longer, the lower the C content in the steel. 3. The introduction into the steel of Nb in quantities exceeding even 25 times its amount in relation to C shows no stabilizing effect. The Kh18N28M3D3 steel acquires also an inclination to IC after short-time heating in the dangerous temperature range in spite of the fact that the C content in it is only 0.03% in all. Apparently the appearance of an inclination to IC in the Kh23N23M3D3

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steel is caused by the separation of a non-equilibrium finely-dispersed carbide phase on the grain boundaries and by the presence of inner stresses of the third class which arise in the crystalline lattice of austenite around the separated dispersed carbide phase. It has been noted that the addition of stabilizing elements (Ti and Nb) to the given steels does not exclude the separation of intercrystallite excess phases in short-time heating. Directly before welding operations, stabilizing tempering can be carried out by the plant which produces the apparatus.

I. Morez.

Card 2/2

SOV/81-59-12-42695

Translation from: Referativnyy zhurnal: Khimiya, 1959, Nr 12, p 268 (USSR)

AUTHORS: Shvarts, G.L., Kuznetsova, Yu.S.

TITLE: Methods for Determining the Susceptibility of Kh23N23M3D3, Kh23N27-M3D3T and Kh23N27M2T Steels to Intercrystallite Corrosion

PERIODICAL: Sb. statey. Vses. n.-i. i konstrukt. in-t khim. mashinostr., 1958, Vol 25, pp 47-56

ABSTRACT: It is recommended to determine the susceptibility of copper-containing steels Kh23N23M3D3 and Kh23N27M3D3T to intercrystallite corrosion (IC) on samples in the state of delivery and after thermal treatment at 700°C (keeping them for 10 - 20 minutes and cooling in the air) in a boiling sulfuric acid $CuSO_4$ solution with the addition of zinc dust (5 g per 1 l of solution). The duration of the test was 144 hours. The determination of the susceptibility of St. Kh23N27M2T to IC was carried out under the same conditions, but during 3 cycles it was carried out every hour at 80°C replacing the solution every hour. There were 5 cycles of umpire control in a solution (in percent): HNO_3 10 + NaF 2 at 80°C. The sharp in-

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Methods for Determining the Susceptibility of Kh23N23M3D3, Kh23N27M3D3T and Kh23N27M2T Steels to Intercrystallite Corrosion

SOV/81-59-12-42695

crease in the penetration depth of IC with an increase in the duration of the test of Kh23N27M3D3T steel has been found. This is not observed in St. Kh23N23-M3D3 and Kh23N27M2T.

From the authors' summary

Card 2/2

AUTHORS: Shvarts, G.L. and Kuznetsova, Yu.S. SOV/136-58-12-17/22

TITLE: Use of Acid-resistant Steels for Making Plant for Certain Hydro-metallurgical Processes (Primeneniye v nekotorykh gidrometallurgicheskikh protsessakh kislotostoykikh staley dlya izgotovleniya oborudovaniya)

PERIODICAL: Tsvetnyye Metally, 1958, Nr 12, pp 79 - 80 (USSR)

ABSTRACT: Developments in the nickel-cobalt industry require new plant for working at high temperatures (and sometimes pressures) in highly corrosive media. The authors describe their work in collaboration with G.N. Dobrokhotov and A.F. Samsonova of the Gipronikel' Institute on the selection of corrosion-resistant steels for reactors for acid leaching of sulphide materials containing 33-76% Ni, up to 5% Cu, up to 7% Co and 3-30% Fe. Two liquids, corresponding to processes at the Yuzhuralnikel' and Severonikel' Combines, were used in the tests. Test temperatures were 135 ± 3 °C, oxygen pressures 10 atm gauge and stirring intensity corresponding to Re = 20 000, duration 500 hours. Of the steels tested, types Kh18N12M2T, Kh18N12M3T and Kh23N28M3D3T showed satisfactory loss-of-weight characteristics but the first developed cracks in welded joints (Figure 2). Best

Card1/2

Use of Acid-resistant Steels for Making Plant for Certain Hydrometallurgical Processes

results were obtained with type OKh23N28M3D3T (EI943) low-carbon steel and the authors recommend this for acid leaching of sulphide materials. In further work effected under laboratory conditions, the authors found the following steels best for continuous vacuum evaporation plant: 1Kh18N9T for copper sulphate solution; Kh18N12M2T for zinc sulphate solutions at temperatures below 105 °C, OKh23N28M3D3T (EI943) for nickel sulphate below 105 °C. Special treatment for weld seams is desirable and the last steel can be used for nickel mother liquors if the temperature is reduced to 80 °C. There are 2 figures.

ASSOCIATION: NIIKhIMMASh

Card 2/2

PHASE I BOOK EXPLOITATION SOV/4535

Vsesoyuznyy sovet nauchno-tekhnicheskikh obshchestv

Mezhkristallitnaya korroziya i korroziya metallov v napryazhennom sostoyanii (Intercrystalline and Stress Corrosion of Metals) Moscow, Mashgiz, 1960. 358 p. 5,000 copies printed.

Ed.: I.A. Levin, Candidate of Technical Sciences; Ed. of Publishing House: I.I. Lesnichenko, Engineer; Tech. Ed.: V.D. El'kind; Managing Ed. for Literature on Metalworking and Instrument Making (Mashgiz): V.V. Rzhavinskiy, Engineer; Editorial Board: I.A. Levin, Candidate of Technical Sciences (Chairman), V.P. Batrakov, Candidate of Technical Sciences, V.M. Nikiforova, Candidate of Technical Sciences, and A.V. Turkovskaya, Candidate of Technical Sciences.

PURPOSE: This collection of articles is intended for technical personnel concerned with problems of corrosion of metals.

COVERAGE: The collection contains discussions of intercrystalline corrosion of stainless steels and stress corrosion of carbon steels, low-alloy and stainless steels, and light-weight and nonferrous alloys. The tendency of steels of various composition and system to corrode under certain conditions is discussed and the nature of corrosion and corrosion cracking is analyzed. No personalities are mentioned. Most of the articles are accompanied by bibliographic references, the majority of which are Soviet.

II. INTERCRYSTALLINE CORROSION OF STAINLESS STEELS

Card 4/9

Kuznetsova, Yu. S.

KUZNETSOVA, Yu.S.

18.8300
18.1150

81882
S/129/60/000/08/009/009
E073/E135

AUTHORS: Kuznetsova, Yu.S. (Engineer), and Shvarts, G.L. (Candidate of Technical Sciences)

TITLE: Corrosion Cracking of Chromium-Nickel-Molybdenum-Copper Steels in Sulphuric Acid Solutions

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1960, No 8, pp 53-56 (+ 2 plates)

TEXT: The authors summarise earlier results and results published in literature on the subject. These are supplemented by further results obtained under laboratory conditions of investigation of commercially produced welded tubes of the steel Kh23N28M3D3T and also of sheet specimens of the same steel and of the steel Kh23N23M3D3. Most of the experiments were carried out in sulphuric acid solutions with various concentrations at 80 °C and at boiling point. The test results for periods of 1000 hours and longer are entered in a Table, p 54. In addition to sulphuric acid solutions, the experiments were carried out in sulphuric acid solutions of nickel sulphate containing: $NiSO_4$ 125 g/litre; $CuSO_4$ 0.5 to 1 g/litre; H_2SO_4 200 g/litre at 60 °C, and $NiSO_4$ 250 g/litre; $CuSO_4$ 1 to 2 g/litre; H_2SO_4 400 g/litre at 105 °C. The results are summarized thus:

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81882

S/129/60/000/08/009/009
E073/E135

Corrosion Cracking of Chromium-Nickel-Molybdenum-Copper Steels in Sulphuric Acid Solutions

1) The chromium-nickel-molybdenum-copper steels Kh18N28M3D3, Kh23N23M3D3, Kh23N28M3D3T and OKh23N28M3D3T, which are recommended for operation in sulphuric acid media, are prone to intercrystallite corrosion. Of these the first two mentioned ones have the strongest tendency to develop intercrystallite corrosion and, therefore, should not be used for welded equipment intended to operate in media containing sulphuric acid.
2) Welded seams of the steel Kh23N28M3D3T containing less than 0.06% C are not prone to intercrystallite corrosion. Therefore, this steel is recommended for welded equipment intended for operation in solutions containing sulphuric acid.
3) In the case of residual stresses, the investigated steels are prone to transcrystalline corrosion cracking in sulphuric acid tests (20, 30, 40 and 50 wt.%) at 80 °C and at the boiling temperature.

Card 2/3

81882

S/129/60/000/08/009/009
E073/E135

Corrosion Cracking of Chromium-Nickel-Molybdenum-Copper Steels in Sulphuric Acid Solutions

4) Heating of the steel Kh23N28M3D3T at 950 °C followed by cooling in air reduces its tendency to corrosion cracking under stress corrosion conditions.

There are 3 figures, 1 table and 8 Soviet references.

Card 3/3

KUZNETSOVA, Yu.S., inzh.

Conference on rapid methods of analysis for iron ores and nometallic metallurgical raw materials. Zav.lab. 27 no.5:630 '61. (MIRA 14:5)

(Metallurgical analysis--Congresses)

KUZNETSOVA, Yu.S. (Moskva); PLAKSIN, I.N. (Moskva); SUVOROVSKAYA, N.A. (Moskva)

Extraction of rare earths from hydrochloric acid solutions. Izv.AN SSSR. Otd.tekh.nauk. Met.i topl. no.4:59-61 Jl-Ag '62. (MIRA 15:8)

(Rare earths) (Hydrochloric acid)

KUZNETSOVA, Yu.S., inzh.

Some regularities in the extraction of rare-earth elements with di-(2-ethylhexyl)phosphoric acid. Nauch. soob. IGD 19:100-106 '63. (MIRA 17:2)

KUZNETSOVA, Z. A.

"The Influence of Fertilizers on Crop Yield in Relation to the Extent of Soil Erosion on Slopes." Sub 8 Jan 51, All-Union Sci Res Inst of Fertilizers, Agricultural Engineering and Soil Science.

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

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

COUNTRY : USSR M
CATEGORY : Cultivated Plants.
Grains, Legumes. Tropical Cereals.
ABS. JOUR. : RZhBiol., No. 3, 1959, No. 10929

AUTHOR : Kuznetsova, Z. A.
INST. : All-Union Scientific Research Institute of Fertilizers*)
TITLE : Density of the Corn Stand - One of the Basic Conditions of Securing High Yields of Green Roughage.

ORIG. PUB. : Byul. nauchno-tekhn. inform. Vses. n.-i. in-t udobr. i agropochvoved., 1957, No. 3, 55-59.
ABSTRACT : Experiments at the Central Experimental Station of VIUA (All-Union Institute of Fertilizers and Agricultural Soil Science) in Moscow Oblast' with the varieties VIR-42, Osetinskaya Belaya and Uspekh, repeated 4 times. In planting 70 x 70 cm and leaving 5 plants in each hill, there was secured a yield of 411.2 centners/ha of the green roughage and ears; with wide row planting with 60-70 cm spaces between the rows - 473.9 centners/ha;

CARD: 1/2

*) and Agricultural Soil Science

COUNTRY :
CATEGORY :

ABS. JOUR. : RZhBiol., No. 1959, No. 10929

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : with the square-hill planting with spaces of 45 x 45 cm - 484.9 centners/ha. In order to obtain ears of milk--wax stage of maturity, it is necessary to take varieties of mid-season maturity and leave 3-4 plants in each hill. — N. G. Buyakovich

CARD: 2/2

M

Country : USSR
Category: Cultivated Plants. Fodders.

Abs Jour: RZhBiol., No 22, 1958, No 100339

Author : Kuznetsova, Z.
Inst :
Title : The Causes of the Decline in Red Clover in Tomskaya Oblast'.

Orig Pub: S.kh. Sibiri, 1958, No 1, 29-31.

Abstract: Observations on the fields of three kolkhozes and also on the experimental plot of the Botanical Garden of Tomsk University showed that the decline in red clover is explained by an insufficient thickness of the snow cover while the plants are poorly provided with nutrients. Clover survived better in

Card : 1/2

Country : USSR
Category: Cultivated Plants. Fodders.

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Abs Jour: RZhBiol., No 22, 1958, No 100339

depressions, and also when a forest was nearby where greater thickness in the snow cover is formed. In the experiment conducted on the plot of the Botanical Garden, with the snow cover thickness amounting in March to 36 centimeters, the decline in the clover plants sown in spring under a cover crop (winter rye), equalled 6% on the plot dressed with humus and 30% on an unfertilized plot.
-- G.N. Chernov

Card : 2/2

KUZNETSOVA, Z.A., kand. sel'skokhozyaystvennykh nauk.

Study of top soil erosion. Zemledelie 6 no.2:46-49 '58. (MIRA 11:3)
(Erosion)

C#

7

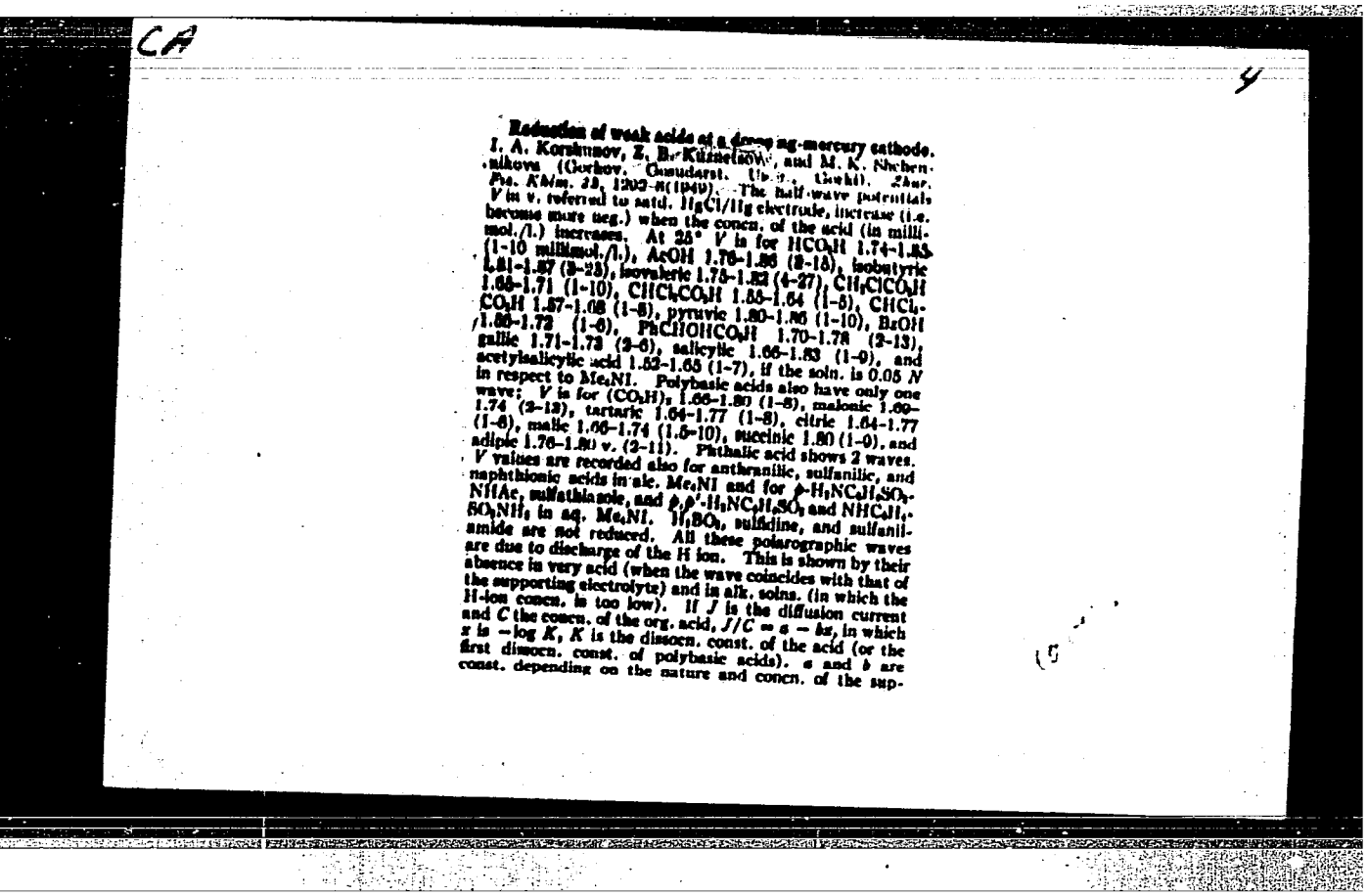
Polarographic method of determination of aldehydes and ketones with conjugated bonds. M. I. Gerlet, L. M. Kuznetsova, and M. B. Neiman. *Zhur. Anal. Khim.* 103-7(1949).—Citral, cinnamaldehyde, jasmine aldehyde, anisaldehyde, piperonal, methylionone, pseudomethylionone, and citronellal were detd. polarographically in acid (HCl), neutral (LiCl), and alk. (KOH) solns. The aldehydes were taken as alc. solns. and mixed with aq. solns. of the respective supporting electrolytes. When the alc. and aq. solns. were mixed in ratios of 1:2 or 1:1, the polarograms had maxima which could not be depressed by gelatin. The maxima disappeared when the ratio of the solns. was 2:1. The reduction potential of these substances depended on the medium. The relation between the height of the curve and concn. of aldehyde was a straight line for which the equation was $I = Kn^{2/3}m^{1/6}t^{1/6}c$, where I is the diffusion current in microamps., c the concn. of substance in mol./l., m is the rate of dropping of Hg in mg./sec., t period of dropping, and K is a const. The reduction potentials and K for these substances were:

	HCl		LiCl		KOH	
	$-E$	K	$-E$	K	$-E$	K
Citral	0.80	1.46	1.55	1.25	1.40	1.30
Cinnamaldehyde	0.65	1.82	1.20	1.65	1.20	1.65
Jasmine aldehyde	0.75	1.55	1.55	1.44	1.40	1.55
Anisaldehyde	1.00	1.05	1.00	2.00	1.70	1.00
Piperonal	0.95	1.08	1.55	1.05	1.50	1.70
Methylionone	0.95	1.80	1.75	1.75	1.70	1.80
Pseudomethylionone	0.80	1.07	1.40	1.07	1.40	1.07

The values of E are given in v. Citronellal could be reduced only in neutral or alk. soln. in which case the reduction potential was −1.9 v. and the value of K 1.15.

M. Hirsh

Chair Inorg. Chem., Gor'kiy State U.



CA

4

Reduction of weak acids at a dropping mercury cathode. I. A. Korshunov, Z. B. Kuznetsova, and M. K. Shchennikova (Gorkov. Gosudarst. Univ., Gorkii). *Zhur. Fiz. Khim.* 23, 1203–8(1949). The half-wave potentials *V* in v. referred to satd. HgCl/Hg electrode, increase (i.e. become more neg.) when the concn. of the acid (in millimol./l.) increases. At 25° *V* is for HCO_2H 1.74–1.85 (1–10 millimol./l.), AcOH 1.76–1.86 (2–15), isobutyric 1.81–1.87 (3–23), isovaleric 1.78–1.82 (4–27), CH_2ClCO_2H 1.68–1.71 (1–10), $CHCl_2CO_2H$ 1.55–1.64 (1–8), $CHCl_2CO_2H$ 1.57–1.68 (1–8), pyruvic 1.80–1.86 (1–10), BzOH 1.86–1.72 (1–6), $PhCHOHCO_2H$ 1.70–1.78 (2–13), gallic 1.71–1.73 (2–6), salicylic 1.66–1.83 (1–9), and acetylsalicylic acid 1.52–1.65 (1–7), if the soln. is 0.05 *N* in respect to Me_4NI. Polybasic acids also have only one wave: *V* is for $(CO_2H)_2$ 1.66–1.80 (1–8), malonic 1.69–1.74 (2–12), tartaric 1.64–1.77 (1–8), citric 1.64–1.77 (1–8), malic 1.66–1.74 (1.5–10), succinic 1.80 (1–9), and adipic 1.76–1.80 v. (2–11). Phthalic acid shows 2 waves. *V* values are recorded also for anthranilic, sulfanilic, and naphthionic acids in ale. Me_4NI and for *p*-$H_2NC_6H_4SO_2$-$NHAc$, sulfathiazole, and *p*,*p*′-$H_2NC_6H_4SO_2$ and NHC_6H_4-SO_2NH_2 in aq. Me_4NI. H_3BO_3, sulfidine, and sulfanilamide are not reduced. All these polarographic waves are due to discharge of the H ion. This is shown by their absence in very acid (when the wave coincides with that of the supporting electrolyte) and in alk. solns. (in which the H-ion concn. is too low). If *J* is the diffusion current and *C* the concn. of the org. acid, $J/C = a - bx$, in which *x* is $-\log K$, *K* is the dissocn. const. of the acid (or the first dissocn. const. of polybasic acids). *a* and *b* are const. depending on the nature and concn. of the sup-

KUZNETSOVA, Z.B.

Polarographic determination of aromatic ketones and aldehydes. L. A. Korshunov, Z. B. Kuznetsova, L. N. Sazhinova, and A. S. Kirillova (Gorki State Univ.). *Zavodskaya Lab.* 16, 144-6(1950).—For AcPh, Ph_2CO, p-$Me_2NC_6H_4CHO$, and BzH only one diffusion wave is seen in acid solns. but raising the pH from 3 to 6 brings up a 2nd wave, which is the only one left when the pH rises above 6. Cinnamaldehyde gives also a 3rd wave which is present at all pH values and changes from −1.40 v. half-wave potential at pH 2.03 to −1.22 v. at pH 9.55. The half-wave potential (against satd. calomel electrode) is as follows: for AcPh −1.07 and −1.6 v.; Ph_2CO −1.1 and 1.45; BzH −1.0 and −1.35; p-$Me_2NC_6H_4CHO$ −0.95 and −1.05; PhCH:CHCHO −0.90 and −1.84 v., resp. Polarographic detns. of these substances are readily performed when alc. solns. of the materials are used, since their soly. in H_2O is poor; 0.1-1.0 *N* HCl may be satisfactorily used as the solvent in such cases.

G. M. Kosolapoff

KUZNETSOVA, Z. B.

Polarographic determination of the concentration of weak acids. I. A. Korshunov, Z. B. Kuznetsova, and M. K. Shchepnikova (Gorki State Univ., Gorki, U.S.S.R.). *Zhur. Anal. Khim.* 6, 96-100(1951).—The concns. of formic, acetic, isobutyric, isovaleric, chloroacetic, dichloroacetic, trichloroacetic, oxalic, malonic, tartaric, citric, maleic, pyrotartaric, succinic, adipic, benzoic, mandelic, gallic, phthalic, salicylic, acetylsalicylic, anthranilic, sulfanilic, naphthionic, cinnamic acids, *N*-acetylsulfanilamide, sulfathiazole, sulfazole, and *N*-sulfanilil-sulfanilamide, all having 1st dissocn. consts. above 10^{-9} were detd. polarographically with a neutral auxiliary electrolyte, $N(CH_3)_4I$. Acids having their 1st dissocn. const. below 10^{-9}, e.g., sulfidine, sulfanilamide, and boric acid, could not be detd. Between the coeff. of the diffusion current (K_d) and the colog. of the 1st dissocn. const. (pK) there is a direct relation expressed by $K_d = 5.25-0.725$ pK. M. Hoseh

KUZNETSOVA, Z. B. and KORSHUNOV, I. A.

"Polarographic Determination of the Esters of Organic Acids," Zavodskaya Laboratoriya, No 9, 1952, pp 1075-1079.

1. KUZNETSOVA, Z. B., KORSHUNOV, I. A.,

2. S55R (600)

4. Electrodes

7. Effect of temperature on the reduction of organic substances at a dropping mercury electrode.
Zhur. ob. khim. 22 No. 10, 1952 -p.1756

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

KUZNETSOVA, Z. B.

CATALYST

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
Electrochemistry

Influence of the temperature on the reduction of organic substances on the dropping mercury cathode. Z. B. Kuznetsova and I. A. Korshunov. *J. Gen. Chem. U.S.S.R.* 22, 1799–1800(1952)(Engl. translation).—See *C.A.* 47, 2004*e*.

9-2-54 dfp

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3

Reduction of mono-, di-, and trichloroacetamide on a dropping mercury electrode. I. A. Kossmmov and Z. B. Kur-

SIAVNINA, T.P.; POTEKHINA, L.I.; KUZNETSOVA, Z.D.; SIMONOVA, Ye.I.

Characteristics of soil in the rhizosphere zone of winter rye and oats in dark-gray and gray forest soils. Nauch.dokl.vys. shkoly;biol.nauki no.4:190-198 '58. (MIRA 11:12)

1. Rekomendovana kafedroy pochvovedeniya Tomskogo gosudarstvennogo universiteta imeni V.V.Kuybysheva.
(Rhizosphere microbiology) (Rye) (Oats)

KUZNETSOVA, Z.D.

Groups of particles less than 0.01 mm. in diameter in meadow Chernozems and Gray forest soils of Tomsk Province. Izv.Sib. otd.AN SSSR no.1:114-119 '60. (MIRA 13:7)

1. Tomskiy gosudarstvennyy universitet.
(Tomsk Province--Soil particles)

KAZANSKIY, B.A.; DOROCHINSKIY, A.Z.; ROZENGART, M.I.; KUZNETSOVA, Z.F.; LYUTER, A.V.; MITROFANOV, M.G.

Changes in alumina-chromia catalysts during the aromatization of n-hexane. Kin.i kat. 4 no.5:768-772 S-O '63. (MIRA 16:12)

1. Institut organicheskoy khimii AN SSSR imeni N.D.Zelinskogo i Groznenskiy neftyanoy nauchno-issledovatel'skiy institut.

5 (2; 3)

AUTHORS: Kazanskiy, B. A., Academician,
Rozengart, M. I., Kuznetsova, Z. E.

SOV/20-127-6-23/51

TITLE: The Effect of Added Elements of the 2nd Group of the Periodic System Upon the Activity of Aluminum-chromium Catalysts in Aromatization

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 6, pp 1228-1230 (USSR)

ABSTRACT: In the present paper, the authors proved that the elements mentioned in the title (except for Hg which was not tested) favor the aromatization of cyclohexane. This effect increases with the increasing atomic weight from Be to Ba. The said effect was weaker in the dehydrocyclization of n-heptane. Only the alkaline earth metals exhibited it. An addition of Be, Mg, and Zn had practically no effect on the activity of the catalyst; an addition of cadmium even reduced it slightly. The experiments with cyclohexane were carried out twice through 4 hours each; the catalyst was regenerated after each experiment. The temperature was 520°, the volume velocity was 0.35 h^{-1} per volume unit. Table 1 indicates the results obtained. It shows that the yield in aromatic substances on the beryllium-containing sample rose

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The Effect of Added Elements of the 2nd Group of the Periodic System Upon the Activity of Aluminum-chromium Catalysts in Aromatization SOV/20-127-6-23/51

by 5%, with magnesium by 5.5, with calcium by 10, with strontium by 13, and with barium by 17.6%. The results obtained with n-heptane (temperature 530°, volume velocity as above) are shown in table 2. It shows that the effect of all said elements in the dehydrocyclization of n-heptane was much weaker than above. The yields in unsaturated compounds were small in the arbmatization of cyclohexane (0.4-2.6%, Table 1). There are 1 figure, 2 tables, and 2 Soviet references.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

SUBMITTED: June 5, 1959

Card 2/2

5(3) SOV/20-126-3-31/69

AUTHORS: Kazanskiy, B. A., Academician, Rozengart, M. I., Kuznetsova, Z. F.

TITLE: Destructive Alkylation of Benzene by Propane (Destruktivnoye alkilirovaniye benzola propanom)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 3, pp 571 - 574 (USSR)

ABSTRACT: The reaction of paraffin hydrocarbons with aromatic hydrocarbons can open new ways to the production of various aromatic substances, and contribute to clarify the nature of catalytic transformations. But it belongs to the most poorly investigated branches of hydrocarbon chemistry. Patents (Refs 1,2) show that benzene is alkylated by paraffin hydrocarbons in the presence of hydrogen fluoride, boron fluoride, as well as their mixtures. The patents state that only such paraffins are suitable which possess no less than 5 carbon atoms in the chain. On the basis of references 4-9, it was to be expected that toluene would originate by the interaction of benzene with different paraffin hydrocarbons under pressure and in the presence of nickel catalysts. Preliminary experiments by the authors have confirmed this expectation, for it came true with normal paraffin hydrocarbons (heptane, hexane, butane, propane) at a much lower pressure (60 atmospheres overpressure) than indicated in refer-

Card 1/2

ence 6. The said reaction of benzene with propane was closely investigated by the authors on nickel deposited on siliceous earth. Table 1 shows the yields of "alkyl benzenes", table 2 the influence of temperature on this yield. Table 3 indicates the influence of the duration of test on the activity of the catalyst. Figures 1 and 2 show the fractionation curves of the catalyzates. There are 2 figures, 3 tables, and 11 references, 2 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences,USSR)

SUBMITTED: March 11, 1959

5(2)

SOV/20-126-4-27/62

AUTHORS: Kazanskiy, B. A.; Academician, Rozengart, M. I.; Kuznetsova, Z. F.

TITLE: The Effect of Some Admixtures of Alkali Elements on the Properties of Aluminum-chromium Catalysts (Vliyaniye dobavok shchelochnykh elementov na kataliticheskiye svoystva alyumo-khromovykh katalizatorov)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 4, pp 787-790 (USSR)

ABSTRACT: As is known, the admixture of small amounts of potassium and cesium to the catalysts mentioned in the title, increases the output of final products in the reaction of aromatizing paraffin hydrocarbons (Ref 1). In publications however, there are no reliable statements on a similar effect of other alkaline elements. The present article is dedicated to the latter problem. A description follows of the effects of equivalent amounts of Li, Na, K, Rb and Cs on the activity of two preparations A and B of the mentioned catalyst, in the reaction of dehydrogenation of n-heptane at 520°. Lithium is ineffective for the increase of the output of aromatic products of heptane. The introduction of sodium however, raises

Card 1/3

the output in both catalysts by 8%. This promoting effect still increased with potassium (13 and 11%), and reached its maximum with rubidium (21 and 15%), for cesium it was 9 and 13%. The same was observed in the dehydrogenation of cyclohexane with A and B. There is a great similarity between the effect mentioned above and that of the same admixtures to catalysts of iron magnesium (Ref 3). If alkali elements are added to the catalysts mentioned in the title, the output of the catalyst increases, i.e. the cracking of hydrocarbons decreases. This gives reason to the opinion that there are active centres in the catalyst concerned which catalyze reactions of cracking and of the polymerization of unsaturated hydrocarbons. In their course they develop carbonium ion, similar to the classical case of the catalyst aluminum silicate. Such an admixture of alkali elements apparently reduces the "coke" sediment on the catalyst and thus increases the stability of the latter (Ref 4). It is to be expected that the application of alkali elements will reduce the temperature of regeneration in the catalyst. This would increase the stability of the latter, and extend the duration of their application. On the

other hand, the thermal stability of the catalyst is reduced by alkali (Ref 4). The role of this one part of the effect of alkali cannot be explained sufficiently. There are 2 figures, 2 tables, and 6 references, 3 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR
(Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

SUBMITTED: April 13, 1959

ROZENGART, M.I.; KUZNETSOVA, Z.F.

Effect of additions on the increase in activity of catalysts for the dehydrocyclization of paraffins. Kin.i kat. 3 no.6:942 N-D '62. (MIRA 15:12)

1. Institut organicheskoy khimii imeni N.D. Zelinskogo AN SSSR.
(Paraffins) (Aromatization) (Catalysts)

ROZENGART, M.I.; KUZNETSOVA, Z.F.; GITIS, K.M.

Role of an alkali promoter in the development of an aluminum-chrome catalyst for the dehydrocyclization of paraffin hydrocarbons. Neftekhimiia 5 no.1:17-23 Ja-F '65.

(MIRA 18:5)

1. Institut organicheskoy khimii imeni Zelinskogo AN SSSR.

GREBNEV, V.N.; KUZNETSOVA, Z.I.; KHALILULLINA, Z.F.; MEYER, L.K.

Movement for public health and personal hygiene in Kulebaki in Gorkiy Province. Zdrav. Ros. Feder. 5 no. 3:14-16 Mr '60. (MIRA 14:2)

1. Iz Kulebakskogo gozdravotdela (zav. V.N. Grebnev) i otdela organizatsii zdravookhraneniya Moskovskogo instituta gigiyeny imeni F.F. Erismana (dir. A.P. Shitskova).
(KULEBAKI--HEALTH EDUCATION)

ADAMOVICH, P.V.; BATURIN, V.V.; VAKHVAKHOV, G.G.; VAYNGAUZ, L.G.; VILENSKIY, Ye.Ya.; GAMBURG, P.Yu.; DAVYDOV, Yu.S.; KARPIS, Ye.Ye.; KUZNETSOVA, Z.I.; KOP'YEV, S.F.; LIVCHAK, I.F.; LOBACHEV, P.V.; LEV, G.M.; NOTKIN, Ye.M.; PIRUMOV, A.I.; POLIKARPOV, V.F.; PROTOPOPOV, A.P.; REPIN, N.N.; SLADKOV, S.P.; TALIYEV, V.N.; TROITSKAYA, F.B.; FEDOROV, M.N.; SHEVELEV, F.A.; SHKABEL'NIKOVA, L.P.; SHCHUTSKIY, A.I.; SMIRNOV, L.I., inzh., nauchnyy red.; SMIRNOVA, A.P., red. izd-va; MOCHALINA, Z.S., tekhn. red.; RODIONOVA, V.R., tekhn. red.

[Present level and prospects for the development of sanitary engineering and the production of sanitary engineering equipment] Sovremennyi uroven' i perspektivy razvitiia sanitarnoi tekhniki i proizvodstva sanitarno-tekhnicheskogo oborudovaniia. Moskva, Gosstroiizdat, 1962. 283 p. (MIRA 15:8)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut sanitarnoy tekhniki.

(SANITARY ENGINEERING)

KOVALEV, S.A., inzh., red.; CHERNIN, L.A., inzh., red.; KUZNETSOVA, Z.I., kand. tekhn.nauk; MOISEYENKO, A.T., inzh., red.; MOSKALEV, N.M., kand. tekhn. nauk; VOLKOV, A.V., kand. tekhn. nauk, red.; STRASHNYKH, V.P., red.izd-va; PETROVA, V.V., red.izd-va; RODIONOVA, V.M., tekhn. red.

[Construction norms and regulations] Stroitel'nye normy i pravila. Moskva, Gosstroiizdat. Pt.I. Sec.G. ch.I. [Water-supply and sewer system. Hot-water supply. Interior installation. Equipment, fixtures, and materials] Vodoprovod i kanalizatsiia. Goriachee vodosnabzhenie. Vnutrennie ustroistva. Oborudovaniia, armatura i materialy (SNiP I-G. I-62). 1963. 15 p. Pt.I. Sec.V. ch.17. [Asphalt and tar binders] Bitumnye i degtevye viazhushchie (SNiP I-V. 17-62). 1963. 8 p.
(MIRA 16:7)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam stroitel'stva. 2. Gosudarstvennyy komitet po delam stroitel'stva Soveta Ministrov SSSR (for Kovalev, Moiseyenko). 3. Mezhvedomstvennaya komissiya po peresmotru Stroitel'nykh norm i pravil Akademii stroitel'stva i arkhitektury SSSR (for Chernin, Moskalev). 4. Nauchno-issledovatel'skiy institut sanitarnoy tekhniki Akademii stroitel'stva i arkhitektury SSSR (for Kuznetsova). 5. Gosudarstvennyy Vsesoyuznyy dorozhnyy nauchno-issledovatel'skiy institut Ministerstva transportnogo stroitel'stva SSSR (for Volkov).
(Water-supply engineering) (Sewerage) (Asphalt)

SKUL'SKIY, Yu.V.; TISHURA, V.I.; REPIN, N.N.; BEKHALOV, V.N.; KUZNETSOVA, Z.I.

Machine for the welding of cast iron pipe joints and fittings for sanitary engineering systems. Avtom. svar. 16 no.11:72-77 N '63. (MIRA 17:1)

1. Institut elektrosvarki imeni Ye.O. Patona AN UkrSSR (for Skul'skiy, Tishura). 2. Nauchno-issledovatel'skiy institut sanitarnoy tekhniki (for Repin, Bekhalov, Kuznetsova).

KUZNETSOVA, Z. I.

11 Sep 52

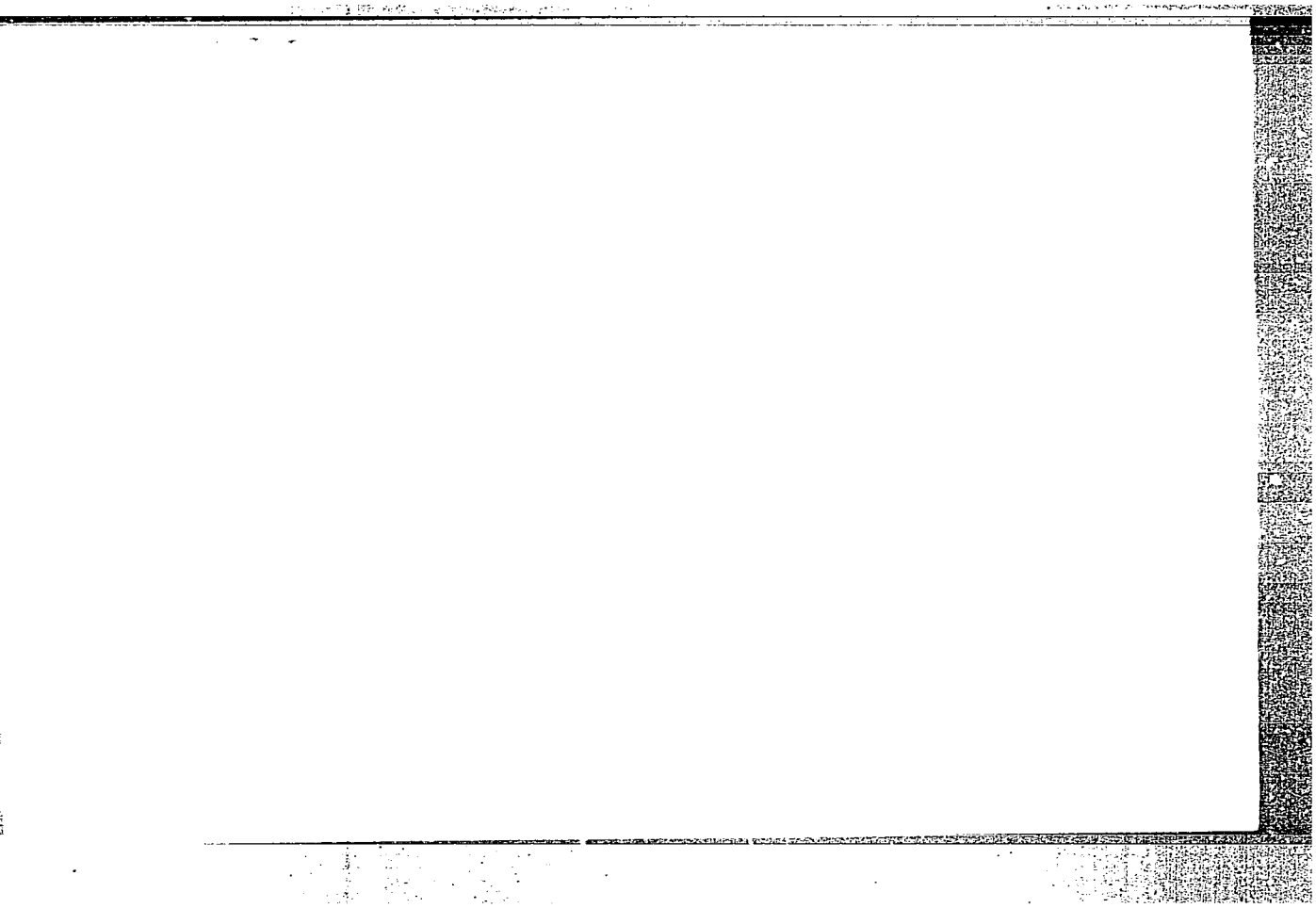
USSR/Chemistry - Cellulose

"Primary Oxidation Changes in Cellulose Due to Hydrogen Peroxide," V. I. Ivanov, Ye. D. Kaverzneva, Z. I. Kuznetsova, Inst of Org Chem, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol 86, No 2, pp 301-304

The primary change in the simple members of the cellulose macromol during the action of hydrogen peroxide is conversion to a glucosone structure. Depending on the P_H, the surrounding groups will undergo changes described in previous work. Presented by Acad A. N. Nesmeyanov.

PA 235T23



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KUZNETSOVA, Z. I.

(3) 6

Chemical transformations of cellulose macromolecules in oxidation. Transformation of cellulose in oxidation with hydrogen peroxide. V. I. Ivanov, E. D. Kaverzneva, and Z. I. Kuznetsova (*Izvestia*, 1953, No. 2, 374—384).—Oxidative degradation of cellulose by H_2O_2 is most intense at pH >11 or <4; processes similar to those with simple sugars occur: oxidation of CH_2OH groups to –CHO and –COOH, of –CHOH groups to =CO, ring-fission at the C_2–C_3 bond forming two –CHO or –COOH groups. Differences between the properties and compositions of the oxycelluloses produced by H_2O_2 and NaClO are discussed.

R. C. MURRAY.

NA

Chemical changes in cellulose during peroxide bleaching [illegible] Kayerenova, V. L. Ivanov, and Z. [illegible] Khim. Prom. 1954, 14, No. 3, 31–34) —The decrease in η and degree of polymerisation in cellulose during peroxide bleaching depends on the pH of the medium and is due to chemical changes of [illegible] in an oxidising medium, *e.g.*, formation of new functional groups in the macromolecule (aldehyde, dialdehyde, and ketone groups) which reduce the stability of the glucoside-glucose linkage in alkaline medium. Optimum pH for the preservation of cellulose [illegible] during peroxide bleaching appears to be between 8 and [illegible] 10.5 the η decreases considerably without a simultaneous increase of whiteness. The use of a strongly alkaline peroxide bath is not advisable. Bleaching of cotton should be carried [illegible] period at high temp. and in a weakly alkaline medium [illegible] nous process. J. Text. Inst. (Abstr. B)

Name: KUZNETSOVA, Z. I.

Dissertation: A study of the chemical transformation of macromolecular cellulose in oxidation with hydrogen peroxide

Degree: Cand Chem Sci

Affiliation: Acad Sci USSR, Inst of Organic Chemistry

Defense Date, Place: 1956, Moscow

Source: Knizhnaya Letopis', No 45, 1956

KUZNETSOVA, Z.I.; KAVERZNEVA, Ye.D.; IVANOV, V.I.

Influence of the ketone group on the stability of glucosidic linkage. Izv. AN SSSR. Otd. khim. nauk no.5:655-656 My '57. (MIRA 10:8)

1. Institut organicheskoy khimii im. N.D. Zelinskogo Akademii nauk SSSR.

(Ketones) (Chemical structure)

AUTHORS: Ivanov, V. I., Kuznetsova, Z. I. 62-58-5-24/27

TITLE: On the Chemical Nature of Weak Bonds in the Cellulose-Molecule (O khimicheskoy prirode slabykh svyazey v molekule tsellyulozy) Communication 1. The Influence of the Carboxyl Groups in the Cellulose-Molecule on the Stability of the Glucoside-Bond (Soobshcheniye 1. Vliyaniye karboksil'nykh grupp v molekule tsellyulozy na ustoychivost' glyukozidnoy svyazi)

PERIODICAL: Izvestiya Akademii Nauk SSSR,Otdeleniye Khimicheskikh Nauk, 1958, Nr 5, pp. 646-648 (USSR)

ABSTRACT: Great attention has been paid during recent years to the investigation of the details of the chemical structure of the cellulose molecule (Ref 1), especially because some properties of cellulose cannot be explained by the previously known chemical structure of the same (Ref 2,3). It was found by the example of the investigated model-compounds of the strontium-salt of the D'--methoxy-D-oxy-methylglycolic acid (formula II) and of the α--methyl-glucoside (formula III) that COOCH-groups reduce the stability of the acetal-bond in an acid medium. It was further found that dicarboxyl-groups in the position 2,3 can be the cause for

Card 1/2

On the Chemical Nature of Weak Bonds in theCellulose- 62-58-5-24/27
-Molecule. Communication 1. The Influence of the Carboxyl Groups in the Cellulose-Molecule on the Stability of the Glucoside-Bond

the weakening of the glucoside-bond of the cellulose-molecule in an acid medium. There are 2 tables, and 11 references, 5 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N.D. Zelinskogo Akademii nauk SSSR (Institute for Organic Chemistry imeni N.D. Zelinskiy AS USSR)

SUBMITTED: January 3, 1958

1. Cellulose--Chemical analysis

Card 2/2

5(3)

AUTHORS: Kuznetsova, Z. I., Ivanov, V. I. SOV/62-59-9-31/40

TITLE: On the Comparable Stability of Glucoside Linkages in Cellulose and Its Models

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 9, pp 1678-1679 (USSR)

ABSTRACT: In the present paper the behavior of the acetal linkages in 1,α-methylglucoside (II), β-methylcellobioside (III), and cellulose (IV) in 97% acetic acid at room temperature is investigated. Cotton cellulose is depolymerized under the conditions mentioned from a state of 100% polymerization down to 20% polymerization, but not further (Table 1). Under the same conditions α-methylglucoside, in the course of a year, is hydrolyzed except for 2%. Subjected to the same treatment, (III) remained practically unchanged for half a year. From these observations it is concluded that cellulose molecules disintegrate

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On the Comparable Stability of Glucoside Linkages in Cellulose and Its Models SOV/62-59-9-31/40

at the weakened glucoside-glucose linkage. The degree of hydrolyzation as a function of time is given in table 2. The degree of polymerization was determined by viscosity measurements. There are 2 tables and 2 Soviet references.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

SUBMITTED: February 27, 1959

Card 2/2

KUZNETSOVA, Z.I.; IVANOV, V.I.

Influence of CHO groups in the cellulose molecule on the stability of the acetal bond in acid medium, as studied on model compounds. Izv. AN SSSR.Otd. khim. nauk no.11:2044-2045 N '60.
(MIRA 13:11)

1. Institut organicheskoy khimii im.N.D.Zelinskogo AN SSSR.
(Formyl group) (Cellulose)

KUZNETSOVA, Z.I.; IVANOV, V.I.

Dydrolytic degradation of D'-methoxy-D-hydroxymethyldethylene glycol in an acid medium. Izv.AN SSSR.Otd.khim.nauk no.5:930-931 My '61. (MIRA 14:5)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Diethylene glycol)

S/062/62/000/011/018/021
B101/B144

AUTHORS: Kuznetsova, Z. I., Ivanova, V. S., and Shorygina, N. N.

TITLE: New nitrogenous cellulose derivatives

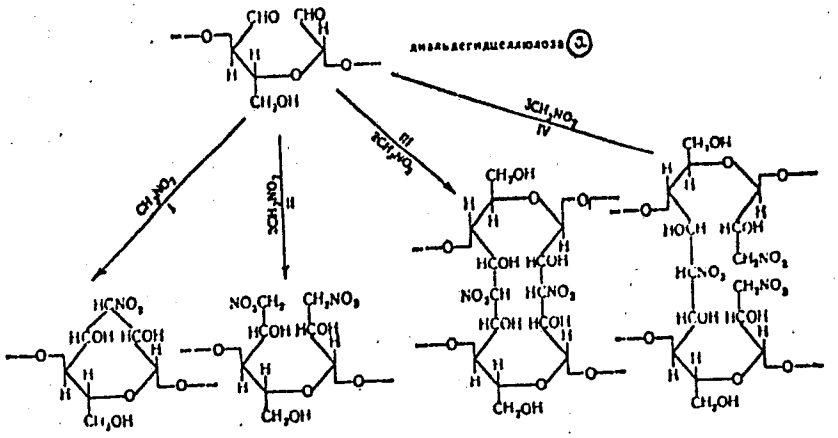
PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 11, 1962, 2087 - 2089

TEXT: The possibilities of modifying the properties of cellulose by introducing new functional groups in the macromolecule were studied. For this purpose, the condensation of dialdehyde cellulose (19.2% aldehyde groups) with nitro-methane in alkaline solution at 5°C was carried out for the first time. The following general reaction course is assumed:

Card 1/3

S/062/62/000/011/018/021
B101/B144

New nitrogenous cellulose derivatives



(a) = dialdehyde cellulose.

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The nitrogen content of the resulting preparations reached 3.4 - 4.96%, the increase in weight was 17 - 20% of the initial weight. These data imply that the reaction proceeds mainly in the direction of I and II; one of the two directions can be selected by choosing the reaction conditions. The resulting nitro derivatives are yellow, keep their fibrous structure, and are stronger and more elastic than the initial dialdehyde cellulose. Further new cellulose derivatives, e.g. those with NH_2 groups, are to be synthesized by reaction of the NO_2 groups. There is 1 table. The most important English-language reference is: H. Baer, H. Fischer, J. Amer. Chem. Soc., 82, 3709 (1960).

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

SUBMITTED: June 18, 1962

IVANOV, V.I.; KUZNETSOVA, Z.I.; LENSHINA, N.Ya.; IVANOVA, V.S.

Structure of cellulose chain molecules. Trudy LTA no.91:33-37 '60. (MIRA 15:12)

1. Institut organicheskoy khimii AN SSSR.
(Cellulose) (Molecules)

KUZNETSOVA, Z.I.; IVANOV, V.I.; OVCHINNIKOVA, M.G.

Hydrolysis of acetal bonds in an acid medium in the compounds modeling some modified celluloses. Izv. AN SSSR.Otd.khim.nauk no.10:1886-1888 O '62. (MIRA 15:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Cellulose) (Acetal) (Hydrolysis)

KUZNETSOVA, Z.I.; IVANOV, V.I.; DOBRZHINSKAYA, M.S.

Effect of the structure of elementary links of modified cellulose during its oxidation. Izv. AN SSSR.Otd.khim.nauk no.10:1888-1889 O '62.
(MIRA 15:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Cellulose) (Oxidation)

KUZNETSOVA, Z.I.; IVANOV, V.I.; PROSTYAKOVA, V.M.

Oxidation of D'-methoxy-D-hydroxymethyldiglycolaldehyde by nitrogen oxides. Izv. AN SSSR. Ser.khim. no.9:1688-1690 S '63. (MIRA 16:9)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Glycolaldehyde) (Nitrogen oxides)

KUZNETSOVA, Z.I.; IVANOVA, V.S.; SHORYGINA, N.N.

Nitrocarboxy derivatives of cellulose. Izv. AN SSSR. Ser.khim. no.9:1686-1688 S '63. (MIRA 16:9)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Nitrocellulose)

ACCESSION NR: AP4039620 S/0076/64/038/005/1182/1187

AUTHORS: Vol'nov, I.I. (Moscow); Tsentsiper, A.B. (Moscow); Chamova, V.N. (Moscow); Laty*sheva, Ye.I. (Moscow); Kuznetsova, Z.I. (Moscow)

TITLE: Synthesis of oxygen-labeled hydrogen peroxide from dissociated heavy oxygen water in the glow discharge

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 5, 1964, 1182-1187

TOPIC TAGS: oxygen labeled hydrogen peroxide, hydrogen peroxide synthesis, heavy oxygen water, glow discharge, heavy oxygen water vapor, labeled peroxide synthesis parameter, oxygen isotope, deuterium labeled oxygen peroxide, oxygen isotope content

ABSTRACT: The equipment for this efficient laboratory synthesis is figured. The discharge tube was fed with a 1150-1800 volt, 0.1-0.5 amp. current. The oxygen-labeled water vapor was fed at the rate of 0.03-1.84 mol/hour, the vapor pressure was 0.43-0.53 mm Hg. The dissociated water vapor was removed from the discharge area, cooled, etc. and the yield determined by titration. This was a function of the parameter Up.v, where U is the discharge force (kwa), v the rate

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ACCESSION NR: AP4039620

of adding the water vapor and p the pressure of the vapor entering the discharge tube. The isotope content of oxygen in the starter water and the peroxide was determined by mass spectrometry. Both the water remaining in the vaporizer and that formed upon decomposition of the synthesized $H_2O_2^{18}$ were found to differ little from the starter water. The gases collected during the process were found to consist of hydrogen, thus confirming the reaction

$$2H_2O \rightarrow 2H + 2OH;\ 2H \rightarrow H_2;\ 2OH \rightarrow H_2O_2.$$

The authors also synthesized $D_2O_2^{18}$ by subjecting a mixture of D_2O and H_2O^{18} to the discharge. The so obtained peroxide container 26% active oxygen, somewhat enriched from the starter material. The advantages of this method are a high degree of purity of the peroxide; the entire heavy oxygen contained in the initial water passes into the peroxide; the latter is somewhat enriched in O^{18}; solutions of the oxygen labeled peroxide ranging from 1-50% may be obtained, depending upon the energy supply for the discharge and the rate of supply of the water vapor. Yields for 5-7% solutions were 1 g/hour on a 100% $H_2O_2^{18}$ basis. Using the same equipment, the peroxide may be concentrated to 90% weight. Orig. art. has: 2 figures and 1 table.

Card 2/3

ACCESSION NR. AP4039620

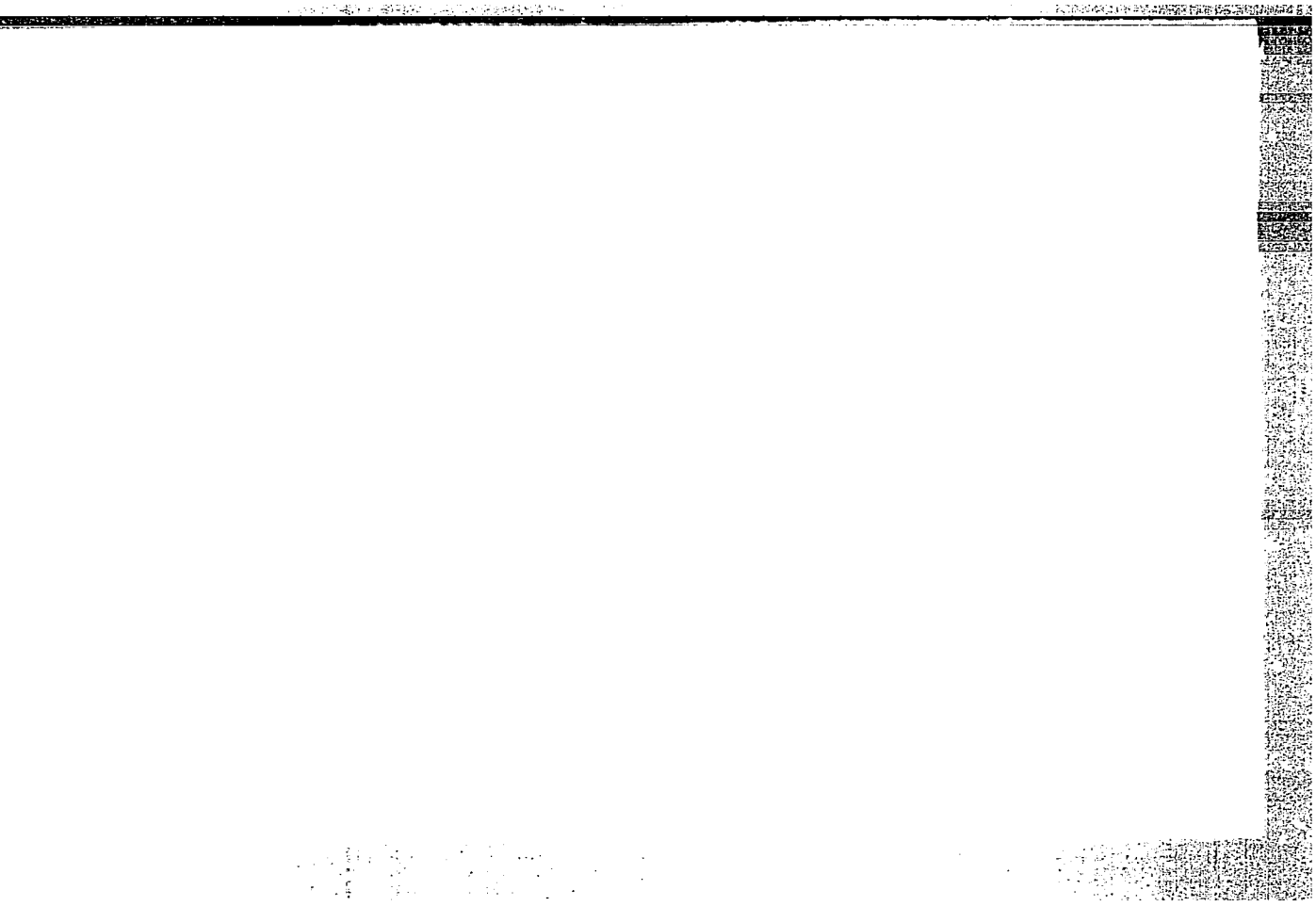
ASSOCIATION: Akademiya nauk SSSR (Academy of Sciences, SSSR); Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova(Institute of General and Inorganic Chemistry).

SUBMITTED: 30May63 ENCL: 00

SUB CODE: IC NO REF SOV: 006 OTHER: 001

Card 3/3

AUTHOR: Kuznetsova, Z. I., Ivanova, V. S., Shorygina, N. N.



APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928220020-6"

L 16985-66 EWT(m)/T WW/JW/WE/RM
ACC NR: AP6002107 SOURCE CODE: UR/0062/65/000/011/2083/2085

AUTHORS: Tsentsiper, A. B.; Kuznetsova, Z. I.

ORG: Institute of General and Inorganic Chemistry im. N. S. Kurnyakov, Academy of Sciences SSSR (Institute obshchey i neorganicheskoy khimii Akademii nauk SSSR)

TITLE: Reaction of lithium peroxide with ethane

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 11, 1965, 2083-2085

TOPIC TAGS: lithium compound, peroxide, ethane, oxidation kinetics, activation energy

ABSTRACT: Oxidation of ethane (I) with lithium peroxide (II) was studied as a representative reaction of oxidation of hydrocarbons with peroxides containing O_2^{2-} ion directly in their crystal lattice. This reaction is of interest in the studies of phenomena occurring during catalytic oxidation of hydrocarbons. Experiments were performed according to the method described by A. B. Tsentsiper and S. A. Tokareva (Zh. neorg. khimii, 6, 2474, 1961) at 250--300C. Reaction was followed by measuring pressure changes, and the products were analyzed chromato-

Card 1/2 UDC: 531.1+541.124+661.49

graphically and by titration. It was established that they consisted of Li_2CO_3 and LiOH according to the equation

$$Li_2O_2 + C_2H_6 \xrightarrow{k_1} Li_2O + O_2$$
$$Li_2O_2 + C_2H_6 \xrightarrow{k_2} Li_2CO_3 + LiOH + Li_2O$$

where k_1 and k_2 are reaction rates. Simultaneously with the total oxidation of I (activation energy 27 kcal/mole) there occurs the decomposition of II (activation energy 50 kcal/mole), the former reaction being considerably more intensive than the latter. Orig. art. has: 3 tables and 3 equations.

SUB CODE: 07/ SUBM DATE: 11Mar65/ ORIG REF: 007/ OTH REF: 001

TSENTSIPER, A.B.; KUZNETSOVA, Z.I.

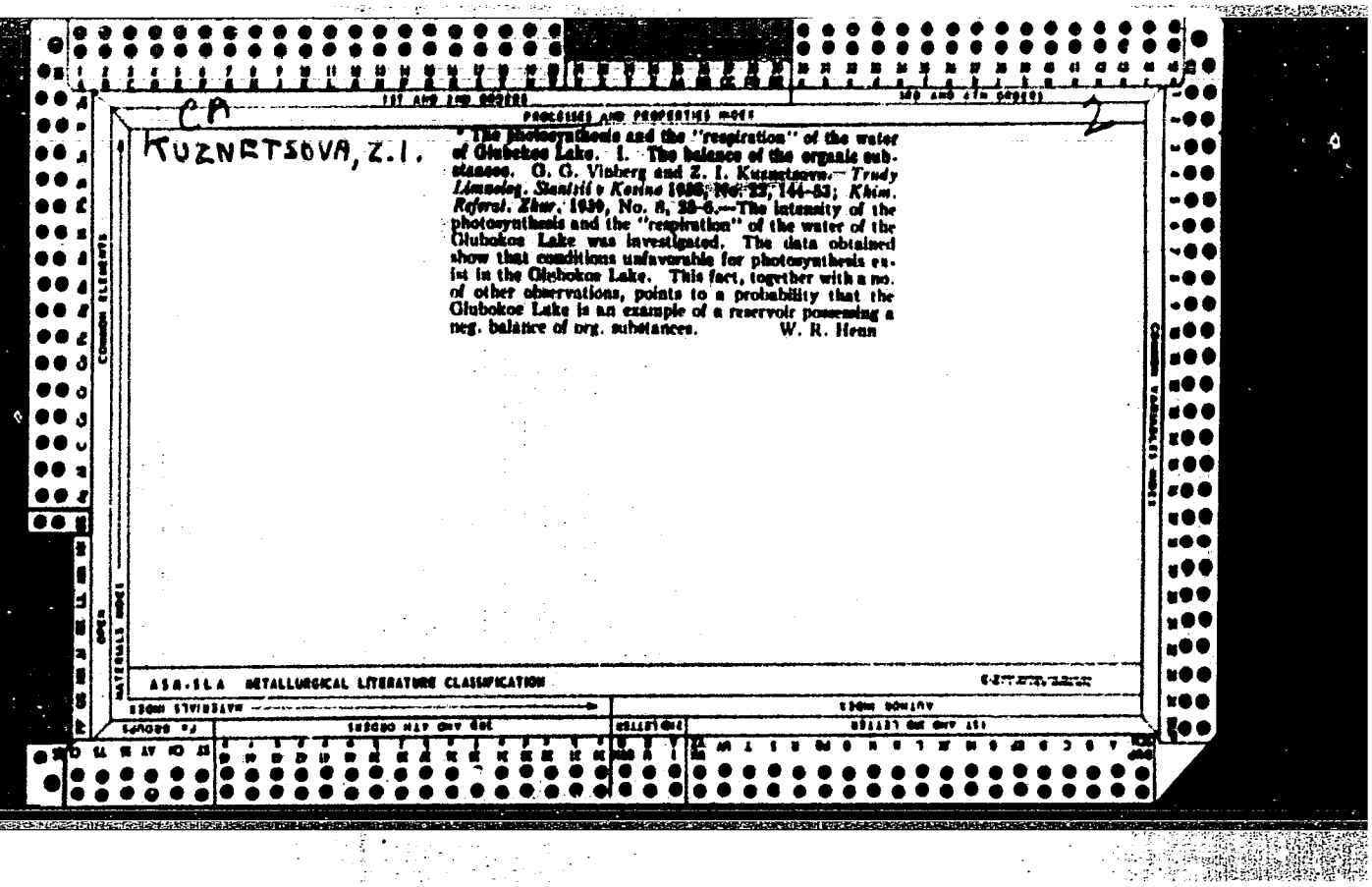
Thermal decomposition of lithium peroxide. Izv. AN SSSR.Ser.khim. no.10:1902-1904 '65. (MIRA 18:10)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova AN SSSR.

ARBUZOV, G.A., doktor tekhn. nauk, prof.; KUZNETSOVA, [illegible], kand. [illegible] nauk, dotsent

Interaction of boric acid with gelatin. Report No.8: Formation of polynuclear mixed chromium-aluminum complexes in solutions. Nauch. trudy MTIP no.27:35-39 '63. (MIRA 17:11)

1. Kafedra neorganicheskoy i analiticheskoy khimii Moskovskogo tekhnologicheskogo instituta legkoy promyshlennosti.



CA

KUZNETSOVA, Z. I.

2

PROCESSES AND PROPERTIES INDEX

The photosynthesis and the "respiration" of the water of Glubokoe Lake. I. The balance of the organic substances. O. G. Visberg and Z. I. Kuznetsova.—*Trudy Limnolog. Stantsii v Kosine* 1938, No. 22, 144–53; *Khim. Referat. Zhur.* 1939, No. 8, 28–9.—The intensity of the photosynthesis and the "respiration" of the water of the Glubokoe Lake was investigated. The data obtained show that conditions unfavorable for photosynthesis exist in the Glubokoe Lake. This fact, together with a no. of other observations, points to a probability that the Glubokoe Lake is an example of a reservoir possessing a neg. balance of org. substances. W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

SOKOLOV, I.Yu; KUZNETSOVA, Z.I.

Method of determining unstable component directly at the water source in the case of regional hydrogeological research. Gidrokhim.mat.24:15-18 '55. (MLRA 9:4)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii i inzhenernoy geologii, Moskva.
(Water, Underground) (Water--Analysis)

KUZNETSOVA, Z.I.

Quantitative analysis of bacteria in underground waters of oil fields [with summary in English]. Mikrobiologiia 26 no.2:189-193 Mr-Ap '57. (MIRA 10:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii i inzhenernoy geologii, Moskva.
(WATER SUPPLY, microbiol.
quantitative counts of bact. in underground waters of oil layers (Rus))

KUZNETSOVA, Z.I.

AL'TOVSKIY, Mikhail Yegen'yevich; KUZNETSOVA, Zinoveya Ivanovna; SHVETS, Vladimir Mikhaylovich; DOBRYNINA, N.P., vedushchiy red.; FEDOTOVA, I.G., tekhn.red.

[Formation of petroleum and its pools] Obrazovanie nefti i formirovanie neftianykh zalezhei. Moskva, Gos. nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1958. 167 p. (MIRA 11:5)
(Petroleum)

KUZNETSOVA, Z.I.

Distribution of desulfurizing bacteria along the gradient of the aquiferous layer in the Terek Valley portion of Daghestan. Vop. gidrogeol. i inzh. geol. no. 18:51-58 '59. (MIRA 14:5)
(Daghestan--Oil field brines--Bacteriology)