ARBUZOV, N.T., kand.tekhn.nauk; GROMOV, V.L., kand.tekhn.nauk; GORSKIY, B.Z., kand.tekhn.nauk; KALISHCHUK, A.L., kand.tekhn.nauk; KUNITSKIY, L.P., kand.tekhn.nauk; KUKBATOV, D.I., kand.tekhn.nauk; MOROZOV, N.V., kand.tekhn.nauk; PILYUGIN, A.I., kand.tekhn.nauk; PRIMAK, N.S., kand.tekhn.nauk; SEMENTSOV, S.A., kand.tekhn.nauk; ULITSKIY, I.I., kand.tekhn.nauk; KHUTORYANSKIY, M.S., kand.tekhn.nauk; SHERENTSIS, A.A., kand.tekhn.nauk; PINSKIY, Ye.A., inzh.; KORSAK, Yu.Ye., red.; MATUSEVICH, S.M., tekhn.red.

[Manual on civil engineering] Spravochnik po grazhdanskomu stroitel'stvu. Izd.4., ispr. Kiev, Gos.izd-vo tekhn.lit-ry. Vol.1. 1959. 867 p. Vol.2. 1959. 560 p. (MIRA 12:8)
(Civil engineering)

GROMOV, V., kand. tekhn. nauk

Windows with paired casements. Zhil. stroi. no.1:15-18 '59.
Zhil. stroi. no.1:15-18 '59. (MIRA 12:10)
(Windows)

GROMOV, V.L.

Windows for apartment and public buildings. Standartizatsiia 26 no.6:34-35 Je '62. (MiRA 15:7)
(Windows--Standards)

GROMOV, V.L.

Standardization of window glass. Standartizatsiia 26 no.8: 36-37 Ag '62. (MIRA 15:8)
(Glass--Standards) (Windows)

GROMOV, V.L.

Doors for apartment, official and industrial buildings. (MIRA 15:9)
Standartizatsiia 26 no.9:23-25 S '62.
(Doors—Standards)

LOSKUTOVA, L.T.; MAKOTINSKIY, M.P., kand. arkh.; RUDINA, M.A., arkh.; SHPANOV, I.A., arkh. Prinimal uchastiye LIVSHITS, A.M., inzh.; GROMOV, V.L., kand. tekhn. nauk, retsenzeng; KRASNOVSKIY, N.V., kand. tekhn. nauk, retsenzent; PAVLOV, V.P., kand. tekhn. nauk, retsenzent; PODZOROVA, N.G., inzh., retsenzent; FOLOMIN, A.I., doktor tekhn. nauk, retsenzent; GURVICH, E.A., red.

[Catalog of finishing materials and elements] Katalog otdelochnykh materialov i izdelii. Moskva, Gosstroiizdat. Pt.[illegible] [Wood and paper] Derevo i bumaga. 1962. 56 p. (MIRA 16:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroitel'nykh materialov.

(Finishes and finishing)

GROZOV, Nikolay Viktorovich, doktor tekhn. nauk; ARBUZOV, Nikolay Terent'yevich, kand. tekhn. nauk; GROMOV, Vasiliy Lukich kand. tekhn. nauk [deceased]; KALISHUK, Aleksandr Luk'yanovich, kand. tekhn. nauk; KURGATOV, Dmitriy Ivanovich, kand. tekhn.nauk; PILYUGIN, Mikhail Semenovich, kand. tekhn. nauk; KHUTORYANSKIY, Aleksandr Abramovich, kand. tekhn. nauk; SHERENTSIS, Aleksandr Abramovich, kand. tekhn. nauk; LAVRIK, Gennadiy Ivanovich, arkh. MALEVA, Georgiy Il'ich, inzh.; PINSKIY Ye'im Aronovich, inzh.; SHKLYAR, Aleksandr Samoylovich, inzh.; BERGER, K.V., red.; VISHNEVYY, V.V., red.; ISHCHENKO, N.S., red.

[Manual on civil engineering] Spravochnik po grazhdanskomu stroitel'stvu. Izd.5., perer. i dop. Kiev, Budivel'nyk, 1965. 2 v. (MIRA 18:2)

EFROS, I.Ye., inzh.-podpolkovnik; GROMOV, V.M., mayor, red.; STREL'NIKOVA, M.A., tekhn.red.

[Basic structure of bombsights] Osnovy ustroistva pritselov dlia bombometaniia. Izd.2., perer. Moskva, Voen.izd-vo M-va Vooruzhennykh sil SSSR, 1947. 318 p. (MIRA 13:2)
(Bombsights)

GROMOV, V N

Method of calculation of spectrum parameters. V. N. Gromov (D. I. Mendeleev Chem.-Tech. Inst., Moscow). *Zhur. Fiz. Khim.* 26, 1105-8 (1952).—A rigorous math discussion of the calcn. of spectrum parameters.

Paul W. Howerton

GROMOV, V.M.

Riddle of gravitation. Znanaila 31 no.10:28-30 O '56. (MLRA 9:11)
(Gravitation)

BALANDIN, A.A., akad., red.; KOBOZEV, N.I., prof., red.; LEBEDEV, V.P., dots., zam. red.; MAL'TSEV, A.N., dots., zam. red.; AGRONOMOV, A.Ye., dots., zam. red.; GROMOV, V.N., red.; LAZAREVA, L.V., tekhn. red.

[Transactions of the First Interuniversity Conference on Catalysis] Trudy Mezhvuzovskogo soveshchaniia po kataliau,1st. Moskva, Izd-vo Mosk. univ. No.1. Pt.1. 1962. 475 p. (MIRA 16:7)

1. Mezhvuzovskoye soveshchaniye po kataliau. 1st. 2. Khimicheskii fakul'tet Moskovskogo gosudarstvennogo universiteta (for Balandin, Kobozev, Lebedev).

(Catalysis—Congresses)

GROMOV, V.P.

Experience in draining fields for the drying of excavation peat. Torf.prom. 30 no.7:9-10 Jl '53. (MLRA 6:7)

1. Isetsko-Ayatskoye torfopredpriyatiye. (Peat industry)

GROMOV, V. P.

GROMOV, V. P. and NAUMENKO, V. M. (Voronezh Veterinary Station). Paratyphoid epizootic among grown pigs.

So: Veterinariya; 24; 10; October 1947; Uncl.
TABCON

OPOLOV, V. P.

"Contagious diseases of the young of agricultural animals and the fight against them."
Sverdlovsk. Sverdlgiz. 1952. 32 pages.

SO: Vet., July 1952, Unclassified.

R-2

USSR/Diseases of Farm Animals - Diseases Caused by Bacteria and Fungi.

Abs Jour : Ref Zhur - Biol., No 11, 1958, 50171

Author : Gromov, V.P., Frumkina, Kh.B.

Inst : Sverdlovsk Farm Institute.

Title : Antivirus Therapy of Bovine Brucellosis.

Orig Pub : Tr. Sverdl. s.-kh. in-ta, 1957, 1, 311-315.

Abstract : Experimental antivirus (AV) therapy was undertaken on 24 cows afflicted with brucellosis. AV was prepared from 3 brucelli strains according to the generally accepted method. The following doses were administered to the cows: for the first injection, 15 ml; then, 15 days later it was followed by a dosis of 50 ml, and 30 days after the second injection the same dosis was repeated, followed by 50 ml again 30 days after the third injection.

Card 1/2

USSR/Diseases of Farm Animals. Diseases Caused by Bacteria and Fungi. R-1

Abs Jour : Ref Zhur-Biol., No 18, 1958, 83547

Author : Gromov, V. P.; Khokhlachev, V. K.
Institute : Sverdlovsk Institute of Agriculture
Title : Vaccine Therapy in Brucellosis of Swine

Orig Pub : Tr. Sverdl. s.-kh. in-ta, 1957, 1, 317-320

Abstract : Semiliquid formolvaccine was used for treating brucellosis. On the first day of treatment of this vaccine was injected in a 1 ml dose, on the 3rd day in a 3 ml dose, and on the 6th day in a 5 ml dose. After 70 days the treatment was repeated. The vaccinations resulted in body temperature increases in the sick animals, and they also caused loss of appetite and depression. Vaccine therapy affected the treated animals favorably. Bacteriological, serological, and biological findings were negative.

Card 1/1

USSR/Diseases of Farm Animals. Diseases Caused by Bacteria and Fungi. R-1

Abs Jour : Ref Zhur-Biol., No 18, 1958, 83515

Author : Gromov, V. P., Zhukova, Ye. N., Vetluzhskikh, P.A
Inst : Sverdlovsk Institute of Agriculture
Title : The Effectiveness of Vaccine Therapy in Bovine Brucellosis.

Orig Pub : Tr. Sverdlovsk. s.-kh. in-ta, 1957, 1, 321-326

Abstract : Formolvaccines and heat-killed vaccines were prepared from virulent strains of all three brucella types to be used in vaccine therapy. ice and rabbits infected by brucella cultures were subjected to formolvaccine treatment. Bacteriological examinations of perished and killed mice and rabbits did not reveal brucella discharges. Apart from this, s sharply increased agglutination titer was detected in rabbits. Brucellosis afflicted cows were treated with intramuscular injections of formolvaccine

Card 1/3

Abs Jour : Ref Zhur-Biol., No 18, 1958, 83515

Abstract : and of heat-killed vaccine in the following manner; 2 billions of microbic organisms were used for the first injection, 2 billions (3 days thereafter) after again for the second injection, 5 billions (5 days thereafter) for the third injection, 5 billions again for the fourth injection (20 days thereafter), 7 billions for the fifth injection (10 days thereafter), 7 billions again for the sixth injection (14 days thereafter), and 10 billions for the seventh injection (20-25 days thereafter). After 1-2 days, a general rise of body temperature was observed in the majority of the vaccinated animals. Also, loss of appetite and a decrease of milk yields were established, as well as swelling of the injection site. Already after the first few

USSR/Diseases of Farm Animals. Diseases Caused by Bacteria and Fungi R-1

Abs Jour : Ref Zhur-Biol., No 18, 1958, 83515

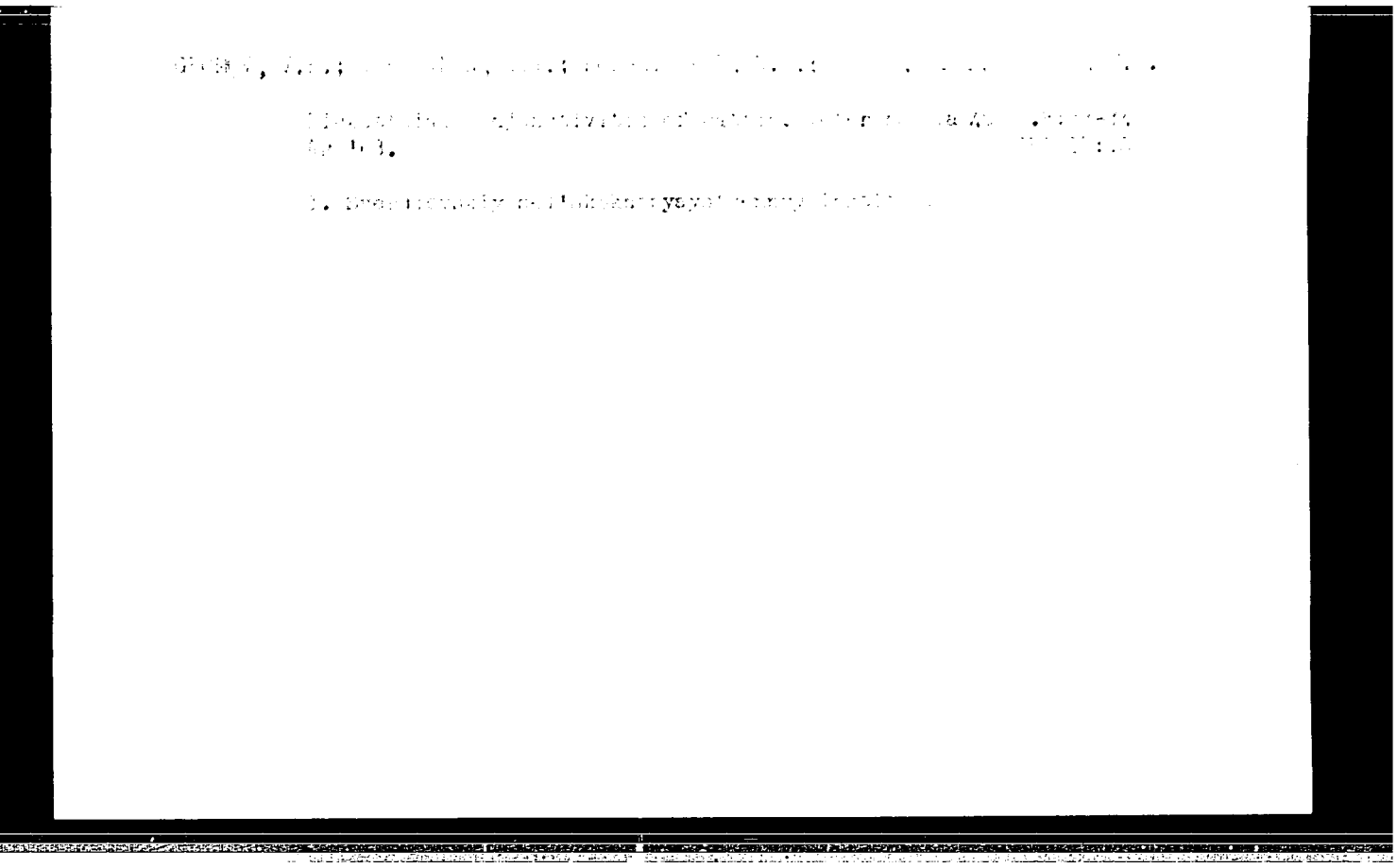
Abstract : injections agglutinin titers rose and remained at a high level (1:800, 1:1600, 1:6400) for a long period of time. Eleven to 13 months after the treatment, a decrease to 1:50 and 1:25 followed or became even negative. The phagocytal index increased in the diseased animals during the vaccination period. Before treatment opsonophagocytal reactions were negative or slightly positive. A specific vaccine therapy carried out on 2 farms, prevented recurrences of abortions and resulted in a decrease of barreness. Also, inflammatory processes of the animals' sex organs ceased.— I. Ia. Panchenko

Card 3/3

GROMOV, V. P.

Doc Vet Sci - (diss) "Materials for vaccinoprophylaxis and vaccinotherapy in brucellosis of horned cattle." Kazan', 1961. 19 pp; (Ministry of Agriculture USSR, Kazan' Veterinary Inst); 180 copies; price not given; (KL, 10-61 sup, 223)

APPROVED FOR RELEASE: Thursday, July 27, 2000 CIA-RDP86-00513R00051702(



GROMOV, V.P.

Completeness of the systems of the derivatives of an analytic function. Izv.AN SSSR.Ser.mat. 25 no.4:543-556 Jl-Ag '61. (MIRA 14:8)

(Functions, Analytic)

GROMOV, V.P.

Expansion of the system $\{f(\lambda_n z)\}$ in a series. Trudy MEI no.42:19-56 '62. (MIRA 16:7)

(Series)

GROMOV, V.P.

Growth of functions on a sequence of points in a ray. Izv.AN Arm. SSR.Ser.fiz.-mat.nauk 15 no.1:37-51 '62. (MIRA 15:2)

1. Moskovskiy energeticheskiy institut.
(Functions, Entire) (Sequences (Mathematics))

GROMOV, V.P.

Series of $\{f(\gamma_n z)\}$ functions. Dokl.AN SSSR 144 no.1:23-26 My '62. (MIRA 15:5)

1. Moskovskiy energeticheskiy institut. Predstavleno akademikom I.M.Vinogradovym.
(Series) (Functions, Entire)

GROMOV, V. P.

Dissertation defended for the degree of Candidate of Physicomathematical Sciences at the Mathematical Institute imeni V. A. Steklova 1962:

"Functional Orders of the Dirichlet Series Type."

Vest. Aknd. Nauk SSSR. No. 4, Moscow, 1963, pages 119-145

GROMOV, V.P. (Moskva)

The $\sum_{n=1}^{\infty} d_n f(\lambda_n z)$ series. Mat. sbor. 61 no.3:272-290 Jl '63. (MIRA 16:7)

(Series)

GROMOV, V.P. (Moskva)

Completeness of systems of analytic functions in a region.
Mat. sbor. 62 no.3:320-334 N '63. (MIRA 16:11)

GROMOV, V.P. (Moskva)

Completeness of certain systems of analytic functions in a region. Mat sbor. 6 no.2:204-214 F '65. (MIRA 18:4)

GROMOV, V.F. (Moskva)

Growth of functions def'ned by series of the type $\sum_{1}^{\infty} d_n! (\lambda_n z)$.
Mat. sbor. 67 no.2:190-209 Je '65.
(MIRA 18:8)

BORDINA, V.F.; KOZLOV, G.T.; GROMOV, V.P.

Method of programmed accounting for crystal [illegible] in refining structural parameters using an electric digital computer. Zhur. strukt. khim. 6 no.1:141-152 Ja-F '65. (MIRA 18:12)

1. Vychislitel'nyy tsentr Sibirskogo otdeleniya AN SSSR, Novosibirsk. Submitted June 26, 1963.

L 23207-66 EWT(d)/EWP(1) IJP(c)
ACC NR: AP6013588 SOURCE CODE: UR/0039/65/066/002/0204/0214

AUTHOR: Gromov, V. P. (Moscow)

ORG: none

TITLE: Completeness of certain systems of analytic functions in a region

SOURCE: Matematicheskiy sbornik, v. 66, no. 2, 1965, 204-214

TOPIC TAGS: analytic function, mathematics

ABSTRACT: Section 1 of the article indicates the necessary and sufficient conditions for the completeness of the lacunary system

$$\left\{\left[D^{p_\nu} F(z)\right]^{(q_\nu)}\right\} \quad (0 \leq q_\nu \leq s-1,\ n_\nu = p_\nu\ s + q_\nu,\ \nu = 1, 2, \ldots)$$

in a simply-connected region D (the analytic function F(z) is assumed to be regular in region D). It is shown that the system

$$\left\{\left[D^{p} F(z)\right]^{(q)}\right\} \quad (0 \leq q \leq s-1,\ p = 0, 1, 2, \ldots)$$

is complete or incomplete simultaneously with the system of derivatives $\left\{F^{(n)}(z)\right\}$ $(n = 0, 1, 2, \ldots)$. Section 2 shows that a certain connection exists between the regions of completeness of the systems

Card 1/2 UDC: 517.53

L 23207-66

ACC NR: AP6013588

$\{y(z, \lambda_j)\}$ ($j = 1, 2, \ldots$) and $\{D^n F(z)\}$ ($n = 0, 1, \ldots$) (here $D^0 F = F$, $D^n F = D[D^{n-1}F]$). Particular cases are considered as to the connection of the regions of completeness of the systems $\{e^{\lambda_j z}\}$ and $\{F^{(n)}(z)\}$. Orig.art. has: 2 formulas. [JPRS]

SUB CODE: 12 / SUBM DATE: 10Sep63 / ORIG REF: 010

Card 2/2

GROMOV, V. S.

SHESTOPEROV, S.V., doktor tekhnicheskikh nauk; BOGIN, N.M., kandidat tekhnicheskikh nauk; IVANOV, G.S., inzhener; LUKICHEV, N.A., inzhener; DAVYDOV, L.S., inzhener; GROMOV, V.S., inzhener; POPOV, N.A., inzhener; ZHURAVLEV, G.M., master.

Vibrators for making wire reinforced ties on stands. Transp.stroi. 6 no.3:12-14 Mr '56. (MLRA 9:7)
(Railroads--Ties, Concrete)

Gromov, V.S.

Vsesoyuznoye ob"yedinennoye soveshchaniye po avtomatizatsii proizvodstvennykh protsessov v mashinostroyenii i avtomatizirovannomu elektroprivodu v promyshlennosti. 3d, Moscow, 1959

Elektroprivod i avtomatizatsiya promyshlennykh ustanovok; trudy soveshchaniya (Electric Drive and Automation in Industrial Systems; Transactions of the Conference) Moscow, Gosenergoizdat, 1960. 470 p. 11,000 copies printed.

General Eds.: I.I. Petrov, A.A. Sirotin, and M.G. Chilikin; Eds.: I.I. Sud, and N.F. Bilayev; Tech. Eds.: K.P. Voronin, and G.Ye. Larionov.

PURPOSE: The collection of reports is intended for the scientific and technical personnel of scientific research institutes, plants and schools of higher education.

COVERAGE: The book is a collection of reports submitted by scientific workers at plants, scientific institutes and schools of higher education at the third Joint All-Union Conference on the Automation of Industrial Processes in Machine Building and Automated Electric Drives in Industry held in Moscow on May 12-16, 1959. The Conference was called by the Academy of Sciences USSR, the Gosplan SSSR (State Planning Commission USSR), the GNTK SSSR, the Gosudarstvennyy Komitet po avtomatizatsii i mashinostroyeniyu (State Committee on Automation and Machine Building) and the Natsional'nyy Komitet SSSR po avtomaticheskomu upravleniyu (USSR National Committee on Automatic Controls) and prepared by the Nauchno-tekhnicheskiy komitet po avtomatizirovannomu elektroprivodu (Scientific and Technical Committee on Automated Electric Drives), the MEI (Moscow Institute of Energetics), the VNIIEM, the IAT (Institute of Automation and Telemechanics) of the Academy of Sciences USSR, and the Komissiya po tekhnologii mashinostroyeniya Instituta mashinovedeniya AN SSSR (Commission on the Technology of Machine Building of the Institute of Science of Machines of the Academy of Sciences USSR). It was the purpose of the Editorial Board to arrange the reports in a way which would ensure a relatively systematic presentation of theoretical and practical problems relating to electric drives and automatic controls of industrial mechanisms used in various branches of industry. Basic problems of automated electric drive and their solution are outlined. The book also contains articles on electric machinery and means of automation. Considerable attention is paid to noncontact automatic control systems, including systems with semiconductor devices and magnetic amplifiers, and to computers intended both for the analysis and the synthesis of linear and nonlinear automatic regulation and control systems. Reports already published in journals or official publications have been considerably abbreviated; those which have appeared in volume V of MEI EP transactions or in the journal "Elektrichestvo" are marked with an asterisk. No personalities are mentioned. References accompany some of the papers.

PART I. GENERAL PROBLEMS CONCERNING THE THEORY AND PRACTICE OF ELECTRIC DRIVE AND AUTOMATION OF CONTROL

Influence of removal of polysaccharides from the wood substance on the solubility of lignin in sulfite liquor. P. N. Odincova, V. Gromova, and A. Jakuleva (Latvian State Univ., Ri[redacted] *PSR Zinātņu Akad. Vēstis* 1952, No. 11(Whole No. 64), 31–41(in Russian).—Either partial or full removal of carbohydrates from the wood substance by hydrolysis with dil. H_2SO_4, soln. with Cu-NH_3 soln., or decompn. by enzymes of *Coniophora cerebrila* decreased very significantly the ability of lignin to dissolve in the sulfite liquor. The probable mechanism is that the sulfonation of the lignin-carbohydrate complex proceeds at the double bonds in the aliphatic chain of lignin, and the removal of the carbohydrates by the pre-treatments converts lignin into a keto-form with elimination of the double bonds; this causes difficulties in sulfonation. Andrew Drawnieks

GROMOV, V.S.

TSIRULIS, F.Ya., inzhener; GROMOV, V.S., inzhener.

Utilization of dolomite and dolomitized limestones in acid towers. Bum.prom. 30 no.1:23-24 Ja '55. (MLRA 8:3)

1. Tsellyulozno-bumazhnyy kombinat "Sloka".
(Paper industry) (Dolomite)

GRUNOV, V. S., Master Chem Sci --(diss) "Investigating the process of hydrotropic heating of deciduous wood and straw in cellulose making." Riga, 1957, 30 pp. Acad Sci Latv SSR. Inst of Lumber), 200 copies. (KL, No 40, 1957, 90)

COMMUNIST CHINA/Chemical Technology - Chemical Products and Their Application, Part 4. - Cellulose and Its Derivatives, Paper. H-33

Abs Jour : Ref Zhur- Khimiya, No 14, 1958, 48995

Author : V.S. Gromov, P.N. Odintsov
Inst : -
Title : Cellulose Pulping of Hardwood and Straw with Hydrotropic Solvents.

Orig Pub : Tszaochzhi gun-e, 1957, No 11, 22-24

Abstract : Translation.
See RZhKhim, 1958, 3277.

Card 1/1

[redacted], V.S.; ODINTSOV, V.N.

Cooking woodpulp from wood of deciduous trees and straw with use of hydrotropic solvents. Bum.prom. 32 no.6:11-14 Je '57. (MLRA 10:8)

1.Institut lesokhozyaystvennykh problem Akademii nauk Latviyskoy SSR.
(Woodpulp industry) (Solvents)

GROMOV, V.(Riga); PORMALE, M.(Riga)

Hydrotropic and alkaline boiling of green wood for obtaining cellulose with simultaneous hydrogenation of lignin. Pt. 2. Fractionation of hydrogenated lignin products and separation of phenols. Vestis Latv ak no.4:85-92 '61. (EEAI 10:9)

1. Akademiya nauk Latviyskoy SSR, Institut lesokhozyaystvennykh problem i khimii drevesiny.

(Wood) (Lignin) (Hydrogenation) (Phenols) (Cellulose)

GROMOV, V.S., kand. khim. nauk, otv. red.; DOMBURG, G.E., kand. khim. nauk, red.; IYEVIN'SH, I.K.[Ievins, I.], kand. tekhn. nauk, red.; KAL'NINA, V.K.[Kalnina, V.], kand. tekhn. nauk, red.; RUPAYS, Ye.A.[Rupais, E.], kand. khim. nauk, red.; SERGEYEVA, V.N., doktor khim. nauk, red.; ERMUSH, N.A.[Ermus, N.], st. nauchn. sotr., red.; YUKNA, A.D.[Jukna, A.], kand. tekhn. nauk, red.; LEVI,S., red.; SHKLENNIK, Ch., red.

[Chemical processing and preserving of wood] Khimicheskaia pererabotka i zashchita drevesiny. Riga, Izd-vo AN Latv.SSR, 1964. 238 p. (MIRA 18:1)

1. Latvijas Padomju Socialistiskas Republikas Zinatnu Akademija. 2. Institut khimii drevesiny AN Latviyskoy SSR (for Gromov, Sergeyeva, Ermush).

GROMOV, V.V., prof. (Kazan')

Professor V.K. Trutnev; obituary. Kaz. med. zhur. no. 2:115-118 Mr-Ap '61. (MIRA 14:4)

(TRUTNEV, VASILII KUZ'MICH, 1891-1960)

GROMOV, V.V.

In a remote division. Put' i put. khoz. 7 no.5 32-33 '63.
(MIRA 16:7)

1. Starshiy normirovshchik Lenskoy distantsii puti Vostochno-Sibirskoy dorogi.
(Railroads--Maintenance and repair)

GROMOV, V.V., prof. (Kazan')

In memoriam: G.A.Ziarkovskii. Kaz.mod. zhur. no.1:104 Ja-F '63.
(MIRA 16:8)
(ZIARKOVSKII, GRIGORII ARTUROVICH, 1909 - 1962)

GROMOV, V.V., inzh.; TKACHENKO, P.Ye., kand.tekhn.nauk

Passage of discharges penstocks during the work construction through the turbine-unit at the Irkutsk Hydroelectric Power Station. Gidr. stroi. 27 no.5:17-22 My '58. (MIRA 11:5)
(Irkutsk Hydroelectric Power Station)
(Penstocks)

GROMOV, V.V., prof. (Kazan')

All-Russian conference on problems of hearing disorders. Kaz. med. zhur. no. 4:82-83 Jl-Ag '60. (MIRA 13:8)
(DEAFNESS)

AUTHORS: Spitsyn, Vikt. I., Gromov, V. V. SOV/89-5-4-6/24

TITLE: Investigation of the Law of the Sorption of Radioactive Strontium on Montmorillonite and Its Fixation by the Method of Calcination (Izucheniye zakonomernostey sorbtsii radioaktivnogo strontsiya na montmorillonite i zakrepleniya yego metodom prokalivaniya)

PERIODICAL: Atomnaya energiya, 1958, Vol 5, Nr 4, pp 446-452 (USSR)

ABSTRACT: The sequence of the various cations decreasing the absorption of $Sr^{89,90}$ in montmorillonite (from Oglanlinsk, Krym, Kazakhstan) is as follows:

$$Al^{+3} > Fe^{+3}$$

$$Ba^{+2} \geqslant Ca^{+2} > Mg^{+2} \geqslant H^{+} > NH_4^{+} > K^{+} > Na^{+}$$

It was stated that the sorption of $Sr^{89,90}$ by montmorillonite has the character of ion interchange and obeys the law of mass action. The presence of anions such as CO_3^{-2}, SO_4^{-2}, $C_2O_4^{-2}$, which, with strontium, form a difficultly soluble salt, does not change the absorption mechanism. They do, however, decrease

Card 2

Investigation of the Law of the Sorption of Radioactive Strontium on Montmorillonite and Its Fixation by the Method of Calcination

the amount of the absorbed strontium, which is probably due to the forming of radioactive colloids. Calcination at 850-900°C and extended duration of calcination over more than 1-2 hours does not exercise any influence upon the degree of fixation of $Sr^{89,90}$ in montmorillonite. Activity, which can be washed out by river- or sea water, amounts to ~2%.
It is assumed that already before the crystal lattice begins to change (T = 800°C) fixation is brought about by the formation of difficultly soluble strontium compounds with the absorber. Above 800°C the modifications of the crystal lattice structure and the step-like vitrification of the material become effective. There are 7 figures, 1 table, and 19 references, 9 of which are Soviet.

SUBMITTED: January 7, 1958

Card 2

5(4)

AUTHORS: Spitsyn, Vikt. I., Academician, Gromov, V. V. SOV 20-123-4-42/53

TITLE: The Influence of the Radioactivity of Barium Sulfate on Its Sorptive Properties (Vliyaniye radioaktivnosti sul'fata bariya na yego sorbtsionnyye svoystva)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 4, pp 722-724 (USSR)

ABSTRACT: The authors of the present report investigate the influence of radioactivity on the sorptive properties of solids. Barium sulfate, which had already previously been thoroughly investigated (Refs 6, 7, 8), was used as a sorbent. The present paper deals with the adsorption from aqueous solutions of acid orange dye (Orange AT2B $(C_{16}H_{11}O_4N_2S)Na$ and of two basic dyes methylene-blue $(C_{16}H_{18}N_3S)Cl$ and brilliant green $(C_{27}H_{35}N_2)Cl$, occurring on these sorbents. S^{35}, which was introduced into the barium sulfate during its precipitation, served as a source of radioactive radiation. The production of the $BaSO_4$-preparations is described in short. 3 g of the

Card 1/4

The Influence of the Radioactivity of Barium Sulfate on Its Sorptive Properties

precipitate to be investigated was shaken at a temperature of $(25 \pm 0.5)^{0}$ for four hours with 15 ml of the coloring substance solution of the corresponding concentration. After this, the coloring substance content in the liquid phase was spectrophotometrically determined by means of the apparatus SF-4 and SF-2M. Measuring errors amounted to 3-4%. The results obtained by these investigations are shown by three diagrams. The acid orange dye is to the largest extent adsorbed by the $BaSO_4$, viz. by one order of magnitude more than the other coloring agents. Methylene-blue is adsorbed somewhat more than brilliant green. The sorption of the two basic coloring substances diminishes with increasing specific radioactivity of the barium sulfate. Thus, the sorption capacity for methylene-blue at activities of 0.01 - 10 millicurie/g depends linearly on the logarithm of the specific activity of $BaSO_4$. The authors also carried out special investigations for the purpose of solving the problem as to whether the decrease of the adsorption of the

The Influence of the Radioactivity of Barium Sulfate on Its Sorptive Properties

investigated basic coloring substances is only imagination, and whether it is not due to loss of color under the influence of radiation. Also these experiments are described in short. According to the results obtained the variation of the sorption of coloring substances is not due to destruction of these substances by the action of S^{35} radiation. Moreover, no visible chemical or radio-chemical changes could be observed in the liquid phase that might have exercised any influence upon the stability of coloring substances or upon the intensity of their sorption. According to the authors' opinion, the variation of the sorption of coloring substances observed may be connected with the occurrence of a positive charge on the precipitate of the radioactive barium sulfate (in consequence of the continuous β-radiation). There are 4 figures, 1 table, and 8 references, 3 of which are Soviet.

SOV/20-123-4-42/53

The Influence of the Radioactivity of Barium Sulfate on Its Sorptive Properties

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

SUBMITTED: July 25, 1958

Card 4/4

GROMOV, V. V.; ZAKHAROV, S. I.; ZHAGIN, B. P.; SPIRIDOV, F. M.; V. I. SPITSYN; AND BALUKOVA, V. D.;

"Sorption regularities in Behavior of Fission Product eElements during Filtration of Their Solutions through Grounds."

report presented at the Scientific Conference on the Disposal of Radioactive Wastes, Monaco, 16-21 November 1959.

GACMOV, V. V.

PHASE I BOOK EXPLOITATION SOV/5084

International Conference on the Peaceful Uses of Atomic Energy. 2d, Geneva, 1958.

Doklady sovetskikh uchenykh. [t.4] Khimiya radioelementov i radiatsionnykh prevrashcheniy (Reports of Soviet Scientists. v. 4.: Chemistry of Radioelements and Radiation Transformations) Moscow, Atomizdat, 1959. 323 p. 8,000 copies printed. (Series: Its: Trudy)

Ed. (Title page): A. P. Vinogradov, Academician; Ed.: V. I. Labaznov; Tech. Ed.: Ye. I. Mazel'.

PURPOSE: This collection of articles is intended for scientists and engineers interested in the applications of radioactive materials in science and industry.

COVERAGE: The book contains 26 separate studies concerning various aspects of the chemistry of certain radioactive elements and the processes of radiation effect on matter. These reports discuss present-day methods of reprocessing irradiated nuclear fuel, research in the chemistry of mercury, thorium, uranium, plutonium, and americium, problems related to the sorption and burying of radioactive wastes, the radiolysis of aqueous solutions and of organic compounds, the mechanism of polymer chain grafting, and the effect of radiation on natural and synthetic rubbers. V. N. Prusakov edited the present volume. Most of the reports are accompanied by references. Contributors to individual investigations are mentioned in annotations to the Table of Contents.

SPITSYN, Vikt. I.; GROMOV, V.V.

Effect of the radioactivity of precipitates on their sorptive properties. Radiokhimiia 1 no.2:181-184 '59. (MIRA 12:8)
(Radioactive substances) (Sorption)

SPITSYN, Vikt.I.; GROMOV, V.V.

Adsorption of radiostrontium by certain soil minerals.
Pochvovedenie no.12:45-50 D '59. (MIRA 13:4)

1. Institut fizicheskoy khimii Akademii nauk SSSR.
(Strontium--Isotopes) (Minerals in soil)

82519

S/076/60/034/06/33/040
B015/B061

21.3200

AUTHOR: Gromov, V. V. (Moscow)

TITLE: Desorption of Microquantities of Strontium and Cesium From Montmorillonite and Kaolinite

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 6, pp. 1357-1363

TEXT: The desorption of Sr^{90} and Cs^{137} from montmorillonite and kaolinite by NaCl and $CaCl_2$ solutions (Table 1, composition) was investigated. Both isotopes were used in carrier-free 10^{-7} - 10^{-9} N chloride solutions. The montmorillonite clay was from the Oglanly, and the kaolinite from the Glukhovitsy deposit. The equation $q_1 = K' a_1$ and/or $q = Kc$ (2) (q = sorbed ion quantity, K = constant) was derived from the equation (1) (Ref. ..., proposed by B. P. Nikol'skiy, and it corresponds to the desorption of microquantities of ions by ion exchange and a completely reversible adsorption of these ions. The constants of the equation (2), obtained in the tests, are given in Tables 1 and 2 and confirm the validity of the

Card 1/2

derived equation. The desorption curves obtained (Figs. 1-3) show that the sorption of Sr^{90} on montmorillonite and kaolinite is completely reversible, and that of Cs^{137} is partially irreversible. Sr^{90} is eluted better with calcium- than with sodium-ions, whilst Cs^{137} is desorbed better with sodium ions. Both isotopes are desorbed more easily by kaolinite than by montmorillonite. Finally, Academician Viktor Ivanovich Spitsyn is thanked for hints. There are 8 figures, 3 tables, and 14 references: 8 Soviet and 6 American.

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

SUBMITTED: September 11, 1958

Card 2/2

BELYAKOVA, L.D.; GROMOV, V.V.; KISELEV, A.V.; SPITSYN, Vikt.I., akademik

Adsorption of hexane and benzene vapors on nonradioactive and radioactive barium sulfate samples. Dokl.AN SSSR 138 no.5:1139-1142 Je '61. (MIRA 14:6)

1. Institut fizicheskoy khimii AN SSSR i Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Barium sulfate) (Sulfur—Isotopes) (Adsorption)

27255

S/020/61/139/005/010/021
B103/B208

5.4600

AUTHORS: Spitsyn, Vikt. I., Academician Zemlyanova, L. I., Mikhaylenko, I. Ye., Gromov, V. V., and Zimakov, I. Ye.

TITLE: Electron-microscopic examination of the effect of radioactive radiation of solids on the structure of their surface

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 139, no. 5, 1961, 1163-1165

TEXT: The crystal lattice of solids is disturbed by the ionizing action of their own radioactive radiation and the appearing recoil atoms, which also changes their surface structure. According to the authors, all this may be one of the causes of the effect exerted on physicochemical properties of solids by their own radiation (sorptive power, solubility in water, kinetics of heterogeneous processes of isotopic exchange catalysis, etc.). The authorsmade electron-microscopic studies of the surface structure of radioactive samples of K_2SO_4, $MgSO_4$, $BaSO_4$, and MoO_3 which had been used previously to study adsorption, catalysis, and isotopic exchange. Except for $BaSO_4$ the pictures were obtained by

Card 1/5

27166

S/020/61/139/005/020/0[illegible]
B103/B208

Electron-microscopic examination ...

replication, and for $BaSO_4$ the method of double replicas (silver quartz replicas) was used. K_2SO_4, $MgSO_4$, and MoO_3 were applied to a collodion film in the form of a fine powder. A 200 - 300 Å thick quartz layer was sputtered onto it in vacuo. After dissolution of collodion in amyl acetate, the quartz replica were rinsed in distilled water in the case of K_2SO_4 and $MgSO_4$, and in dilute alcohol in the case of MoO_3. Radioactive samples of K and Mg were obtained by adding small amounts of Na_2SO_4 containing S^{35}. $BaSO_4$ precipitates were isolated by a method previously described by Vikt. I. Spitsyn, V. V. Gromov (DAN 123, 722 (1958); Radiokhimiya 1, 181 ('959)). Radioactive MoO_3 was obtained by adding an Mo^{99} containing sample to ordinary MoO_3 in order to attain the necessary specific radioactivity. The mixture was converted to ammonium molybdate by treating it with aqueous ammonia; it decomposed when heated. The resultant MoO_3 was sublimed at 850°C. When comparing the pictures (magnification: 12,000 times) [Abstracter's note: Not reproducible] the

Card 2/ 5

S/020/61/139/005/020/02
B103/B208

Electron-microscopic examination...

authors found the following differences in the crystal surface of a) radioactive and b) non-radioactive samples: 1) The surface of b) is comparatively smooth, that of a) highly pitted. The crystal surface of $BaSO_4$ is changed to a high extent by incorporation of small radium amounts. K_2SO_4, $BaSO_4$, and MoO_3 also show some changes in their surface structure after an external irradiation with 800-kev electrons. Although the dose was much higher in this case, the changes were less pronounced than those caused by radioactive radiation. The above surface defects appear rather regularly over the whole length of the crystal of the radioactive substance. The deep cavities observed in samples irradiated with neutrons were absent. The surface changes resemble those observed in metal etched by an ion beam. The authors further conclude from the comparison of the photographs that the surface defects of the radioactive samples develop already during the separation of the solid phase from the solution or from the gas. They assume that the radiation of electrons or other charged particles during the crystallization of solid substances gives rise to a great number of new active centers (seed crystals). The particle-size distribution on separation of radioactive salts from

Card 3/5

27266

Electron-microscopic examination... S/020/61/139/005/020/02
B103/B208

solutions differs from a non-radioactive preparation. The content of smaller fractions considerably increases. The authors assume that additional crystallization centers are formed directly on the surface of the radioactive salts owing to radiation. The larger crystals thus decompose, and the surface becomes looser. A dendritic structure results in some cases (after separation of MoO_3 from the gaseous phase). The further development of the surface of solids under the action of prolonged radioactive radiation reminds of the radiation corrosion rather than of the growth of irradiated crystals, as is the case in neutron bombardment. The adsorption of the radioactive samples is changed in the following way: Radioactive samples adsorb far more vapor of methanol, benzene, and hexane per unit surface of $BaSO_4$ precipitate than do non-radioactive samples. This is considered to prove essential differences in the surface structure between these two types of samples. There are 1 figure, 2 tables, and 16 references: 15 Soviet-bloc and 1 non-Soviet bloc. The reference to English-language publications reads as follows: Ref. 13: H. Newkirk, J. Nucl. Materials, 2, 269 (1960).

Card 4/5

27266

Electron-microscopic examination

S/020/61/139/005/020/021
B103/B208

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

SUBMITTED: April 15, 1961

Card 5/5

GROMOV, V.V.; SPITSYN, Vikt. I., akademik

Effect of external irradiation on the sorption properties of $BaSO_4$. Dokl. AN SSSR 141 no.4:891-893 D '61. (MIRA 14:11)

1. Institut fizicheskoy khimii AN SSSR.
(Solids, Effect of radiation on)
(Barium sulfate)
(Sorption)

GROMOV, V.V.

Tendipedid larvae (Diptera) in the water of the Sylva Bay of Kama Reservoir. Biul. Inst. biol. vodokhran. no.12:38-41 '62. (MIRA 16:3)

1. Permskiy gosudarstvennyy universitet.
(Kama Reservoir—Chironomidae)

BELYAKOVA, L.D.; GROMOV, V.V.; KISELEV, A.V.; SPITSYN, Vikt.I.

Adsorption of various substances on radioactive samples of barium sulfate. Radiokhimia 4 no.4:410-421 '62.
(MIRA 15:11)

(Barium sulfate) (Sulfur—Isotopes)
(Adsorption)

SPITSYN, Vikt.I., akademik; GROMOV, V.V.

Effect of the radioactive radiation of the solid phase on the kinetics of potassium sulfate recrystallization. Dokl. AN SSSR 147 no.3:663-666 N '62. (MIRA 15:12)

1. Institut fizicheskoy khimii AN SSSR.
(Potassium sulfate) (Crystallization) (Radiation)

GROMOV, V.V.

Structure of radioactive deposits. Dokl.AN SSSR 149 no.3:626-628 Mr '63. (MIRA 16:4)

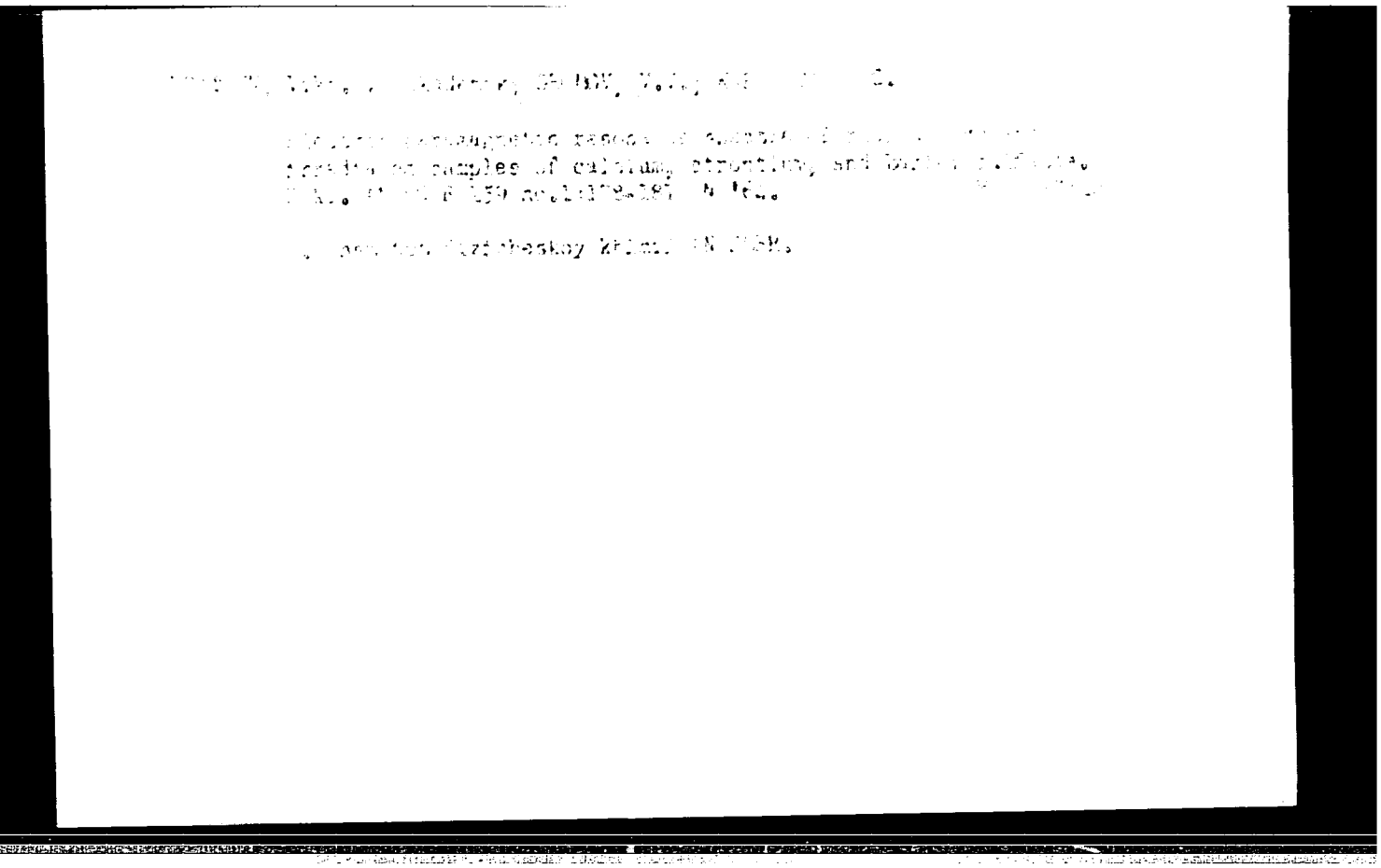
1. Institut fizicheskoy khimii AN SSSR. Predstavleno akademikom V.I.Spitsynym.

(Radioactive substances) (Sulfates)

SPITSYN, Vikt.I., akademik; GRINEV, V.V.

Effect of electrolytes on the absorption of dyes by radioactive precipitates of $BaSO_4$. Dokl. AN SSSR 156 no. 4: 427-429 My '64. (MIRA 17:5)

1. Institut fizicheskoy khimii AN SSSR.



S/844/62/000/000/111/129
D207/D307

AUTHORS: Spitsyn, V. I. and Gromov, V. V.

TITLE: Effect of radiation on sorption properties of barium sulfate

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 646-650

TEXT: The adsorption of an aqueous solution of methylene blue on precipitated $BaSO_4$ was reduced by activating the sulfate with S^{35} but it rose on adding radium (3.0×10^{-7} μc/g) to $BaSO_4$. The converse was found for the adsorption of an aqueous solution of acid orange on $BaSO_4$: radium strongly reduced the adsorption while the activation with S^{35} increased it. This behavior was due to the positive charging of $BaSO_4$ surface by the β emission of S^{35} and the negative charging by the α emission of radium. The charged surface of

Card 1/2

the sulfate attracted preferentially the dye with the opposite charge (methylene blue and acid orange have oppositely charged dye ions). NaCl added to the dye solutions reduced the difference between the adsorption on activated and unactivated $BaSO_4$. When the S^{35}-activated $BaSO_4$ was stored for 100 - 200 days, the adsorption of both dyes was not greatly affected because structural changes on the surface occurred immediately after activation; the observed small reduction of the adsorption with time was due to the 'polishing' effect of the β emission acting for a long time. A similar 'polishing' effect was found on irradiation of the unactivated $BaSO_4$ with 800 kec electrons or 1.5 Mev protons, the effect being stronger for lower dose rates. There are 4 figures and 1 table.

ASSOCIATION: Institut fizicheskoy khimii AN SSSR (Institute of Physical Chemistry, AS USSR)

L 11051-63 EWT(m)/BDS--AFFTC/ASD--DM 52

ACCESSION NR: AP3001183 S/0089/63/014/005/0491/0493

AUTHOR: Gromov, V. V.; Spitsyn, V. I.

TITLE: Study of sorption properties of silica gel irradiated by neutrons 19

SOURCE: Atomnaya energiya, v. 14, no. 5, 1963, 491-493

TOPIC TAGS: sorption after nuclear radiation, nuclear reactor, calcium ions, silica gel sorption

ABSTRACT: It has been shown in a number of papers, both by these authors as well as by others, that, among other effects, the irradiation of a surface of a solid results in a change of sorption. In particular, the sorption by silica gel irradiated mainly by Gamma rays were studied in recent papers. Both an increase and a decrease of sorption were observed. In the present paper, the change of sorption of silica gel in an aqueous medium was studied after irradiation by both neutrons and Gamma rays in a nuclear reactor. Pure, coarse silica gel was irradiated by the flux of thermal neutrons and gamma rays. The sorption of both calcium ions and of methylene blue was measured. It was found that sorption is lowered after radiation, the more so the longer the irradiation time. The authors attribute this to a partially irreversible dehydration of silica gel. Orig. art. has: 2 figures.

Card 1/2

I. 11051-63
ACCESSION NR: AP3001183

0

ASSOCIATION: none

SUBMITTED: 22Jun62 DATE ACQD: 21Jun63 ENCL: 00

SUB CODE: 00 NO REF SOV: 010 OTHER: 003

kes /CA
Card 2/2

L 24299-66 EWT(1)/T JK

ACC NR: AP6005094 (A) SOURCE CODE: UR/0325/65/000/004/0020/0022

27
B

AUTHOR: Gromov, V. V.

ORG: none

TITLE: Distribution of the Caspia crayfish Corophium in the Sylvenskiy Inlet of the Kama water reservoir

SOURCE: Nauchnyye doklady vysshey shkoly. Biologicheskiye nauki, no. 4, 1965, 20-22

TOPIC TAGS: water pollution, ~~[illegible]~~, sea water, fresh water, animal physiology, biologic ecology, drainage system, surface water

ABSTRACT: The number and habitat of Corophium curvispinum (Perecaridae), a desirable biomass as food for fish, was determined since 1956 when this reservoir was filled to cover 100 km^2 of the Sylvenskiy Inlet. This caused migration to parts with river conditions, shallow with gravel. Some of these shallow parts froze over in winter, thus killing the Corophium which requires depths beyond 7-8 m. Subsequently it migrated to lower parts with a flooded forest bottom. Its biomass was

Card 1/2

L 24299-66

ACC NR: AP6005094

91.3 g/m^2 in 1957 under river conditions. In 1962-63 Corophium was found in the flooded forest at a 57.8 g/m^2 biomass. It was concluded that 8 years after the reservoir was filled, the Corophium had migrated from the shallow river-like parts to occupy the biotope of the first half of the inlet, living not only on wooded bottoms but also on non-silted rocks, and that it will probably occupy the inlet wherever oxygen conditions are favorable. There is some competition with Dreissena polymorpha. It is recommended that Coriphium be artificially transplanted to other inlets of the reservoir to augment fish food since it cannot migrate by itself due to barriers of contaminated water. Orig. art. has: none.

SUB CODE: 06,08/SUBM DATE: 16Dec64/ ORIG REF: 003

Card 2/2 FV

ACC NR: AT7001783 SOURCE CODE: UR/3119/66/000/004/0049/0052

AUTHOR: Gromov, V. V.; Karaseva, L. G.

ORG: Institute of Physical Chemistry AN SSSR (Institut fizicheskoy khimii AN SSSR)

TITLE: Radiation damage in radioactive and gamma-irradiated calcium, strontium, and barium sulfate

SOURCE: AN LatSSR. Institut fiziki. Radiatsionnaya fizika, no. 4, 1966. Ionnyye kristally (Ionic crystals), 49-52

TOPIC TAGS: calcium sulfate, strontium compound, barium compound, sulfate, radiation damage, radioactivity effect, gamma radiation, beta radiation, electron paramagnetic resonance, paramagnetic susceptibility

ABSTRACT: The authors used electron paramagentic resonance to study the transformations occurring in a crystal lattice of rare-earth sulfates under the influence of beta radiation from S^{35} introduced into these compounds. In addition, they investigated nonradioactive samples of the same salts irradiated with gamma rays from Ca^{60}. The procedure for preparing powders of the radioactive salts was described earlier (DAN SSSR, v. 149, 626, 1963). The tests consisted essentially of determining the accumulation of paramagnetic centers in the radioactive sulfates, determining the concentration of the paramagnetic centers as a function of the specific radioactivity,

Card 1/2

ACC NR: AT7001783

and measuring the annealing of the paramagnetic centers in the irradiated sulfates. The results show that the higher the level of the specific radioactivity of the salt, the more rapidly equilibrium is attained in the formation of the paramagnetic centers. The paramagnetic-center concentration increases with radioactivity but eventually attains saturation. It is concluded from the results that irradiation produces in the investigated salts localized unpaired electrons, which remain stable up to certain temperatures. The most stable EPR signal is found to be due to the radical SO_3^-. The asymmetry of the observed EPR line is attributed to the radical SO_4^-, which has a three-axis anisotropy of paramagnetic susceptibility. Orig. art. has: 3 figures.

SUB CODE: 20/ 18/ SUBM DATE: 00/ ORIG REF: 005

Card 2/2

GROMOV, V.V.

Modern changes in the distriburion of Caspian forms in the Kama River.[with English summary in insert]. Zool.zhur.35 no.11:1608-1616 D '56. (MLRA 10:1)

1.Molotovskiy gosudarstvennyy universitet.
(Kama River--Fresh-water fauna)

GROMOV, V.V.

Effect of industrial sewage on the water fauna and fish catches in the middle course of the Kama River. Vop. ikht. no.10:172-187 '58.
(MIRA 11:10)

1. Permskiy universitet.
(Kama River--Water--Pollution)
(Kama River--Fisheries)

GROMOV, V.V.

Hydrobiological characteristics of the upper course of the Iren' River. Uch. zap. Perm. gos. un. 13 no.1:63-73 '60. (MIRA 14:11)

(Iren' River--Fresh-water fauna)
(Trout)
(Fishes--Food)

GROMOV, V.V.

The fauna of aquatic organisms occuring on submerged wood in the Sylva Bay of Kama Reservoir. Zool. zhur. 40 no.3:309-317 Mr '61. (MIRA 14:3)

1. State University of Perm.
(Kama Reservoir—Chironomidae)

GROMOV, V.V.

Aquatic organisms occurring on decaying wood in Kama Reservoir (exemplified by the Syra River Estuary). Dokl. AN SSSR 142 no.3: 692-694 Ja '62. (MIRA 15:1)

1. Permskiy gosudarstvennyy universitet im. A.M.Gor'kogo. Predstavleno akademikom Ye.N.Pavlovskim.
(Kama Reservoir--Fresh-water fauna)

L 54700-65 EWT(m)/EPF(c)/EWP(i)/EPF(n)-2/T/EWP(t)/EWP(b) Pr-4/Pu-4 JD/HW/GG

ACCESSION NR: AP5007570 S/0020/65/160/005/1111/1113 48 46 B

AUTHOR: Gromov, V. V.; Kapshaninov, Yu. I.

TITLE: Preparation of highly dispersed electrolytic platings of crystalline cerium oxide under irradiation 19 16

SOURCE: AN SSSR. Doklady, v. 160, no. 5, 1965, 1111-1113

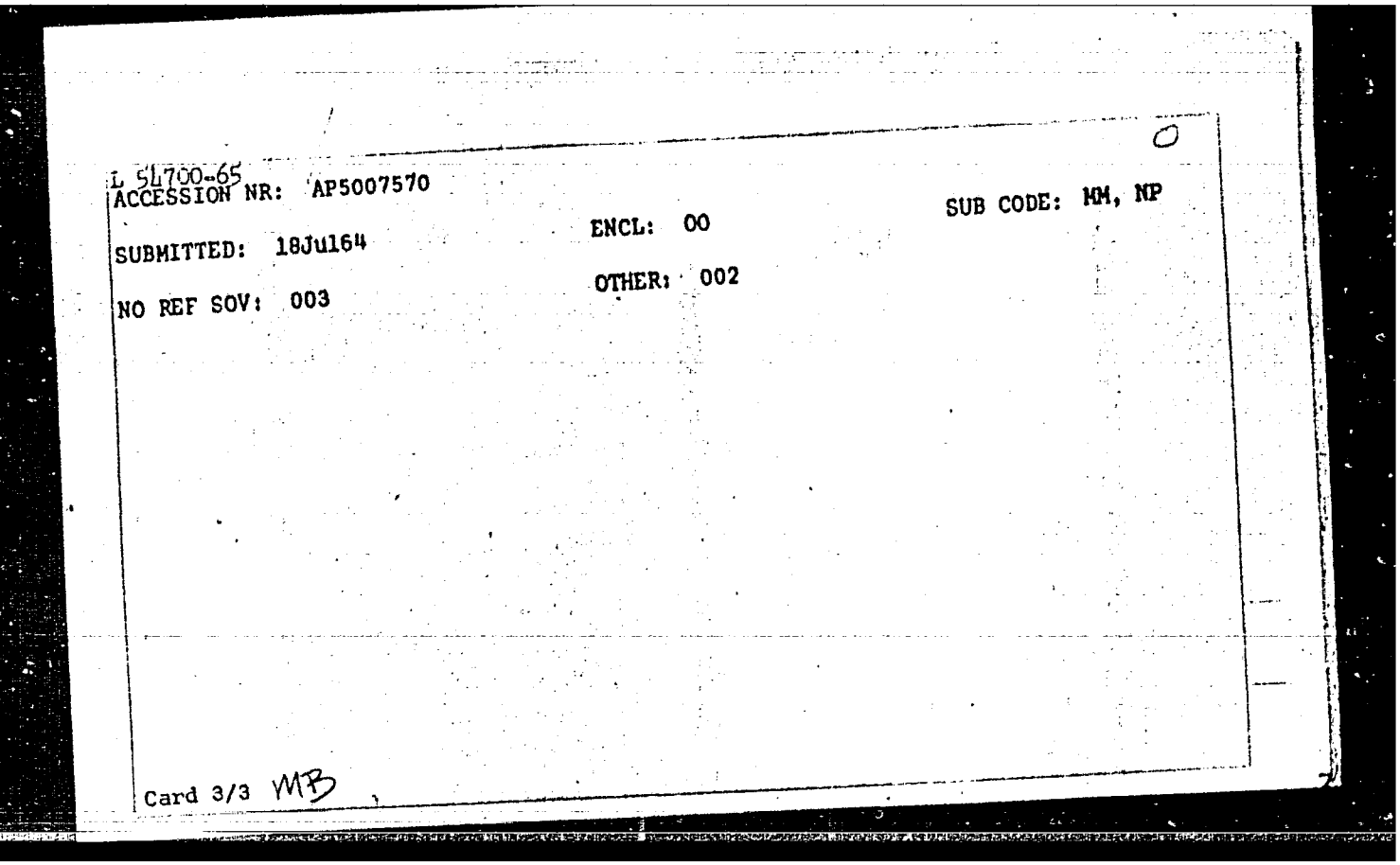
TOPIC TAGS: crystalline cerium oxide plating, cerium oxide plating, cerium oxide, irradiation, highly dispersed plating 14

ABSTRACT: The effect of ionizing radiation on the degree of dispersion of electrolytic crystalline platings of cerium oxide on stainless steel was studied. The experimental set-up contained a 1.5 cm^2 Pt-anode rotating at about 120 rpm, a 2 cm^2 stainless steel cathode, and an LP-5 glass electrode for pH recording. In each experiment a 50 ml solution of $CeCl_3$ was used containing 0.02 mg of Ce^{3+}/ml. The following conditions were also constant: electrolysis duration 1 hour, current density 70 ma/cm^2, voltage 12V, pH 2.5, and temperature 55°C. In all cases 0.8 ± 0.05 mg or 80 ± 5% of Ce^{3+} ions contained in the electrolyte was deposited on the stainless steel cathode. In one series of experiments Ce^{144} isotope (0.2, 2.0 and 20.0

Card 1/3

millicuries) was used as an internal source of ionizing radiation while in another series an external ionizing radiation was derived from a Co^{60} source (40,000 g·eqv of Ra). Examination of the platings with an MIM-7 microscope (400 magnification) showed that in both series of experiments an identical dispersion of cerium oxide was reached at a given level of radiation absorption ($1 \cdot 10^{13}$, $2 \cdot 10^{14}$, and $2 \cdot 10^{15}$ eV/ml). Ionizing irradiation of platinum and stainless steel with Co^{60} results in increased adsorptive capacities of these metals. For a given radiation absorption level, cerium oxide platings with slightly greater crystallite dispersion resulted from using Ce^{144} isotope than from the Co^{60} irradiation. Function of ionizing radiation is traced to radiolysis of the electrolyte water into H and OH radicals which then interact with the cathode in such a fashion as to cause increased adsorption ability of the cathode surface. The paper was presented to Academician V. I. Spitsyn on July 19, 1964. "In conclusion, we thank A. T. Vagramyan for discussing the results of the work." Orig. art. has: 1 table and 3 figures.

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



L 51700-65
ACCESSION NR: AP5007570

SUBMITTED: 18Jul64 ENCL: 00 SUB CODE: MM, NP

NO REF SOV: 003 OTHER: 002

Card 3/3 MB

L 55917-65 EWT(1)/EPF(c)/EEC(t) Pi-4 IJP(c) WW/GG

ACCESSION NR: AP5018336 UR/0020/64/159/001/0178/0181

AUTHOR: Spitsyn, Vikt. I. (Academician); Gromov, V. V.; Karaseva, L. G.

TITLE: Investigation of the electron paramagentic resonance spectra of radioactive and irradiate samples of calcium, strontium, and barium sulfates

SOURCE: AN SSSR. Doklady, v. 159, no. 1, 1964, 178-181

TOPIC TAGS: electron paramagnetic resonance, inorganic salt, crystal structure, sulfate

ABSTRACT: The method of electron paramagnetic resonance was used to study the transformation that occur in the crystal lattice of sulfides of the alkaline earth elements under the influence of the beta radiation of S^{35}, introduced into these preparations. The irradiation of nonradioactive samples of the same salts on a Co^{60} gamma setup was conducted for comparison. The comparison of the electron paramagnetic resonance spectra of radioactive and irradiated samples of calcium, strontium, and barium sulfates showed that the nature of certain paramagnetic centers (A,B) is the same in both cases. In

Card 1/2

L 55917-65
ACCESSION NR: AP5018336

contrast to the radioactive preparations, the spectra of the gamma-irradiated sulfates consist of a large number of paramagnetic centers differing in character, since the absorbed dose was twice as high as in the radioactive preparations. A comparison of the yields of paramagnetic centers of the three substances showed that $CaSO_4 \cdot 2H_2O$ possesses the greatest radiation stability, and $SrCO_4$ the least. This finding correlates with the corresponding pattern found for the hearts of formation of these compounds: $CaSO_4 \cdot H_2O > BaSO_4 > SrSO_4$.

Orig. art. has: 4 figures, 1 table.

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

SUBMITTED: 26May64 ENCL: 00 SUB CODE: NP, IC

NR REF SOV: 008 OTHER: 005 JPRS

Card 2/2

CRONOV, V.V.

Distribution of the Caspian crustacean Corophium in the Sylva Bay of Kama Reservoir. Nauch.dokl.vys.shkoly; biol.nauki no.4:20-22 '65. (MIRA 18:10)

1. Rekomendovana kafedroy zoologii bespozvonochnykh Permskogo gosudarstvennogo universiteta im. A.M.Gor'kogo.

GRIGOV, V.V.

Distribution of Dreissena polymorpha Pall. in the Syrva Bay of Kama Reservoir. Zool. zhur. 44 no.7:1084-1086 '65. (MIRA 18:9)

ACC NR: AP6002210 (A) SOURCE CODE: UR/0153/65/008/005/0834/0839 14 13

AUTHOR: Gromov, V. V.; Gavurina, R. K. 8

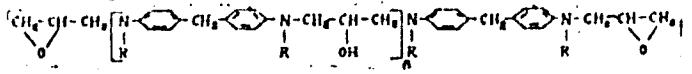
ORG: Department of Plastic Technology, Leningrad Technological Institute im. Lensovet (Kafedra tekhnologii plastmass Leningradskogo tekhnologicheskogo instituta)

TITLE: Epoxy resins from N,N'-dialkyl substituted derivatives of 4,4'-diamino-diphenylmethane 15

SOURCE: IVUZ. Khimiya i khimicheskaya tekhnologiya, v. 8, no. 5, 1965, 834-839

TOPIC TAGS: epoxy plastic, nitrogen compound, organic synthetic process, resin, diphenyl compound, methane, chlorohydrin

ABSTRACT: Using N,N'-dimethyl-, N,N'-diethyl-, and N,N'-diisopropyl-4,4'-diamino-diphenylmethane and epichlorohydrin as the starting materials, the epoxy resins containing nitrogen were synthesized, while studying the conditions of each stage of the synthesis. The condensation reaction of N,N'-dialkyldiamines with epichlorohydrin was performed in two stages (1. formation of chlorohydrin, 2. dehydrochlorination by alkali at room temperature) and gave a product of the structure:



The average magnitude of the degree of condensation (n) depended on the ratio of the

Card 1/2 UDC: 678-65

L 39477-66

ACC NR: AP6002210

starting materials. At constant reaction conditions, the concentration of epoxy groups in the final products decreased with the increasing length of the alkyl substituents. In the first stage of the synthesis, the nature of the solvent affected the rate of the reaction. At 75-95C the rate decreased with the solvents: isoamyl alcohol > isopropyl alcohol $\gg$ benzene + isopropyl alcohol $\ggg$ benzene. Use of a benzene-isopropyl-alcohol mixture as the solvent in the second stage of the reaction made possible a replacement of a 44% solution by the solid NaOH. The dehydrochlorination reaction was practically accomplished within 3-4 hours. Curing with maleic anhydride (5 hours at 60C) or 4,4'-diaminodiphenylmethane gave resins of approximately similar properties. Experimental procedure: one mole of diamine dissolved in 300 ml C_6H_6 was heated for 15 minutes at 85C and then a known amount of epichlorohydrin was added slowly (15 minutes) by drops to the solution; this was mixed at 85C for 15 hours. The clear light-brown solution of dichlorohydrin formed was cooled to 20C, 2.4 M 44% NaOH solution was added gradually for each mole of the diamine, and this was mixed for 15 hours at 20-25C. The NaCl formed was removed and the reaction mixture was washed with H_2O to a negative Cl^- reaction and a weak alkalinity of the wash water (pH 7.8 - 8.5). After distillation of the solvent (C_6H_6), epichlorohydrin, and residues of H_2O, the resin formed was dried in a vacuum at 36 - 40C. Using C_6H_6 + isopropyl alcohol mixture as the solvent, the reaction was performed analogously with a reduction of the time of the dehydrochlorination with solid NaOH to 5 - 6 hours. Orig. art. has: 3 figs., 1 formula and 5 tables.

SUB CODE: 20,07/ SUBM DATE: 18Jul64/ ORIG REF: 010/ OTH REF: 010

Card 2/2 MLP

GROMOV, Ye.A.; KANEVSKAYA, T.M., red.; PONOMAREVA, A.A., tekhn.red.; GERASIMOVA, Ye.S., tekhn.red.

[Coal in the fuel economy of the United States] Ugol' v toplivnom khoziaistve SShA. Moskva, Gosplanizdat, 1958. 243 p. (MIRA 12:7)
(United States—Coal)

L 23537-66

ACC NR: AP6013990 SOURCE CODE: UR/0216/65/000/001/0103/0107

16

AUTHOR: Gromova, Ye. A.--Gromova, E. A.; Skuratova, S. A. B

ORG: Institute of Normal and Pathological Physiology, AMN SSSR, Moscow (Institut normal'noy i patologicheskoy fiziologii AMN SSSR)

TITLE: Physiological analysis of the effect of serotonin on the motor function of man

SOURCE: AN SSSR. Izvestiya. Seriya biologicheskaya, no. 1, 1965, 103-107

TOPIC TAGS: serotonin, biologic metabolism, electrophysiology, cat

ABSTRACT: The investigation of the mechanism of action of serotonin on the motor function of the organism is of major interest in view of the existence of experimental findings on its antispasmodic effect (Scarinci, 1955; Cahn et al., 1958; Laborit et al., 1958 and others) These findings have led to the theory that disturbances in the normal metabolism of serotonin may be a definite factor in the genesis of convulsive seizures. The authors experimentally verified this plausible theory by performing an electrophysiological analysis of the effect of serotonin on cerebrospinal reflex activity. Thus, mono- and polysynaptic reflexes of the spinal cord on stimulation of the muscular and cutaneous nerves of the hind legs were tested in experiments on 62 cats with sectioned spinal cord. It is shown that the intravenous and intraarterial administration of serotonin in doses of 10-150 g per kg body

UDC: 591.18

Card 1/2

L 23537-66

ACC NR: AP6013990

weight produces two-phase changes in the magnitude of the electrical potential of these reflexes, recorded in the anterior roots L_7, S_1 of the spinal cord. It is concluded that serotonin exerts a direct effect on the segmental cerebrospinal reflexes in the mechanism of the action of serotonin on the motor function of the organism, which most investigators consider due to the effect of serotonin on the cerebral subcortical structures. Orig. art. has: 4 figures. [JPRS]

SUB CODE: 06 / SUBM DATE: 20Jul63 / ORIG REF: 003 / OTH REF: 010

Card 2/2

GRICOV, Ye. I.

"Studying the Process of Ammonia Absorption From Coke Oven Gas With Sulfuric Acid Solutions to Improve Industrial Methods of Preparing Ammonium Sulfate." Cand Chem Sci, Ukrainian Sci-Res Coal Chemistry Inst, Glavkoks, Ministry of Local Industry; Khar'kov Sci-Res Inst of Coal Chemistry, Khar'kov, 1954. (RZhKhim, No 21, Nov 54)

Survey of Scientific and Technical Dissertations Defended by USSR Higher Educational Institutions (11)

SO: Sum. No. 521, 2 Jun 55

BRODOVICH, A.I., doktor tekhnicheskikh nauk; GROMOV, Ye.I., kandidat tekhnicheskikh nauk.

Investigation of asbestos-vinyl as a protective coating for equipment of by-product coke plants. Koks i khim.no.2:47-50 '56. (MLRA 9:7)

1.Ukrainskiy uglekhimicheskiy institut.
(Protective coatings) (Coke industry--Equipment and suplies)

GROMOV, Ye.I.; CHERKASHIN, V.N.

Methods for protecting cross tie rods in coke ovens. Koks i khim. no.11:35-37 '61. (MIRA 15:1)

1. Ukrainskiy uglekhimicheskiy institut.
(Coke ovens)

S/068/62/000/003/003/003
E071/E435

AUTHORS: Gromov, Ye.I., Cherkashin, V.N.

TITLE: Corrosion resistance of materials in technological media involved in the production of indine-coumarone resins

PERIODICAL: Koks i khimiya, no.3, 1962. 47-48

TEXT: The results are given of an investigation of resistance to corrosion of various steels and corrosion resistant materials in the media of the plant for washing and neutralization of polymerized indine-coumarone resins ($AlCl_3$ used as a catalyst) in the evaporator and condenser. Specimens investigated were placed in a special cage made of a fluoride plastic which was fitted in to the appropriate plant equipment. Data on the velocity of corrosion were expressed in loss of weight (g/m^2 of surface per hour). It is concluded that the body of the washing apparatus should be made from mild steel, protected by diabase plate lining, the joints of which should be filled with a paste Armasite-2 (resistant to acid and alkali); the protection of the cover and manholes can be achieved with ATM-1 plates, faolite or bakelite lacquer. The evaporator can be made from steel Kh18N12M3T (Kh18N12M3T), tubes

Card 1/2