On the Problem of Experimental Determination of the Drop Size During Investigations of Extraction Columns With Filter Plates SOV/156-58-4-49/49

successfully employed for the determination of the drop formation in liquid-liquid extractions as well as for further detailed experiments in the processes.

$$d_{equiv.} = 1.240 \sqrt[3]{QT_{mean}} \quad [cm] \qquad (8)$$

There are 4 figures and 7 references, 2 of which are Soviet.

ASSOCIATION: Kafedra protsessov i apparatov khimicheskoy tekhnologii Moskovskogo instituta khimicheskogo mashinostroyeniya (Chair of Processes and Apparatuses of the Chemical Technology of the Moscow Institute for Chemical Machine-Building)

SUBMITTED: May 27, 1958

Card 3/3

BULATOV, S.N.

3(4,7)

Vsesoyuznyy gidrologicheskiy s"yezd, 2-y, Leningrad, 1957.

Trudy... t. III: Sektsiya gidrofiziki [Transactions of the 2nd All-Union Hydrological Convention. V. 3: Hydrophysics Section] Leningrad, Gidrometeoizdat, 1959. 470 p. Errata slip inserted. 2,000 copies printed.

Sponsoring agency: Glavnoye upravleniye gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR.

Resp. Ed.: V.A. Uryvayev; Ed.: V.S. Protopopov; Tech. Ed.: M.I. Braynina.

PURPOSE: This work is intended for meteorologists, hydrologists, and hydrophysicists, particularly those engaged in the study of snow and ice and evaporation processes.

COVERAGE: This book contains papers on hydrophysics which were presented and discussed at the Third All-Union Hydrological Conference in Leningrad, October 1957. The Conference published 10 volumes on various aspects of hydrology of which this is number 3. The editorial board in charge of the series include: V.A. Uryvayev (Chairman), O.A. Alekin, Ye.V. Blinyak (deceased), O.N. Borzuk, M.A. Velikanov, L.K. Davydov, A.P. Domanitskiy, O.P. Kalinin, S.M. Kritskiy, B.I. Rudelin, L.F. Manole, M.F. Menkel', B.F. Orlov, I. V. Popov, A.K. Proskuryakov, D.L. Sokolovskiy, O.A. Spengler, A.I. Chebotarev, and S.K. Cherkasskiy. This volume is divided into 2 sections: the first contains reports from the subsection for the study of evaporation processes, and the second contains reports from the snow and ice subsection. References accompany each article.

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Izanov, I.V. (deceased) [Candidate of Geographical Sciences, TsIP Moscow] Basic Features of Snow Cover in European USSR (According to the Data of the Snow Survey) 241

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Bulatov, S.N. [Junior Scientific Worker, TsIP Moscow] The Effect of Water Conditions in Winter on the Ice Regimen and the Ice Break-up of Rivers 253

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Shulyakovskiy, L.G. Computing the Onset of River Freeze-up Without Observation Data for Past Years 266

Card 8/ 14

PLANOVSKIY, A.N., doktor tekhn.nauk prof.; BULATOV, S.N., inzh.

Calculation for the overflowing system of column extractors equipped with perforated plates. Khim.mash. no.2:10-13 Mr-Ap '60. (MIRA 13:6)

(Plate towers)

PLANOVSKIY, A.N., doktor tekhn.nauk, prof.; BULATOV, S.N., inzh.

Calculation for the separation compartment in column extractors with sieve plates. Khim. mash. no. 3:9-11 My-Je '60.
(MIRA 14:5)

(Plate towers)

BULATOV, S. N., Cand. Tech. Sci. (diss) "Investigation of Hydrodynamics of Flows in Extraction Apparatus with Sieve Plates," Moscow, 1961, 16 pp. (Moscow Chem. Engr. Inst.) (KL Supp 12-61, 264).

BULATOV, S.N.

Method for calculating the dates of the thawing of ice in reservoirs with an outlet, and ice melting forecasts for Kama Reservoir. Trudy TSIP no.114:3-35 '61. (MIRA 14:10)
(Ice on rivers, lakes, etc.) (Reservoirs)

PLANOVSKIY, A.N.; BULATOV, S.N.; VERTUZAYEV, Ye.D.

Design of sieve-plate column extractors. Khim.prom. no.5:364-367 My '62. (MIRA 15:7)
(Extraction apparatus)

PLANOVSKIY, A.N.; BULATOV, S.N.

Analytical computation of the number of actual plates in a column-type mass transfer apparatus. Khim.prom. no.9: 592-596 Ag '62. (MIRA 15:9)
(Plate towers)

PLYASHKEVICH, A.M.; PLANOVSKIY, A.N.; BULATOV, S.N.; RYABININ, V.A.
ZELINSKAYA, L.G.

Study of caffeine extraction in the column extractor with sieve plates. Med. prom. 17 no.6:32-36 Je'63 (MIRA 17:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze i Moskovskiy institut khimicheskogo mashinostroyeniya.

BULATOV, T.A., inzh.

Contactless devices of program and power supply automatic control systems with a short circuit tester for traction substations. Trudy TSNII MPS no.261:80-102 '63. (MIRA 16:9)

BULATOV, Toriy Antonovich, inzh.; GRIN'KOV, Boris Nikolayevich, inzh.; KUT'IN, Aleksandr Ivanovich, inzh.; MANUKHOV, Vitaliy Andreyevich, inzh.; SUKHOPRUDSKIY, N.D., red.; AYBASHEVA, T.V., red.

[Automatic systems of d.c. traction substations] Ustroistva avtomatiki tiagovykh podstantsii postoiannogo toka. [By] T.A.Bulatov i dr. Moskva, Transport, 1965. 215 p. (MIRA 18:2)

BULATOV, T.A., inzh.

Apparatus with contactless elements for the automation of feeders. Elek. i tepl.tiaga 7 no.11:9-11 N '63. (MIRA 17:2)

BULATOV, V. (Falenskiy rayon Kirovskoy oblasti)

A screw driver and current indicator. Politekh.obuch. no.5:94 My '59. (MIRA 12:7)
(Screwdrivers)

BULATOV, V.

Two years of the work of the departments of agricultural financing.
Fin.SSSR 23 no.11:56-60 N '62. (MIRA 15:12)

1. Nachal'nik otdela finansirovaniya sel'skogo khozyaystva Sverdlovskogo oblastnogo finansovogo otdela.
(Sverdlovsk Province—Agriculture—Auditing and inspection)

BABADZHAN, A.A., kand. tekhn.nauk; BOGOMOLOV, V.I., inzh., retsenzent; BULATOV, V.D., inzh., retsenzent; VETRENKO, Ye.A., kand. tekhn. nauk, red.; VETRENKO, Ye.A., kand. tekhn. nauk, red.; LUCHKO, Yu.V., red.izd-va; KOVALENKO, N.I., tekhn. red.

[Innovators' practce in the copper smelting industry of the Urals] Opyt novatorov medeplavil'noi promyshlennosti Urala. Pod red. E.A.Vetrenko. Sverdlovsk, Metallurgizdat, 1953. 133 p. (MIRA 16:8)
(Ural Mountain region--Copper industry)

TURUTA, N.U., dotsent; BULATOV, V.F., inzh.

Selecting a method of blasting underground borehole charges. Izv. vys. ucheb. zav. gor. zhur. no.8:73-78 '60. (MIRA 13:9)

1. Sverdlovskiy gornyy institut im. V.V.Vakhrusheva (for Turuta).
2. Institut Unipromed' (for Bulatov).
(Mining engineering)

BULATOV, Viktor Fedorovich; USHKOV, N.N., retsenzent; PARTSEVSKIY, V.N., red.izd-va; MAKSIMOVA, V.P., tekhn. red.; KONDRAT'YEVA, M.A., tekhn. red.

[Boring machine operator in underground mining] Mashinist burovykh stankov na podzemnykh gornykh rabotakh. Moskva, Gosgortekhizdat, 1963. 147 p. (MIRA 16:12)
(Boring machinery) (Mining engineering)

BULATOV, V.F.

Introducing a bulk mining system in breaking ore through [illegible]. Biul. tekh.-ekon. inform. Gos. nauch.-issl. inst. nauch i tekhn. inform. 17 no.8:3-7 Ag '64. (MIRA 17:11)

BULATOV, V.F.

Efficiency of the introduction of mine filling systems in selective reef extraction. Biul. tekh.-ekon. inform. Gos. nauch.-issl. nauch. i tekh. inform. 17 no.9:3-6 S '64 (MIRA 18:1)

MIKULINSKIY, M. A., inzh.; SISIN, A. G., inzh.; TIMOFEYEV, B. A., inzh.; BULATOV, V. G., inzh.

Analytical method of determining the optimum parameters of dumps when truck haulage is used. Izv. vys. ucheb. zav.: gor. zhur. 5 no.8:18-25 '62. (MIRA 15:10)

1. Ural'skiy nauchno-issledovatel'skiy i proyektnyy institut mednoy promyshlennosti. Rekomendovana kafedroy otkrytykh rabot Sverdlovskogo gornogo instituta imeni Vakhrusheva.

(Mine haulage)

BULATOV, V.G., mashinist ekskavatora

They carried out two work norms. Transp.stroi. 15 no.10:32-33 O '65. (MIRA 18:12)

1. Mekhanizirovannaya kolonna No.44 tresta TSentrostroymekhanizatsiya.

BULATOV, V.I.; KRICHEVSKIY, L.M.; RIMMAN, A.F.; SHVARTSMAN, A.Z.

Centration system for rotation apparatus with a constant focal distance whose source of irradiation is rotated around the patient. Vest. rent. i rad. 35 no. 5:56-57 My-Je '60.
(MIRA 14:2)

(RADIOGRAPHY—EQUIPMENT AND SUPPLIES)

BULATOV, V.I.; KRICHEVSKIY, L.M.; SHVARTSMAN, A.Z.

Biprojective arteriography with single arteriograms taken at a time decided on beforehand. Vest. rent. i rad. 36 no. 1:57-59 Ja-F '61. (MIRA 14:4)

1. Iz rentgenovskogo otdeleniya (nachal'nik - kandidat meditsinskikh nauk L.D. Gubskiy [deceased] Glavnogo voyennogo gospitalaya imeni Akademika N.N. Burdenko (Nachal'nik L.I. Lyalin)
(ARTERIES—RADIOGRAPHY)

BULATOV, V.I., inzh.

Shock absorber of a new design. Put' i put.khoz. 7 no.9:38 '63. (MIRA 16:10)

1. Putevaya mashinnaya stantsiya No.40 Gor'kovskoy dorogi.

GUBSKIY, L.D. [deceased]; BULATOV, V.I.; SHVARTSMAN, A.Z.

Device for making kymographs of recumbent patients. Vest. rent. i rad. 36 no.4:70-72 Jl-Ag '61. (MIRA 15:2)

(KYMOGRAPH)

BULATOV, V.I.; SHVARTSMAN, A.Z.

Modernization of the wiring system in the URD-105-K4 and URDd-110 apparatus. Vest.rent.i rad. 34 no.2:71-75 Mr-Ap '59. (MIRA 13:4)

(ROENTGENOLOGY, appar. & instruments
URD-105-k4 & URDd-110., modification of
electrical scheme (Rus))

BULATOV, V.I.; KRICHEVSKIY, L.M.; SHVARTSMAN, A.Z.

Device for pitcture-taking in the second projection in angiography with a single serial cassette. Vest. rent. i rad. 35 no. 4:56-61 Jl-Ag '60. (MIRA 14:2)

1. Iz rentgenologicheskogo otdeleniya (nachal'nik - kand.med.nauk L.D. Gubskiy [deceased]) Glavnogo voyennogo gospitalaya imeni akad. N.N. Burdenko (nachal'nik L.I. Lyalin).
(ANGIOGRAPHY—EQUIPMENT AND SUPPLIES)

L 22713-66 EWT(1)/EWA(h)
ACC NR: AP6002933 (A) SOURCE CODE: UR/0286/65/000/024/0102/0102

AUTHORS: Khatskelevich, Ya. D.; Bulatov, V. K.; Popov, S. A.; Mityakov, A. I. 17 B

ORG: none

TITLE: A trigger for controlling relay-contact commutators. Class 42, No. 177159

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965, 102

TOPIC TAGS: relay system, electronic circuit reliability, commutator

ABSTRACT: This Author Certificate presents a trigger for controlling relay-contact commutators. The trigger contains transistors with the windings of the relay in their collector circuit. The design increases the reliability of the trigger and reduces its response time. The bases of the transistors are connected with the contacts of one of the relays. This relay connects the input of the trigger to the bases of the transistors (see Fig. 1). The emitters of the transistors are joined together and are connected to the voltage source through a resistance and the contacts of the second relay. Diodes are connected between the base and the emitter of each transistor.

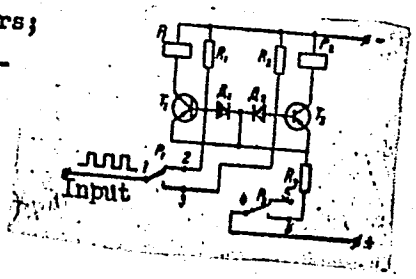
UDC: 681.142:621.374.3

Card 1/2

L 22713-66

ACC NR: AP6002933

Fig. 1. P_1 and P_2 - Relays; T_1 and T_2 - transistors; D_1 and D_2 - diodes; R_1, R_2 and R_3 - resistors; 1-3 - contacts of relay P_1; 4-6 - contacts of relay P_2.



Orig. art. has: 1 figure.

SUB CODE: 09/ SUBM DATE: 14May64

Card 2/2 UDC

BULATOV, V. N.

Valerii Nikolaevich Bulatov; obituary. Vest. LGU 17 no.12:142 '62.
(MIRA 15:7)
(Bulatov, Valerii Nikolaevich, 1939-1962)

BEREZYUK, G.S.; BULATOV, V.V.; ROGOV, L.V.; SHALAYEV, I.L.

Determination of the coefficient of retention of half-life daughter derivatives of radon in the respiratory organs of man. Med.rad. 5 no.6:30-34 '60. (MIRA 13:12)
(RADON) (RESPIRATORY SYSTEM)

BULATOV, V.V.; KARNAUKHOV, L.A.

Increasing the effectiveness of rock disintegration in the drilling of deep wells. Neft. khoz. 41 no.7:13-17 Jl '63
(MIRA 17:7)

FEDOROV, V.S.; BULATOV, V.V.; ALEKSEYEV, Yu.F.

Comparative data on specific operations in the disintegration of rocks under field and laboratory conditions. Neft. khoz. 41 no. 11:11-14 N '63. (MIRA 17:7)

BULATOV, V.V.

Zones of rock disintegration under high pressures. Izv. vys. ucheb. zav.; neft' i gaz 5 no.7:19-23 '62. (MIRA 16:7)

1. Groznenskiy neftyanoy institut.
(Oil well drilling)

FEDOROV, V.S.; BULATOV, V.V.

Stressed state in the bottom hole and the determination of the cutting hardness of rocks. Izv.vys.ucheb.zav.; neft' i gaz 6 no.9:31-35 '63. (MIRA 17:2)

1. Groznenskiy neftyanoy institut.

BULATOV, V.V.; KHALIMOV, A.I.

From operating practices of the KM-81 complex at the "Baydayevskiye uklony" Mine. Ugol' 39 no.2:30-34 F '64. (MIRA 17:3)

1. Shakhta "Baydayevskiye uklony", Kuzbass.

BULATOV, V.V.

Determining the hardness of rocks under high confining pressure by means of the pressing-in method. Izv. vys. ucheb. zav.; neft' i gaz 5 no.3:31-36 '62. (MIRA 16:8)

1. Groznenskiy neftyanoy institut.

FEDOROV, V.S.; SHLYKOV, V.V.

Investigating the interrelation of the rock disintegration zones under conditions of pressure. Izv. vys. ucheb. zav.; neft' i gaz 6 no.1:29-34 '63. (MIRA 17.10)

1. Groznenskiy neftyanoy institut.

BULATOV, V.V.

Temperature stresses of rocks in well walls. Neft. khoz. 43 no.2:23-26 F '65. (MIRA 18:4)

KHALIKOV, A.I., BULATOV, V.V., VLADIMIROV, G.G.

Drifting 2,075 running meters in one month with the PKG-3 cutter-loader at the "Baidaevskie uklony" mine. Ugol' 40 no.4:6-10 Ap '65. (MIRA 18:5)

1. Shakhta "Baydayevskiye uklony", Kuznetskiy ugol'nyy basseyn.

KHALIMOV, A.I., inzh.; BULATOV, V.V., inzh.; VLADIMIROV, G.G., inzh.

Making 2,075 meters of mining in 31 workdays. Shakht. stroi. 9 no.7:9-11 Jl '65. (MIRA 18:10)

1. Shakhta "Baydayevskiye uklony" kombinata Kuzbassugol'.

BULATOV, V.V.; KARNAUKHOV, L.A.

Increasing the efficiency of bits used in turbine drilling; a topic for discussion. Neft. khoz. 41 no. 12:1-5 D '63.

TREFILOV, A.A.; IVANOV, D.P., veterinarnyy vrach; KRUGLIKOV, B.P.; VOVK, A.M., mladshiy nauchnyy sotrudnik; VEGLINA, M.P., veterin.vrach; BULATOV, Ya.P.

Veterinary preparations and equipment. Veterinariia 41 no.3:94-104 Mr '64. (MIRA 18:1)

1. Nachal'nik otdela zocveterinarnykh tovarov Soyuznogo tresta po snabzheniyu sel'skogo khozyaystva veterinarno-zootekhnicheskim oborudovaniyem, instrumentariyem i medikamentami (for Trefilov). 2. Ministerstvo sel'skogo khozyaystva Belorusskoy SSR (for Ivanov). 2. Zaveduyushchiy khimicheskim otdelom Ivanovskoy oblastnoy veterinarnoy laboratoriyey (for Bulatov). 4. Zaveduyushchiy radiologicheskim otdelom Ivanovskoy oblastnoy veterinarnoy laboratoriyey (for Kruglikov). 5. Ukrainskiy nauchno-issledovatel'skiy institut eksperimental'noy veterinarii (for Vovk).

BULATOV, Ya.P.

Table for determining sodium chloride in feeds and pathological material. Veterinariia 41 no.11:92 N '64.

(MIRA 18:11)

1. Zaveduyushchiy khimicheskim otdelom Ivanovskoy oblastnoy veterinarnoy laboratorii.

BULATOV, Yu.; KARTASHOV, N., dotsent; KULTYSHEV, V., dotsent

Special building for coarse crushing. Na stroi.Ros. 3 no.6: 8-10 Je '62. (MIRA 16:7)

1. Glavnyy inzh. Kachkanarrudstroya (for Bulatov). 2. Ural'skiy politekhnicheskiy institut (for Kartashov, Kultyshev).
(Crushing machinery)

ZORINA, A.V., starshiy inzhener; ESTULINA, A.I., inzh.; BULATOVA, A.M., inzh.; ALEKSEYEV, S.A., dotsent, red.; SMIRNOVA, G.V., tekhn.red.

[Time norms for die and precision casting operations in foundries for general machinery manufacture] Obshchemashinostroitel'nye normativy vremeni na liteinye raboty pri lit'e pod davleniem i po vyplavliaemym modeliam. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.promyshl. 1959. 58 p. (MIRA 12:12)

1. Moscow. Nauchno-issledovatel'skiy institut truda. TSentral'noye byuro promyshlennykh normativov po trudu. 2. Nauchno-issledovatel'skiy institut tekhnologii i organizatsii proizvodstva aviatsionnoy promyshlennosti (for Zorina, Estulina, Bulatova).
(Die casting) (Precision casting)

ZORINA, A.V., starshiy inzhener; ESTULINA, A.I., inzh.; BULATOVA, A.M., inzh.; ALEKSEYEV, S.A., dots., red.; VLADIMIROVA, L.A., tekhn. red.

[Time norms established in the general machinery industry for die casting and precision casting operations]Obshchemashinostroitel'nye normativy vremeni na liteinye raboty pri lit'e pod davlenie i po vyplavliaemym modeliam. Moskva, Mashgiz, 1962. 57 p. (MIRA 15:10)

1. Moscow. TSentral'noye byuro promyshlennykh normativov po trudu. 2. Nauchno-issledovatel'skiy institut mashinostroyeniya i tekhnologii (for Zorina, Estulina, Bulatova).
(Die casting--Production standards)
(Precision casting--Production standards)

30971. BULATOVA, A. P. AND TREGUBOV, A. I.

Primenenie antirctikuloendotelial'noy tsitotoksicheskoy cyvorotki akad. Bogomolytsa pri le chenii infarkta miokarda. Doklad na nauch. sessii In-ta im. Sklifosovskogo. Dek. 1946 g. V sb: Voprosy ostroy vnutrenney kliniki M., 1949, s. 79-90

BULATOVA A. P.

3335. BULATOVA A. P. "The diagnosis intra vitam of metastasis of cancer into the myocardium (Russian text) KLIN MED. (Mosk.) 1955, 33, 11 (72-73)

Description of a man aged 61 yr., with an inoperable gastric cancer who, after a month in hospital, suddenly presented a state of shock with precordial pain, tachycardia and sweating. The left ventricle and the liver were enlarged. The presumption was a metastasis of cancer into the myocardium. Autopsy confirmed this supposition by the finding among metastases in other organs of a small, fresh tumour in the posterior wall of the right ventricle which corresponded microscopically to the structure of the gastric cancer. Kraus - Arad (VI, 5, 16)

Iz poliklinik Ministerstva zdravookhraneniya SsSR (Dir.- I. S. Mironenko)

BULATOVA, A. S.

"The Influence of Phenol and Mercuric Chloride on the Respiration of 'Quiescent' Bacilli Coli", Zhur Mikrobiol, Epidemiol i Immunobiol, No. 9, pp 22-26, 1950.

USSR/Medicine - Sulfanilamides Jan 53

"The Effects of White Streptocide and of Sulfidin on the Respiration of B. coli Which Are in a State of Rest," A. S. Bulatova, Chair of Biochem, Moscow Pharmaceutical Inst, Min Pub Health USSR

"Zhur Mikrobiol, Epidemiol, i Immunobiol" No 1, pp 68-69

White streptocide (I) and sulfidin (II) do not inhibit the respiration of B. coli completely, as do $HgCl_2$, phenol, and KCN. This may be due to the lower solubility of the sulfa drugs in water. II has a stronger effect than I, which is possibly due to the decompn of II in the bacterial cell.

241T18

BULATOVA, A.S.

Scientific and methodologic work of the correspondence department of the Moscow Pharmacy Institute. Apt.delo 4 no.3:24-26 My-Je '55. (MLRA 8:8)

1. Iz zaochnogo otdeleniya Moskovskogo farmatsevticheskogo instituta Ministerstva zdravookhraneniya SSSR.
(PHARMACY, education, in Russia, correspondence courses)

SEREBRYAKOVA, L.N.; BULATOVA, A.V.

Improving the method for the preparation of vanadium pentoxide. Prom. khim. reak. i osobo chist. veshch. no.1:13-14 '63. (MIRA 17:2)

L 41590-65 EWT(m)/EPF(c)/T Pr-4 WE

ACCESSION NR: AT5008637 S/2933/64/007/000/0256/0259

AUTHORS: Obolentsev, R. D. (Doctor of chemical sciences); Gavrilova, L. D.; Bulatova, B. T. 24 23 B+1

TITLE: Determination of disulfide sulfur in petroleum products

SOURCE: AN SSSR. Bashkirskiy filial. Khimiya seraorganicheskikh soyedineniy, soderzhashchikhsya v neftyakh i nefteproduktakh, v. 7, 1964, 256-259

TOPIC TAGS: benzene, kerosene, petroleum, polarographic analysis, dielectric permeability, sulfur/ LP 55 polarographic system

ABSTRACT: The disulfide content in benzene and kerosene petroleum products distillates was determined by the polarographic method. Various solutions of Walden salts and lithium chlorides were used as the base electrolyte. The best solvent was found to be 0.015M solution of tetramethylammonium iodide in dimethylformamide. This solvent has a high dielectric permeability and dissolves petroleum products satisfactorily. A total of eight disulfide half-wave potentials were recorded and the disulfide sulfur content of petroleum distillates was determined with a concentration of 0.005 to 0.15% by weight. Synthetic dibutyl-disulfide and diphenyl-disulfide solutions were prepared in petroleum fractions containing no disulfide sulfur. The new disulfide content was determined by the polarographic method.

Card 1/2

L 41590-65
ACCESSION NR: AT5008637

Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: Institut organicheskoy khimii BashFAN SSSR (Institute of Organic Chemistry, Bashkirskiy Branch, AN SSSR)

SUBMITTED: 00 ENCL: 00 SUB CODE: FP

NO REF SOV: 004 OTHER: 001

mu
Card 2/2

BULATOVA, F.D..

Case of systemic lupus erythematosus with an atypical course. Klin. med. 40 no.12:119-120 D '62.
(MIRA 17:2)

1. Iz mediko-sanitarnoy chasti (nachal'nik A.I. Zveynek) Neftepromyslovogo upravleniya "Ishimbayneft'" Bashkirskoy ASSR.

BULATOVA, F. F.

USSR/Astronomy - Position, Computation of Nov/Dec 53

"Comparison of Methods by A.N. Deych and A. Koenig Concerning Photographic Determination of Position of Object From Two Reference Stars," F.F. Bulatova Main Astron Observ, Acad Sci USSR

Astron Zhur, Vol 30, No 6, pp 655-658

Compares basic formulas by A.N. Deych (Astron Zhur 25, 1 [1948] and by A. Koenig, (A.N. 277, [1949]) and presents computations by both methods. Rec 4 Oct 53.

273T78

BULATOVA, F.F.

Exact positions of minor planets according to photographic observations at Pulkovo. Izv.GAO 20 no.1:84-93 '55.
(MIRA 13:5)

(Planets, Minor)

BULATOVA, F.F.; CHUDOVICHEVA, O.N.

Accurate positions of minor planets according to photographic observations in Pulkovo. Izv.GAO 20 no.4:133-136 '57.
(MIRA 13:4)

(Planets, Minor)

POTTER, Kh.I.; BULATOVA, F.F.

Observations of lunar occultations of stars at the Main Astronomical Observatory in Pulkovo in 1956. Astron.tsir. no.180:23 My '57. (MIRA 13:4)
(Occultations)

BULATOVA, G. A.; TROITSKAYA, V. A.; ALPEROVICH, L. V.; [illegible], M. V.

"Fine Structure of Magnetic Storms in Respect of Pulsations." ((II-1P-3))

report submitted for the Intl. Conf. on Cosmic Rays and Earth Storms (IUPAP) Kyoto, Japan 4-15 Sept. 1961.

TROITSKAYA, V.A.; [illegible]

Fine structure of magnetic storms. Izv. AN SSSR. Ser. geof. no.6: 82-86 '65. (MIRA 18:7)

1. Institut fiziki zemli AN SSSR.

DANILKIN, V.A.; KONSTANTINOV, K.M.; BULATOVA, G.I.

Determination of hydrogen in solid aluminum and aluminum alloys.
Zav.lab. 27 no.3:259-261 '61. (MIRA 14:3)
(Aluminum—Hydrogen content)
(Hydrogen—Analysis)

L 52614-65 EWT(1)/EWT(m)/EPF(c)/T/EWP(k) Pf-4/Pr-4/Pi-4 DJ

ACCESSION NR: AP5009997 UR/0318/65/000/003/0020/0024

AUTHORS: Ayzenshtayn, P. G.; Bulatova, I. N.; Sobolev, A. I.

TITLE: Production of sulfofresol with ultrasonics

36
B

SOURCE: Neftepererabotka i neftekhimiya, no. 3, 1965, 20-24

TOPIC TAGS: ultrasonics, lubricant, coolant, organic synthesis

ABSTRACT: Sulfofresol is one of the most important lubricant-coolant fluids used in the treatment of metals. The chief supplier is the Gor'kovskiy neftemaslozavod im. 26 Bakinskikh komissarov (Gorkiy Petroleum-oil Plant). The technology for producing it was set up in 1935 and has remained essentially unchanged. Sulfofresol is obtained by mixing medium-viscosity mineral oils with a so-called sulfured base at 110-120C. It is produced in nigrol heated to 120C with addition of elemental sulfur during careful stirring. The temperature in the vat is then raised to 165C, and this temperature is held for 10-12 hours. The process is long and tedious, so to simplify the production of sulfofresol the authors investigated the possibility of using ultrasonics. An ultrasonic head was submerged in a column of the liquid mix and hydrodynamic currents were generated by means of a disk. The general procedure was to dissolve elemental sulfur (10-12%)

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L 52614-65

ACCESSION NR: AP5009997

in nigrol at 130C, with careful stirring. After complete solution, the nigrol and dissolved sulfur were mixed with distillate, heated to 130C again, and subjected to ultrasonic radiation. High-quality sulfofresol was obtained in this way. Samples were obtained at different periods of ultrasonic radiation, and the properties of the resulting material were determined. All tests indicate that the sulfofresol obtained by the new technique has cutting-coolant properties equivalent to that obtained by the old, and the stability is equally good. Orig. art. has: 3 figures and 4 tables.

ASSOCIATION: Gor'kovskiy neftemaslozavod im. 26 Bakinskikh komissarov (Gorkiy Petroleum-Oil Plant)

SUBMITTED: 00 ENCL: 00 SUB CODE: FP, MM

NO REF SOV: 000 OTHER: 000

Card 2/2

S/137/62/000/002/008/1
A006/A101

AUTHORS: Bulatova, L. G., Vil'nyanskiy, Ya. Ye.

TITLE: Interaction of chromic chloride with oxygen

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 18, abstract 2A85 ("Metallurg. i khim. prom-st' Kazakhstana. Nauchno-tekhn. sb.", 1961, no. 2(12), 68-73)

TEXT: Preliminary thermodynamical calculations of chromic and chromous chloride reactions with O_2 revealed the possibility in principle of the full transformation of Cr chlorides into Cr_2O_3. The reaction $2CrCl_{3(solid)} + 1.5\ O_{2(gas)} = Cr_2O_{3(solid)} + 3Cl_{2(gas)}$ was experimentally investigated. The rate of this reaction was determined as a function of O_2 concentration, the velocity of the gas flow, temperature and duration of interaction. Experimental data are represented in graphs in lgK versus $(1/T)\ 10^3$ coordinates. The nature of graphs and the activation energy values E show that at 350 - 400°C, the process takes place in the kinetic range (E = 31-34 kcal/mole). At 500 - 600°C diffusion conditions take place (E = 7 - 10 kcal/mole); in the 400 - 500°C range there is an intermediate zone; (E = 19 kcal/mole). Experimental data presented in

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S/137/62/000/002/008/144
A006/A101

Interaction of chromic chloride with oxygen

"transformation degree versus time" coordinates, are S-shaped curves. The average rate, calculated by dividing the degree of $CrCl_3$ transformation into Cr_2O_3 by time, was taken as the reaction rate. On the basis of the curve type the conclusion is drawn that this reaction is of an autocatalytic nature. At the beginning of the process the reaction rate depends considerably on the velocity of the air current. From 15 minute and more duration, the reaction rate depends very weakly on the gas flow velocity. At low O_2 concentrations and short duration of the reaction, the rate of the latter depends on O_2 concentration in the gas according to an equation of the first order. At 1% O_2 in the initial gas, the rate of $CrCl_3$ transformation into Cr_2O_3 is 0.5 - 0.7%/min at 500°C. This entails the practical conclusion on the necessity of protecting hot $CrCl_3$, obtained during chlorination of ore or Fe-Cr, against the effect of air O_2 during cooling. The interaction of $CrCl_3$ with O_2 belongs to type 3 of topochemical reactions (according to Roginskiy) and can be schematically described by equation $A_{solid} + n_1B_{gas} = C_{solid} + n_2D_{gas}$.

G. Frents

[Abstracter's note: Complete translation]

Card 2/2

BULATOVA, L.N.; BULATOV, N.M.

Clinical characteristics of an outbreak of vernal tick-borne encephalitis in the Aktash District of the Tatar A.S.S.R. in 1957. Kaz.-med.zhur. 40 no.2:48-53 Mr-Ap '59. (MIRA 12:11)

1. Iz Aktashskoy rayonnoy bol'nitsy (glavnyy vrach rayona - G.I.Baklanov).
(AKTASH DISTRICT--ENCEPHALITIS)

Булатова Л. В.

USSR/Magnetism - Ferromagnetism F-4

Abs Jour : Referat Zhur - Fizika, No 5, 1957, 12006

Author : Shur, Ya.S., Kandaurova, G.S., Shtol'ts, Ye.V., Bulatova, L.V.

Inst : Institute of Physics of Metals, Ural' Branch, Academy of Sciences, USSR, Sverdlovsk.

Title : Investigation of Magnetization Processes in a High-Coercive MnBi Alloy by Means of Powder Patterns.

Orig Pub : Fiz. metallov i metallovedeniye, 1956, 3, No 1, 191-192

Abstract : The magnetic structure of the MnBi alloy and its variation in the magnetic field were studied. The specimens had $H_c \sim 1{,}000$ oersted and consisted of individual particles of a MnBi alloy measuring ~ 15 -- 20 microns, insulated by layers of Bi. In certain crystals there were observed on a plane parallel to the hexagonal axis

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USSR/Magnetism - Ferromagnetism

F-4

Abs Jour : Ref Zhur - Fizika, No 5, 1957, 12006

several fundamental regions with 180° boundaries, and on the end of the regions there were observed dagger-like closing regions, whose magnetization is anti-parallel to the magnetization of the basic region. The magnetization of such crystals took place by shifting the boundaries. In other cases, the entire surface of the crystal consisted of one fundamental region, on the ends of which there were closing regions. During magnetization of such crystals the closing regions vanish after the field reaches a certain value, and as the field is reduced they appear again. However, if the maximum of the magnetizing is increased, it is possible to obtain such a state, whereby a reduction in the magnetic field does not cause the reappearance of the closing regions, and then the demagnetization process is effected by rotating the magnetization vector.

Card 2/2

Bulatova, L. V.

126-2-6/35

AUTHORS: Shur, Ya. S., Shtol'ts, Ye. V., Kandaurova, G. S., and Bulatova, L. V.

TITLE: On the Domain Structure of the High Coercitivity Manganese-Bismuth Alloy. (O domennoy strukture vysokokoertsitivnogo splava marganets-vismut).

PERIODICAL: Fizika Metallov i Metallovedeniye, 1957, Vol.5, No.2, pp. 234-240 (USSR)

ABSTRACT: On the basis of available information on high coercitivity alloys, it can be assumed that the distinguishing feature of this class of ferromagnetics is the presence in these of a single domain structure, as a result of which the magnetization is effected in such ferromagnetics by rotation processes. The high coercitivity state can occur only if the single domains have a high magnetic anisotropy. However, within the framework of this conception it is not possible to explain some of the phenomena which were observed earlier by the author and his team in high coercitivity ferromagnetics, for instance, the magnetic temperature hysteresis (Ref.1), the magnetic viscosity (Ref.2), particular properties of magnetically anisotropic specimens produced from powders of the manganese-bismuth alloy (Ref.3). Therefore, it is

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On the Domain Structure of the High Coercitivity Manganese-Bismuth Alloy.

important to observe directly the domain structure and its changes caused by the effect of a magnetic field and for this purpose the authors carried out the here described investigations for studying the domain structure of the high coercitivity alloy manganese-bismuth, using the powder pattern method. The Mn-Bi alloy was selected for the experiments because it has the highest magnetic anisotropy energy; when crushed into finer particles the coercive force in particles of the order of 10 to 20μ reaches up to 5000 Oe and it can be assumed that, as a result of the high value of the magnetic anisotropy constant, such comparatively large particles will have either a single domain or a nearly single domain magnetic structure, which can be detected by powder patterns. Attempts to study the domain structure were made by various authors (Ref.4) but the results did not allow any definite conclusions on the domain structure of the high coercive alloys and particularly on the magnetization process itself. The experiments were made on cylindrical specimens, 6 mm dia., 10 mm long produced by sintering in vacuum of manganese and bismuth powders at 300°C for one hour. It was established microscopically that after such

On the Domain Structure of the High Coercitivity Manganese-Bismuth Alloy.

sintering the specimen consists of formations of the manganese-bismuth compound with dimensions of 15 to 20μ separated by interlayers of bismuth and manganese; the specimens had a coercive force of the order of 1000 Oe. The results are described and the powder patterns are reproduced in a number of photographs. These show that in a manganese-bismuth alloy consisting of MnBi crystallites of sizes of 15 to 25μ and separated from each other by non-ferromagnetic interlayers, the process of remagnetization parallel to the axis of the easiest magnetization can proceed in the following two ways: by the formation of nuclei, their growth and transformation of some of these in the range of reversible magnetization and a displacement of 180° boundaries between the individual areas, whereby a coercive force of 1000 Oe can be achieved; solely by rotation which is achieved if the magnetizing force is adequate for anihilating the remagnetization nuclei, which excludes occurrence of closing areas, and in this case the coercive force can reach several thousand Oe. Apparently the revealed features are due to the fact that the dimensions in the investigated crystallites are near to the critical size

On the Domain Structure of the High Coercitivity Manganese-Bismuth Alloy.

of transition to the single domain structure. It can be assumed that in other high coercive materials a similar character of the remagnetization processes take place but in ferromagnetics with a magnetic anisotropy smaller than the MnBi alloy it should be possible to observe this phenomenon in the case that the individual ferromagnetic formations are of smaller sizes.
There are 3 figures and 8 references, 4 of which are Slavic.

SUBMITTED: March 21, 1957.

ASSOCIATION: Institute of Metal Physics, Ural Branch of the Ac.Sc. U.S.S.R. (Institut Fiziki Metallov Ural'skogo Filiala AN SSSR).

AVAILABLE: Library of Congress.

AUTHORS: Novikov, S. S., Korsakova, I. S., Bulatova, N. N.

S/153/60/003/01/036/058
B011/B005

TITLE: On the Addition of Nitroalkanes to β,β-Dimethyldivinylketone

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1960, Vol 3, Nr 1, pp 132-134 (USSR)

TEXT: Although β,β-dimethyldivinylketone contains 2 double bonds, substances with one single mobile hydrogen atom are mainly added to one single nonsubstituted vinyl group under experimental conditions (in accordance with I. N. Nazarov, Ref 2 The presence of double bonds in the addition products of the substances mentioned in the title was proved by hydrogenation of 7-nitro-2-methyl-octen-2-one-4 on Pt-black (see Scheme). Trinitromethane adds easily to β,β-dimethyldivinylketone at room temperature. 7,7,7-trinitro-2-methyl-hepten-2-one-4 (I) is formed here. Dinitromethane reacts with the same ketone at 30-35°. 1,1-dinitroethane reacts slowly with the ketone at room temperature. Diethylamine used as a catalyst accelerates the reaction considerably so that it may be finished within 1-2 h. Nitroethane reacts with ketone at 80° in the presence of diethylamine within 8 h. In consequence of the reaction of nitromethane with β,β-dimethyldivinylketone, a mixture of 2 nitroketones forms in the presence of diethylamine at 75-80° (within 7 h): 7-nitro-2-methyl-hepten-2-one-4 (V) (the reaction product of nitromethane with one ketone molecule) and 7-nitro-2,12-dimethyl-tridecadiene-2,11-dione-4,10 (VI) (the reaction product with 2 ketone molecules). Even with the use of a tenfold excess of nitromethane, a mixture of the two ketones (V and VI) is formed. Besides

On the Addition of Nitroalkanes to β,β-Dimethyldivinyl-ketone

S/153/60/003/01/036/058
B011/B005

the nitroalkanes mentioned, the authors investigated the addition of nitroacetic and dinitroacetic ester to β,β-dimethyldivinylketone. Ethyl ester of nitroacetic acid may add to the ketone in the presence of diethylamine at room temperature. Dinitroacetic ester reacts with the ketone without a catalyst under strong development of heat. The yields and properties of the substances obtained are given in a table (p 133). There are 1 table and 3 Soviet references.

ASSOCIATION: Moskovskiy inzhenerno-fizicheskiy institut
(Moscow Institute of Physics and Engineering)

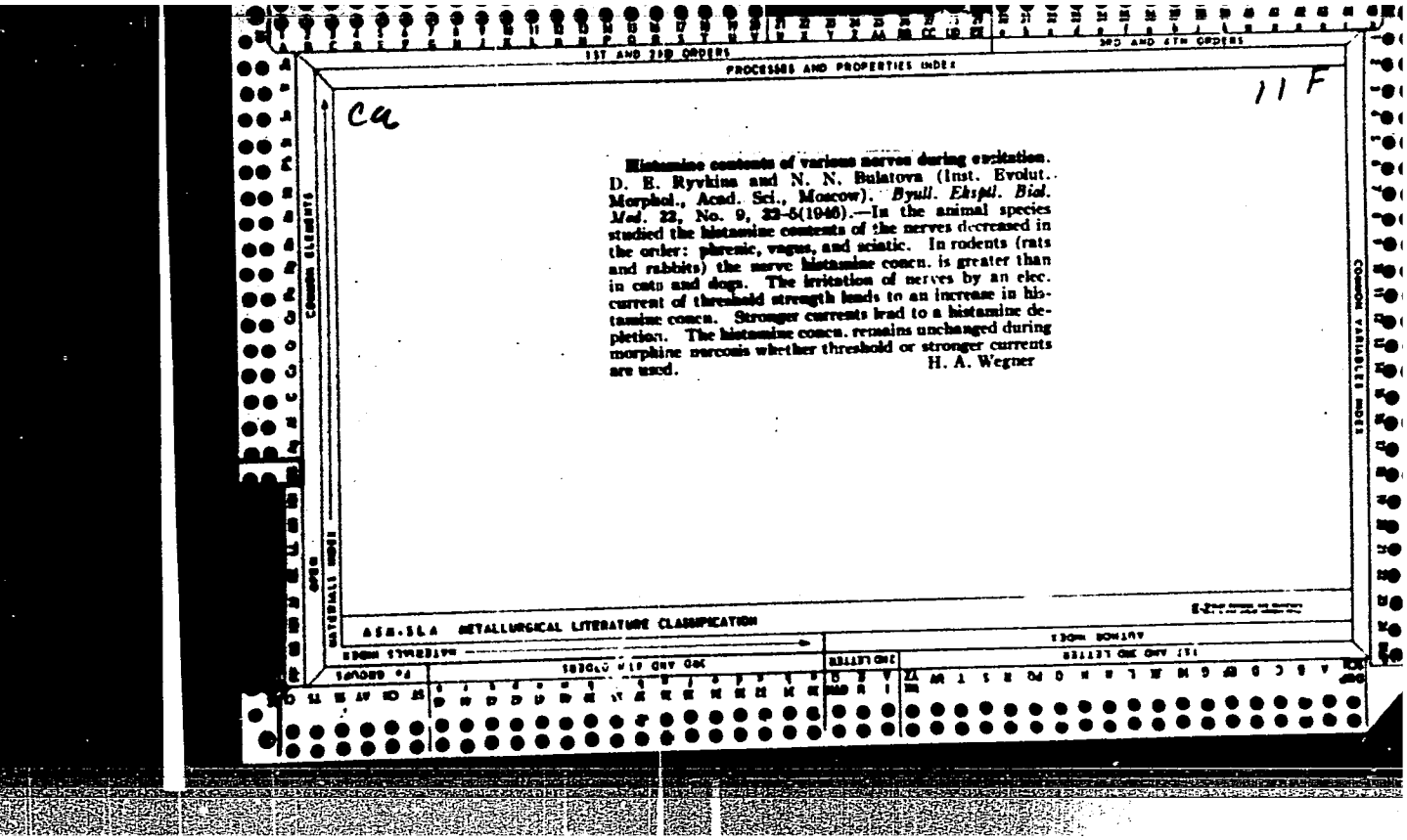
SUBMITTED: March 18, 1959

Card 2/2

IVANOVA (Korsakova), I.S.; BULATOVA, N.N.; NOVIKOV, S.S.

Addition of nitroacetic acid esters to α,β -unsaturated ketones. Izv. AN SSSR. Otd.khim.nauk no.5:921-922 My '62. (MIRA 15:6)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Acetic acid) (Ketones)



1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

Ca

11 F

Histamine contents of various nerves during excitation. D. E. Ryvkina and N. N. Bulatova (Inst. Evolut. Morphol., Acad. Sci., Moscow). *Byull. Eksptl. Biol. Med.* 22, No. 9, 23–6(1946).—In the animal species studied the histamine contents of the nerves decreased in the order: phrenic, vagus, and sciatic. In rodents (rats and rabbits) the nerve histamine concn. is greater than in cats and dogs. The irritation of nerves by an elec. current of threshold strength leads to an increase in histamine concn. Stronger currents lead to a histamine depletion. The histamine concn. remains unchanged during morphine narcosis whether threshold or stronger currents are used.

H. A. Wegner

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

Physiological peculiarities of erythrocytes of cordate fish (concentration of hemoglobin and intensity of oxygen utilization). P. A. Korzhuev and N. Bulatova. *Doklady Akad. Nauk S.S.S.R.* 70, 149–51(1950).—Erythrocytes taken from blood by heart puncture of *Raja clavata* (I) and *Trygon pastinaca* (II) show the following characteristics: Blood of I and II contains few erythrocytes, but these are large (1000 cu. μ) with a high sedimentation rate; hemoglobin is 2.5–4.5 g./100 ml. of blood and the av. concn. in erythrocytes is about 19–20%. O consumption about equals that for other vertebrates, i.e. at 25° for 1 cc. of erythrocytes it is 50 cu. mm./hr. G. M. Kosolapoff

BULATOVA, N. N.

USSR/Medicine - Cholinesterase
Erythrocytes

1 Mar 50

"Comparative Investigations of the Activity of Cholinesterase in Erythrocytes With Different Resistances to Hemolysis," Kh. S. Koshtoyants, Corr Mem, Acad Sci USSR, N. N. Bulatova, Inst of Animal Morph imeni Severtsov, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXXI, No 1, pp 199-200

Investigates role of cholinesterase in erythrocytes in two series of experiments: the first testing effect on speed of hemolysis of erythrocytes of inhibiting action of cholinesterase, and the second comparing activity of cholinesterase in erythrocytes of various animals whose erythrocytes differ in their resistance to substances causing hemolysis. Finds inhibition of cholinesterase increases speed of hemolysis, and erythrocytes with greatest resistance to hemolysis show greatest activity of cholinesterase. Submitted 14 Jan 50.

PA 165T39

KORZHUYEV, P. A.; BULATOVA, N. N.

Blood - Corpuscles and Platelets

Respiratory function of the blood of dolphins. Trudy Inst. morf. zhiv. no. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, November 1952, Uncl.

BULATOVA, N. N., KORZHUYEV, P. A.

Black Sea - Mackerel

Erthrocites and hemoglobin of the Black Sea mackerels. Trudy Inst.morf.zhiv., no. 6, 195

9. Monthly List of Russian Accessions, Library of Congress, November 1953, Uncl.

BULATOVA, N. N.

Dissertation: "Some characteristics of the Respiratory Function of the Blood in Mountain Animals." Cand Biol Sci, Moscow Order of Lenin State U imeni M. V. Lomonsov, 23 Apr 54. (Vechernyaya Moskva--Moscow, 14 Apr 54)

SO: SUM 243, 19 Oct 1954

Bulatova, N.

AUTHORS: Savitskiy, P., Finkel', E., Serenko, V., Bulatova, N. 89-1-19/29

TITLE: The Use of Radioactive Isotopes for Scientific Research (Primeneniye radioaktivnykh izotopov v nauchnykh issledovaniyakh)

PERIODICAL: Atomnaya Energiya, 1958, Vol. 4, Nr 1, pp. 92 - 96 (USSR)

ABSTRACT: From September 9, to September 2o, 1957 a Congress was convened by the UNESCO, which dealt with the use of radioactive isotopes. A total of 39 sessions took place, at which 2o6 lectures were delivered. Of these lectures 49 were delivered by representatives from the USSR, 38 by representatives of France, 31 by such from the USA, and 29 by representatives from Great Britain. The following lectures deserve special mention:
Physics:
Formation of long-lived Al^{26} from $Mg^{25}(d,n)$ and $Mg^{26}(p,n)$
Production of the short-lived isotopes Mg^{28}, I^{132}, I^{133}, F^{18}
Production of Cs^{137}: (Great Britain)-from phosphorous tungsten acid as a phosphate,
(USSR) - from ferrocyanide as a chloride.
A new electromagnetic method for the separation of α,β, and γ active isotopes.
Metal Industry:
Investigation of diffusion phenomena.
Investigation of the transmission of electricity in "solid"

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The Use of Radioactive Isotopes for Scientific Research. 89-1-19/29

liquids.
The use of Cr^{51} as a proof for the stability of inert metal coverings.
The measuring of the interspaces between the rotor and the stator of high pressure steam turbines with Ir^{192}.
The influence exercised by irradiation upon semiconductors.
Investigation of the velocity of corrosion in solids at high temperatures. The measuring of cation mobility in a mixture of molten oxides.
Analytical and Physical Chemistry:
Chromatography in ion exchangers.
Investigation of catalytic processes.
Investigation of the construction and the properties of heteropoly-compounds.
Explanation of platinum-sublimation phenomena.
The sulphurization of metallic surfaces.
Determination of the thickness, nature, and physical-chemical properties of extremely thin coating applied to glass.
Dosimetry:
Determination of the sum dose with end-point colors.
The use of phenol solutions and trichlorethylene for the dosimetry of γ-rays and neutrons.
Geophysics:
Determination of the S^{32}/S^{34} content of meteorites and of the earth.

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Biology:
Investigation of the albumen exchange, of nuclei acids and glucogen in various funcional states of the brain.
Investigation of the course taken by ferments.
A device for the exact determination of the introduction of a radioactive substance into hypophysis.
Investigations of photo-synthesis.
The behaviour of the fission products in earth, in plants, and in living beings.
Determination of the lethal effect if Sr^{90} is administered to young monkeys: if a dose of 18 μC Sr^{90}/ 1 g Ca is present in the bones of the monkey, the monkey dies within 3 years.

AVAILABLE: Library of Congress

Card 3/3

NOVIKOV, S. S.; KORSAKOVA, I. S.; BULATOVA, N. N.

Addition of nitroalkanes to chloromethylvinyl ketone. Izv. vys. ucheb. zav.; khim. i khim. tekh. 5 no.5:753-755 '62. (MIRA 16:1)

1. Moskovskiy inzhenerno-fizicheskiy institut.

(Paraffins) (Ketone)

IVANOVA, I.S.; KONNOVA, Yu.V.; BULATOVA, N.N.; NOVIKOV, S.S.

Addition of 3,3,5,5-tetranitropiperidine to α,β-unsaturated compounds. Izv.AN SSSR.Otd.khim.nauk no.9:1686-1688 S '62. (MIRA 15:10)

1. Institut organicheskoy khimii ii. N.D.Zelinskogo AN SSSR.
(Piperidine) (Unsaturated compounds)

IVANOVA, I.S.; BULATOVA, N.N.; NOVIKOV, S.S.

Addition of tetranitroalkanes to α,β-unsaturated ketones. Izv. AN SSSR. Otd.khim.nauk no.10:1856-1858 O '62. (MIRA 15:10)

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

IVANOVA, I.S.; BULATOVA, N.N.; NOVIKOV, S.S.

Ethylenedinitrodiamine in the reaction of addition to α,β-unsaturated ketones. Izv. AN SSSR.Otd.khim.nauk no.10:1858-1859 O '62. (MIRA 15:10)

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

BULATOVA, N.N.

Characteristics of the blood of alpine animals. Trudy Inst. morf. zhiv. no.41:11-46 '62. (MIRA 16:4)
(Blood) (Altitude, Influence of)

ARBUZOV, Yu.A.; BULATOVA, N.N.

Diene synthesis involving phenyl vinyl ketone. Zhur.ob.khim. 33 no.6:2045-2048 Je '63. (MIRA 16:7)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Ketone) (Unsaturated compounds) (Chemistry, Organic--Synthesis)

BULATOVA, N.P.

SUNDUKOV, N.A., kandidat pedagogicheskikh nauk; TUCHNIN, N.P., kandidat pedagogicheskikh nauk; BULATOVA, N.P., redaktor; TRESTNIKOV, V.N. redaktor; TUSHKEVICH, A.V., tekhnicheskiy redaktor.

[Work in physics and engineering outside class] Vneklassnaia rabota po fizike i tekhnike. Pod red.N.P. Bulatova. Moskva, 1955. 138 p. (MLRA 8:9)

1. Akademiya pedagogicheskikh nauk RSFSR, Moscow. Institut teorii i istorii pedagogiki.
(Physics--Study and teaching)

Bulatova N. V.

AUTHORS: Plisov, A. K., Bulatova, N. V. 79-2-48/64

TITLE: The Configuration and Properties of Unsaturated Acids and Their Derivatives (Konfiguratsiya i svoystva nepredel'nykh kislot i ikh proizvodnykh). VIII. On the Reactivity of Erucic-and Brassidic Acid and Their Esters (VIII. O reaktsionnoy sposobnosti erukovoy i brassidinovoy kislot i ikh efirov).

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 2, pp. 498-503 (USSR

ABSTRACT: The reactions of hydrogenation, oxidation, and saponification of the above acids were investigated in order to chemically determine their precise configuration. On the basis of the determinations of cryoscopic constants Mascarelli (ref. 2) ascribed to the erucic acid a cis-and to the brassidic acid a trans-configuration. The same configuration was observed also by G. V. Pigulevskiy and P. A. Artamonov (ref. 3) by means of investigations carried out in the Raman spectrum. The chemical investigations described in the present work confirm the configurations found by means of physical methods. Erucic acid and its esters hydrogenize and oxidize faster than brassidic acid and its esters while they are slowlier saponifiable. The erucic acid is isolated according to a new method based on the solubility of lead erucate in alcohol. According to Holde the

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The Configuration and Properties of Unsaturated Acids and Their Derivatives. VIII. On the Reactivity of Erucic- and Brassidic Acid and Their Esters. 79-2-48/64

brassidic acid is obtained from erucic acid. Brassidic acid butyl ester was isolated for the first time. The oxidation of the acids and their esters was carried out by means of potassium bichromate in acetic acid at 40 and 55°C. Hydrogenation was carried out with Pd on $BaSO_4$ as catalyst on which occasion comparisons are made with works by Paal (ref. 6) and Fokin (ref. 7).The saponification of the erucates and brassidates was observed by means of the measurings of electric conductivity. The constants of reaction velocity of oxidation, hydrogenation, and saponification are given in a table. There are 4 tables, 9 references, 6 of which are Slavic.

ASSOCIATION: Odessa State University (Odesskiy gosudarstvennyy universitet).

SUBMITTED: January 19, 1957

AVAILABLE: Library of Congress

Card 2/2

BULATOVA, N.V.

Configuration and properties of erucic and brassidic acids and their esters. Pratsi Od. un. zbir. mol. vchen. un. 148 no.3:145-150 '58 (MIRA 13:3)

1. Nauchnyy rukovoditel' - prof. O.K. Plisov.
(Erucic acid) (Brassidic acid)

BULATOVA, N.V., Cand Chem Sci — (diss) "Configuration and properties of erucic and brassidic acids and their ethers." Odessa, 1959, 14 pp with diagrams (Min of Higher Education UkSSR. Odessa State Univ im I.I. Mechnikov) 150 copies (KL, 33-59, 116)

BULATOVA, R.F.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1613
AUTHOR KOGAN, V.S., LAZAREV, B.G., BULATOVA, R.F.
TITLE The Crystal Structure of Hydrogen and Deuterium.
PERIODICAL Zurn.eksp.i teor.fiz, 31, fasc.3, 541 - 541 (1956)
Issued: 12 / 1956

The present work investigates the structure of solid deuterium. The samples of liquid D were produced by condensation on a copper capillary filled with liquid helium. By the method of sharp focussing roentgenographs with distinct lines were obtained after exposure of from 1 to 2 hours. Unfortunately, the lines of D are visible only under small angles, which renders a reliable interpretation of the X-ray pictures and an exact determination of lattice parameters difficult. With the highest degree of reliability attainable in this case, the structure of D was determined as tetragonal with the axial ratio c/a = 0,94 and with the parameter a = 5,4 Å . The density D in this case amounted to 0,18 g/cm^3. This result made it necessary tocheck the data concerning the structure of hydrogen, because the difference in the structure of the lattices of H and D appeared strange. Such a difference could occur particularly in the case of the existence of a polymorphism with a transformation temperature of ~4,2° K in both isotopes. However, neither H nor D change their structure at from 1,5 to 4,1° K.
In the work by W.H.KEESOM et al.Comm.Phys.Univ.Leiden, 209 d,(1930) on the structure of solid H no roentgenographs are mentioned, but they apparently consist of individual reflexes through which DEBYE's arcs were plotted. A simple utilization of such a roentgenograph taken in accordance with the conditions

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resulting from KEESOM's work shows that the breadth of lines covers the spacing between some neighboring lines. Thus, the reflexes assigned by KEESOM et al. to various lines may belong to one single line. This may probably also explain the fact that to the 5 intense lines in KEESOM's roentgenographs there correspond three lines in the roentgenograph described here. Furthermore, KEESOM et al. erroneously assigned several lines to the β - spectrum. When a filter which eliminates β - radiation was used, all lines belonged to the system of interferences originating from Kα - radiation. In the authors' opinion, the data found in the LEIDEN laboratory and accepted by all books of reference are wrong. The authors believe that the roentgenographs of H indicate a tetragonal structure. The assumption that the lattices of H and D belong to a non-cubical syngony is confirmed by the fact that, according to observations made by the authors, they have a double radiation refraction. This does not confirm previous assumptions that solid hydrogen is optically isotropic.

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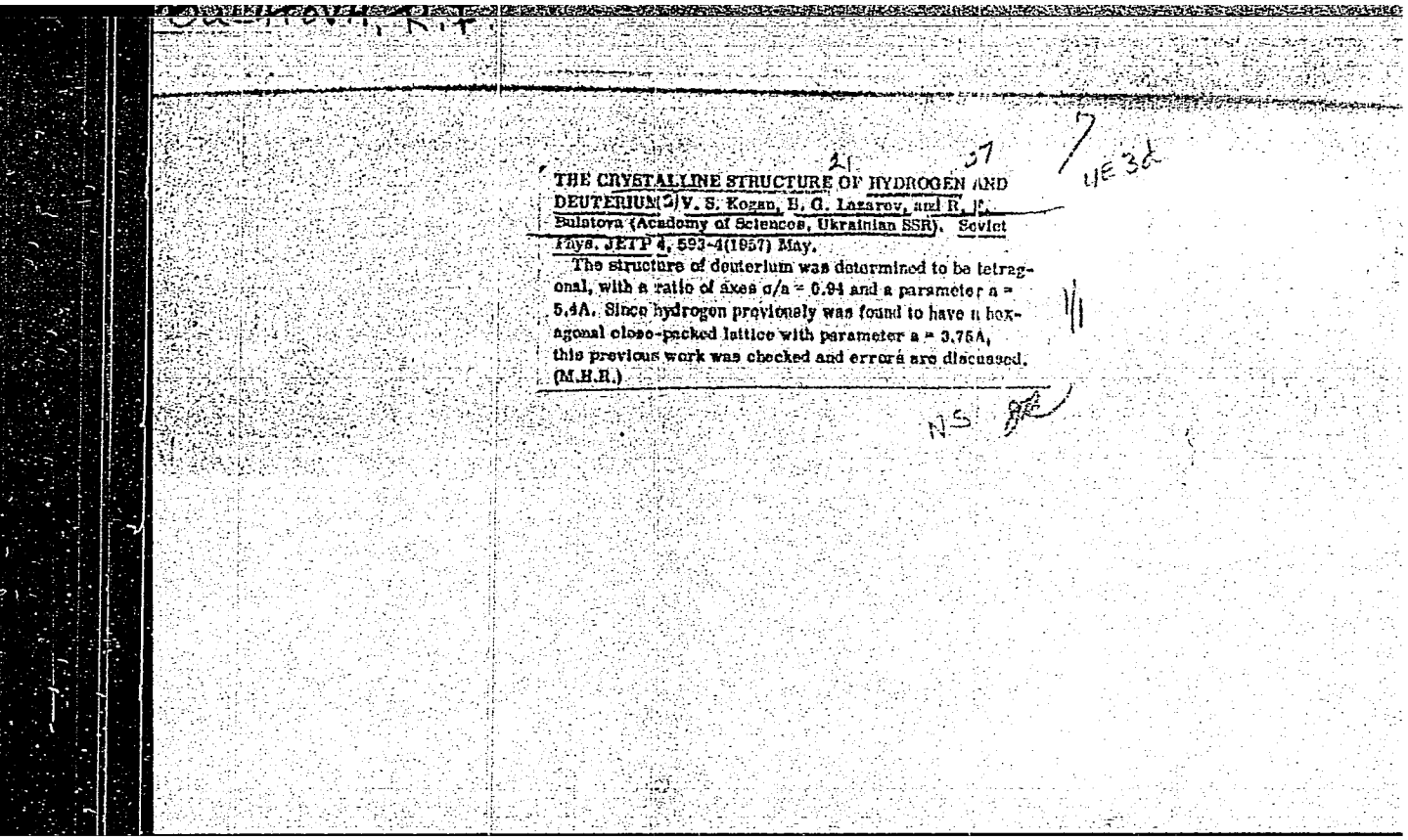

THE CRYSTALLINE STRUCTURE OF HYDROGEN AND DEUTERIUM(S)V. S. Kogan, B. G. Lazarev, and R. I. Bulatova (Academy of Sciences, Ukrainian SSR). Soviet Phys. JETP 4, 593-4(1957) May.

The structure of deuterium was determined to be tetragonal, with a ratio of axes c/a = 0.94 and a parameter a = 5.4A. Since hydrogen previously was found to have a hexagonal close-packed lattice with parameter a = 3.75A, this previous work was checked and errors are discussed. (M.H.R.)