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SOV/66-59-1-23/32

Cold Storage Houses and Artificial Skating Rinks in the CSR

air being blown down from the top of the door and sucked up at the bottom. There are 24 artificial ice skating-rinks in the ČSR. It takes 8 to 10 hours to freeze the water in the rink. The freezing pipes are laid in concrete at a distance of 85 to 100 mm from one another. The specific load for covered rinks is 250-300 kgcal/m^2 and for open rinks 150 - 200 kgcal/m^2. Ice thickness is 2 - 5 cm. Skating-rinks with brine freezing system last about 10 years. There are 3 photos.

Card 3/3

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LAVROVA, V. V., Cand Tech Sci -- (diss) "Experimental research into heat-exchange coefficient in the boiling of freon-12." Leningrad, 1960. 14 pp with illustrations; (Ministry of Higher and Secondary Specialist Education RSFSR, Leningrad Technological Inst of Refrigeration Industry); number of copies not given; price not given; (KL, 28-60, 161)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

BADYL'KES, I.S., prof., doktor tekhn.nauk; BUKHTER, Ye.Z., inzh.; VEYNBERG, B.S., kand.tekhn.nauk; VOL'SKAYA, L.S., inzh.; GERSH, S.Ya., prof., doktor tekhn.nauk [deceased]; GUREVICH, Ye.S., inzh.; DANILOVA, G.N., kand.tekhn.nauk; YEFIMOVA, Ye.V., inzh.; IOFFE, D.M., kand.tekhn.nauk; KAN, K.D., kand.tekhn.nauk; LAVROVA, V.V., inzh.; MEDOVAR, L.Ye., inzh.; ROZENFEL'D, L.M., prof., doktor tekhn. nauk; TKACHEV, A.G., prof., doktor tekhn.nauk; TSYRLIN, B.L.; SHUMELISHSKIY, M.G., inzh.; SHCHERBAKOV, V.S., inzh.; YAKOBSON, V.B., kand.tekhn.nauk; GOGOLIN, A.A., retsenzent; GUKHMAN, A.A., retsenzent; KARPOV, A.V., retsenzent; KURYLEV, Ye.S., retsenzent; LIVSHITS, A.B., retsenzent; CHISTYAKOV, F.M., retsenzent; SHEYNDLIN, A.Ye., retsenzent; SHEMSHEDINOV, G.A., retsenzent; PAVLOV, R.V., spetsred.; KOBULASHVILI, Sh.N., glavnyy red.; RYUTOV, D.G., zam.glavnogo red.; GOLOVKIN, N.A., red.; CHIZHOV, G.B., red.; NAZAROV, B.A., glavnyy red.izd-va; NIKOLAYEVA, N.G., red.; EYDINOVA, S.G., mladshiy red.; MEDRISH, D.M., tekhn.red.

[Refrigeration engineering; encyclopedic reference book in three volumes] Kholodil'naia tekhnika; entsiklopedicheskii spravochnik v trekh knigakh. Glav.red. Sh.N.Kobulashvili i dr. Leningrad, Gostorgizdat. Vol.1. [Techniques of the production of artificial cold] Tekhnika proizvodstva iskusstvennogo kholoda. 1960. 544 p. (MIRA 13:12)

(Refrigeration and refrigerating machinery)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

ALEKSANDROV, S.V.---(continued) Card 2.
1. Vsesoyuznyy institut rasteniyevodstva (for Sechkarev, Lizgunova, Brezhnev, Gazenbush, Mashcherov, Filov, Tkachenko, Kazakova, Krasochkin, Levandovskaya, Shebalina, Syskova, Makasheva, Ivanov, Martynov, Girenko, Ivanova, Shilova). 2. Gribovskaya ovoshchnaya selektsionnaya opytnaya stantsiya; chleny-korrespondenty Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Alpat'yev, Solov'yeva). 3. Deystvitel'nyy chlen Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Brezhnev).
(Vegetables--Varieties)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

BOBKOV, Vsevolod Andreyevich, kand. tekhn. nauk, starshiy nauchnyy sotr.; LAVROVA, V.V., kand. tekhn. nauk, nauchnyy red.; KAPLUN, M.S., red.; MAMONTOVA, N.N., tekhn. red.

[Automatic ice machine for making crushed kitchen ice; scientific report] Issledovanie avtomaticheskogo l'dogeneratora dlia proizvodstva droblenogo pishchevogo l'da; nauchnoe soobshchenie. Moskva, Gos. izd-vo torg. lit-ry, 1961. 31 p. (MIRA 14:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut kholodil'noy promyshlennosti im. A.I.Mikoyana (for Bobkov).
(Ice—Manufacture)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

BRUT, Dar'ya Semenovna; LAVROVA, Yelena Antonovna; DEREVETS', S., red.; VELICHKO, M., tekhn.red.

[Handbook for students entering the special secondary schools of the Ukrainian S.S.R. in 1959; as of March 1, 1959] Dovidnyk dlia vstupnykiv po serednikh spetsial'nykh uchbovykh zakladiv Ukrains'koi RSR na 1959 rik; za stanom na 1 bereznia 1959 roku. Kyiv, Derzh. vyd-vo tekhn.lit-ry URSR, 1959. 250 p. (MIRA 13:3)
(Ukraine--Technical education)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

28 (5) SOV/32-25-8-26/44

AUTHORS: Britske, M. E., Lavrova, Ye. A.

TITLE: Application of the Photo-electric Stylometer FES-1 for the Analysis of Nonconductive Powders

PERIODICAL: Zavodskaya laboratoriya, 1959, Vol 25, Nr 8, pp 970 - 971 (USSR)

ABSTRACT: For comparison a non-resolved beam of the arc is being used in the instrument FES-1, which causes difficulties in the analysis of powders. Therefore, a light filter was inserted in the channel in the present case, which filter permits the passage of only a narrow wave-range of the spectrum. To stabilize the intensity of the spectrum the blowing-in of the sample method according to A. K. Rusanov was applied. Sodium is used as inner standard. Determinations of lead, zinc, and copper on ores and flotation residues of the lead-zinc production were made (Table), the influence of the blowing-in velocity, of the current intensity of the arc and the chemical composition of the sample were investigated and it was established that these factors do not cause an appreciable displacement of the calibration dia-

Card 1/2

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

Application of the Photo-electric Stylometer FES-1 for the Analysis of Nonconductive Powders SOV/32-25-8-26/44

grams (Figure). There are 1 figure and 1 table.

ASSOCIATION: Gosudarstvennyy institut tsvetnykh metallov (State Institute of Non-ferrous Metals)

Card 2/2

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVA, Ye.A.; KUZNETSOVA, A.V.

Analysis of brand-grade lead, zinc, and cadmium in an impurity by means of the DFS-10 quantometer. Zav. lab. 31 no.1:50-54 '65. (MIRA 18:3)

1. Gosudarstvennyy institut tsvetnykh metallov.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

SAMSONOVA, K.A.; TRATRIN, A.D.; LAVROVA, Ye.M.

Responses to our articles. Zashch. rast. ot vred. i bol. 8 no.6:11 Je '63. (MIRA 16:8)

1. Zaveduyushchaya sektorom sluzhby ucheta i prognozov Rostovskoy oblasti (for Samsonova). 2. Nachal'nik otryada po zashchite rasteniy Sorochinskogo proizvodstvennogo upravleniya Orenburgskoy oblasti (for Tratrin). 3. Zaveduyushchaya Urzhumskim nablyudatel'nym punktom, Kirovskaya oblast' (for Lavrova).
(Plants, Protection of)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVA, Ye.V.

SHPIRT, Ya.Yu.; LAVROVA, Ye.V.

Use of ecmonovocillin for preventing pneumonia in acute catarrh of the upper respiratory tract and in influenza in children. Antibiotiki 1 no.6:34-36 N-D '56. (MLRA 10:2)

1. Detskaya konsul'tatsiya i poliklinika Okruzhnoy moskovskoy dorogi.
(PNEUMONIA, prevention and control,
procaine penicillin with ecmoline, prev. of pneumonia in common cold & influenza (Rus))
(COMMON COLD, therapy,
procaine penicillin with ecmoline, prev. of pneumonia (Rus))
(INFLUENZA, therapy,
same)
(ANTIBIOTICS, therapeutic use,
ecmoline with procaine penicillin, prev. of pneumonia in common cold & influenza (Rus))
(PENICILLIN, related compounds,
procaine penicillin with ecmoline, prev. of pneumonia in common cold & influenza (Rus))

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVA, Ye. V.

SHPIRT, Ya.Yu., prof.; LAVROVA, Ye.V.; LITVINOVA, N.N.

Prevention of focal pneumonia during influenza and acute catarrh of the upper respiratory tract in children. Sov.zdrav. 16 no.12: 35-39 D '57. (MIRA 11:1)

1. Iz detskoy konsul'tatsii i polikliniki Okruzhno Moskovskoy dorogi.

(INFLUENZA, in inf. & chold
compl., focal pneumonia, prev., ekmonovocillin (Rus))
(ANTIBIOTICS, ther. use
ekmonovocillin in prev. of focal pneumonia in influenza & upper resp. tract infect. in child. (Rus))
(PNEUMONIA, in inf. & chold.
prev. in influenza & upper resp.tract infect., ekmonovocillin (Rus))

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

31663
S/570/61/000/019/003/008
B104/B102

9,9100

AUTHOR: Lavrova, Ye. V.

TITLE: Geographical distribution of ionospheric disturbances in the F2 layer

SOURCE: Akademiya nauk SSSR. Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln. Trudy, no. 19 (29), 1961, 31 - 43

TEXT: Under the program of the International Geophysical Year, the IZMIRAN Institute evaluated data on the critical frequency foF2 in 1957. In September of that year, seven magnetic storms occurred. The deviations $\pm \Delta foF2$ (in %) throughout this month were determined. The disturbances in the F2 layer begin long before a magnetic storm occurs in high latitudes. As the magnetic storm develops, the disturbances spread to medium and lower latitudes. Several anomalous regions above the earth were discovered, in which $\Delta foF2$ is considerably higher or lower than in their neighborhood. These "centers" are shifted during a magnetic storm. The following pattern is proposed on the basis of an investigation of the

Card 1/3

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31663
S/570/61/000/019/003/008
B104/B102

Geographical distribution of ionospheric....

motion of these centers and of ΔfoF2 charts: One to three days before the magnetic storm, small negative centers (20 - 30%) of ΔfoF2 appear in high latitudes, which are usually accompanied by positive centers in lower latitudes. As the magnetic storm starts, the negative centers are moving southward and extend over a larger area. During the magnetic storm, the area of negative ΔfoF2 covers the entire area between 45 and 65° north latitude. The negative centers are then situated either over Canada or over Europe. In December 1957, no negative centers were observed over the Far East and the Pacific. As the magnetic storm further develops, the positive centers in lower latitudes are replaced by negative ones. Total absorption was observed in high latitudes almost during the entire period of the magnetic storm. Toward the end of the latter, the latitudinal distribution of negative disturbances is distorted, and positive centers appear in the South Pacific. Recommendations are made for the evaluation of results for short-range weather forecasts. The results obtained here need further verification. There are 3 figures, 2 tables, and 4 non-Soviet references. The 4 references to English-language publications read as follows: Burkard, J. Geophys. Res., 56, no. 4, 595, 1951; Lawrence. J. Geophys. Res., 58, no. 2, 1953; Sinno. Rept. Ionosph. Res.

Card 2/3

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

31663
S/570/61/000/019/003/008
B104/B102

Geographical distribution of ionospheric...

Japan, 8, 28, 1954; Obayashi. J. Radio Res. Laborat., Tokyo, 1, no. 6, 55, 1954.

Card 3/3

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

L 38375-66 EWT(1)/FCC GW

ACC NR: AT6023730 SOURCE CODE: UR/2831/65/000/014/0086/0093

AUTHOR: Mogilevskiy, E. I.; Zevakina, R. A.; Lavrova, Ye. V.; Lyakhova, L. N. 63 B+1

ORG: none

TITLE: The nature of time-space distribution of ionospheric disturbances

SOURCE: AN SSSR. Mezhduvedomstvennyy geofizicheskiy komitet. V razdel programmy MGG: Ionosfera. Sbornik statey, no. 14, 1965. Ionosfernyye issledovaniya, 86-93

TOPIC TAGS: ionospheric disturbance, solar wind, F layer, geomagnetic field, solar plasma, critical frequency, solar corpuscular radiation, atmospheric ionization, atmospheric disturbance, ionospheric absorption, synoptic meteorology, map

ABSTRACT: Ionospheric perturbations are associated with solar corpuscular streams and the magnetosphere. An increased disturbance in the F2 layer at high latitudes is connected with additional ionization and structural disruptions of the lower ionosphere. Data obtained from 60 ionospheric stations during the IGY were used in analysis of the spatial distribution of anomalous absorption in the Northern and Southern Hemispheres. Absorption maps have been drawn and compared with solar processes, ionospheric disturbances, and perturbations in the geomagnetic field. Anomalous absorption begins several hours after a type-IV radio burst and covers the polar cap and the auroral zone. During weak absorption, preeminent "shock zones" and quasi-spiral regions are formed allowing direct entry of high-energy solar corpuscles. A corpuscular stream model with a forceless magnetic field was used for ionospheric disturbances. A forceless magnetic field is a necessary

Card 1/2

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVA, Ye.V.

Geographical distribution of ionospheric disturbances in the F_2 layer. Trudy IZMIRAN no.19:31-43 '61. (MIRA 15:3)
(Ionospheric radio wave propagation) (Magnetic storms)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

MOGILEVSKIY, Ye. I.; ZEVAKINA, R. A.; LAVROVA, Ye. V.; KYAKHOVA, L. N.

"On the Nature and Space - and Time - Distribution of Ionospheric Disturbances."

summary to be presented at the 13th Gen Assembly, IUGG, Berkeley, Calif, 19-31 Aug 63.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVA, Z., agronom

That's how valuable varieties were developed. Nauka i pered.op. v sel'khoz. 8 no.11:71-73 N '58. (MIRA 11:12)
(Plant breeding)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVA, Z., agronom

First Russian women agronomists. Nauka i pered.op. v sel'khoz. 9 no.3:71-72 Mr '59. (MIRA 12:5)
(Women as agriculturists)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVA, Z., agronom

Recent developments in the treatment of vegetable seeds before planting. Nauka i pered. op. v sel'khoz. 9 no.4:14-16 Ap '59. (MIRA 12:6)

(Vegetable gardening)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

KAMSHILOV, N., agronom; LAVROVA, Z., agronom

Advice to gardeners. Nauka i zhyttia 11 no.3:51 Mr '62. (MIRA 15:8)

(Gardening)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVA, Z.P., (Moskva)

Causes of bitter taste in cucumbers. Priroda 52 no.9:101-102 '63. (MIRA 16:11)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVA-BALASHOVA, M. F. Cand Biol Sci -- "Isolation, purification, [redacted] cleaning, and study of certain chemical properties of the colimin~~x~~cin antibiotic." Mos, 1961 (Acad Med Sci USSR). (KL,4-61, 192)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

Ca

8

The graphite occurrence of Kosharul-Aleksandrov. N. S. Lavrovich. *Mineral-'noe Suir'e i Tsvetnuie Met.* 4, 57-68(1929); *Chem. Zentr.* 1930, I, 661.—The graphite veins found on the left bank of the Bug were examd. more closely. Two av. samples (I and II) from various occurrences were analyzed. I contained C 9.98, S 0.02, Fe 3.1, H_2O 6.4%; d_{15} 2.33. The ash contained SiO_2 34.04, Al_2O_3 22.84, Fe_2O_3 6.70, CaO 26.02, TiO_2 0.85, MgO 5.99, P_2O_5 0.03%, MnO traces. By flotation of the graphite ore a concentrate contg. 85.50% C was obtained. The graphite flakes show a skeleton structure cemented with calcite. II contained SiO_2 56.68, Fe_2O_3 9.41, MnO 3.72, Al_2O_3 7.87, TiO_2 2.91, CaO 9.31, MgO 3.16, CuO 0.48, C 17.40, H_2O 6.8%. Geologic and microscopic investigations led L. to the assumption that the graphite was formed from O compds. of C under the influence of pneumatolytic processes. G. Schwoch

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

Graphite supplies of the U. S. S. R. V. I. LUCHITSKII AND N. S. LAVROVICH.
Mineral. Sutr's 5, 1050-63(1930); *Chem. Zentr.* 1931, I, 2032 M. G. MOORE

COMMON ELEMENTS

MATERIALS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVICH, N.S.

JOHN F. [illegible]

Khalilov deposits of magnesite in South Ural. N. S. LAVROVICH AND D. YA. TERSKOV. *Mineral. Suir's* 6, 453-76(1931). CHAS. BLANC

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

CA

8

Deposits of fluorspar in East Transbaikal. N. S. Lavrovich. *Mineral. Smir's* 9, No. 1, 3-11(1934).—Phys. and chem. properties of fluorite deposits and economical and transportation aspects of mining are discussed. C. B.

COMMON ELEMENTS

COMMON VARIABLES INDEX

MATERIALS INDEX

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

A

Fluorite deposits in eastern Trans-Baikal. N. S. Lavrovich and N. T. Tarasova. *Mineral. Sur'e* 9, No. 3, 16-30(1934).—The various fluorite deposits and their chem. and phys. properties are discussed. C. Blanc

ASM-SLA - METALLURGICAL LITERATURE CLASSIFICATION

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1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

CA

7

A new fluorite deposit near Sedlovaya station on the Transbaikal railroad N. S. Lavrovich. *Mineral. Suir'e* 9, No. 4, 44(1934). Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVICH, Nikolay Stepanovich

LAVROVICH, Nikolay Stepanovich; BRITAYEV, M.D., redaktor; GERASIMOVSKIY, V.I., redaktor; YERSHOV, A.D., redaktor; KONSTANTINOV, M.M.; NIFONTOV, R.V., glavnyy redaktor; SAAKYAN, P.S., redaktor; SMIRNOV, V.I., redaktor; SOLOV'YEV, D.V., redaktor; CHERNOSVITOV, Yu.L., redaktor; SOSHNIKOVA, M.S., redaktor vypuska; SERGEYEVA, N.A., redaktor izdatel'stva; AVERKIYEVA, T.A., tekhnicheskiy redaktor.

[Fluorspar; (fluorite).] Plavikovyi shpat (fliuorit). Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geol. i okhrane nedr, 1956. 133 p. (Otsenka mestorozhdenii pri poiskakh i razvedkakh, no.16).
(Fluorite) (MLRA 10:9)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

Lavrovich, O.S.

Study of effect of clays of different mineral composition on the characteristics of clay-lime structural materials. P. P. Budnikov, I. M. Keller, and O. S. Lavrovich. *Doklady Akad Nauk S.S.S.R.* 87 [6] 1043-46 [1952]. Experiments were carried out with kaolin, clays and tripoli. The addition of lean clays and argillaceous soils to a lime-sand mixture improves the physical properties of the structural material steamed under pressure. During steaming under pressure, the free silica, which is finely dispersed in the clays, forms hydrocalcium silicate with the $Ca(OH)_2$. It is possible that kaolinite and $Ca(OH)_2$ also form a compound that improves the material to a smaller extent. A definite relationship exists between the expansion of the lime-clay structural material during its wetting, the frost resistance, and the amount of calcium hydrosilicate formed during steaming under pressure. Clay-lime shapes which expand more than 0.12% when moistened are not frost-resistant. B.Z.K.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVICH, O.S.

The effect of clay components on the properties of lime-stone-clay products. P. P. Budnikov, I. M. Keller, and O. S. Lavrovich. *Sbornik Trudov Resp. Nauch.-Issledovatel. Inst. Mestnykh Stroitel. Materialov* 1953, No. 5, 3-14; *Referat. Zhur., Khim.* 1954, No. 50399; cf. *C.A.* 49, 12810h.—Tests of compression strength showed that addn. of unwashed clay increases the strength whereas addn. of clay free of sand lowers the strength of ceramic specimens. Thermographic investigation showed that after treating a mixt. of 85% quartz sand and 15% lime with steam there was an endothermal effect at 180° and an exothermal effect at 900°. A steam-treated mixt. of kaolin 92 and lime 8% had an endothermal effect at 370°. The suitability of a raw material for lime-clay brick depends largely on its mineralogical compn. M. Hosch

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LAVROVICH, O.S.

Investigation of the interaction of clay minerals and feldspars with lime under hydrothermal treatment. I. M. Keller and O. S. Lavrovich. *Sbornik Trudov Respub. Nauch.-Issledovatel. Inst. Mestnykh Stroitel. Material.* 1954, No. 6, 11–30; *Referat. Zhur., Khim.* 1955, No. 873.—The investigation was carried out under conditions of autoclave hardening of lime-clay brick. As result of the interaction of $Ca(OH)_2$ with washed unimineral clays, Ca hydrosilicates and Ca hydroaluminates were formed. When natural clays and lime react, first to react is quartz sand. The extent of the interaction of clay minerals with lime depends on the specific surface of the quartz sand in the clay. When the content of finely dispersed sand in the clay is high, then the formation of the cementing substance is attributable primarily to the sand.

M. Hosch

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LAVROVS, Marats; VAIDERS, Leo; KRILOVA, N., red.; LEMBERGA, A., tekhn. red.

[Viruses] Virusi. Riga, Latvijas PSR Zinatnu akademijas izdevnieciba, 1961. 72 p. (MIRA 15:3)

(VIRUSES)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

Recombination of atoms on solid surfaces. V. V. Voevodskii and G. K. Lavrovskaya. *Doklady Akad. Nauk S.S.S.R.* 63, 151-4(1948).—Recombination of O atoms produced in a discharge under 300 v., 320 milliamp., and detd. by the rise of the temp. on the wall of a side capillary connected with the discharge tube, proved to be weak on glass and quartz, covered or not with KCl, LiCl, or $K_2B_4O_7$, fairly intense on surfaces coated with sputtered Pt, $ZnO.Cr_2O_3$, or $AgNO_3$. The temp. remains practically const. with the pressure decreasing from 0.3 to 0.07 mm. Hg, rises sharply at that point with further decreasing pressure. On Pt, the excess of the temp. within the capillary over the temp. of the external wall is only of about 30°K. at 40 milliamp., of the order of 1000°K. at 300-350 milliamp. If, at this stage, the current is turned off, and a low current of 40 milliamp. is switched on while the temp. is falling, the effect depends on the stage at which the low current is turned on; if it is done at less than 410°K., the temp. continues to fall to about 30°, if at more than 410°K., the temp. will rise to the former 1000°K. These crit. effects can be interpreted on the basis of Frank-Kamenetskii's theory of heterogeneous processes; the heat evolved per unit time being $\Phi_1 = \alpha k n Q/(\beta + k)$, where n = concn. of O atoms at a distance from the surface, Q = thermal effect per atom, β = diffusion rate const., K = rate const. of recombination at the surface, and the heat dissipated being $\Phi_2 = \alpha(T - T_0)$, where T = temp. within the capillary, T_0 = temp. of the external face of the wall, α = heat-transfer coeff., one has $\Phi_1 = \Phi_2$ for 3 temps. T_1, T_2, T_3 ($T_1 < T_2 < T_3$) of which only T_1 and T_3 correspond to a steady state; the above "crit." temp. of 410°K. corresponds to T_2, and the stationary temp. reached on turning on the current will be either T_1 or T_3, depending on whether it is done below or above T_2, i.e., depending on whether, at that point, $\Phi_1 > \Phi_2$ or $\Phi_1 < \Phi_2$. The activation energy E can be detd. by $\alpha = \alpha_0 e^{-E/RT}$

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Inst. Chem. Physics, AS USSR

(where α = probability of recombination), by calcg., from the data, α_0 and the degree of dissocn. γ for different values of E. Possible values of γ, i.e. $\gamma < 100\%$, correspond, on a $ZnO.Cr_2O_3$ surface, to $5100 \leq E \leq 5400$; as, by direct detns. γ = 50-70%, one has $E = 5200 \pm 100$ cal./mole and $\alpha_0 = 0.6$; on Pt, $E = 4900$ and $\alpha_0 = 0.3$. A similar calcn. of the recombination of H atoms on $ZnO.Cr_2O_3$ at 500° gives $E = 5000$, $\alpha_0 = 0.3$. The pre-exponential factor α_0 has the usual significance of a product of a steric factor and no. of collisions; if $\alpha_0 = \alpha_0' (\nu h^2/2\pi m k T)(S'/S)$, where ν = no. of active points per sq. cm., m = mass of the atom, S' and S, resp., the true and the geometric surface area, the estd. S'/S becomes, with $\alpha_0' = 1$, $\nu = 10^{10}$, for Pt = 50, for $ZnO.Cr_2O_3$ = 100. A test of the formula is given

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LAVROVSKAYA, G. K.

PA 192T40

USSR/Chemistry - Gas Kinetics Sep 51
Catalysis

"Reactions of Atoms of Hydrogen and Oxygen on Solid Surfaces," G. K. Lavrovskaya, V. V. Voyevodskiy, Acad Sci USSR, Inst of Chem Phys, Moscow State U imeni M. V. Lomonosov

"Zhur Fiz Khim" Vol XXV, No 9, pp 1050-1058

Studied recombination of H or O atoms into mols in the following systems: H + Pt; O + Pt; H + $ZnO.Cr_2O_3$; O + $ZnO.Cr_2O_3$; O + Cr_2O_3; O + MgO; H + MoO_3; O + MoO_3; H + carbon; O + ZnO; H + ZnO;

LC 192T40

USSR/Chemistry - Gas Kinetics (Contd) Sep 51

H + Cr_2O_3; O + PbO; H + PbO; H + MgO; O + quartz; O + KCl on quartz; H + $K_2B_4O_7$ on quartz; H or O + NaCl, LiCl, or HNO_3 on glass. Describes methods of depositing catalyst, conditions of conversion (including occurrence of the so-called "burning surface," i. e., a sharp rise of temp to 1,000° and higher), and other observations.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

USSR/Chemistry - Isotopes, Hydrocarbons Nov 51

"Mechanism of the Exchange Reaction of Hydrocarbon Radicals With Molecular Deuterium," V. V. Voyevodskiy, G. K. Lavrovskiy, R. Ye. Mardaleyshvili, Inst Chem Phys, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXXXI, No 2, pp 215-218.

Assumes that high deg and speed of introduction of D atoms, particularly into CH_3 radical, are due to participation of D_2 in addn to that of the few D atoms in the reaction. Investigated interaction of C_2H_5 radicals with D_2 in the absence of

199T6

USSR/Chemistry - Isotopes, Hydrocarbons Nov 51
(Contd)

D atoms. Found there was substitution in CH_2 groups of ethyl: n-butane substituted in the CH_2 groups could be isolated.

199T6

LAVROVSKIY, G. K.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

Aug 52

LAVROVSKAYA, G. K.

USSR/Chemistry - Catalysts

"The Recombination of Hydrogen Atoms on solid Surfaces," G. K. Lavrovskaya and V. V. Voyvodskiy, Inst of Chem Phys, Acad Sci USSR

Zhur Fiz Khim, Vol 26, No. 8, pp 1164-1166

A study was made of the recombination of H atoms on MoO_3, aluminosilicate catalyst, and activated carbon. The probabilities of recombination on these catalysts were detd and found to be related in the ration 50:5:1. The correctness of the mechanism postulated for the recombination of the atoms was confirmed. The principal phase of the mechanism is the interaction of atoms absorbed on the surface with atoms approaching the surface.

263 T 11

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVSKAYA, G. K.

"The Mechanism of Isotopic Hydrogen Exchange in Alkyl Radicals." Cand Chem Sci, Inst of Chemical Physics, Acad Sci USSR, Apr-June 54. (Vest ak Nauk SSSR, Sep 54)

SO: Sum 432, 29 Mar 55

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

USSR/Chemistry - Analysis methods

Card 1/1 : Pub. 147 - 15/27

Authors : Mardaleyshvili, R. E.; Lavrovskaya, G. K.; and Voyevodskiy, V. V.

Title : Micro-method of analyzing heavy water

Periodical : Zhur. fiz. khim. 28/12, 2195-2198, Dec 1954

Abstract : A new compensation method for measuring vapor pressures was utilized in determining the deuterium content of water. This method permits carrying out heavy water analyses (deuterium content in water) in 0.5 mg of water with an accuracy of up to 1 - 0.05 mol/% regardless of the D_2 content in the water. The installations used in connection with this compensation method are described. Eight references ; 5 USSR; 1 USA; 1 English and 1 German (1936-1953). Table; graphs; drawings.

Institution : Academy of Sc. USSR, Institute of Chemical Physics and the V. M. Lomonosov State University, Moscow

Submitted : June 23, 1954

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVSKAYA, G. K.

4077 TT-701 19 7

ISOTOPE EXCHANGE OF HYDROGEN IN FREE ALKYL RADICALS. (Izotopnyi Obmen Vodoroda v Svobodnykh Alkil'nykh Radicalakh). G. K. Lavrovskaya (Lavrovskaia), R. E. Mardalejshvili, and V. V. Voevodskii. Translated by G. Belkov from Voprosy Khim. Kinetiki, Kataliza i Reaktsionnoi Sposobnosti Akad. Nauk S.S.S.R., Otdel. Khim. Nauk, 40-53(1955). 26p.

It is shown experimentally that there is a new class of radical reactions. These are exchange reactions of radi-

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

Possibility of chain mechanism in heterogeneous catalysis. V. V. Voevodskii, G. K. Lavrovskaya, and Yu. I. Pecherskaya. *Katalitiche* [illegible] *Akad. Nauk Kazakh. S.S.R., Trudy Konf.* 1955, 89-90.—Exam. n. of the kinetics of hydrogenation of C_2H_4 on Mo_2O_3 on Al_2O_3 at 405° showed the dependence of the initial reaction rate and of the degree of its retardation on exptl. factors of temp., pressure, and compn. of the reaction mixt. The results can be explained if a chain mechanism based on formation of active surface radicals of V . . . H type is assumed; the possibility of existence of such radicals can be deduced from the rate of recombination of H on this catalyst.

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possibility of existence of such radicals can be deduced from the rate of recombination of H on this catalyst.

G. M. Kirzdapoff

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVSKAYA, G. K.

AUTHORS: Lavrovskaya, G. K., Skurat, V. Ye., Tal'roze, V.L., Tantsyrev, G. D. 20-4-27/52

TITLE: Mass-Spectroscopic Investigation of the Products of Discharge in Steam (Mass-spektroskopicheskoye issledovaniye produktov razryada v parakh vody).

PERIODICAL: Doklady AN SSSR, 1957, Vol. 117, Nr 4, pp. 641-644 (USSR)

ABSTRACT: The here discussed measurements were carried out with a mass spectrometer specially constructed for the determination of free radicals and atoms. The peculiarity of this apparatus is the introduction of the mixture to be analyzed into the ion source in form of a bundle of molecules. The molecule bundle is here coaxial with the ion-bundle. The system of the formation of this molecule bundle and the scheme of the connection of the apparatus of discharge with the mass spectrometer is demonstrated in a diagram. Further particulars are given on the design and calibration of this instrument. The authors then discuss the results of the mass-spectroscopical measurements of the concentration of the atoms and radicals in the discharge-products formed in the steam. Measurements were carried out at pressures of from 0,5 to 4 mm torr. and with a discharge amperage of from 100 to 150 mA. The intensities of the

Card 1/3

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currents of ions I' and I'' for m/e = 1, 2, 16, 17, 18, and 32 were measured. With a steam pressure from 0,5 to 1,5 mm torr., H-atoms and the free hydroxyl, but no O-atoms were observed in the discharge. An evaluation of the sensitivity of the apparatus show that the concentration of the O-atoms is in each case smaller than the concentration of OH. O-atoms were observed with an increase of pressure to 3 mm torr. . The results of these measurements were summarized in a table. The intensities of the current of ions I depend only on the atoms H,O and on the free hydroxyl. The concentrations of the atoms H and O, as well as of the free hydroxyl are numerically given. The mass spectroscopic measurements confirm the existence of an important concentration of O-atoms in the products of a discharge in steam. At least two processes must contribute to the occurence of O-atoms with this discharge:

$OH^+ + H_2O \rightarrow O + H_3O^+ + 58$ kkal/mol; $OH + H_2O^+ \rightarrow O + H_3O^+ +$ + 47 kkal/mol. With an increase of the pressure these processes must play a steadily increasing rôle.

There are 2 figures, 2 tables, and 13 references, 8 of which are Slavic.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

Mass-Spectroscopic Investigation of the Products of Discharge in Steam. 20-4-27/52

PRESENTED: May 16, 1957, by V. N. Kondrat'yev, Academician.

SUBMITTED: April 28, 1957

AVAILABLE: Library of Congress

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

5(0), 24(7)

SOV/63-4-2-4/39

AUTHORS: Lavrovskaya, G.K., Candidate of Chemical Sciences, Skurat, V.Ye., Tal'roze, V.L., Frankevich, Ye.L., Candidates of Physico-Mathematical Sciences

TITLE: Application of Mass-Spectroscopy for Chemical Analysis

PERIODICAL: Khimicheskaya nauka i promyshlennost', 1959, Vol 4, Nr 2, pp 154-163 (USSR)

ABSTRACT: Mass-spectroscopy employs two methods: a static and a dynamic method. The first uses electric and magnetic fields for the separation of ions, the second alternating fields. Molecular mass-spectral analysis is applied to substances which are easily evaporated, e.g. alcohols, aldehydes, organic acids. Multi-atomic molecules show a great number of spectral bands. To avoid this difficulty, ionization by low-energy electrons is recommended [Ref 5-8]. Group analysis is made use of in the analysis of petroleum fractions containing aromatic and sulfur compounds. In these cases the bands are placed one above the other so that differentiation is difficult [Ref 11]. These complex mixtures can be analyzed by combining mass-spectroscopy with chromatography [Ref 15, 16] and in infrared and ultraviolet spectroscopy

Card 1/4

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[Ref 17-18]. The composition of analyzed mixtures is determined by absolute or relative methods. The absolute graduation coefficients vary in every spectrometer, the relative coefficients are more stable. A measure for the content of a substance is the "complete ionization" which is the sum of all band intensities of the spectrum of the mixture. Recently electronic computers have come to be used for calculating the composition of mixtures [Ref 24]. Mass-spectroscopy has also been used for the analysis of esterified fatty acids, condensates from industrial fumes from the atmosphere of big cities, etc [Ref 29, 30], for the determination of gases in metals [Ref 31-33], etc. The distribution of the band intensities usually corresponds to the structure of the molecules. The theoretical calculation of the band intensities is possible only for the simplest case, i.e. the molecule H_2. A theory of the mass-spectrum must still be developed. The kinetics of chemical reactions is determined by taking samples at the beginning and the end of the process or by the continuous method in which the reacting mixture is directly passed into the ion source of the mass-spectrometer. The last method can be used for the determination of intermediate products, like free radicals. The use of low-energy electrons avoids the dissociative ionization of molecules. It has been proposed to use photoionization, because the monochromatization of light is simpler

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than that of slow electrons [Ref 9]. Free radicals are passed into the area of ionization in the form of a molecular bunch in order to avoid reactions with metal surfaces, etc. The mass-spectroscopy of free radicals is applied on a broad scale. It is also employed for the determination of ions in the flames of hydrocarbons and hydrogen [Ref 91, 92]. A system for the determination of the composition of free radicals has been developed by the authors [Ref 73, Figure 3]. Recently the cross-sections of ion-molecular reactions have been determined [Ref 98, 99]. Levina determined the isotopes of Fe, Zn, Mg, Ni, Cr, Pb and Sb by means of mass-spectroscopy [Ref 106]. Solid bodies are evaporated in a vacuum spark. In substances with low ionization potentials surface ionization may be used. Admixtures of 10^{-3} to 10^{-5}% may be determined by these methods. This is important for the production of semiconductors, pure metals, etc. Mass-spectroscopy is used in the USSR for the control of the evacuation conditions of electrovacuum apparatus [Ref 116]. Tantsyrev controlled the purity of inert gases by this method. Improvements of the method consist in the application of new cathodes, e.g. a thorium-iridium cathode [Ref 119], and the utilization of an electrometric amplifier, a secondary electronic amplifier measuring currents of less than 10^{-15} a. In the USSR the mass-spectrometers MI 1301, MI 1305, MKh 1303 have a resolving power of 400 - 600, the apparatus MV 2301, a power of 5,000.

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Application of Mass Spectroscopy for Chemical Analysis SOV/63-4-2-4/39

There are 3 diagrams, 2 tables and 126 references, 36 of which are Soviet, 55 English, 11 American, 8 Canadian, 5 German, 5 Belgian, 3 French, 2 Swedish and 1 Polish.

Card 4/4

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LAVROVSKAYA, G.K.

86746

9.6150
5.5800 (1043, 1228, 1273)
26.2312
11.1320

S/120/60/000/006/021/045
E032/E514

AUTHORS: Tal'roze, V.L., Dekabrun, L.L., Tastagrev, G.D., Frankevich, Ye.L., Vetrov, O.D., Lyubimova, A.K., Lavrovskaya, G.K., Yerofeyev, V.I., Grishin, V.D., Skurat, V.Ye. and Yukhvidin, A.Ya.

TITLE: The PMC-2 (RMS-2) Mass Spectrometer Designed for Studying Chemical Reactions and the Determination of Free Radicals

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, No.6, pp.78-84

TEXT: A double magnetic mass-spectrometer designed for studying reactions in the gaseous phase and, in particular, for the determination of free radicals is described. Two methods are used to produce the ions. In the first method the mixture to be analysed is ionized by charge transfer to specially produced ions. The latter are formed in a separate ion gun by means of electron bombardment and are mass-analysed in a small magnetic analyser. In the second method the mixture under consideration is ionized directly by electron bombardment. Quasi-monochromatization is achieved by a method based on that reported by Fox et al. (Ref.11). The gas from the "reactor" is introduced into the ion source in the

Card 1/6

The PMC-2 (RMS-2) Mass Spectrometer Designed for Studying Chemical Reactions and the Determination of Free Radicals

form of a molecular beam which is mechanically interrupted at a known frequency. In distinction to the method described by Foner and Hudson (Ref.2), in which the molecular and ion beams are perpendicular, in the present system the two beams are coaxial, which means that smaller voltages are necessary for the "extraction" of the ions from the ionization region and it is possible to reduce the intensity of the background mass-spectrum. A particular feature of the present instrument is the use (in the measuring part of the spectrometer) of K-stabilization of parameters such as the accelerating voltage, the voltage supplying the detector, the emission current of the ion gun cathode, and the supply voltage for the ion source cathode. This was described by the second of the present authors in Ref.10. The mass numbers are determined from a knowledge of the magnetic field which in turn is measured with the aid of a Hall probe (germanium crystal). The basic mass spectrometric arrangement employed is shown in Fig.2. Products of chemical reactions taking place in the "reactor" I enter the region II through a small aperture in the thin glass diaphragm 8

Card 2/6

in the form of a molecular beam. This molecular beam is collimated further by the diaphragm 6 which separates the volume II from the region in which ionization takes place. A moveable screen 7 is placed in front of the diaphragm 6 and interrupts the molecular beam 33 times per sec. In the case of ionization by charge transfer, the primary ions are produced in the ion gun III. The ion beam formed there is mass analysed in the 60° magnetic analyser IV which has a working radius of 100 mm. The primary ion beam, consisting of ions of the required mass, intersects the molecular beam and charge transfer takes place. In the case of ionization by electron impact, the source becomes analogous to that described by the first and fourth of the present authors in Ref.9. In the case of ionization by a monochromatized electron beam, the modulation of the molecular beam by the chopper 7 is not employed. The ion current in the mass-spectrometer is measured either by a d.c. amplifier or by an electron multiplier. The vacuum chamber of the mass-spectrometer is an all-metal system and all the sections are out-gassed at 300 to 350°C before the operation is begun. As an illustration of

Card 3/6

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S/120/60/000/006/021/045
E032/E514

The PMC-2 (RMS-2) Mass Spectrometer Designed for Studying Chemical Reactions and the Determination of Free Radicals

the possible applications of the instrument, data are quoted on the formation of free radicals in the pyrolysis of hydrazine. In these experiments the hydrazine entered from a glass container into a quartz capillary through a control valve. The capillary was heated to a known temperature, as a result of which the hydrazine decomposed into nitrogen, hydrogen, ammonia and some unstable products (Foner and Hudson, Ref.18). Fig.7 shows the distribution of line intensities in the mass-spectrum of hydrazine obtained by the charge transfer method using HH_3^+ ions formed from ammonia. The pressure in the source was 5×10^{-5} mm Hg and the pressure in the chamber of the small analyser was 4×10^{-5} mm Hg. For comparison, the dotted line shows the mass-spectrum obtained on bombarding hydrazine with 50 eV electrons. Fig.8 shows the intensity distribution obtained under similar conditions at 1000°C (dotted lines) and 25°C (continuous lines). Acknowledgments are expressed to Ye. K. Russiyan, B. T. Vorob'yev, B. G. Belov, M. N. Morozov and M. I. Markin for assistance in this work. There are 8 figures and 20 references: 11 Soviet and 9 non-Soviet.

Card 4/6

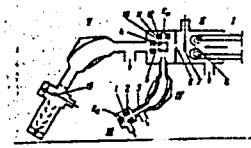
The PMC-2 (RMS-2) Mass Spectrometer Designed for Studying Chemical Reactions and the Determination of Free Radicals

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics, AS, USSR)

SUBMITTED: October 15, 1959

Fig.2

I - reactor, III - ion gun, IV - small magnetic analyser, V - large magnetic analyser



Card 5/6

E032/E514

The PMC-2 (RMS-2) Mass Spectrometer Designed for Studying Chemical Reactions and the Determination of Free Radicals

Fig.7

Comparison of mass-spectra of hydrazine obtained on electron bombardment (dotted) and charge transfer from NH_3^+ ions (full lines). Key: 1 - relative intensity, 2 - mass number.

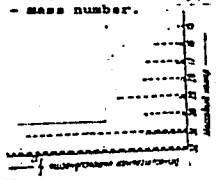
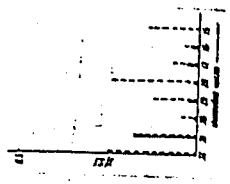


Fig.8

Charge transfer mass spectra of hydrazine and its decomposition products at 1000°C (dotted) and 25°C (full line).



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20989

S/195/61/002/001/003/006
B101/B216

26.2312

AUTHORS: Lavrovskaya, G. K., Markin, M. I., Tal'roze, V. L.

TITLE: Exchange of charge between ions on complex molecules

PERIODICAL: Kinetika i kataliz, v. 2, no. 1, 1961, 21-37

TEXT: Processes within the energy range 10^{-1} to 10^{1}-10^{2} ev involve two elementary processes: (I) exchange of heavy particles and molecular regrouping, and (II) exchange of charge which may be accompanied by dissociation. Process (II) which may occur in the case of comparatively slow ions has been little investigated as yet. The present work was undertaken with a view to clarifying this process on complex systems and establishing the extent of competitive occurrence of (I) and (II). It studies the exchange of charge between monoatomic and polyatomic ions in the energy range 10-500 ev. The mass spectrometer used is shown in Fig. 1. Primary ions produced in the ion source 1 by ionizing gas with 60-ev electrons were accelerated to 110-500 ev and separated according to mass in the magnetic analyzer I (angle of deflection 60^{0}, r = 100 mm). Ions of specific mass were passed through the collector slit 2 (2 × 8 mm)

X

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S/195/61/002/001/003/006
B101/B216

Exchange of charge between ions ...

into the charge exchange chamber 3. The secondary ions formed in it were deflected at right angles to the beam of primary ions by a weak magnetic field extending into the chamber, accelerated to 1500-2000 v, and separated in the magnetic analyzer II (60°, r = 200 mm). In chamber 3, gas ionization could also be excited by electrons emitted from cathode 4. The vacuum in the charge exchange chamber was 10^{-6}-$5 \cdot 10^{-5}$ mm Hg. The primary ion current was 10^{-8}-10^{-7} a, measured by an electrometer amplifier (a). 5 is an electron multiplier tube, 6 are the deflecting electrodes. Charge exchange was measured on CH_4, C_2H_6, C_3H_8, C_2H_4, C_3H_6, CH_3COCH_3, NH_3, and N_2H_4. As primary ions the authors used (1), NH_3^+, NO^+, CH_4^+, CH_3^+, CCl_3^+, Xe^+, Zn^+, Hg^+ (for which the recombination energy was lower than the ionization potential of the molecule), and (2) He^+, Ar^+, N_2^+, H^+, H_2^+, H_3^+ (possessing high recombination energies). The experimental data are listed in Tables 1-5. The first columns of these tables indicate the values of m/e in atomic mass units, the potentials

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at which ions of that mass occur being given in parentheses. The second columns give the mass spectra as obtained by ionizing the respective molecules with 60-ev electrons. The following columns indicate the mass spectra as obtained by exchange of charge with the ions listed in the first line. The recombination energies are given below the symbols of the primary ions. The amperage I of the secondary ions is given relative to the sum of amperages of all ions produced. The thermal effects of ion formation also appear in the tables. The last line refers to the relative cross section calculated from $\sigma_{rel} = \sigma/(\sigma_{A^+ - A}) = i_{A^+}(dI/dP)/i(dI_{A^+}/dP_A)$, where i_{A^+} denotes the current of primary A^+ ions, I_{A^+} the current of secondary A^+ ions, i the current of primary ions, I the sum of currents of separated secondary ions fromed at exchange of charge of the primary ions on the respective molecule, P_A the argon pressure, P the pressure of the gas under investigation. The mass spectra were taken with primary ions of energy 300-500 v, and a potential of 200 v applied to the drawing electrode. It was found that in the energy

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Exchange of charge between ions ...

range 10^1-10^3 ev the transition of kinetic energy to internal energy by charge exchange becomes easier with increasing complexity of the molecule. The cross sections of the charge exchange processes are, therefore, considerable even close to the threshold of endothermic processes, and must be large for exothermic processes, even at low temperature. Consequently, these processes are of considerable importance in real systems (radiation chemistry, reaction during discharges, ion formation in flames, processes in the upper layer of the atmosphere). Basing on these results, all ion-molecule interactions may be divided into processes with and without formation of a long-lived intermediate ion. One of the two mechanisms is realized depending on the kinetic energy of the collision. The authors thank A. K. Lyubimova and A. A. Bulatova, Technician, for their assistance, G. K. Karachevtsev, Student, for cooperating in several experiments, and Academician V. N. Kondrat'yev for discussions. N. N. Tunitskiy, Ye. L. Frankevich, Yu. F. Bydin, and A. M. Bukhteyev are mentioned. There are 5 figures, 5 tables, and 23 references: 9 Soviet-bloc and 16 non-Soviet-bloc. The 3 references to English-language publications read as follows: E. C. Melton et al.,

Card 4/15

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Exchange of charge between ions ... S/195/61/002/001/003/006
B101/B216

J. Amer. Chem. Soc., 26, 1302, 1957; F. H. Field, F. W. Lampe, J. Amer. Chem. Soc., 80, 5587, 1958; D. R. Bates, Proc. Roy. Soc., A257, 22, 1960.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics of the AS USSR)

SUBMITTED: October 31, 1960

Card 5/15

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

43222
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D290/D307

5.4200

AUTHORS: Lavrovskaya, G. K., Markin, M. I. and Tal'roze, V. L.

TITLE: The elementary processes of charge transfer from slow ions to polyatomic molecules

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 48-51

TEXT: The authors studied the process of charge transfer from slow ions to multiatomic molecules in many different reactions in order to infer charge transfer cross-sections at thermal energies in endothermic reactions or to deduce the behavior of the cross-sections near the threshold energy for endothermic reactions. The effects were investigated of He^+, A^+, Xe^+, N_2^+, H^+, H_2^+, H_3^+, NO^+, NH_3^+, CH_3^+, CH_4^+, CCl_3^+, Zn^+, Hg^+, and other ions on molecules such as CH_4, C_2H_6, C_2H_4, C_3H_8, C_3H_6, $(CH_3)_2CO$, NH_3, N_2H_4, and oth-

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ers; the energies of the ions ranged from 10 to 1000 ev. A special double mass spectrometer was used. The authors discuss the way in which the experimental results provide evidence for the occurrence of dissociative charge transfer, the ease of conversion of kinetic and internal energy, the effect of the presence of metastable excited ions in the original beam, and the formation of complex intermediate ions. It is concluded that the ease of conversion of kinetic into internal energy and vice versa increases sharply with increasing complexity of the molecule and that, therefore, the charge transfer cross-sections in exothermic reactions become larger at thermal energies. There are 2 figures.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics, AS USSR)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVSKAYA, G.K.; MARKIN, M.I.; TAL'ROZE, V.L.

Using the ion recharging method in the mass spectrometric determination of radicals formed in the pyrolysis of acetone, di-tert-butyl peroxide and hydrazine. Trudy Kom. anal. khim. 13:474-482 '63. (MIRA 16:5)

1. Institut khimicheskoy fiziki AN SSSR.
(Radicals (Chemistry)) (Mass spectrometry)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

ACCESSION NR: AP4016514 S/0020/64/154/005/1160/1162

AUTHOR: Lavrovskaya, G. K.; Skurat, V. Ye.; Tal'roze, V. L.

TITLE: Radiation synthesis of xenon fluorides

SOURCE: AN SSSR. Doklady*, v. 154, no. 5, 1964, 1160-1162

TOPIC TAGS: xenon fluoride, radiation, xenon difluoride, xenon tetrafluoride, infra red spectrum, xenon fluorine radiation

ABSTRACT: A mixture of fluorine and xenon was irradiated with a 1.6-Mev beam of electrons (electron current 30-40 microamps, 10^{-3} mm. Hg pressure, reactor liquid-air cooled during reaction). After irradiation unreacted F and Xe were measured and removed from the reactor while cooled with liquid nitrogen. After removal of unreacted gases, the reactor pressure at room temperature was 3 mm. Hg, corresponding to the vapor pressure of XeF_2 and XeF_4. After remaining in the reactor, the Xe fluorides decomposed to F and Xe. Xenon reacts to the extent of 30-50%. The xenon fluorides were identified by their IR

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ACCESSION NR: AP4016514

spectra; and it was found that XeF_2 and XeF_4 were formed to a lesser extent. The radiation dose was about 3000 megarads. The radiation yield, based on xenon consumption, is 0.4-0.7; the same yield is obtained with larger doses. Orig. art. has: 1 table.

ASSOCIATION: Institut khimicheskoy fiziki, Akademii nauk SSSR (Institute of Chemical Physics, Academy of Sciences SSSR)

SUBMITTED: 18Sep63 DATE ACQ: 12Mar64 ENCL: 00

SUB CODE: PH, CH NO REF SOV: 001 OTHER: 017

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

EPSHTEYN, Ya.A.; LAVROVSKAYA, N.F.

Effect of ionizing radiation on protein metabolism in fish. Biokhimiia 24 no.4:592-599 Jl-Ag '59. (MIRA 12:11)

1. Radiobiologicheskaya laboratoriya Vsesoyuznogo nauchno-issledovatel'skogo instituta ozernogo i rechnogo rybnogo khozyaystva, Leningrad.
(COBALT radioactive)
(BLOOD PROTEINS radiation eff.)
(FISH radiation eff.)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

EPSHTEYN, Ya.A.; AVETIKYAN, B.G.; LAVROVSKAYA, N.F.; ROGOZHNIKOVA, V.M.; ARTEMOVA, A.G.

Biochemical changes in the organism of the carp produced by the administration of antigens. Biokhimiia 25 no. 3:427-435 My-Je '60. (MIRA 14:4)

1. Research Institute of Lake and River Fisheries and Institute of Experimental Medicine, Leningrad.
(ANTIGENS AND ANTIBODIES) (FISHES—PHYSIOLOGY)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

5(3),5(4) SOV/62-59-9-32/40

AUTHORS: Freydlin, L. Kh., Gorshkov, V. I., Lavrovskaya, T. K.

TITLE: Selective Hydrogenation of Acetylene Bonds Conjugated to Ethylene Bonds on a Zinc Catalyst

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 9, pp 1679-1681 (USSR)

ABSTRACT: In the present paper the catalytic properties of zinc in reactions of conjugated double bond systems are investigated. The following compounds are investigated: Isoprene, piperylene, vinyl- and isopropenylacetylene. The method of investigation and preparation of catalysts are described in reference 3. The course of the reaction was determined by means of the number of moles H_2 consumed. At normal pressure and temperatures between 60 and 140° isoprene could not be hydrogenated. Thus it is concluded that the hydrogenation reaction on zinc catalysts does not proceed beyond a system of conjugated double bonds. The reaction products were analyzed by means of gas-liquid chromatography. Chromatographs and analytical data are given in figures and in table 1. The zinc catalyst proved strictly selective. Vinylacetylene was hydrogenated only to divinyl, butane and butene were not formed.

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Selective Hydrogenation of Acetylene Bonds Conjugated to Ethylene Bonds on a Zinc Catalyst SOV/62-59-9-32/40

By a side reaction, polymers formed, owing to the rapid deactivation of the catalyst. A 75% yield was obtained under optimum conditions (80°, 93.9% H_2, 6.1% vinylacetylene). On a Zn-Cu catalyst vinylacetylene was hydrogenated down to butane. Results and experimental conditions for the hydrogenation of isopropenylacetylene are given in table 2. Isoprene was the final product. There are 1 figure, 2 tables, and 7 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

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

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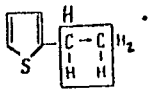
77409
SOV/79-30-1-70/78

AUTHORS: Balandin, A. A., Marukyan, G. M., Seymovich, R. G., Lavrovskaya, T. K., Levitskiy, I. I.

TITLE: Catalytic Dehydrogenation of 2-Ethylthiophene

PERIODICAL: Zhurnal obshchey skimii, 1960, Vol 30, Nr 1, pp 321-324 (USSR)

ABSTRACT: Catalytic dehydrogenation of 2-ethylthiophene at 500-600° over copper-chromium oxides, copper-iron oxides, and copper-iron nitrates forms 2-vinylthiophene. According to the multiplet theory, catalytic dehydrogenation of the ethyl group can be represented by the following:



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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

Catalytic Dehydrogenation of 2-Ethylthiophene

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SOV/79-30-1-70/78

where the reacting atoms, in contact with the catalyst, are within the square. The reaction was conducted in a flow system (at the space velocity of 0.15-0.38 hr^{-1}) at atmospheric pressure in presence of water vapor and carbon dioxide as well as in absence of these diluents. The product was collected in a receiver provided with a condenser and analyzed by bromometric titration, making a correction for bromination of the thiophene ring; the gaseous products, collected in a gasometer, were analyzed in the Orsat apparatus. [The 2-ethylthiophene (bp 135.0-135.5° (741.5 mm); n_D^{20} 1.5130; d_4^{20} 0.990) was submitted by Ya. L. Gol'dfarb.] Best results were obtained by dehydrogenation at 525-575° using copper-iron oxides as catalyst. Under these conditions, the dehydrogenation was not accompanied by side reactions, such as breaking off of the side chain (only 0.2-0.8% of unsaturated hydrocarbons--saturated hydrocarbons were not determined--were found in the gaseous products), and yielded 50-60% of vinylthiophene. Addition of CO_2

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

Catalytic Dehydrogenation of 2-Ethylthiophene

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SOV/79-30-1-70/78

enhances decomposition (resulting in 1.6-2.8% unsaturated hydrocarbons). Preliminary experiments have shown that under the conditions of the experiment the thiophene ring is not opened. There are 2 tables; and 19 references, 11 Soviet, 2 German, 1 U.K., 5 U.S. The 5 most recent U.S. and U.K. references are: Ch. Walling, J. Am. Chem. Soc., 70, 1543 (1948); Synthetic Rubber, N. Y., 694 (1954); W. S. Emerson, T. M. Patrick, J. Org. Ch., 13, 729 (1948); Am. Pat. 2689855 (1954); Hartough Howard, Thiophene and Its Derivatives, London, 62 (1952).

ASSOCIATION: N. D. Zelinskiy Institute of Organic Chemistry (Institut organicheskoy khimii imeni N. D. Zelinskogo)

SUBMITTED: December 22, 1958

Card 3/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

S/062/62/000/011/009/021
B101/B144

AUTHORS: Balandin, A. A., Marukyan, G. M., Lavrovskaya, T. K., Seymovich, R. G., and Gryzlova, L. V.

TITLE: Catalytic dehydrogenation of chloro-ethyl benzene

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 11, 1962, 2031 - 2036

TEXT: Chloro styrene, an important raw material for polymer chemistry, was obtained by dehydrogenation of chloro-ethyl benzene on a mixed oxide catalyst at 600°C, volume rate 0.2 - 0.35 hr^{-1}. The dehydrogenation was carried out in a continuous apparatus; the chloro-ethyl benzene was diluted with water vapor or CO_2. Preliminary tests with chloro benzene showed that it was not changed by the catalyst in the presence of water vapor, whereas about 50% of it was disintegrated to benzene and HCl in the presence of H_2. The catalyzate, which contained up to 36% chloro styrene and, on heating, formed a solid polymer, was analyzed by gas-liquid chromatography. The chromatograph contained a detector for thermal conductivity, the column was filled with diatomite and 15% dinonyl sebacinate

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as solid phase, and nitrogen was used as carrier gas. The analysis was made at 130°C. For deciphering the chromatogram, mixtures of possible components of the catalyzate were subjected to comparative chromatography. Ethyl benzene could not be separated from chloro benzene. The chromatographic analysis of six experiments yielded (in % by weight): composition of the initial substance: o-chloro-ethyl benzene, 48-57; p-chloro-ethyl benzene, 43-48; ethyl benzene, 0-4; composition of the reaction product: benzene, 0.1-0.8; toluene, 0.1-0.8; ethyl benzene + chloro benzene, 1.7-13.2 (the higher values with CO_2 as diluent); styrene, 0.5-7.7 (the higher values in the presence of CO_2); chloro toluene, 1.0-4.0; o-chloro-ethyl benzene, 28.5-44.3; p-chloro-ethyl benzene, 18.6-33.5; o-chloro-styrene, 10.1-18.0; p-chloro styrene, 8.2-19.3. There are 4 figures and 4 tables. The most important English-language references are: S. Freeman, Analyt. Chem., 32, 1304 (1960); H. Nadeon, D. Oaks, Analyt. Chem., 33, 1157 (1961).

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 3, 1962

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

BALANDIN, A.A.; MARUKYAN, G.M.; LAVROVSKAYA, T.K.; SEYMOVICH, R.G.; GRYZLOVA, L.V.

Catalytic dehydrogenation of chloroethylbenzene. Izv. AN SSSR. Otd.khim.nauk no.11:2031-2036 N '62. (MIRA 15:12)

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

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVSKAYA, V. M.

"Antigennyye svoystva assotsirovannykh vaktsin. Materialy po obmenu opytom mezhdu institutami epidemiologii i mikrobiologii ("Antigenic Properties of Associated Vaccines," Materials for Interchanges of Experience Between the Institutes of Epidemiology and Microbiology), 19, 38-40, 1948

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVSKAYA, V. M., IVANOVA, N. A. and ZHITOVA, E. I.

"Filterable Forms of Bacteria," Sbornik Trudov Gor'kovskogo Instituta Epidemiologii i Mikrobiologii, Gor'kiy, 1951

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

Jun 53

LAVROVSKAYA, V. M.

USSR/Medicine - Dysentery

"Correlation Between Some Biological Properties of Flexner Dysentery Bacilli,"

V. M. Lavrovskaya, Gor'kiy Inst of Epid and Microbiol

Zhur Mikro, Epid, i Immun, No 6, p 88 - 1953

When cultures of Flexner dysentery bacilli are kept in agar (under a layer of vaseline oil) in a refrigerator, their virulence, toxicity, and immunogenic properties are lowered, while their agglutinability increases. Not only virulent strains, but also some non-virulent strains are immunogenic. Generally immunogenic strains are also toxic, while nonimmunogenic strains are nontoxic and have a weak virulence. In order to compare the immunogenic properties of different strains, a highly virulent strain must be used as a standard.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVSKAYA, V.M.

Changes in the properties of intestinal group bacteria upon aeration of the medium. Zhur.mikrobiol.epid.i immun. no.4:81 Ap '54. (MLRA 7:5)

1. Iz Gor'kovskogo instituta vaktsin i syvorotok.
(Bacteria, Pathogenic) (Bacteriology (Cultures and culture media)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVSKAYA, V. M.

"A Study of the Biological Characteristics of Bacteria of the Enteric Group During Cultivation Under Aerated Conditions." Cand Med Sci, Gor'kiy State Medical Inst imeni S.M. Kirov, Gor'kiy, 1955. (KL, No 12, Mar 55)

SO: Sum. No. 670, 29 Sep 55--Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVSKAYA, V. M.

Changes in amino acid composition of nutrient medium during growth of microörganisms of intestinal group. I. N. Blokhina, R. S. Perova, and V. M. Lavrovskaya (Inst. Epidemiol. and Hyg. [illegible]). *Zhur. Mikrobiol., Epidemiol. i Immunobiol.* 10: 12 (18 1956).—Microorganisms of intestinal groups were grown on pancreatic digest of casein containing 200-250 mg. % of amino N. The amino acids were estimated by descending paper chromatography, using two [illegible] of n-butanol-acetic acid-water. A similar chromatographic picture was obtained in control expts. using untreated medium, centrifuged medium, or exts. of amino acids from the medium. In all expts. within 24 hrs. aspartic acid disappeared from the medium. With typhoid-paratyphoid group, disappearance of certain amino acids depended on conditions of cultivation. Thus, arginine disappeared in the absence of glucose in the medium, did not when glucose was present; leucine, however, disappeared only in the presence of glucose. During continuous aeration of the medium, much greater utilization of aspartic acid, glutamic acid, serine, glycine, threonine, and alanine occurs in the presence of all bacteria studied as compared to that taking place during stationary conditions of growth. Chromatographic study of centrifugates of cultures permit, without any complicated handling, a wide and useful approach to metabolic study of microörganisms.

J. A. Stekol

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVSKAYA, V.M.; BLANT, M.Ya.

Study of the cholera antigen. Report No.4: Effect of the initial culture of Vibrio cholerae on the quantity and specific activity of antigen complexes. Zhur. mikrobiol., epid. i immun. 41 no.1:108-112 Ja '64. (MIRA 18:2)

1. Gor'kovskiy institut epidemiologii i mikrobiologii.

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LAVROVSKAYA, YE. V.

7

Microanalytical determination of mercury in organic compounds. M. O. Korshun and E. V. Lavrovskaya. *Zhur. Anal. Khim.* 3, 322-8(1948).—The method is a modification of the Boëtius procedure (*C.A.* 33, 1628[7]). The changes made in the packing of the combustion tube make it suitable for detg. Hg regardless of other elements present. The combustion train comprises a bottle filled with $CaCl_2$, a flowmeter, a combustion tube, an adsorption tube, a $CaCl_2$ tube, a Mariotte flask, and a graduated cylinder. The combustion tube is charged with metallic Cu 25, Ag-Cu 50, a Cu spiral 30, $PbCrO_4$ 50, metallic Cu 25, Ag-coated ceramic pieces 40 mm. At each end of the tube there is a plug made of sealed quartz tubing. The Hg absorption tube is made of transparent quartz 80 mm. long. It consists of a 50-mm. portion having an internal diam. of 3.5 mm. and a 20-mm. portion having an internal diam. of 1 mm. The wider portion of this tube is lined for 20 mm. with strips of Au foil. Weigh a 3-6 mg. sample and the adsorption tube. Place the sample in the combustion tube which has been heated to 700° and pass N through the app. at a rate of 4-5 ml./min. Heat with a movable burner until charring ends and then move it toward the metallic Cu packing. Increase the flame and reheat this portion of the tube. When all the Hg is driven from the combustion tube heat the end of the adsorption tube to drive the Hg into the Au foil. Cool for 3 min. and pass 300 ml. of dry air at a rate of 7 ml./min. Weigh the adsorption tube.

M. Hosch

Lab. Org. Chem. im. N. D. Zelinskiy, Moscow State U.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

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LAVROVSKIY, A.A.; PISHVANOV, Z.I.

History and present state of mammals on the islands of the Caspian Sea. Zool. zhur. 41 no.9:1386-1394 S '62. (MIRA 15:11)

1. All-Union Research Institute "Microb", Saratov and Anti-Plague Station of the Azerbaijan, Baku.
(Caspian Sea region--Mammals)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVSKIY, A. A.

42211. LAVROVSKIY, A. A., SHATAS, YA. F. - Prichiny kolebaniy plodovitosti malogo suslika (Citellus pygmaeus Pall.) Materialy K. poznaniyu fauny i flory SSSR, Izd. Mosk. o-vom ispytateley prirody, Novaya seriya. Otdel zool., VYP. 3, 1948, c 191-202 -Bibliogri 15 nazv.

SO: Letopis' Zhurnal'nykh Statey, Vol. 47, 1948

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LA'ROVSKIY, A.A.; SHATAS, Ya.F.

Causes of fertility fluctuations in the lesser suslik (Citellus pygmaeus Pall.). Mat. k pozn. fauny i flory SSSR. Otd. zool. no.17: 191-202 '48. (MIRA 11:3)

(Susliks) (Fecundity)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVSKIY, A.A.; SHATAS, Ya.F.

Marmota baibacina in Daghestan [with English summary in insert]. Zool.zhur.35 no.8:1254-1259 Ag '56. (MLRA 9:10)

1.Dagestanskaya protivochumnaya stantsiya.
(Daghestan--Marmots)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVSKIY, A. A. (USSR)

"Reseach of pulsations of areal boundaries of animals in relation to present regression of the Caspian Sea. (in Russia)"

report presented at the Intl. Symposium on Methods of Theriological Investigation. Brno, Czech.,
4Sept. 1960

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVSKIY, A.A.

Recent changes in the landscape-faunistic complexes on the shores of the Caspian Sea and the effect of these changes on spreading of plague epizooties. Zool. zhur. 41 no.2:252-259 F '62. (MIRA 15:4)

1. All-Union Research Institute "Microbe", Saratov. (Caspian Sea region--Plague) (Communicable diseases in animals)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVSKIY, Aleksandr Aleksandrovich; KUROCHKIN, Yu.V., otv.red.; LEBEDEVA, L.S., kand.biolog.nauk, red.; BELEVICH, Ye.F., red.; ZABLOTSKIY, V.I., red.; KOBLITSKAYA, A.F., red.; LUGOVOY, A.Ye., red.; KLIMOVA, Z.I., tekhn.red.

[Wild boar in the Volga Delta.] Kaban v del'te Volgi. Astrakhan', Izd-vo "Volga," 1962. 66 p. (Astrakhanskii zapovednik. Trudy, no. 7).

(MIRA 17:2)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVSKIY, A.A.

Epizootiological role of mixed rodent colonies at the junction of landscapes of the original seashore and the young coastal plain. Zool. zhur. 43 no.1:98-107 '64 (MIRA 17:7)

1. All-Union Research Institute "Microb", Saratov .

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVSKIY, B. V.

Technology - Bibliography

Books on the history of national technology for students. Fiz. v shkole, no. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, March 1952. UNCLASSIFIED.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVSKIY, B.V., inzhener-polkovnik.

Books on technology. Tekh. molod. 21 no.6:38 Je '53. (MLRA 6:6)
(Technology--Bibliography) (Bibliography--Technology)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

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PHASE I BOOK EXPLOITATION 732

Lavrovskiy, Boris Vyacheslavovich

Vsesoyuznaya promyshlennaya vystavka (All-Union Industrial Exhibition) Moscow, Izd-vo "Znaniye", 1958. 63 p. (Series: Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy. Seriya IV, 1958, nos. 2/3) 57,000 copies printed.

Sponsoring Agency: Vsesoyuznoye obshchestvo po rasprostraneniyu politichesikh i nauchnykh znaniy.

Ed.: Islankina, T. F.; Tech. Ed.: Streletskiy, I. A.

PURPOSE: This is a report on the All-Union Industrial Exhibition held in Moscow in 1956 and 1957.

COVERAGE: The author describes the industrial exhibition held in Moscow in 1957. It is said that the purpose of the exhibition is to show the latest achievements of industry, to present plans for future development, and to make known to the general public the latest engineering developments and methods.

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It is claimed that over 50,000 exhibits were presented, and that over 6 1/2 million people visited this exhibition, which included lectures, seminars, and technical conferences. The most important topics are said to have been automation, mechanization, ultrasonics, semi-conductors, the use of radioactive isotopes and others. There are a number of illustrations showing stands, visual aids, and machinery. There are no references.

TABLE OF CONTENTS:

Introduction	3
The Coal Industry	6
The Oil Industry	9
Electric Power	11
Metallurgy	17
Ferrous metallurgy	17
Nonferrous metallurgy	21
The Machinery Industry	24
Machine tools	31
Tractors and agricultural machinery	35
Transportation machinery	37
Automation	41

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The Use of Atomic Energy for Peaceful Purposes 47

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Consumer Goods 60

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVSKIY, K.F.

SINITSYN, V.P., kandidat tekhnicheskikh nauk; MALOV, N.F., kandidat tekhnicheskikh nauk; MANDRAZHITSKIY, M.N.; BORKHUNOVA, V.D.; LAVROVSKIY, K.F., redaktor; DZHATIYEV, S.G., tekhnicheskiy redaktor

[Local air defense; textbook for secondary schools and pedagogical schools] Mestnaia protivovozdushnaia oborona; uchebnoe posobie dlia srednikh shkol i pedagogicheskikh uchilishch. Pod red. Sinitsyna. Moskva, Gos. uchebno-pedagog. izd-vo Ministerstva prosveshcheniia RSFSR, 1956. 150 p. [Microfilm] (MLRA 9:12)
(Air defenses)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVSKIY, K. F.

PORTNOV, Mikhail Naumovich, kandidat tekhnicheskikh nauk; LAVROVSKIY, K.F., redaktor; DZHATIYEV, S.G., tekhnicheskiy redaktor

[For the young combine operator; manual for students in grades 8-10 of the secondary school] IUnomu kombaineru; posobie dlia uchashchikhsia VIII-X klassov srednei shkoly. Moskva, Gos. uchebno-pedagog. izd-vo M-va prosv. RSFSR, 1956. 200 p. (MIRA 10:4)
(Combines (Agricultural machinery)--Handbooks, manuals, etc.)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

BELOGORSKAYA, N.I.; GALININ, D.D.; GORYACHKIN, Ye.N.; GLAZYRIN, A.I.; DUBOV, A.G.; YEVROPIN, Yu.P.; YENOKHOVICH, A.S.; ZVORYKIN, B.S.; IVANOV, S.I.; KRAUKLIS, V.V.; LAVROVSKIY, K.F.; MENSHUTIN, N.F.; MINCHENKOV, Ye.Ya.; NABOKOV, M.Ye.; PERYSHKIN, A.V.; POPOV, P.I.; POKROVSKIY, A.A.; REZNIKOV, L.I.; SAKHAROV, D.I.; SOKOLOV, I.I.; SOKOLOVA, Ye.N.; EVENCHIK, E.Ye.; YUS'KOVICH, V.F.

Sergei Nikolaevich Zharkov. [Obituary]. Fiz.v shkole 16 no.3:94-95 My-Je '56. (Zharkov, Sergei Nikolaevich, 1883-1956) (MIRA 9:7)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

KURDINOVSKIY, Yuriy Pavlovich; BEYZEL'MAN, P.D., red.; LAVROVSKIY, K.F., red.; FEDOTOVA, A.F., tekhn.red.

[Factory laboratory] Zavodskaia laboratoriia. Moskva, Gos. uchebno-pedagog. izd-vo M-va prosv. RSFSR, 1958. 130 p. (Laboratories) (MIRA 12:1)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6

LAVROVSKIY, K.F. (Moskva)

Physics textbooks for institutes and schools published by the Educational State Publishing House. Fiz.v shkole 17 no.4:89-90 Jl-Ag '57. (MLRA 10:7)

(Bibliography--Physics)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000928830005-6"