124-58-9-10057

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 9, p 88 (USSR)

AUTHORS: ~~Batova, G. A.,~~ Deryagin, B. V., Leonov, L. F., Nikol'skiy, A. P., Prokhorov, P. S.

TITLE: Diffusion Hygrometers (Diffuzionnyye gigrometry)

PERIODICAL: V sb.: Issled. oblakov, osadkov i grozovogo elektrichestva. Leningrad, Gidrometeoizdat, 1957, pp 189-191

ABSTRACT: Bibliographic entry

1. Hygrometers--Equipment 2. Diffusion

Card 1/1

5 (4)
AUTHORS: Deryagin, B. V., Corresponding Member AS USSR, Batova, G. A. SOV/20-128-2-28/59

TITLE: Investigation of Capillary Osmosis in Gases

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 2, pp 323-325 (USSR)

ABSTRACT: The osmosis through a membrane which is permeable for both gas components is the definition given for capillary osmosis. In this case pressure differences caused by different diffusion rates of the components may occur, which vanish however when the thermodynamical equilibrium is reached. One of the discoverers of the capillary osmosis was F. Shidlovskiy (1886, Ref 1). The diffusion depends on the ratio between the mean free path of the gas molecules and the diameter of the membrane pores as well as on the mixture processes within the pores according to the laws by Fick and Poiseuille. Hygrometers (Ref 2) constructed in the below cited institute take both laws into account, but neglect the surface effects caused by the impact of molecules against the walls of the pores. The theory of the motion of aerosol particles in a diffusion field due to B. V. Deryagin and S. S. Dukhin (Ref 3) requires therefore a correction which was recommended by Deryagin and

Card 1/2

Investigation of Capillary Osmosis in Gases SOV/20-128-2-28/59

S. P. Bakanov (Ref 4). The present paper investigated a gas mixture passing through a porous membrane and measured the arising pressure differences. Figure 1 shows the used equipment, figure 2 the results of measurement for argon-helium, nitrogen-helium and argon-nitrogen gas mixtures. The pressure difference increases according to the difference of the atomic weights of the gases. The results already known for gases with equal molecular weight (ethylene-nitrogen), where only the difference of the molecular radius is effective, show that in this case the pressure differences are smaller but still measurable. There are 2 figures and 5 references, 4 of which are Soviet.

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

SUBMITTED: June 5, 1959

Card 2/2

BATOVA, G A.

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PHASE I BOOK EXPLOITATION SOV/5590

Konferentsiya po poverkhnostnym silam. Moscow, 1960.

Issledovaniya v oblasti poverkhnostnykh sil; sbornik dokladov na konferentsii po poverkhnostnym silam, aprel' 1960 g. (Studies in the Field of Surface Forces; Collection of Reports of the Conference on Surface Forces, Held in April 1960) Moscow, Izd-vo AN SSSR, 1961. 231 p. Errata printed on the inside of back cover. 2500 copies printed.

Sponsoring Agency: Institut fizicheskoy khimii Akademii nauk SSSR.

Resp. Ed.: B. V. Deryagin, Corresponding Member, Academy of Sciences USSR; Editorial Board: N. N. Zakhavayeva, N. A. Krotova, M. M. Kusakov, S. V. Nerpin, P. S. Prokhorov, M. V. Talayev and G. I. Fuks; Ed. of Publishing House: A. L. Bankvitser; Tech. Ed.: Yu. V. Rylina.

PURPOSE:. This book is intended for physical chemists.

Card 1/8

Studies in the Field of Surface Forces (Cont.) SOV/5590

COVERAGE: This is a collection of 25 articles in physical chemistry on problems of surface phenomena investigated at or in association with the Laboratory of Surface Phenomena of the Institute of Physical Chemistry of the Academy of Sciences USSR. The first article provides a detailed chronological account of the Laboratory's work from the day of its establishment in 1935 to the present time. The remaining articles discuss general surface force problems, polymer adhesion, surface forces in thin liquid layers, surface phenomena in dispersed systems, and surface forces in aerosols. Names of scientists who have been or are now associated with the Laboratory of Surface Phenomena are listed with references to their past and present associations. Each article is accompanied by references.

TABLE OF CONTENTS:

Zakhavayeva, N. N. Twenty-Five Years of the Laboratory of Surface Phenomena of the IFKhAN SSSR (Institute of Physical Chemistry of the Academy of Sciences USSR) 3

Studies in the Field of Surface Forces (Cont.) SOV/5590

Talayev, M. V., B. V. Deryagin, and N. N. Zakhavayeva. Experimental Study of the Filtration of Rarefied Air Through Porous Bodies in a Transitional Area of Pressures 187

Deryagin, B. V., N. N. Zakhavayeva, M. V. Talayev, B. N. Parfanovich, and Ye. V. Makarova. Metallic Device for Determining the Specific Surface of Powdered and Porous Bodies 190

V. SURFACE FORCES IN AEROSOLS

Deryagin, B. V., S. P. Bakanov, S. S. Dukhin, and G. A. Batova. Diffusiophoresis of Aerosol Particles 197

Bakanov, S. P., and B. V. Deryagin. Behavior of a Small Aerosol Particle in a Nonuniformly Heated Mixture of Gases 202

Strozhilova, A. I. Differential Counter of Condensation Nuclei 209

KIL'MAN, Ya.I., kand.tekhn.nauk; Prinimali uchastiye: BATOVA, G.S.; TROSHCHINA, L.G.

Stabilization of the thermal decomposition of highly concentrated ammonium nitrate melts. Khim.prom. no.1:66-69 Ja '62. (MIRA 15:1)

1. Gosudarstvennyy institut azotnoy promyshlennosti.
(Ammonium nitrate)

S/078/60/005/010/016/021
B004/B067

AUTHORS: Klochko, M. A., Batova, K. T.

TITLE: Solubility of the Fluorides and Iodides of Lithium and Cesium in Water and Some Other Solvents

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 10, pp. 2325-2328

TEXT: The authors wanted to study the relationship between solubility and other physical data, such as ionic radius and dielectric constant. The solubility of LiF, LiI, CsF, and CsI was determined at 25°, 50°, and 75°C in water, hydrazine, nitrobenzene, dioxane, toluene, and benzene, and at 0°, 25°, and 50°C in acetone. The experimental data for water are given in Table 1, those for the other solvents in Table 2. Table 3 shows the ratio r_k/r_a of the ionic radii for LiF, LiI, CsF, and CsI (according to A. F. Kapustinskiy). The solubility of these salts depends clearly on r_k/r_a. The more this ratio becomes equal to one, i.e., the more symmetric the configuration of the salt, the lower is its solubility in water. The symmetry of the salt is also significant for the solubility of

Solubility of the Fluorides and Iodides of Lithium and Cesium in Water and Some Other Solvents

S/078/60/005/010/016/021
B004/B067

nonaqueous solvents. In this case, however, the solubility decreases above all with the dielectric constant of the solvent. The exceptionally high solubility of CsI in hydrazine is probably due to the formation of a compound. The authors mention I. V. Tananayev et al. (Ref. 4). There are 3 tables and 11 references: 10 Soviet and 1 US.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the Academy of Sciences USSR)

SUBMITTED: July 18, 1959

Card 2/2

BATOVA, L.D.

Preparation of black currants for winter. Zdorov'e 6 no.8:31 Ag '60. (MIRA 13:8)

(CURRANTS)

BATOVA, N.; TULUPNIKOV, A.

"Principles and methods of preparing scientifically tested agricultural systems based on zones"

Sbornik. Rada Zemedelska Ekonomika. Praha, Czechoslovakia. Vol. 32, no. 1, Jan 1959

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 6, Jun 59, Unclas

L 38863-66 EWP(j)/EWP(k)/EWT(m)/T/EWP(v) IJP(c) RM/RH/WW

ACC NR: AR6015914 SOURCE CODE: UR/0081/65/000/022/S065/S065

AUTHOR: Kil'p, Yu. L.; Glizburg, I. L.; Batova, N. I.; Andreyev, Yu. Ye. 45 B

TITLE: Ultrasonic welding of products made of thermoplastics

SOURCE: Ref. zh. Khimiya, Abs. 22S390

REF SOURCE: Tr. N.-i. tekhnol. in-t, vyp. 8, 1964, 98-102

TOPIC TAGS: thermoplastic material, ultrasonic welding, POLYAMIDE RESIN, CAPRONE, STYRENE COPOLYMER, POLYSTYRENE

ABSTRACT: Ultrasonic welding of the following thermoplastics was studied: polyamide resin 68, cast capron of brand V, styrene copolymer (SNP-2), polystyrene, high-strength polystyrene. The study established the feasibility of welding thermoplastics with ultrasound; the unit UZAP-2 was built for this purpose, and its technical data are cited. The unit has an acoustic feedback for the automatic fine tuning of the generator frequency to the natural frequency of the transducer and for stabilizing the amplitude of oscillations of the instrument. The welding was carried out at amplitudes of ultrasonic vibrations of 15-25 μm, forces pressing the instrument to the part of 20-150 kg, and a time of 1.5-6.25 sec. The strength of joints made of high-strength polystyrene was 4 times greater than that of the base material (60 instead of 15 kg/cm^2). A series of data are cited on the strength of weld joints, details of the process, and design of the instruments. The main advantage of the ultrasonic welding of plastics is the liberation of the maximum amount of heat in the welding

Card 1/2 -

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Card 2/2

TULUPNIKOV, L.A.; SOLOV'YEV, A.V.; BATOVA, N.T.; GAVRILOV, V.I., kand. ekonom.nauk; SHIMKO, N.I.; POLOVENKO, I.S., kand.ekonom.nauk; POTAPOV, Kh.Ye., red.; OVCHINNIKOV, N.G., red.; PONOMAREVA, A.A., tekhn.red.

[Problems pertaining to long-range planning and systems of management on collective and state farms] Voprosy perspektivnogo planirovaniia i sistemy vedeniia khoziaistva v kolkhozakh i sovkhozakh. Moskva, Gosplanizdat, 1960. 681 p. (MIRA 14:3)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut ekonomiki sel'skogo khozyaystva. 2. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina; direktor Vsesoyuznogo nauchno-issledovatel'skogo instituta ekonomiki sel'skogo khozyaystva (for Tulupnikov). 3. Zamestitel' direktora Vsesoyuznogo nauchno-issledovatel'skogo instituta ekonomiki sel'skogo khozyaystva (for Gavrilov). 4. Rukovoditel' otdela Vsesoyuznogo nauchno-issledovatel'skogo instituta ekonomiki sel'skogo khozyaystva (for Polovenko).
(Collective farms) (State farms)

RUSANOV, A.K.; BATOVA, N.T.

Effect of the powder content on the results of spectral analysis by the injuction method. Zav.lab. 27 no.3:299-306 '61. (MIRA 14:3)

1. Vsesoyuznyy nuachno-issledovatel'skiy institut mineral'nogo syr'ya.
(Spectrum analysis)

RUSANOV, A.K.; BATOVA, N.T.

Particular features of the method of blowing powders into the arc in the spectral analysis of ores. Zhur.anal.khim. 17 no.4:404-410 Jl '62. (MIRA 15:8)

1. All-Union Scientific Research Institute of Mineral Raw Materials, Moscow.
(Ores--Analysis) (Spectrum analysis)

RUSANOV, A.K.; HATOVA, N.T.

"Characteristic features of the spectrochemical analysis of powdered samples introduced into arc plasma by a stream."

Report presented at the Spectroscopicum; 11th Intl. Colloq. Belgrade, Yug, 30 Sep - 4 Oct 63.

S/048/63/027/001/004/043
B163/B180

AUTHORS: Rusanov, A. K., and Batova, N. T.

TITLE: Features of the method of blowing powders into the arc flame in the spectroscopic analysis of ores

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 27, no. 1, 1963, 8-9

TEXT: The development of the luminous gas cloud and its content of evaporation products from the powder and electrodes was studied by high-speed color cinematography through a synchronized rotating shutter. The first stage of the discharge, which lasts ~0.002 sec is particularly important for the powder particles vaporization and spectral line emission. The temperature of the discharge is then maximal, and the powder particles are most efficiently vaporized and excited. Silicate powders are not completely vaporized if their particle diameter exceeds 0.01 mm. As particle size falls to this value the line intensity increases systematically, and the intensity ratio of spark and arc lines decreases, which indicates a reduction of arc temperature. Below 0.01 mm the intensity decreases, and the ratio of spark and arc line intensity increases, as less particles

Features of the method of blowing ... S/048/63/027/001/004/043
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reach the discharge zone. The highest line and weakest background intensity come from the central part of the arc torch between 0.0003 and 0.002 sec after arc formation. This part of the torch is about 4 mm wide, 2-5 mm from the electrode axis, and during this period it emits 80-90% of the total line intensity. To reduce the effects composition and dispersion of the powder, and of the blowing velocity, on the results the following is recommended: 1) The powder should be carefully pulverized to definite size distribution; 2) excitation sources should be used which have high discharge power in the first stage; 3) the powders should be mixed with graphite, to improve the spraying in air; 4) chemical pre-treatment of the powder to obtain uniform distribution both of the elements to be determined and the internal standards; 5) if the line intensities of the test element and internal standard are to be compared, compounds should be used which are evaporated under similar temperature conditions. A more detailed version of the present paper is published in the Zhurnal analiticheskoy khimii. This paper was presented at the 14th Conference on Spectroscopy in Cor'kiy, July 5-12, 1961.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya (All-Union Scientific Research Institute of Mineral Raw Materials)

Card 2/2

RUSANOV, A.K., BATOVA, N.T.

Effect of particle size and fractional evaporation of elements on the intensity of spectral lines when powders are injected into the arc plasma. Zhur. anal. khim. 20 no.6:649-654 '65.
(MIRA 18:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya, Moskva.

RUSANOV, A.K.; BATOVA, N.T.

Effect of chemical reactions on the intensity of spectral lines when powders are injected into the arc plasma. Zhur. anal. khim. 20 no.7:769-773 '65. (MIRA 18:9)

1. All-Union Scientific-Research Institute of Mineral Resources, Moscow.

BATOVA, V.A.

PRODUCTION EXEX RESULTS OF HYDROPEAT WINNING MACHINE SETS. Batova, V.A. and Vorontsov, V.S. (Torf. Prom. (Peat Ind.) July 1951. p. 18).

BATOVA, V. S.

PA 47/49T43

USSR/Engineering Apr 49
Tracks, Railroad
Machinery

"Mechanization of Track-Laying Operations at Peat Enterprises," V. S. Batova, Engr, 6 pp

"Torf Prom" No 4

Narrow-gauge tracks are used to move peat from operating base to main-line railroad tracks. Briefly describes several types of equipment used for rapid laying and taking up of tracks. Tracks are laid in prefabricated sections. Mentions methods used during winter season.

47/49T43

BATOVA, V.S.

23228. Ratsionalizatsii i izobretatel'stve. Torfprom - St, 1949, No. 7, c. 7-10

SO: LETOPIS' NO. 31, 1949

BATOMA, V.S.

"Survey of inventions and rationalization in peat works of the Peat Administration of the ministry of Electric Power Stations."
Torf. prom., 29, No.3 , 1952.

BATOVA, V.S.

"WORK OF PEAT enterprises in rationalization and invention."
Torf. prom. 29, no. 6, 1952

BATOVA, V.S., inzhener.

Invention and efficiency improvement work. Torf. prom. 30 no.6:24-26 Je '53. (MLRA 6:5)

1. Glavnoye upravleniye torfyanoy promyshlennosti. (Peat industry)

BATOVA, V.S., inzhner.

Initiative to work on efficiency problems and innovations. Torf. prom. 32 no.1:23-26 '55. (MLRA 8:3)

1. Glavtorf.
(Peat industry)

BATOVA, V. S.

USSR.

905. OPERATION OF DTU-4 MACHINES IN 1952 SEASON. Batova, V.S. (Torf. Prom. (Peat Ind., Moscow), Feb. 1955, 29-32). Performance figures are given for a disa type peat layer, which picks up hydro-peat sods and lays them in a snake pattern for drying. (U).

BATOVA, V.S., inzhener.

Results of applying and checking different technical improvements and efficiency suggestions for the mechanization of bog maintenance work. Torf.prom.33 no.2:24-26 '56. (MLRA 9:6)

1.Glavtorf.

(Peat industry)

BATOVA, V.S., inzhener.

Equipment proposed by inventors in 1955. Torf.prom. 33 no.3: 26-29 '56. (MIRA 9:7)

1.Glavtorf.

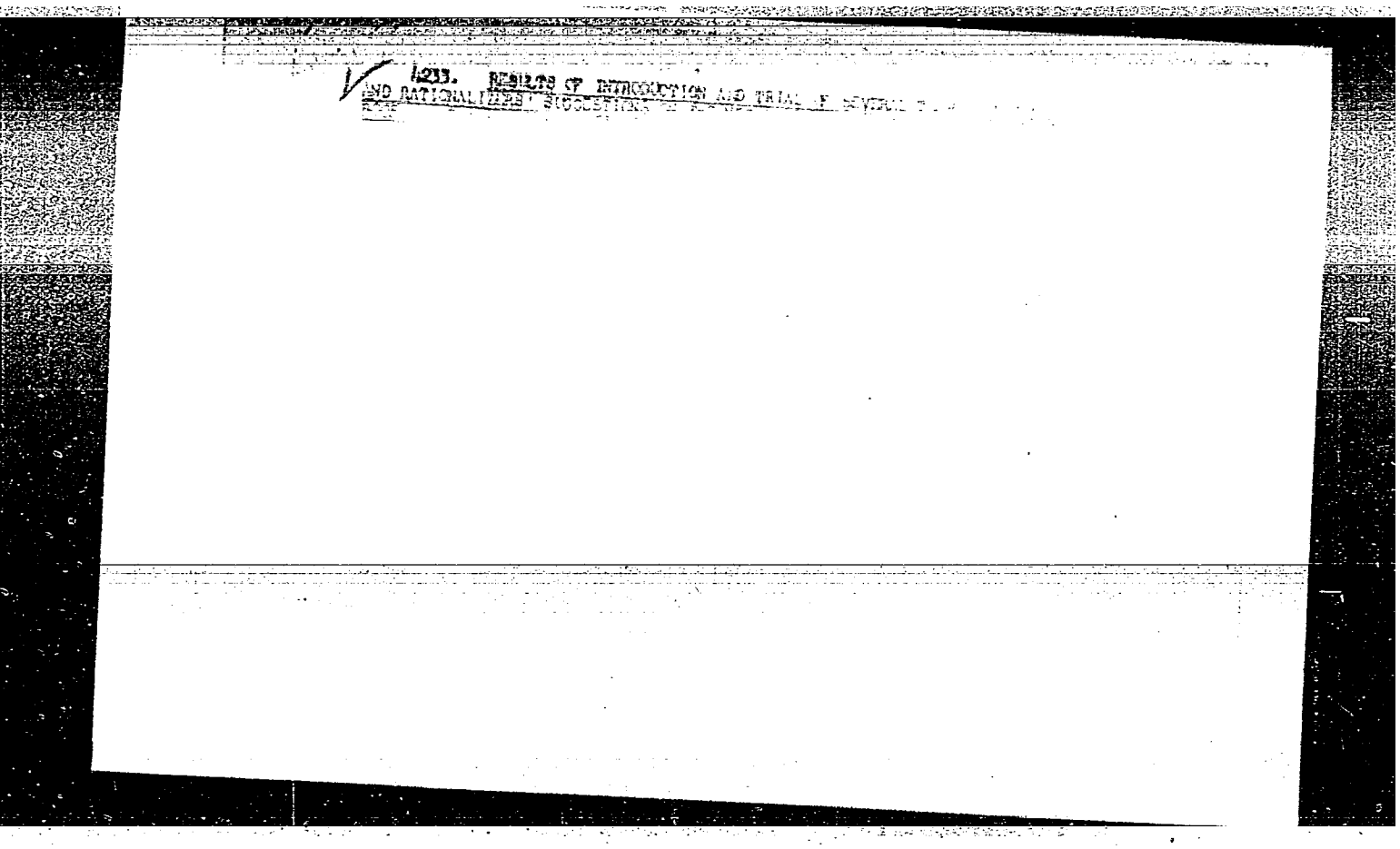
(Peat machinery)

BATOVA, V.S., inzhener.

[redacted]

Work of the enterprises on efficiency and inventions. Torf.prom.33 no.4:13-16 '56. (MLRA 9:9)

1.Glavtorg.
(Peat industry)



BATOVA, V.S.

Seminar at the Exhibition of Achievements of the National Economy. Torf. prom. 40 no.2:33-34 '63. (MIRA 16:4)

(Peat machinery)

BRAGIN, N.A.; BATOVA, V.S.

Review. Torf. prom. 40 no.6:37-38 '63. (MIRA 16:10)

BATOVRIN, A. A.

The following is among dissertations of the Leningrad Polytechnic Institute imeni Kalinin:

"Electromagnetic Processes in an Impulse Machine for Welding." 2 July 1951. Development of problems of the most advantageous air gap in an impulse transformer for contact welding and spark-free operation of the switching arrangement. A theoretical and experimental investigation is given of the electromagnetic processes which take place in an impulse transformer.

SO: M-1048, 28 Mar 56

USSR/Engineering - Welding, Equipment Dec 51

"Measuring and Recording of Welding Currents in the Process of Resistance Welding," A. A. Batovrin

"Avtogen Delo" No 12, pp 21,23

Describes measuring and recording system consisting of 4 main parts: transmitting element or magnetic belt, integrating quadripole, special dc amplifier, and ferroresonance stabilizer of voltage. Recording is reproduced on film of oscillograph. Equipment permits undistorted recording of the curves of welding current and

200T5

USSR/Engineering (Contd) Welding, Equipment Dec 51

magnetic flux i. transformer core. Deficiency of system is its comparative complexity.

200T5

BATOVRIN, A.A.

BEZUGLYY, V.D.; DMITRIYEVA, V.N.; BATOVSKAYA, T.A.

Polarographic determination of acenaphthylene in polymers. Zhur.-anal.khim. 17 no.1:109-112 Ja-F '62. (MIRA 15:2)

1. All-Union Scientific Research Institute of Monocrystals, Scintillators and Highly Pure Materials.
(Acenaphthylene) (Polymers) (Polarography)

SHTURMAN, A.A., YEFOYAN, A.S.; ASNINA, F.I.; BATOVSKAYA, T.A.

Models of current conducting plastics. Mashinostroitel' no.9:41 S '62. (MIRA 15:9)

(Plastics)

BATOVSKIY, O.M.; GAL'PERIN, L.N.

Automatic conductometer. Zhur. fiz. khim. 39 no.5:1273-1276 My '65. (MIRA 18:8)

1. Institut khimicheskoy fiziki AN SSSR.

BATOVSKIY,V.

What the records tell; notes from the All-Union Agricultural Exhibition. Prom.koop. no.7:26-27 Jl'55. (MLRA 8:11)
(Moscow--Agricultural exhibitions)

GERNER, M.M.; ARONOV, Ye.G.; BATOVSKIY, V.N.

Isocol, a new insulating material. Stomatologiia 41 no.4:94-95 Jl-Ag '62. (MIRA 15:9)

1. Iz Khar'kovskogo zavoda zubovrachebnykh materialov (dir. Ye.G. Aronov).

(DENTAL MATERIALS)

ARONOV, Ye.G.; GERNER, M.M.; BATOVSKIY, V.N.

Jet mills in medical industry. Med. prom. 17 no.9:46-47 S'63.
(MIRA 17:5)

1. Khar'kovskiy zavod zubovrachebnykh materialov.

BATOWSKI, H.

"The administrative and territorial division of the USSR.p. 25." (PRZEGLAD GEOGRAFICZNY. POLISH GEOGRAPHICAL REVIEW, Vol. 24, no. 4, 1952, Warszawa, Poland.)

SO: East European L. C. Vol. 2, No. 12, Dec. 1953

BATOYEV, Ts. Zh., Cand Biol Sci -- (diss) "Motor function of the digestive organs of sheep and goats ~~under conditions~~ upon maintenance of the~~ir~~ ~~maintenance~~ latter on ~~different~~ various rations." Len, 1957. 16 pp (Min of Agr USSR, Len Vet Inst, Chair of Normal Physiology of ~~Farm~~ Agr Animals), 100 copies (KL, 1-58, 116)

BATOZSKAYA, E.A.

"The Decisive Role Of The External Environment And The Functional Surroundings Of Organisms In The Ontogenesis Of White Blood Corpuscules In The Horse" (p.198) by V.N. Nikitin, E.A. Batozskaya, P.S. Lyachchenko, M.I. Novikov, I.L. Poltavski, G.F. Bryazkun, and P.G. Prikhod'ko

SO: Journal of General Biology (Zhurnal Obshchei Biologii) Vol. XI, 1950, No.3

BATOZSKAYA, T. A.

USSR/Biology - Nucleic Acids Jul/Aug 52

"Changes, Occurring During the Aging Process, in the Electro-Colloidal Characteristics of the Iso-Electric Point of the Protoplasm of Tissues of Rabbits, Under Various Methods of Rearing," V. N. Nikitin, Yu. A. Basina, T. A. Batozskaya, S. A. Braylovskaya, M. P. Volovik, A. V. Rudayeva, Khar'kov State U

Zhur Obshch Biol, Vol 12, No 4, pp 270-285

The biological role of nucleic acids and nucleoproteids is very great. The protoplasmic complex of a number of organs of exptl rabbits, raised on

265T3

a modified diet, revealed a change in iso-electric point to acidity. It may be considered as proven that changes in iso-electric point of protoplasmic complex take place during aging process of animal organism. Reproduction of intercellular matter in various tissues goes through the same biochemical aging evolution and reflects, in the main, the same regularity of ontogenesis as does the whole organism.

265T3

BATOZSKAYA, T. A.

Growth changes in electrocolloidal properties of rabbit tissue protoplasm in various types of growth. V. N. Nikitin, Yu. A. Baslna, T. A. Batozskaya, S. A. Brailovskaya, M. P. Volovik, and A. V. Rilskaya (People's Univ., Kharkov). *Zhur. Obshchei Biol.* 13, 270–85(1952).—The isoelec. point (IEP) of karyoplasm and cytoplasm changes during growth, first rapidly and then more slowly, toward the alk. side. This is related to the intercellular compds. of the cerebral cortex and the cerebellum; also to the thyroid colloids. It may be evidence of nucleic acid impoverishment in protoplasm during growth. Changes in IEP in spermatogenetic epithelia are similar to changes in other rabbit tissues. Differences in IEP in different organs lessen gradually as the animal grows, indicating that the body protein complexes are becoming less heterogeneous; and as growth continues there is a shift of IEP toward the acid side. This shift was not observed in protoplasm from pancreas cells.

Julian F. Smith

BATOZSKAIA, E. A.

BATOZSKAIA, E. A., LISHCHENKO, P. S., NOVIKOV, M. I., POLTAVSKII, I. L., BRIAZKUN, G. F., PRIKHOD'KO, P. G., NIKITIN, V. N.

Decisive role of outer media and functional state of the organism in cytogenesis of the blood plasma in horses. Zh. obsh. biol. 11:3, May-June 50. p. 198-202

1. Khar'kov Zootechnical Institute and Khar'kov State University.

CLML 19, 5, Nov., 1950

BATRACHENKO,G.M. (Sumy)

Frequent errors in the analysis of problem-solving in geometry.
Mat. v shkole no.4:26-31 Mat. v shkole no.4:26-31 Jl-Ag '55.
(MLRA 8:9)

(Geometry, Solid--Problems, exercises, etc.)

BATRACHENKO, I.P.

Thrombosis of the central retinal vein and glaucoma. Vest. oft. 73 no. 2:17-20 Mr-Ap '60. (MIRA 14:1)
(GLAUCOMA) (VEINS—DISEASE) (RETINA—BLOOD SUPPLY)

TRAPEZNIKOV, V.A., akademik, glav. red.; AYZERMAN, M.A., doktor tekhn. nauk, red.; AGEYKIN, D.I., kand. tekhn. nauk, red.; ARTOBOLEVSKIY, I.I., akademik, red.; BATRACHENKO, L.P., inzh., red.; VORONOV, A.A., doktor tekhn. nauk, red.; GAVRILOV, M.A., doktor tekhn. nauk, red.; DIKUSHIN, V.I., akademik, red.; KARIBSKIY, V.V., kand. tekhn. nauk, red.; KOGAN, B.Ya., kand. tekhn. nauk, red.; KRASIVSKIY, S.P., red.; KULEBAKIN, V.S., akademik, red.; LERNER, A.Ya., doktor tekhn. nauk, red.; LETOV, A.M., kand. tekhn. nauk, red.; MEYEROV, M.V., doktor tekhn. nauk, red.; PETROV, B.N., akademik, red.; PUGACHEV, V.S., doktor tekhn. nauk, red.; SOTSKOV, B.S., red.; STEFANI, Ye.M., kand. tekhn. nauk, red.; KHRAMOY, A.V., kand. tekhn. nauk, red.; TSYPKIN, Ya.Z., doktor tekhn. nauk, prof., red.; CHELYUSTKIN, A.O., kand. tekhn. nauk, red.; CHILIKIN, M.G., doktor tekhn. nauk, red.; NAUMOV, B.N., kand. tekhn. nauk, red.; KASHINA, P.S., tekhn. red.

[Transactions of the International Federation of Automatic Control, 1st International Congress, Moscow, 1960] Trudy I Mezhdunarodnogo kongressa Mezhdunarodnoi federatsii po avtomaticheskomu upravleniiu. Moskva, Izd-vo Akad. nauk SSSR. Vol.2. [Theory of discrete systems, optimal systems, and adaptive automatic control systems] Teoriia diskretnykh, optimal'nykh i samonastraivaiushchikhsia sistem. 1961. 996 p. (MIRA 14:9)

1. International Federation of Automatic Control, 1st International Congress, Moscow, 1960. 2. Chlen-korrespondent AN SSSR (for Sotskov) (Automatic control)

RATRACHENKO, P.P., mayor meditsinskoy sluzhby

Medical instructions for unit flight personnel in its training with pressure suits. Voen.-med. zhur. no.3:64-65 Mr '56. (MLRA 9:9)
(AERONAUTICS--MEDICAL ASPECTS)

VARFOLOMEYEV, Yu.M.; BATRACHENKO, V.A., inzh.

Centralized boiler plant in Koptevo and its operation. Gor. khoz.Mosk. 36 no.7:32-33 Jl '62. (MIRA 16:1)
(Koptevo—Boilers—Maintenance and repair)

BATRAK, A.I. (Sochi)

Ballistocardiogram of patients with subacute rheumocarditis with situs inversus viscerum. Klin.med. no.7:141-142 '61.
(MIRA 14:8)

1. Iz revmatologicheskoy kliniki (zav. - dotsent N.M. Shikhova) Sochinskogo nauchno-issledovatel'skogo instituta kurortologii (dir. - prof. M.M. Shikhov).

(VISCERA--ABNORMITIES AND DEFORMITIES)
(RHEUMATIC HEART DISEASE)
(BALLISTOCARDIOGRAPHY)

BATRAK, A.I.

Effect of sea baths on patients with obliterating endarteritis.
Vop. kur., fizioter. i lech. fiz. kul't. 28 no.4:303-305
Jl-Ag '63. (MIRA 17:9)

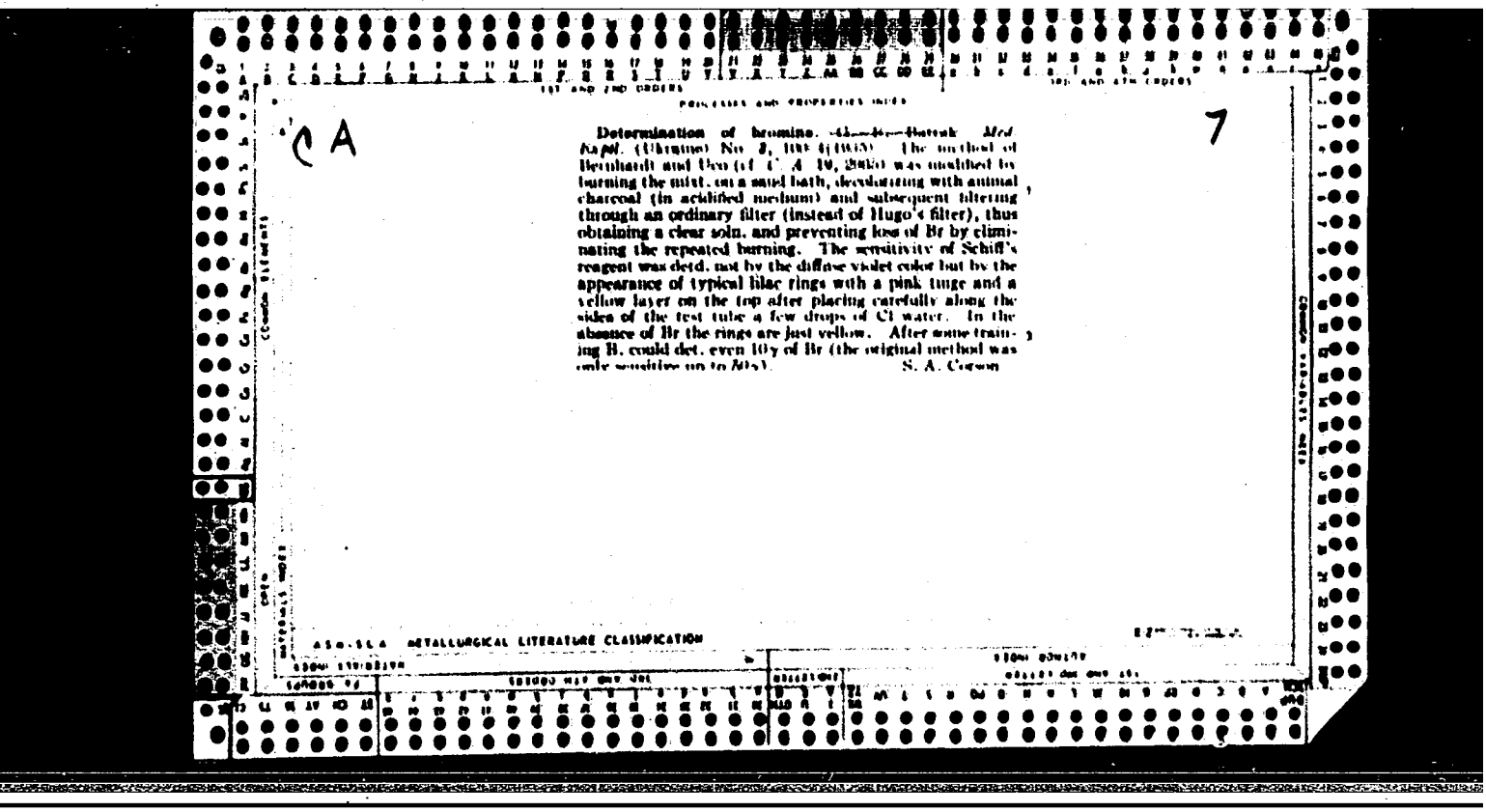
1. Iz revmatologicheskoy kliniki (zav.- dotsent N.M. Shikhova)
Sochinskogo instituta kurortologii (dir.- prof. M.M. Shikhov).

POLISHCHUK, L.K. [Polyshchuk, L.K.]; BATRAK, A.P.; BILYK, L.G. [Bilyk, L.H.]

Effect of phytoncides of the English Walnut on certain phytopathogenic bacteria. Mikrobiol.zhur. 21 no.3:25-30 '59.
(MIRA 12:10)

1. Z Kiivs'kogo derzhavnogo universitetu, Kafedra fiziologii roslin.

(ANTIBIOTICS pharmacol)
(NUTS)



C A

7

Determination of bromine. [illegible] *Med. Kapil.* (Ukraine) No. 3, [illegible] (1935). The method of Bernhardt and Uno (cf. C. A. 19, 2880) was modified by burning the mixt. on a sand bath, decolorizing with animal charcoal (in acidified medium) and subsequent filtering through an ordinary filter (instead of Hugo's filter), thus obtaining a clear soln. and preventing loss of Br by eliminating the repeated burning. The sensitivity of Schiff's reagent was detd. not by the diffuse violet color but by the appearance of typical lilac rings with a pink tinge and a yellow layer on the top after placing carefully along the sides of the test tube a few drops of Cl water. In the absence of Br the rings are just yellow. After some training B. could det. even 10γ of Br (the original method was only sensitive up to 40γ). S. A. Corwin

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

9C

A-4

Action of organs and tissues on blood-adrenaline. G. E. BAYRAK (Proc. Shock Congress, Kiev, 1937, 75—79).—Destruction of adrenaline by various organs (dog) is measured by comparing the hypertensive effect of adrenaline injected into the afferent and efferent vessels of the given organ. The activity of a given organ is very variable. For different tissues the decreasing order of activity is muscle, liver, kidney, brain.

R. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

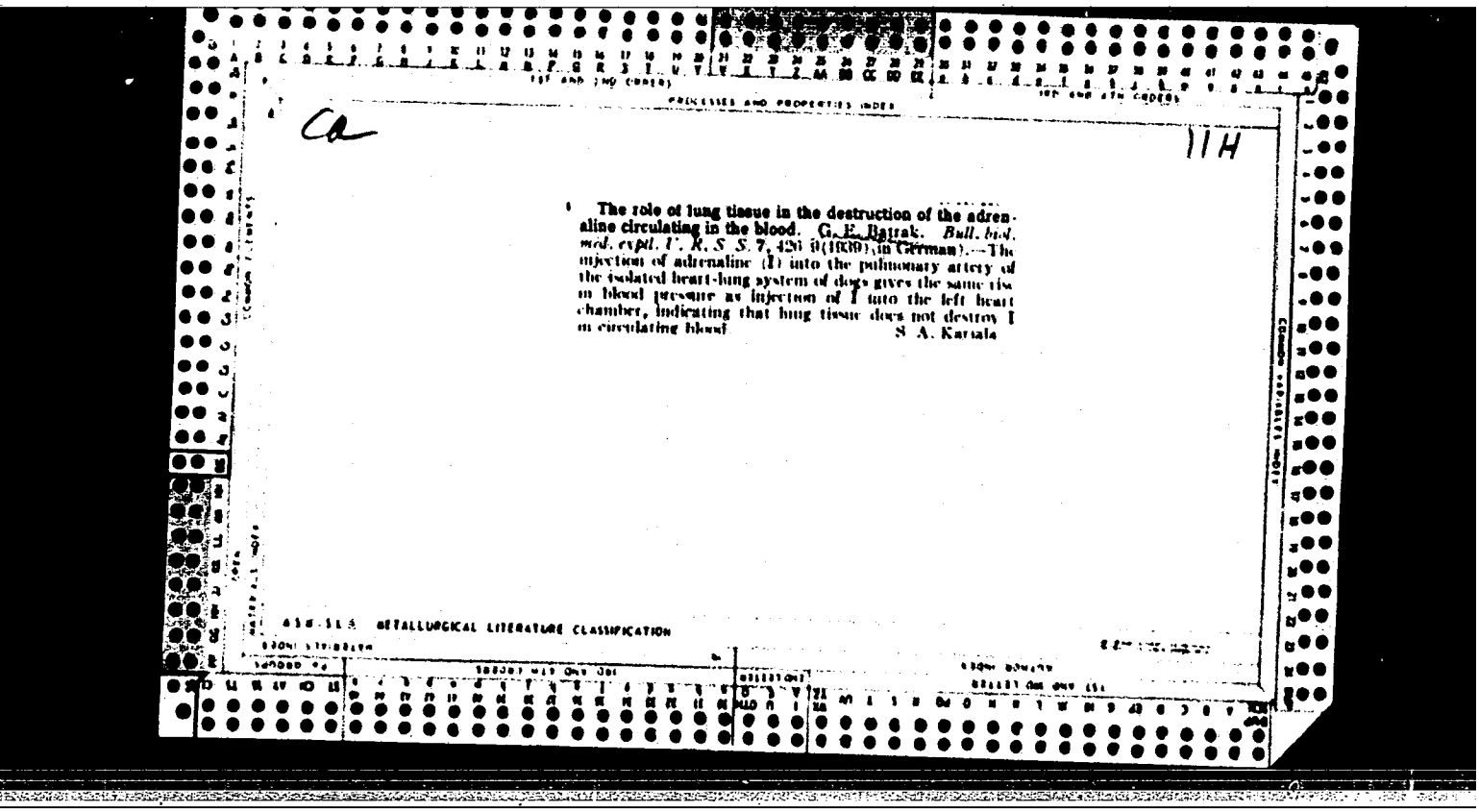
CA

PROCESSES AND PROPERTIES INDEX

11A

The relation of the liver to adrenaline. G. K. Battak and L. I. Timofeeva. *Med. exptl.* (Ukraine) 1938, No. 1, 55-62.—Expts. were performed on isolated livers from normal and P-poisoned rabbits. Adrenaline activity was detd. by perfusing the blood vessels of the rabbit ear (Kravkov-Pisemskii technique). Both the normal and the P-poisoned livers showed no ability to destroy adrenaline. In fact, the vasoconstricting effects of adrenaline solns. which were prepd. in Ringer-Locke soln. previously perfused through the liver were markedly stronger than those prepd. in ordinary Ringer-Locke soln. Moreover, the former type of adrenaline soln. retained its activity for much longer periods than the adrenaline soln. prepd. in ordinary Ringer-Locke soln. S. A. Corson

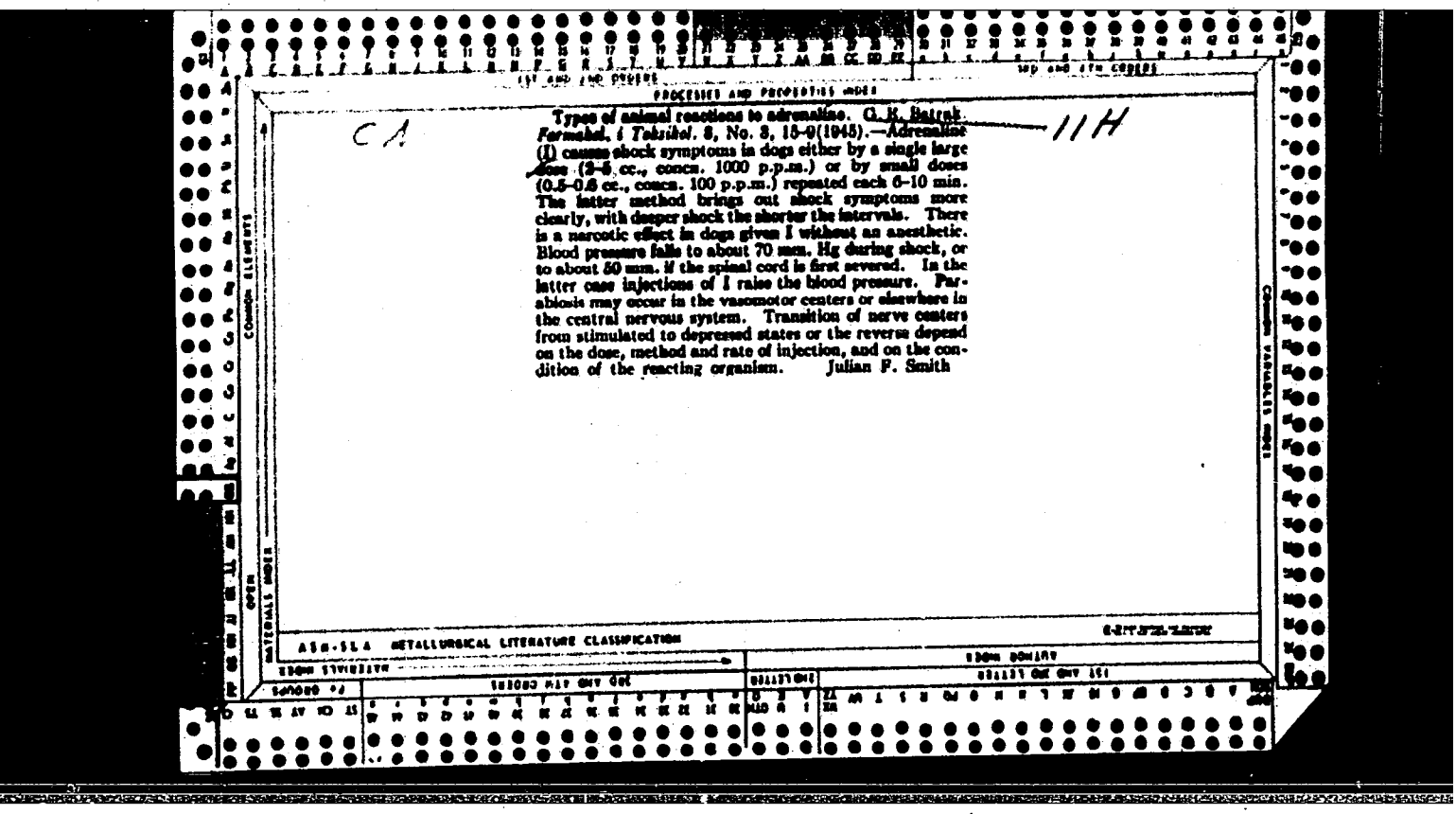
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



Ca

11H

The role of lung tissue in the destruction of the adrenaline circulating in the blood. G. E. Barrak. *Bull. biol. med. exptl. U. R. S. S.* 7, 429–30 (1939) (in German).—The injection of adrenaline (I) into the pulmonary artery of the isolated heart-lung system of dogs gives the same rise in blood pressure as injection of I into the left heart chamber, indicating that lung tissue does not destroy I in circulating blood. S. A. Karsala



C A

11H

Types of animal reactions to adrenaline. G. K. Batrak. *Farmakol. i Toksikol.* 8, No. 3, 15-9(1945).—Adrenaline (I) causes shock symptoms in dogs either by a single large dose (2-6 cc., concn. 1000 p.p.m.) or by small doses (0.5-0.6 cc., concn. 100 p.p.m.) repeated each 6-10 min. The latter method brings out shock symptoms more clearly, with deeper shock the shorter the intervals. There is a narcotic effect in dogs given I without an anesthetic. Blood pressure falls to about 70 mm. Hg during shock, or to about 50 mm. if the spinal cord is first severed. In the latter case injections of I raise the blood pressure. Parabiosis may occur in the vasomotor centers or elsewhere in the central nervous system. Transition of nerve centers from stimulated to depressed states or the reverse depend on the dose, method and rate of injection, and on the condition of the reacting organism. Julian F. Smith

BATRAK, G.Ye., professor.

Adrenalin shock in the cat. Farm.i toks. 10 no.4:36-39 Jl-Ag '47.
(MLRA 7:2)

1. Iz kafedry farmakologii (zaveduyushchiy - professor G.Ye.Batrak) Dnepropetrovskogo meditsinskogo instituta. (Shock) (Adrenalin)

BATRAK, G. Ye.

Batrak, G. Ye. "On the interrelationship among vegetative centers", Vracheb. delo, 1949, No. 4, paragraphs 297-300.

SO: U-4392, 19 August 53, (Letopis 'Zhurnal 'nykh Statey, No 21, 1949).

6168. Problem of chemical therapy of infectious diseases in the light of I. P. Pavlov's [illegible] No. 1, 5—10; Referat. Zh. Biol. Khim., 1956, Abstr. No. [illegible].—By depressing the activity and propagation of pathogenic microbes, therapeutic chemical prep. weaken the impact of the infectious agents on the organism. By depressing the activity of the infectious agent the chemical therapeutic prep. [illegible] vaccine [illegible] of the pathogenic [illegible] antigenic property [illegible] what [illegible] defensive reactions on the part of the macro-organism. [illegible] chemical therapy of infectious diseases the essential [illegible] chemical sterilization as Ehrlich thought and not the stimulation of chemo-therapeutic protective powers of the organism, as assumed by the followers of Bouquet, but the vaccination of the diseased organism with a vaccine obtained from itself. However, one should not identify the processes of vaccination and chemical therapy, for the chemotherapeutic prep. as such may have some effect on the macro-organism in addition to the weakened microbes of the "live" vaccine. (Russian) E. I. Parks

USSR / Pharmacology and Toxicology--Medicinal Plants V-5

Abs Jour: Ref Zhur-Biol, No 23, 1958, 107377

Author : Batrak, G. Ye., L'vov, N. M.

Inst : Dnepropetrovsk Medical Institute

Title : On the Clinical and Pharmacodynamical Properties of the Sand Knotweed

Orig Pub: Sb. nauchn. rabot. Dnepropetr. med. in-t, 1956, 1, 11-13

Abstract: No abstract

Card 1/1

BATRAK-G.E.

Accumulation and elimination of bromine from central nervous system of dog. G. E. Batrak and M. A. Gutina (Med. Inst., Dnepropetrovsk). *Fiziol. Zhur. S.S.S.R.* 42, 389–92(1956).—Bromide ion is accumulated differently in the various parts of the brain. The gray matter accumulates more of it than does the white matter. Reduction of the dose of NaBr serves to retard its accumulation in the brain. After cessation of NaBr supply, the level of Br in the blood drops sharply after 2 days; a similar decline occurs in the brain, slowing down after 3 days. The cortex generally retains more Br than does the medulla.

G. M. Kosolapoff

2

BATRAK, Grigoriy Yevseyevich

[Problem of anesthesia] Problema obezbolivaniia. Kiyev, Gosmedizdat, USSR, 1957. 201 p. (MIRA 12:1)

(ANESTHESIA)

BATRAK, G.Ye. [BATRAK, H.IE.], FREYDLINA, A.Z.

Effect of morphine-ether anesthesia on blood sugar absorption by the cerebral cortex. Fiziol.zhur. [Ukr.] 4 no.3:395-400 My-Je '58 (MIRA 11:7)

1. Dnipropetrovs'kiy medichniy institut, kafedra farmakologii.
(CEREBRAL CORTEX)
(BLOOD SUGAR)
(MORPHINE)
(ETHER (ANESTHESIA)

BATRAK, G.Ye., LIMENKO, V.I., KHRUSTALEV, S.I.

Method for implanting electrodes. Fiziol.zhur. 44 no.10:1001-1003 O '58 (MIRA 12:1)

1. From the department of pharmacology, Medical Institute, Dnepropetrovsk.
(PHYSIOLOGY,
implantation of electrodes (Rus))

BATRAK, Grigoriy Yevseyevich

[New drugs of vegetable origin; experimental and clinical characteristics] Novye lekarstvennye sredstva rastitel'nogo proiskhozhdeniia; eksperimental'no-klinicheskaia kharakteristika. Kiev, Gosmedizdat, USSR, 1959. 131 p. (MIRA 13:9)
(DRUGS)

BATRAK, G.Ye.; FURS, I.T.; KHRUSTALEV, S.I.

Pharmacological properties of Pulsatilla nigricans. Farm. i toks., 22 no.4:320-324 Jl-Ag '59. (MIRA 13:1)

1. Kafedra farmakologii (zav. - prof. G.Ye. Batrak) Dnepropetrovskogo meditsinskogo instituta.
(PLANTS, MEDICINAL pharmacol.)

BATRAK, G.Ye.; DORONIN, A.G.

Influence of morphine on the resistance of animals to ether during ontogenesis. Farm. i toks. 24 no.4:410-416 Jl-Ag '61. (MIRA 14:9)

1. Kafedra farmakologii (zav. - prof. G.Ye.Batrak) Dnepropetrovskogo meditsinskogo instituta.

(MORPHINE) (ETHER (ANESTHETIC)) (GROWTH)

BATRAK, G. Ye.; DUBICH, S. Ya.

Effect of vagotomy on the stamina of the organism under conditions of morphine-ether anesthesia in ontogenesis. Farmakol. toksik. 26 no.3:259-266 My-Je'63 (MIRA 17:2)

1. Kafedra farmakologii (zav. - prof. G. Ye. Batrak) Dnepropetrovskogo meditsinskogo instituta.

Ref[illegible]

Current problems in teaching pharmacology. Farm. i toks. 29 no.3:368-371 My-Je '65. (MIRA 18:8)

BATRAK, Grigoriy Yevseyevich; MAKSIMOVICH, Ya.B., red.

[Pain, shock, anesthesia; on directed stabilization of the brain hemispheres based on the example of morphine. Bol', shok, narkoz; o napravlennoi stabilizatsii bol'shikh polusharii golovnogo mozga na primere morfina. Kiev, Zdorov'ia, 1965. 212 p. (MIRA 19:1)

BATRAK, G.Ye.; CHAPLINSKIY, V.Ya.

Effect of ether anesthesia on changes in the protective properties of the blood serum. Farm. i toks. 28 no.6:710-713 N-D '65. (MIRA 19:1)

1. Kafedra farmakologii (zav. - doktor med.nauk prof. G.Ye. Batrak) Dnepropetrovskogo meditsinskogo instituta i zavod bakteriynykh preparatov (dir. V.S.Sotnikov), Dnepropetrovsk.

BATRAK, I.

Fulfilling honorably the obligations of the second year of the seven-year plan. Muk.-elev. prom. 26 no.6:8-9 Je '60. (MIRA 13:12)

1. Direktor Gusevskogo zavodoupravleniya No.2.
(Gusev--Feed mills)

SIL'VINSKAYA, Kira Aleksandrovna; BATRAKOVA, T.A., red.; CHURAKOVA, V.A., tekhn. red.

[Design of equalizers and filters using master forms] Raschet vyravnivatelei i fil'trov pri pomoshchi shablonov. Moskva, Sviaz'izdat, 1963. 95 p. (MIRA 16:9)
(Electric filters)

Batrak, Ye. N.

AUTHORS: Chentsova, L. G., Grechushnikov, B. N., and Batrak, Ye. N. 51-6-10/25

TITLE: Investigation of Temperature Stimulation of Crystalline Quartz Excited with X-Rays. (Issledovaniye temperaturnogo vysvechivaniya kristallicheskogo kvartsa, vozbuzhdennogo rentgenovymi luchami.)

PERIODICAL: Optika i Spektroskopiya, 1957, Vol. III, Nr. 6, pp. 619-623. (USSR)

ABSTRACT: N.E. Vedenéyeva and G.G. Lemmleyn found that the samples of quartz which luminesce strongly can be coloured intensively by the action of X-rays. The identity of the colour centres and the capture centres which produce thermoluminescence in melted quartz was proved by Lautout (Ref.1). There are two points of view on the nature of capture centres. In the opinion of Yokota (Ref.2) the capture centres are due to oxygen defects. Other workers ascribe colouring on irradiation to the presence of impurities in quartz which are in atomic-disperse state. The authors investigated properties of samples of natural

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crystals from several places of origin. These crystals are: (A) Quartz from Volhynia, which can be intensely coloured by X-rays. (B) Quartz from South Urals, which is more difficult to colour. (V) Quartz from Polar Urals, and (G) Quartz from Aldan - samples of the latter two groups can be only weakly coloured by X-rays. (D) Quartz from Elba, which cannot be coloured by the action of X-rays. All samples were heated to 400°C and then irradiated with 180 kV X-rays. Stimulation was produced by uniform increase of temperature (2 deg/min). Fig.1 shows the thermoluminescence curves for X-irradiated quartz A (curve 1 - 1 hour's irradiation, curve 2 - 2 hours', curve 3 - 6 hours'). On all the curves of Fig.1 clear maxima appear at 175 and 290°C. Fig.2 shows similar curves for samples of quartz A and quartz B, irradiated with X-rays for 3 hours. The maximum at 175°C is much stronger in quartz B.

Fig.3 shows the thermoluminescence of samples of quartz V and G subjected to 30 hours of irradiation. Quartz V has an inflection around 175°C, and a wide maximum at about 280°C. Quartz G has several maxima. Samples cut from two portions of the same crystal G, separated by a crack, have quite different thermoluminescence curves (Fig.4). Heating of uncoloured quartz D did not produce any emission. In the opinion of the present authors the differences between thermoluminescence curves of quartz from various places of origin support the impurity hypothesis on the nature of capture centres. Quartz possesses structural channels (pores) along the C-axis: when ions of Li^+ and Na^+ are introduced into these channels by electrodiffusion, quartz does not lose its ability to be coloured on X-irradiation. Fig.5, curve 1 gives thermoluminescence of quartz A before introduction of foreign ions; curve 2 represents the same quartz with Li^+ ions, and curve 3 - the same quartz with Na^+ ions. In each case the sample was irradiated

for 6 hours. Introduction of Li^+ ions strengthens the 175°C maximum, while introduction of Na^+ destroys the 175°C maximum and depresses the 290°C maximum. It follows that the depth of the capture centres producing thermoluminescence is affected by ions such as Li^+ and Na^+. There are 5 figures and 6 references, of which 1 is Russian, 4 English and 1 French.

ASSOCIATION: Institute of Crystallography, Academy of Sciences of the USSR. (Institut kristallografii AN SSSR)

SUBMITTED: February 11, 1957.

AVAILABLE: Library of Congress.

48-5-30/36

SUBJECT: USSR/Luminescence

AUTHORS: Chentsova, L.G., Grechushnikov, B.N. and Batrak, Ye.N.

TITLE: Investigation of Temperature De-Luminescence of Crystalline Quartz Excited by X-Rays (Issledovaniye temperaturnogo vysvechivaniya kristallicheskogo kvartsa, vozbuzhdennogo rentgenovymi luchami)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1957, Vol 21, #5, pp 699-700 (USSR)

ABSTRACT: The temperature de-luminescence of natural quartz samples from different formation sites was investigated. The curves of samples taken from different sites differ both in intensity of luminescence and in the number and temperature of peaks. This difference indicates the different nature of admixture ions which induce the formation of capture centers.

Alkali "compensating" ions, which presumably are located in the structural channels of quartz, affect the thermal de-luminescence.

The experiments carried out have shown that after migration of

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48-5-3/26

TITLE: Investigation of Temperature De-Luminescence of Crystalline Quartz Excited by X-Rays (Issledovaniye temperaturnogo vysvechivaniya kristallicheskogo kvartsa, vozbuzhdennogo rentgenovymi luchami)

Li^+- and Na^+-ions through quartz, they did not lose their ability of being colored by irradiation. Absorption spectra of the samples subjected to roentgenization after the introduction of Li^+ and Na^+ are very similar, whereas their curves of thermal de-luminescence differ considerably.

The investigation performed has thereby shown that admixture ions, which create charge defects in the crystalline lattice, and ions compensating these defects played an essential role in the formation of capture centers.
The report was followed by a discussion.
One Russian reference is cited.

INSTITUTION: Institute of Crystallography of the USSR Academy of Sciences

PRESENTED BY:

SUBMITTED: No date indicated

AVAILABLE: At the Library of Congress.

Card 2/2

AUTHOR: Batrak, Ye.N. SOV/70-3-1-23/26

TITLE: A Study of the Trapping Centres of X-ray Irradiated Crystals of Quartz with Na Impurity Ions (Issledovaniye tsentrov zakhvata rentgenizirovannykh kristallov kvartsa s vvedennymi ionami Na)

PERIODICAL: Kristallografiya, 1958, Vol 3, Nr 1, pp 104-106 (USSR)

ABSTRACT: The aim of the work reported in this paper was to obtain quantitative thermal characteristics of the trapping centres in X-ray irradiated quartz, namely, the thermal ionisation energy and the parameter p_0 which characterizes the probability of isoenergetic transitions of the system from one state to another. A natural piece of quartz was chosen which had only two well reproducible maxima on the thermal luminescence curve and also a piece of quartz which had impurity sodium ions in it and for which the corresponding thermal luminescence curve had only one high-temperature maximum at 578 °K. The specimens were irradiated using a 37 kV X-ray tube with a molybdenum anticathode (current = 15 mA). To obtain the thermal luminescence curves, the photoelectr...

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A Study of the Trapping Centres of X-ray Irradiated Crystals of Quartz With Na Impurity Ions

method described by Lushchik and Zaitov in Ref 3 was used. In all experiments, the rate of heating was 0.06 °/sec. The table on p 105 gives the data obtained. It was found that the thermal ionisation energy E_T = 1.27 eV and p_o is of the order of 3×10^8 sec^{-1}. Both these quantities were obtained for a specimen of clouded quartz containing Na ions. It was found that crystal subjected to multiple radiations gives stronger luminescence, i.e. specimens can be "trained" to luminesce. L.G. Chentsova and B.N. Grechushnikov are thanked for supervision.

There are 2 figures, 1 table and 7 references, 6 of which are Soviet and 1 English.

ASSOCIATION: Institut kristallografii AN SSSR (Institute of Crystallography of the Ac.Sc.USSR)

SUBMITTED: October 29, 1957

Card 2/2

AUTHOR: Batrak, Ye.N. SOV/70-3-5-18/24

TITLE: On a Model Representation of Colour Centres and Luminescence in Quartz (O model'nom predstavlenii tsentrov okraski i svecheniya v kvartse)

PERIODICAL: Kristallografiya, 1958, Vol 3, Nr 5, pp 626-627 (USSR)

ABSTRACT: The influence of the introduction of Li and Na ions into the lattice of smoky quartz has been studied. The charge of these ions is balanced by the substitution of Si by Al ions. An ISP-51 spectrograph and "D" photographic plates of sensitivity 360 GOST were used for the optical measurements. Both the Li and Na curves of the spectral distribution of the luminescence show peaks at 4450 A with half widths of about 500 A. These are not to be explained by O'Brien's theory (PRS, A 231, 1955, p 404), which postulates that under the influence of X-rays an electron is torn from an O ion (connected to an Al ion by a donor bond) and is trapped by an alkali ion. Light absorption takes place in centres not depending on compensating ions. Temperature luminescence in X-irradiated quartz is therefore not explicable by this model. On the basis of absorption spectra, thermal luminescence curves, thermal decolorisation

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On a Model Representation of Colour Centres and Luminescence in Quartz

curves and emission spectra a model can be proposed. The substitution of a Si ion by an Al ion has an action analogous to that of an activator in a crystal phosphor. It provides a deep level, a little above the fundamental band, which acts as an electron trap. Under radiation, electrons are raised to the conductivity band (the characteristic absorption of the crystal) from the lower band and also from the activator trap (a smaller energy difference - the activator band). The fundamental absorption band is about 1 500 A. The absorption band begins at about 3 000 A and continues to the shorter w.l. side. Electrons in the conductivity band can fall either to the traps or to the local lower levels. The latter are associated with the presence of canals of compensating alkali ions. Heating an excited crystal frees the electrons but is accompanied by discoloration. As an electron freed from a trap must go through the conductivity band, the luminescence spectrum of the crystal does not depend on the nature of the traps. Here, the luminescence is independent of the

On a Model Representation of Colour Centres and Luminescence in Quartz

nature of the compensating ions. Hence, the colour centres and the luminescence centros must be separated. There are 3 figures and 5 references, 3 of which are Soviet and 2 English.

ASSOCIATION: Institut kristallografii AN SSSR
(Institute of Crystallography of the Ac.Sc.USSR)

SUBMITTED: June 11, 1958

SOV/70-3-5-19/24

AUTHOR: Batrak, Ye.N.

TITLE: Temperature Luminescence and Decolorisation of Crystals of X-irradiated Quartz (Temperaturnoye vysvechivaniye i obestsvechivaniye kristallov rentgenizirovannogo kvartsa)

PERIODICAL: Kristallografiya, 1958, Vol 3, Nr 5, pp 627-629 (USSR)

ABSTRACT: Chentsova has suggested (Kristallografiya, 1956, Vol 1, p 484) that when alkali ions are introduced into quartz, they must displace ions already present in the canals which compensate charge defects in the structure. The different forms of the curves of temperature luminescence from irradiated quartz with Li and Na introduced serve to confirm this. These are reproduced, the rate of heating being 0.06°/sec. Li and Na can substitute for each other with some difference in the depth of the traps. As the spectra of the supplementary absorption of smoky quartz has two extra maxima at 4 500 and 6 300 A, the curves of the thermal decolorisation are changed at these two wavelengths. The sharp fall of the absorption coefficient for both bands agrees very well with the thermal luminescence peak at 308 °C. These new data confirm that the absorption bands of quartz in the visible region are connected with

Card1/2

Temperature Luminescence and Decolorisation of Crystals of X-irradiated Quartz

the localisation of electrons in the levels of traps formed in association with Li and Na ions.
There are 4 figures and 5 Soviet references.

ASSOCIATION: Institut kristallografii AN SSSR
(Institute of Crystallography of the Ac.Sc.USSR)

SUBMITTED: July 11, 1958

BATRAK, Ye.N., Cand Phys Math Sci -- (diss) "Study of ~~the~~ centers of capture ~~engagement~~ in crystals of smoked quartz."
Mos, 1959, 12 pp (Inst of Crytallography USSR) 150 copies
(KL, 33-59, 116)

BATRAKOV, Ye.N.

URB-ZAV drilling rig. Neft. khoz. 42 no.2:62-63 F '64.
(MIRA 17:3)

BATRAK, Ye.T.; BUBINA, N.G.; GORELOVA, T.N.; KORDIN, Yu.A.; KRYUKOV, B.I.; KUKUSHKINA, I.N.; LAZARYAN, V.A.; POLYAKOVA, Zh.D.; SHABARSHOVA, A.V. (Dnepropetrovsk)

"Study of regular displacement behaviours of bulk material over vibrating rough surface realizing given motion"

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 January - 5 February 1964

BATRAK, Yu.N.

Study of capturing centers of X-rayed quartz crystals containing injected Na ions. Kristallografia 3 no.1:104-106 '58. (MIRA 11:5)

1. Institut kristallografii AN SSSR.
(Quartz crystals) (Sodium) (X-rays)

1. BATRAKOV, A. B.

2. USSR (600)

4. Technology

7. Story of the televisor. (Rlia nachinaiushchego telezitelia). Moskva, Gosmergoizdat, 1951.

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

BATRAKOV, A. D.

Elementarnaia radiotekhnika [Basic radio engineering]. Moskva, Gosenergoizdat. Part 2, 1952. 240 p.

SO: Monthly List of Russian Accessions, Vol 6 No 6 September 1953

BATRAKOV, A. D.

"Elementary Radio Engineering," Gosenergoizdat, Moscow, 1951

MLRA, December 1952

BATRAKOV, A. D.

Elementarnaia elektrotekhnika dlia radioliubitelei. [Elementary electrical engineering for amateurs]. Rekomendovano v kachestve posobiia dlia radioklubov i radiokruzhkov. Moskva, Gos. energ. izd-vo, 1950.. 176 p. illus. (Massovaia radiobiblioteka, vyp. 58) DLC TK9956.B35

SO: Soviet Transportation and Communications, A Bibliography, Library of Cohgress, Reference department, Washington, 1951, Unclassified.

[redacted], A.I. [redacted] al.

Rasskaz o televizore (Story of a televisor).
Massovaia radiobiblioteka, vyp. 116. Moskva, Gosenergoizdat, 1951. 56 p.