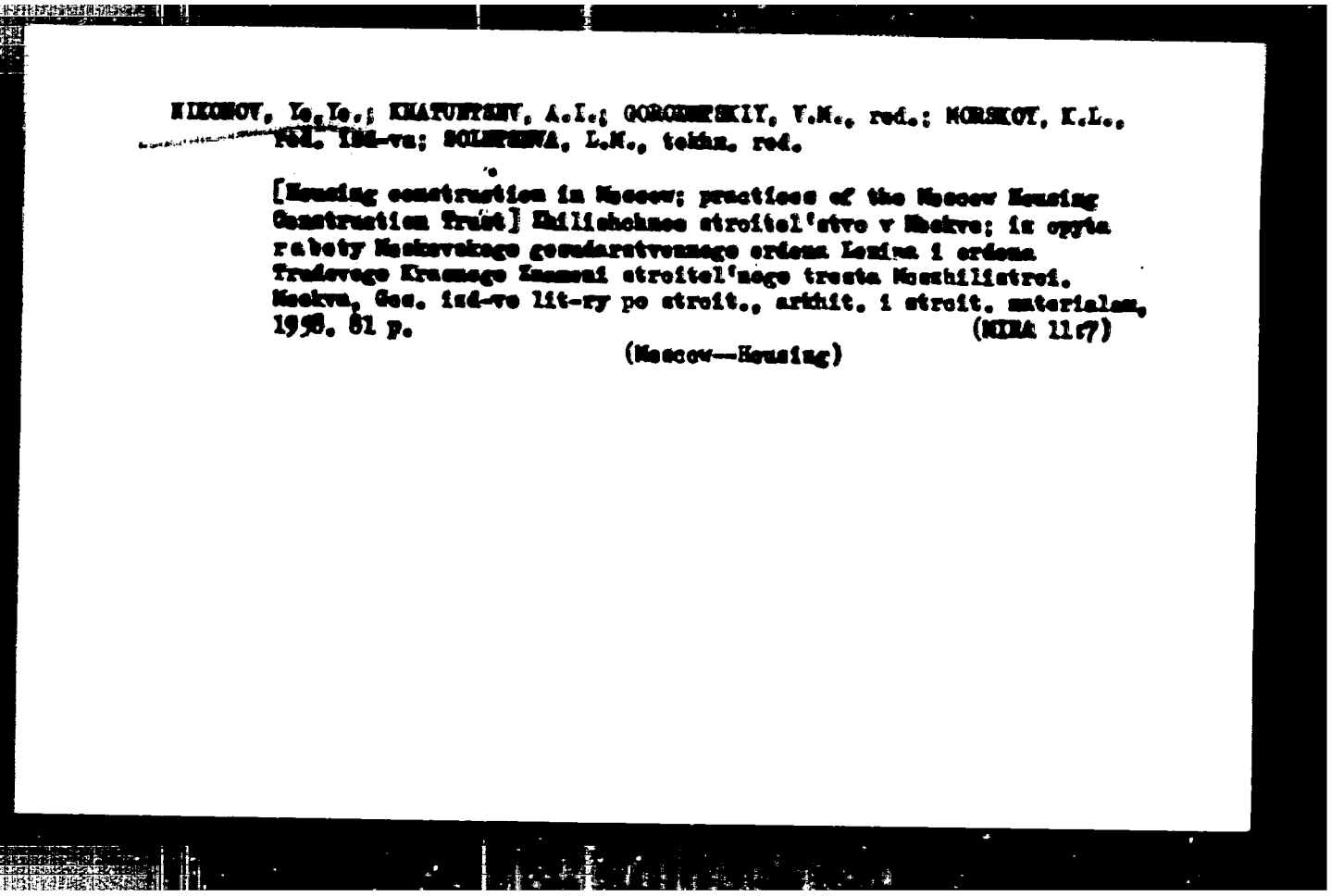
NIKONOV, Ye.Ye.

Twice decorated Moscow Housing Construction Trust. Gor. khoz. Mosk. 31 no.4:14-17 Ap '57. (MLRA 10:6)

1. Upravlyayushchiy Moskovskim zhilishchno-stroitel'nym trestom. (Moscow--Construction industry)



NIKONOV, Ye.Ye.; KHATUNTSEV, A.I.; GORCHERSKIY, V.M., red.; MORSKOY, K.L., red. izd-va; SOLNTSEVA, L.M., tekhn. red.

[Housing construction in Moscow; practices of the Moscow Housing Construction Trust] Zhilishchnoe stroitel'stvo v Moskve; iz opyta raboty Moskovskogo gosudarstvennogo ordena Lenina i ordena Trudovogo Krasnogo Znameni stroitel'nogo tresta Moszhilstroi. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1958. 81 p. (MIRA 11:7)
(Moscow—Housing)

NIKONOV, Yu. Ya.

Compact meniscus of the knee joint. Ortop.travm. i protez. 18 no.6: 19-22 N-D '57. (MIRA 11:4)

1. Iz Ukrainskogo nauchno-issledovatel'skogo instituta ortopedii i travmatologii im. N.I.Sitenko (dir. - chlen-korrespondent AMN SSSR prof. N.P.Kovachenko)
(KNEE, abnorm.
discoid meniscus, surg.)

NIKONOVA, A.A. [Nykonova, A.O.]

Effect of zinc on the carbohydrate phosphorus metabolism in skeletal muscles. Ukr. biokhim. zhur. 36 no.3:440-444 '64. (MIRA 17:10)

1. Kafedra biokhimii Donetskogo meditsinskogo instituta.

OKUNEV, V.N. [Okuniev, V.M.]; NIKONOVA, A.A. [Nykonova, A.O.]

Effect of ischemia on the content of some energy-rich components in skeletal muscles of rabbits. Ukr.biokhim.zhur. 34 no.6:871-875 '62. (MIRA 16:4)

1. Biochemistry Department of Donetsk Medical Institute.
(MUSCLES) (BLOOD VESSELS--LIGATURE)

[illegible]

[illegible]tion processes in the muscles following administration of zinc sulfide to animals. Ukr. biokhim. zhur. 37 no.4:574-578 '65.
(MIRA 18:9)

1. Kafedra biokhimii Donetskogo meditsinskogo instituta im. A.M. Gor'kogo.

BONDAREV, V.M.; GUBANOV, V.G.; KOROVIN, P.K.; OVCHINNIKOV, A.K.; RHAYKOVICH, I.M.; NIKONOVA, A.I., red.

[Gamma-sampling of uranium ores in their natural occurrence] Gamma-oprobovanie uranovykh rud v estestvennom zaleganii. Moskva, Izd-vo "Nedra," 1964. 204 p.
(MIRA 17:7)

NIKONOVA, A.K.

Diagnosis of toxoplasmosis in obstetrical practice. Lab.delo 6 no.2:45-47 Mr-Ap '60. (MIRA 13:6)

1. Akusherako-ginekologicheskaya klinika meditsinskogo instituta i oblastnaya bol'nitsa, Khar'kov.
(TOXOPLASMOSIS)

NIKONOVA, A. K.

Cand Med Sci - (diss) "Materials for the study of toxoplasmosis in obstetrical practice." Khar'kov, 1961. 15 pp;(Khar'kov State Med Inst); 200 copies; price not given; (KL, 6-61 sup, 239)

BULANKIN, I.M.; NIKONOVA, A.S.; ROKHKIND, R.F.; POPOVA, L.Ya.; USHKATS, Ye.V.

Joint uric and acidic-alkaline denaturation of globular proteins. Ukr.biokhim.zhur. 24 no.2:216-224 '52. (MLRA 6:11)

1. Kafedra biokhimiyi Kharkivs'koho derzhavnoho universytetu im. O.M.Gor'koho. (Proteins)

S/052/61/027/007/005/012
B110/B203

AUTHORS: Zhukayeva, V. A., Nikonova, A. S., and Bucina, N. V.

TITLE: Experience gained in the determination of metal impurities in lubricating oils

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 7, 1961, 855

TEXT: The method described for determining metal impurities in lubricating oils is the modified and completed testing process developed by Ye. V. Il'ina and K. I. Taganov (Informatsionno-tekhnicheskiy listok LDNTP, No 97, 1956). After 45 min shaking, 4 g of oil is filled in a porcelain pot, mixed with ~50 mg of graphite powder prepared from spectroscopically pure carbon electrodes annealed for 50 sec, 1 cm^3 of benzine with nickel oleate, and then, dropwise, with 1 cm^3 of benzine with barium oleate. Ni serves as standard, Ba as stabilizer of the arc discharge. The mixture is burnt in the pot, and the ash annealed at 800°C. After cooling in the exsiccator, graphite powder is added and filled up to 200 mg (enrichment coefficient = 20). After 10-min mixing

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in the agate mortar, the mixture is pressed into the crater of the lower graphite electrode. The analysis is conducted by an ИСП-28 (ISP-28) spectrograph with three-lens condenser and three-stage reducer, ДГ-1 (DG-1) generator, and 10 amperes. The spectroscopically pure graphite rod electrodes (6 mm diameter) are burnt with 10 a for 10 sec. The 5 mm long end of the upper electrode is 3 mm in diameter, the lower electrode has a 3 mm deep crater (diameter 3 mm). A special device is used for grinding the electrodes. The analysis is conducted by the method of three standards. The bands lie as follows: Cu - 3082.16; Mn - 2949.20; Sn - 3175.02; Al - 3082.16; Fe - 2966.90; Si-2881.58; Pb - 2833.07; and Cr - 3015.19 Å. Reference line: Ni - 3080.76 Å. The standards are prepared from three mixtures: (I) $SnCl_2$ - 100; Al_2O_3 - 118; CuO - 78.2; Fe_2O_3 - 892; SiO_2 - 134; MnO_2 - 100; PbO - 67.5; Cr_2O_3 - 29.2 mg, and graphite powder - 481 mg. (II) 100 mg of (I) and 900 mg of graphite powder. (III) 200 mg of (II) and 800 mg of graphite powder. 50, 150, and 500 mg of (III), 288 mg of (II), and 96 and 288 mg of (I) are filled into six pots. All pots are mixed with 6 g of pure oil, 15 cm^3 of benzine with nickel oleate, and 15 cm^3 with barium oleate, and heated in a muffle furnace at 600°C. The

substance is filled up with graphite powder to 5000 mg, and mixed in an agate mortar for 30 min. Thus, six standards with Sn, Al, Cu, Mn, Pb, and Si of from 0.001 to 0.3%, Fe from 0.01 to 3%, and Cr from 0.0005 to 0.1% were obtained. This method is, therefore, suited for industrial conditions; because of its time-consuming determinations it is, however, not one of the quick analytical methods. [Abstracter's note: Essentially complete translation.]

ASSOCIATION: Kolomenskiy teplovozostroitel'nyy zavod im. V. V. Kuybysheva (Kolomna Locomotive Works imeni V. V. Kuybyshev)

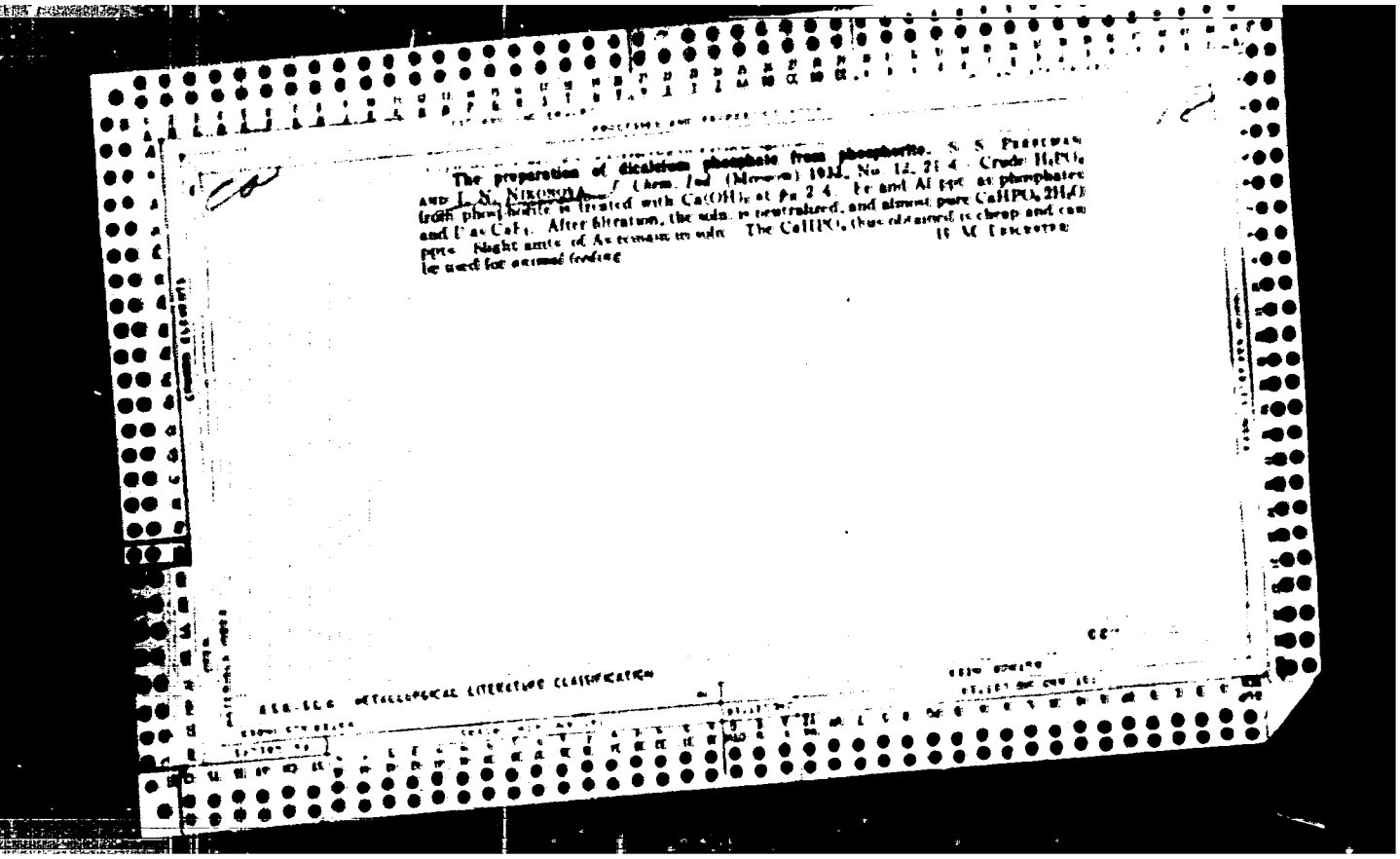
Card 3/3

NIKONOVA, A. S., Cand Agr Sci -- (diss) "Protection of strawberries from unfavorable climatic conditions." Omsk, 1960. 15 pp; (Dissertations listed according to author, as defended in the Omsk Agricultural Inst im S. M. Kirov); 200 copies; free; (KL, 50-60, 135)

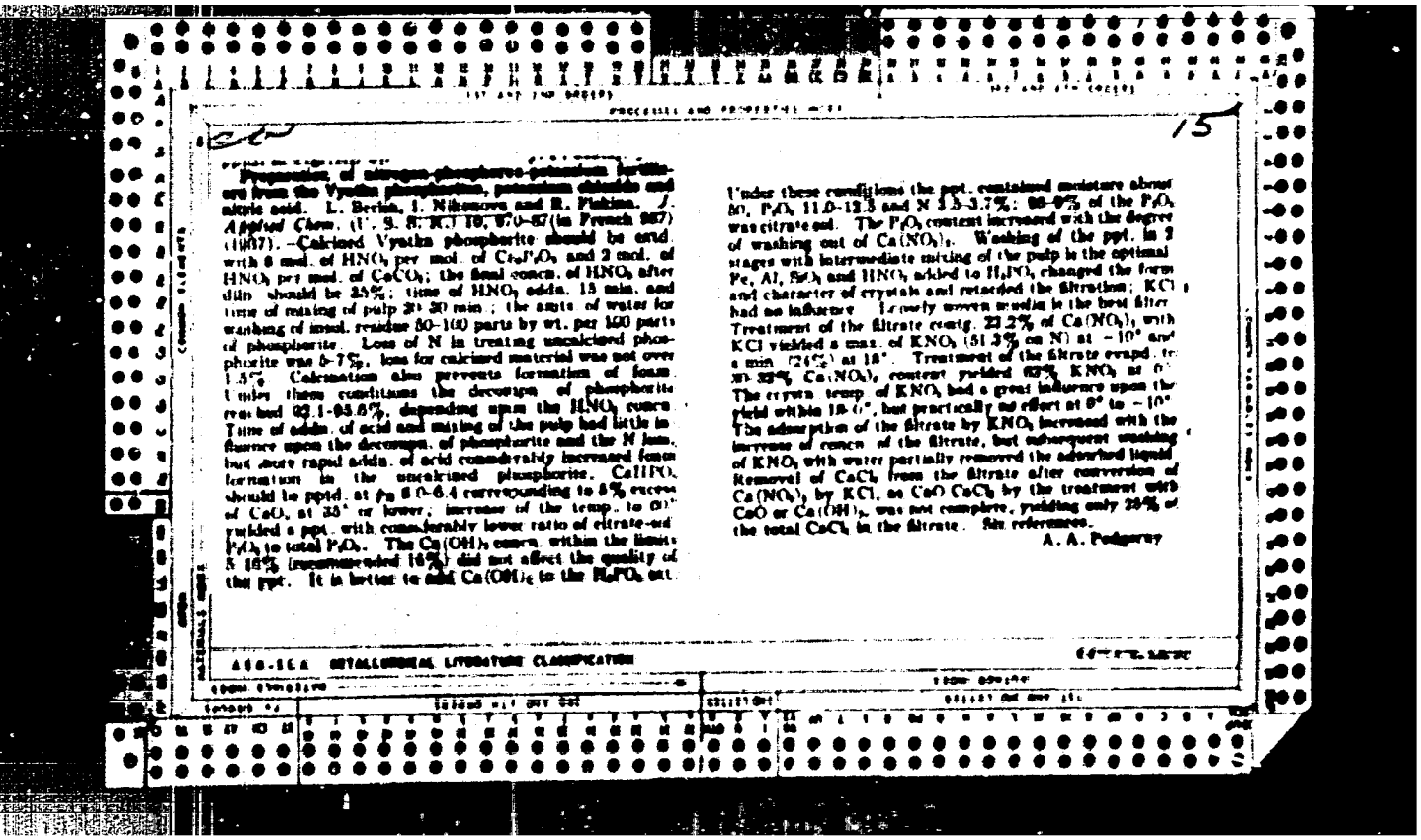
IOFFE, Ya.A., [illegible]; NIKONOVA, I.I.; CHERKASHKO, V.F.; MAYDEROV, G.N.; ZIMIN, B.N.; NOCHEVKINA, L.P.; NESTEROV, L.I.; KISTANOV, N.I.; KUDROV, V.M.; BAK, G.V., red.; POMOSHCHEVA, A.A., tekhn. red.

[Structural changes in the industries of the United States, Great Britain and German Federal Republic in the postwar year]Strukturnye izmeneniia v promyshlennosti SShA, Anglii i FRR v poslevoennye gody. Moskva, Ekonomizdat, 1962. 417 p. (MIRA 15:10)

1. Moscow. Nauchno-issledovatel'skiy ekonomicheskiy institut.
(United States—Industries) (Great Britain—Industries)
(Germany, West—Industries)



The preparation of dicalcium phosphate from phosphorite. S. S. Pasternak and I. S. Nikonova. J. Chem. Ind. (Moscow) 10, No. 12, 21-4. Crude H_3PO_4 (with phosphorite is treated with $Ca(OH)_2$ at pH 2-4. Fe and Al are as phosphates and P_2O_5 as $CaHPO_4$. After filtration, the soln. is neutralized, and almost pure $CaHPO_4 \cdot 2H_2O$ ppts. Slight amts. of As remain in soln. The $CaHPO_4$, thus obtained is cheap and can be used for animal feeding.



15

Preparation of nitrogen-phosphorus-potassium fertilizers from the Vyatka phosphorites, potassium chloride and nitric acid. L. Berlin, I. Nikonova and R. Plakina. *J. Applied Chem.* (U. S. S. R.) 10, 870–87 (in French 887) (1937). —Calcined Vyatka phosphorite should be acidified with 8 mol. of HNO_3 per mol. of $Ca_3P_2O_8$ and 2 mol. of HNO_3 per mol. of $CaCO_3$; the final concn. of HNO_3 after dilu. should be 25%; time of HNO_3 addn. 15 min. and time of mixing of pulp 20–30 min.; the amt. of water for washing of insol. residue 80–100 parts by wt. per 100 parts of phosphorite. Loss of N in treating uncalcined phosphorite was 5–7%, loss for calcined material was not over 1.5%. Calcination also prevents formation of foam. Under these conditions the decompn. of phosphorite reached 92.1–95.6%, depending upon the HNO_3 concn. Time of addn. of acid and mixing of the pulp had little influence upon the decompn. of phosphorite and the N loss, but more rapid addn. of acid considerably increased foam formation in the uncalcined phosphorite. $CaHPO_4$ should be ppted. at p_H 6.0–6.4 corresponding to 5% excess of CaO, at 35° or lower; increase of the temp. to 60° yielded a ppt. with considerably lower ratio of citrate-sol P_2O_5 to total P_2O_5. The $Ca(OH)_2$ concn. within the limits 5–10% (recommended 10%) did not affect the quality of the ppt. It is better to add $Ca(OH)_2$ to the H_3PO_4 sol. Under these conditions the ppt. contained moisture about 50, P_2O_5 11.0–12.3 and N 3.5–3.7%; 98–9% of the P_2O_5 was citrate sol. The P_2O_5 content increased with the degree of washing out of $Ca(NO_3)_2$. Washing of the ppt. in 2 stages with intermediate mixing of the pulp is the optimal. Fe, Al, SiO_2 and HNO_3 added to H_3PO_4 changed the form and character of crystals and retarded the filtration; KCl had no influence. Loosely woven muslin is the best filter. Treatment of the filtrate contg. 22.2% of $Ca(NO_3)_2$ with KCl yielded a max. of KNO_3 (51.3% on N) at −10° and 5 min. (24%) at 18°. Treatment of the filtrate evapd. to 30–32% $Ca(NO_3)_2$ content yielded 62% KNO_3 at 0°. The crystn. temp. of KNO_3 had a great influence upon the yield within 18–0°, but practically no effect at 0° to −10°. The adsorption of the filtrate by KNO_3 increased with the increase of concn. of the filtrate, but subsequent washing of KNO_3 with water partially removed the adsorbed liquid. Removal of $CaCl_2$ from the filtrate after conversion of $Ca(NO_3)_2$ by KCl, as CaO $CaCl_2$ by the treatment with CaO or $Ca(OH)_2$, was not complete, yielding only 20% of the total $CaCl_2$ in the filtrate. Six references.

A. A. Podgorny

A60-52A METALLURGICAL LITERATURE CLASSIFICATION

POPOV, M. M., SHURATOV, V. M., MIKHAYLA, I. M.

"Study of Mixed Crystals" III, Zhur. Obshch. Khim., 10, No. 23-24, 1940. Moscow State University, Scientific-Research Institute of Chemistry.

Report U-1612, 3 Jan 1952.

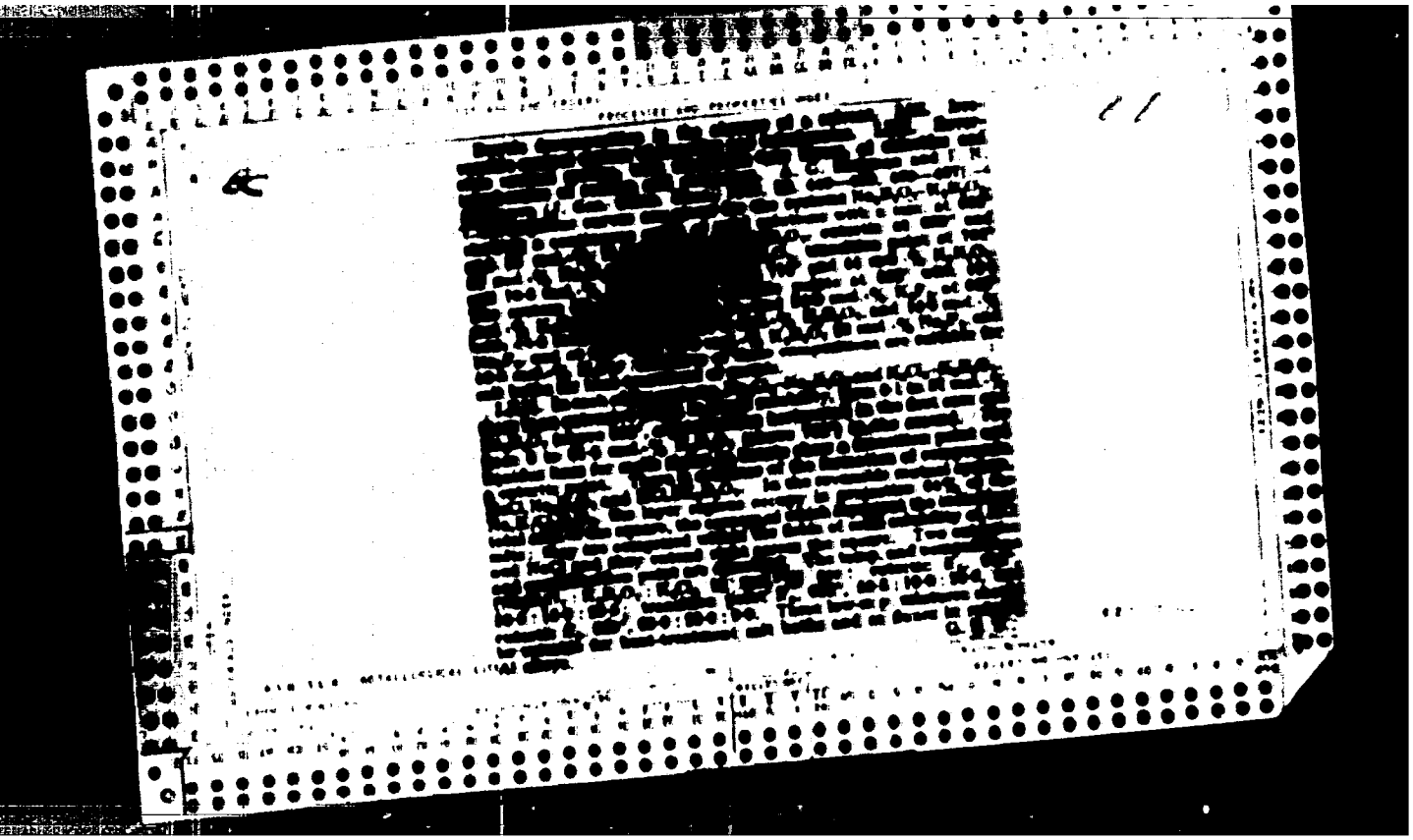
PROCESSES AND PROPERTIES INDEX

CP 2

NIKONOVA, I.N.

Polytherm of the ternary system NaCl-KCl-$ZnCl_2$. I. N. Nikonova, S. P. Pavlenko and A. G. Bergman. Bull. acad. sci. U. R. S. S., Classe sci. chim. 1941, 391-400 (in English, 400).—The true m. p. of $ZnCl_2$ alone and in mixts. with KCl and NaCl was studied. Because of the great hygroscopicity of $ZnCl_2$ there is a great deal of disagreement as to the m. p. of the pure anhyd. salt. Pure $ZnCl_2$ was dehydrated by passing through it a strong stream of dry HCl at 380-400°. The m. p. of the product was found to be 318 ± 2°. The mixts. with KCl and NaCl were also studied in a stream of dry HCl to prevent H_2O absorption. The binary system NaCl-$ZnCl_2$ was found to have a eutectic at 41.5 mol.% NaCl, m. [illegible]°, and a binary compd. $ZnCl_2$.2NaCl, m. incongruently 410°. The system $ZnCl_2$-KCl has the following breaks in the m. p. curve: KCl.2ZnCl$_2$, m. 274°; 2KCl.[illegible] —

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



[illegible], I. N.

External components of the fusion diagram of the quaternary reciprocal system NH_4, K ‖ Cl, NO_3, H_2PO_4. A. G. Bergman, V. P. [illegible], [illegible], V. N. [illegible], [illegible], and [illegible]. *Izvest. Sektora Fiz.-Khim. Anal., Inst. Obshchei i Neorg. Khim., Akad. Nauk S.S.S.R.* 15, 157-69(1947).—Studied were the quaternary systems of the 6 salts. In the system KNO_3-KCl was observed the compd. $KNO_3 \cdot KCl$, m. 400° (decompn.). This compd. had a polymorphic transformation at 2[illegible]°. At the eutectic point 321° it contd. 6 mol. % of KCl and at the transition point 17.4 mol. % KCl. In the system NH_4NO_3-KNO_3 was observed the compd. $2NH_4NO_3 \cdot KNO_3$, m. 170°. There were indications of the existence of a compd. richer in KNO_3. The eutectic of the double salt was at 150.7°, at which point it contd. 11.3 mol. % of KNO_3. At the transition point [illegible]0.5° it contd. 10.5 mol. % of KNO_3. In the eutectic, 1[illegible]°, system NH_4NO_3-$NH_4H_2PO_4$ was observed a wide range of $NH_4H_2PO_4$ solid solns. At the eutectic point this system contd. 12.5 mol. % of $NH_4H_2PO_4$. The eutectic of the system KNO_3-KH_2PO_4 was at 214.3° and contd. 20.2 mol. % of KH_2PO_4. In the system KCl-KH_2PO_4 the eutectic point was at 2[illegible]° when it contd. 3.6 mol. % of KCl. The system NH_4Cl-$NH_4H_2PO_4$ had a eutectic point at 1[illegible]° when it contd. 12.2 mol. % of NH_4Cl. $NH_4H_2PO_4$ and KH_2PO_4 formed a continuous series of solid solns. The ternary system NH_4NO_3-$NH_4H_2PO_4$-NH_4Cl had a eutectic point at 1[illegible]° when it contd. NH_4NO_3 [illegible].25, $NH_4H_2PO_4$ 5.75, and NH_4Cl 11 mol. %. The eutectic point of the system KNO_3-KH_2PO_4-KCl [illegible] it contd. KNO_3 [illegible], KH_2PO_4 [illegible] mol. %. [illegible] within this system

the quaternary reciprocal system NH_4, K ‖ Cl, NO_3, H_2PO_4. *Ibid.* 2093.—The freezing diagram of the system was studied up to 160° in the region adjacent to NH_4NO_3. Within this region were crystd. NH_4NO_3, $2NH_4NO_3 \cdot KNO_3$, KNO_3, $NH_4(K)Cl$, and $NH_4(K)H_2PO_4$. These spaces made contact at the eutectic point approx. 125° and at the transition point approx. 131°. At the eutectic point the approx. compn. was NH_4 9.5, K 9.5, Cl 13.75, H_2PO_4 3.75, NO_3 82.50 ion %, and the solid phases $NH_4(K)Cl$ + $NH_4(K)H_2PO_4$ + NH_4NO_3 + $2NH_4NO_3 \cdot KNO_3$. At the transition point the approx. compn. was NH_4 85.0, K 14.0, Cl 13.25, H_2PO_4 4.80, NO_3 81.95 ion %, and the solid phases $2NH_4NO_3 \cdot KNO_3$ + $NH_4(K)Cl$ + $NH_4(K)H_2PO_4$ + KNO_3. Also studied was the effect of addn. of NaCl and KH_2PO_4 on the ternary p. Addn. of NaCl lowered the quaternary eutectic point, 125°, by 9°. Addn. of KH_2PO_4 lowered the eutectic point, 112°, of the ternary system NH_4, Na ‖ Cl, NO_3 by 9°.

M. Busch

USSR/Chemistry - Reaction Kinetics 11 Sep 52

"The Mechanism Kinetics of the Reaction of Water-Soluble Salts With Gases in the Presence of Water Vapor," I. N. Nikonova, D. A. Epshteyn

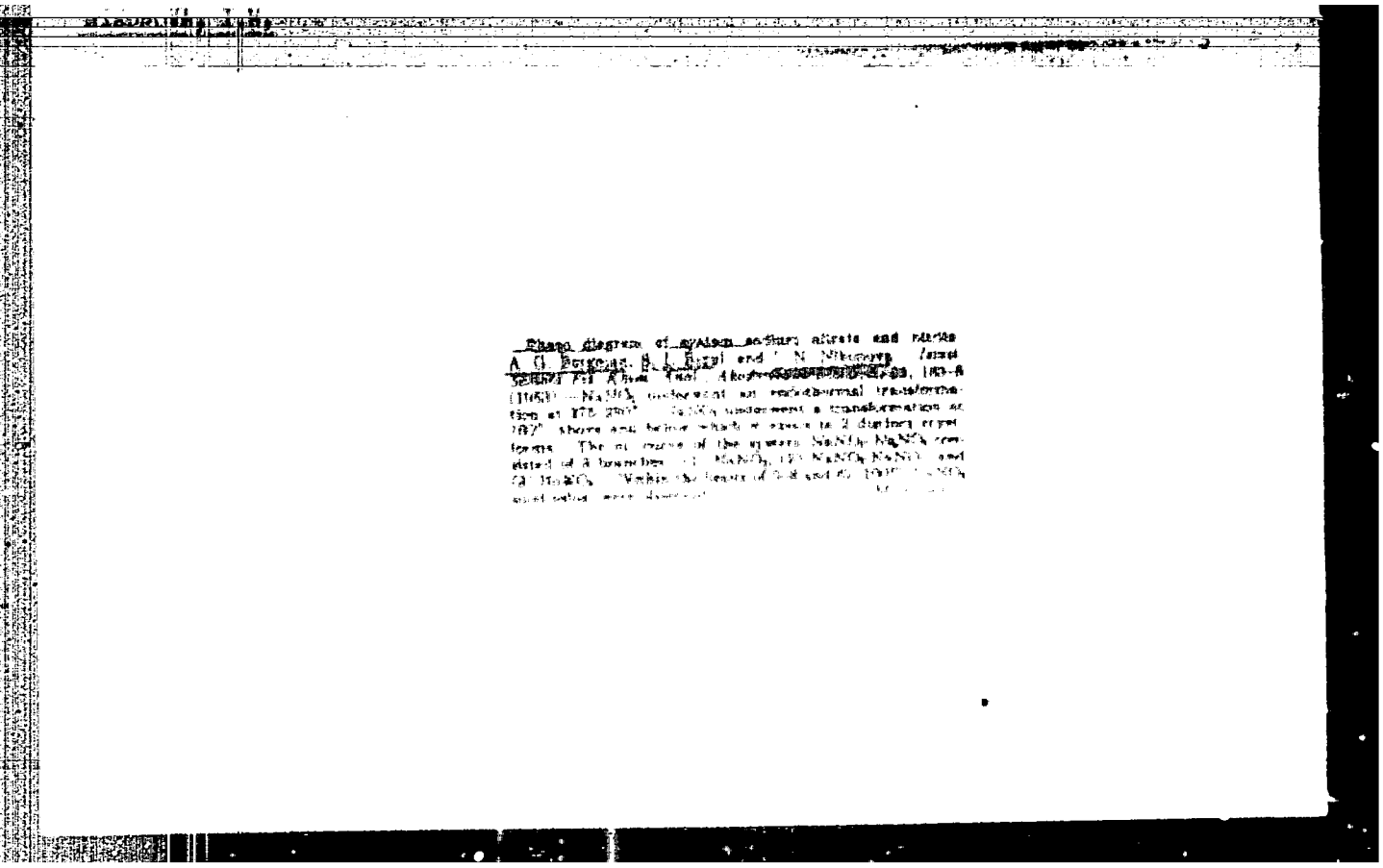
"Dok Ak Nauk SSSR" Vol 85, No 2, pp 353-356

The mechanism of the reaction between a solid substance and a gas in the presence of water vapor to form another solid was studied using the reaction between Na and K chlorides (solid) and HNO_3 (gas). It was found that the water vapor not only hastens the chem reaction, but also speeds up diffusion through the layer of the solid product that is formed. Presented by Acad N. M. Dubinin 25 Jun 52.

235T32

NIKONOVA, I. N.

235T32



3

Formation of solid products from reactions of water-soluble salts with gaseous substances in the presence of water vapor. D. A. Epshtein and I. N. Nikonova. *Izvestiya po Prikl. Khim.* ... *Khim. Nauk* 1955, [illegible] ... of the reaction [illegible] ... [illegible]

... reduced. With salts in monocryst. state the reaction rate was smaller than with the ... reactants. The ... characteristic of the rate curve was observed only at ... concns. of water vapor ... The rate ... [illegible] ... changed into ... [illegible] ... pores through which diffusion took ... [illegible] ... of the water ... the diffusion ... proceeded through pores with diam. smaller ... by means of surface movement ... At the beginning of the reaction the water vapor acts as a catalyst and remains as such during the course of the reaction until the ... stage is reached. At this point ... takes on an added role: together with ... it helps in the formation of pores and thus increases the area of interaction and subsequently the rate of reaction.

A. P. Kotloby

(1)

NIKONOVA, I.P.

Methodology of designing the intake part of a caving excavator. Trudy Inst. gor. dela Sib. otd. AN SSSR no.7:64-69 '62. (MIRA 16:9)

BALASHOV, A.G.; NIKONOVA, I.S.

Improvement of the Gravinskii system pneumatic valve. Gidroliz. i lesokhim.prom. 15 no.2:25-27 '62. (MIRA 18:3)

1. Tavdinskiy gidrolizny zavod.

NIKONOV, A.A.; NIKONOVA, K.I.

Mammoth remains in Pennsylvania and their paleogeographical significance. Izv. Vses. geog. ob-va 97 no.3:277-279 My-Je '65.
(MIRA 18:8)

NIKONOVA, K.V. (Moskva)

Hygienic aspects of working conditions involving high-frequency heating in the electric vacuum industry. Gig. truda i prof. zab. 4 no.1:9-12 Ja '60. (MIRA 15:3)

1. Institut gigiyeny truda i professional'nykh zabolevaniy AMN SSSR.
(ELECTRIC ENGINEERING--HYGIENIC ASPECTS)

NIKONOVA, K. V.; PUKALOVA, P. P. (Moskva)

Hygienic evaluation of the working conditions and the effectiveness of protective measures for the inductive heating of metal using lamp generators of high frequency. Gig. truda i prof. zab. no.3:8-13 '62. (MIRA 15:4)

1. Institut gigiyeny truda i profzabolevaniy AMN SSSR.

(INDUCTION HEATING--HYGIENIC ASPECTS)

KOZLOVA, O., doktor ekon. nauk, prof.; BRODSKIY, G.; DUDORIN, V.; MITIN, S.; NIKONOVA, L.; SALOMATIN, N.; BUDARINA, V., red.; KIRSANOVA, I., mlad. red.; ULANOVA, L., tekhn. red.

[Use of electronic computers in production control] Primenenie elektronno-vychislitel'nykh mashin v upravlenii proizvodstvom. [By] O.Kozlova i dr. Moskva, Izd-vo "Mysl'", 1964. 508 p. (MIRA 17:4)

L 2922-66 EWT(d)/EWP(c)/EWP(v)/T/EWP(k)/EWP(h)/EWP(l) IJP(c) BB/GG/JXT(CZ)
AM6048670 BOOK EXPLOITATION UR/ 6P2.15 P76

Kozlova, O.; Brodskiy O.; Dudorin, V.; Mitin, S.; Nikonova, L.; Salomatin, N.

Application of electronic computers to production control (Primeneniye elektronnovychislitel'nykh mashin v upravlenii proizvodstvom) Moscow, Izd-vo "Mysl", 1964. 508 p. illus., fold-in diagrs. 7000 copies printed. Under the editorship of: Professor O. V. Kozlova, Doctor of Economic Sciences; Editor: V. Budarina; Junior editor: L. Ulanova; Proofreaders: L. Chigina, Yu. Starikova, O. Mel'nikova, S. Novitskaya

TOPIC TAGS: automation, electronic computer, production control

PURPOSE AND COVERAGE: This book is expected to be of definitive assistance to industrial personnel. The book was based on research performed in the Nauchno-issledovatel'skaya laboratoriya ekonomiki i organizatsii proizvodstva Mosgorsovnarkhoza at the Moskovskiy inzhenerno-ekonomicheskiy institut imeni Sergo Ordzhonikidze. All the work has been subjected to experimental introduction into practice at several Moscow enterprises.

Card 1/2

5.3200(B)

AUTHORS: Nesmeyanov, A. N., Academician, Sazonova, V. A., Drozd, V. N., Nikonova, L. A.

80000
S/020/60/131/05/029/069
B011/B117

TITLE: 1-(1'-Halogenferrocenyl) Boric Acids in the Synthesis of Ferrocene Derivatives

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 5, pp 1088-1091 (USSR)

TEXT: The authors proved in their paper that the reaction of 1,1'-ferrocenylene diboric acid with cupric chloride or bromide performed in a mixture of benzene and water yields 1-(1'-chloroferrocenyl) and 1-(1'-bromoferrocenyl) boric acid. Cupric chloride or cupric bromide must, however, be used in a quantity corresponding to one $B(OH)_2$ group. The structures of 1-(1'-halogenferrocenyl) boric acids were established by means of the preparation of the corresponding halogenferrocenes by hydrolysis in the presence of zinc salts. The 1-(1'-halogenferrocenyl) boric acids react in a similar way to the aryl boric acids with mercury salts, yielding the corresponding mercury compounds of ferrocene: 1-(1'-chloroferrocenyl) mercury chloride and 1-(1'-bromoferrocenyl) mercuric bromide. They are easily symmetrized by sodium thiosulfate to yield di-1-(1'-chloroferrocenyl) mercury and di-1,1-(1'-bromoferrocenyl) mercury. From the two last-mentioned substances, the authors prepared 1'-chloro-1-iodoferrocene and

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30000

1-(1'-Halogenferrocenyl) Boric Acids in the Synthesis of Ferrocene Derivatives

S/020/60/131/05/029/069
B011/B117

1'-bromo-1-iodoferrocene which have hitherto been unknown. The procedure used was the same as the one described for ferrocenyl mercury chloride (Ref 2). When an attempt was made to prepare heterocyclic chlorobromoferrocene by reacting cupric chloride with 1-(1'-bromoferrocenyl) boric acid, 1,1'-dichloroferrocene (cf Scheme) was obtained. The latter reaction confirms the simple substitution of the halogen in the ferrocene ring in the presence of copper salts, which has previously been established by the authors (Ref 5). There are 5 Soviet references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: January 7, 1960

Card 2/2

81724

S/020/60/133/01/35/070
B011/B003

5.3700(B)

AUTHORS: Nesmeyanov, A. N., Academician, Sazonova, V. A., Drozd, V. N., Nikonova, L. A.

TITLE: Oxyferrocene and Their Derivatives

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 1, pp. 126 - 129

TEXT: Ferrocenyl-allyl ester is easily formed by heating oxyferrocene with allyl bromide in acetone in the presence of potash. By heating ferrocenyl-allyl ester at 215-220°C in nitrogen, it is decomposed up to oxyferrocene. Part of the ester remains unchanged. Claisen regrouping could not be carried out with ferrocenyl-allyl ester (Ref. 2). The authors' considerations on the instability of the "quinoid" state in the ferrocene molecule were confirmed by experiments on the oxidation of 1,1'-dioxyferrocene with air. The molecule decomposes and separates an inorganic iron compound. The resulting cyclopentadienone was isolated as a dimer. Furthermore, the authors compared the dissociation constants of oxyferrocene and phenol, and described 1,1'-dioxyferrocene

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and its derivatives. The pH-values of 0.005 M solutions of oxyferrocene or phenol in 5% alcohol, which had partly been neutralized with NaOH up to 30, 50, and 70%, were measured at 17°C by means of a glass electrode and an JIT-5 (LP-5) potentiometer. Table 1 lists the values obtained for oxyferrocene. It shows that oxyferrocene is a weaker acid than phenol. The authors synthesized 1,1'-dioxyferrocene derivatives by using 1,1'-ferrocenylene diboric acid. This acid reacts with copper acetate and forms 1,1'-ferrocenylene diacetate in a 41% yield. 1,1'-dioxyferrocene ester is obtained in a yield of 83% if a $B(OH)_2$ group has previously been substituted by a halogen in this acid. When copper acetate acts upon 1-(1'-ferrocenyl halide) boric acids (synthesis: Ref. 5), the acetoxy group substitutes both the halogen and the $B(OH)_2$ group. 1,1'-dibromoferrocene may also be used for the synthesis of ferrocenylene diacetate (cf. Scheme: X denotes the halogen). The frequencies characteristic of the unsubstituted ferrocene ring are missing in the infrared spectrum of ferrocenylene diacetate. Hydrolysis of the first-mentioned compound (in a nitrogen atmosphere) and subsequent acidification or blowing through of CO_2 yields yellow needles of 1,1'-dioxyferrocene,

which is highly sensitive to air (cf. Scheme). The alkaline hydrolysate could be used for synthesizing 1,1'-dioxyferrocene derivatives, i.e., 1,1'-dimethoxyferrocene, 1,1'-ferrocenylene dibenzoate, 1,1-ferrocenylene dibenzosulfonate, and O,O'-(1,1'-ferrocenylene) diglycolic acid. All these derivatives are stable in air. There are 2 tables and 7 references: 2 Soviet, 4 American, and 1 Swiss.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: April 8, 1960

N. Nikonova, L. A.

AID Nr. 982-1 4 June

DIFERROCENYLS AND TERFERROCENYLS (USSR)

Nesmeyanov, A. N., V. N. Drozd, V. A. Sazonova, V. I. Romanenko, A. K. Prokof'yev, and L. A. Nikonova. IN: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 4, Apr 1963, 667-674.
S/062/63/000/004/012/022

A series of substituted diferrocenyls, 1,1'-diferrocenylferrocene, also named 1,1'-terferrocenyl (I), and higher homologues were synthesized at the Moscow State University imeni M. V. Lomonosov by the reaction of a mixture of

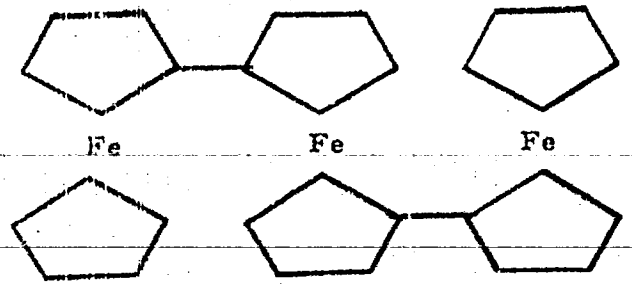
Card 1/4

AID Nr. 982-1 4 June

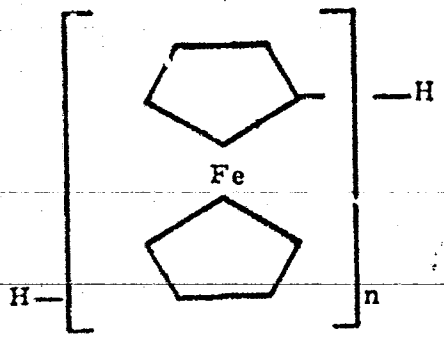
DIFERROCENYLS AND TERFERROCENYLS [Cont'd] S/062/63/000/004/012/022

bromoferrocene and 1,1'-dibromoferrocene with copper at 105-120°C. The following products were isolated by Al_2O_3 chromatography: ferrocene, diferrocenyl, 1,1'-terferrocenyl with the structure I and homologues II, in which n ≤ 4:

(I)



(II)



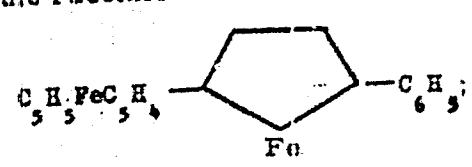
The 1,1'-polyferrocenylenes obtained were diamagnetic. The derivatives of diferrocenyl and terferrocenyl were also obtained by application of the general

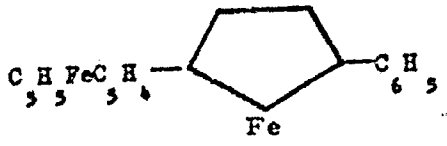
Card 2/4

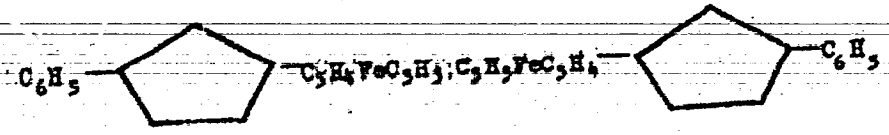
AID Nr. 932-1 4 June

DIFERROCENYLS AND TERFERROCENYLS [Cont'd] S/062/63/000/004/012/022

method for synthesizing ferrocenes, that is, by using substituted cyclopentadienes (in this case, ferrocenylcyclopentadienes) as the starting materials. The synthesis of 3-ferrocenyl-1-phenylcyclopentadiene (III) was achieved by the condensation of acetylferrocene with the ethyl β-benzoylpropionate in the presence of sodium ethylate; III yielded a substituted terferrocenyl — 1,1'-diferrocenyl-3,3'-diphenylferrocene (IV) — after being treated first with sodium amide in liquid ammonia and then with ferrous chloride. Anti and syn structures are ascribed to IV, which could also be in the racemic and meso forms:







Card 3/4

AID Nr. 982-1 4 June

DIFERROCENYLS AND TERFERROCENYLS (Cont.)

S/062/63/000/004/012/022

Investigation of IR spectra indicated that bands with frequencies of 1000 and 1113 cm^{-1} are characteristic for the system of cyclopentadiene rings bound together in disubstituted diferrocenyls which contain no free cyclopentadiene rings.

[BN]

Card 4/4

NOVIKOV, S.S.; NIKONOVA, L.A.; SLOVETSKIY, V.I.

Kinetics of the addition of trinitroethane to methyl acrylate. Izv. AN SSSR Ser. khim. no.2:395 '65.

(MIRA 18:2)

1. Institute organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

ACCESSION NR: AP5017962 UR/0062/65/000/006/1066/1068
547.21

AUTHOR: Novikov, S. S.; Nikonova, L. A., Slovetskiy, V. I., Ivanova, I. S.

TITLE: Kinetics of addition of trinitromethane to derivatives of acrylic acid in

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 6, 1965, 1066-1068

TOPIC TAGS: trinitromethane, methyl acrylate, ethyl acrylate, acrylamide, acrylonitrile, methacrylic acid, itaconic acid, olefin addition

ABSTRACT: The kinetics of addition of trinitromethane (TNM) to a series of α, β-unsaturated compounds (methyl and ethyl ester, amide, and nitrile of acrylic acid; methacrylic and itaconic acid were studied in 0.2-0.5 N HCl at 40C. Determination of the rate constants of these reactions made it possible to estimate the activation of the C=C bond by various electron-acceptor groups, and to determine the influence on the reaction rate of substituents at the α-carbon atom of the unsaturated compound. In the case of addition of TNM to methacrylic acid, itaconic acid, acrylonitrile, and methyl acrylate, the rate constants were second-order and independent of the hydrogen ion concentration in the acid medium. On

ACCESSION NR: AP5017962

other hand, in the case of acrylamide, the rate constant decreased with decreasing hydrogen ion concentration, this is attributed to the greater tendency the $CONH_2$ group to be protonated as compared to the other electron-acceptor ...ups. It is concluded that the activation of the C=C bond increases in the ... CH_2=CHCN < CH_2=CHCOOC$_2$H$_5$ < CH_2=CHCOOCH$_3$ < CH_2=CHCOOH. The decrease in ... t[?], from acrylic to itaconic and methacrylic acid is probably due to the ...nhibitation of the C=C bond caused by the hyperconjugation with the methylene ... methyl group. Orig. art. has: 1 figure and 3 tables.

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

SUBMITTED: 01Jan64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 002 OTHER: 002

ACC NR: AP5019780

AUTHOR: Novikov, S. S.; Nikonova, L. A.;

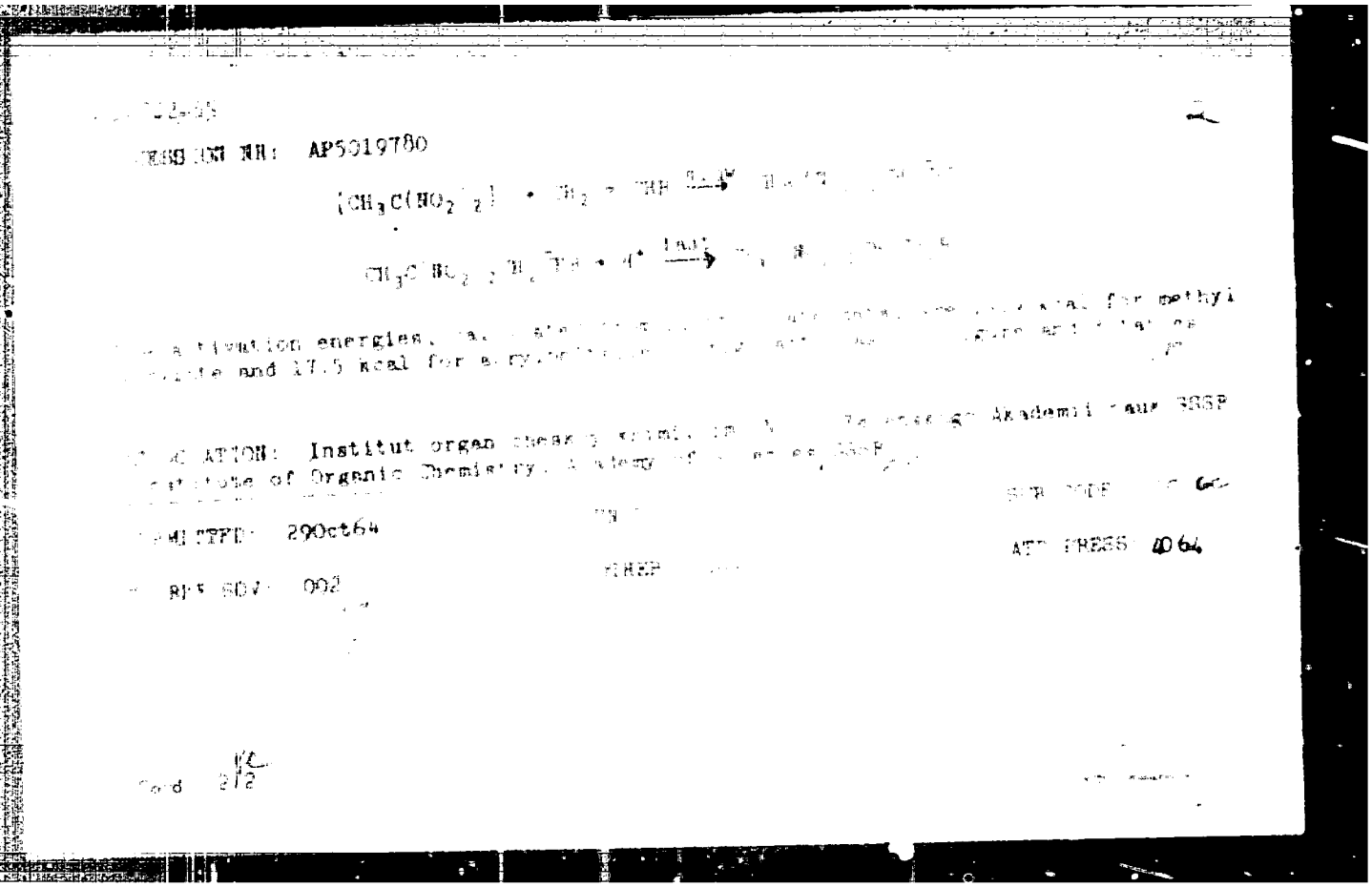
TITLE: Kinetics of addition of gem-dinitro ... and acrylo-

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya

TOPIC TAGS: ionic addition reaction, ... kinetics, nitro- ... acrylic acid, bimolecular reaction

ABSTRACT: The kinetics of ... acrylate and ... nitrile were studied ... the absorption reaction kinetics were followed by observing spectrophotometrically ... the dinitroethane anion (λ_{max} 380 mu, log ε 4.03). Pseudomonomolecular kinetics ... changes in the ... created by using a large excess ... This ... concentration did not affect ... dinitroethane anion on ... that the rate-determining step ... the β-carbon of the unsaturated compound.

Card 1/2



ACCESSION NR: AP5019780

$[CH_3C(NO_2)_2]^- + CH_2 = CHR \rightarrow$

$CH_3C(NO_2)_2CH_2CHR^-$

activation energies, ... for methyl ... and 17.5 kcal for ...

ASSOCIATION: Institut organ... Akademii nauk SSSR (Institute of Organic Chemistry, Academy of Sciences, USSR)

SUBMITTED: 29Oct64 ATD PRESS: 4064

SUB CODE: GC

NR REF SOV: 002 OTHER:

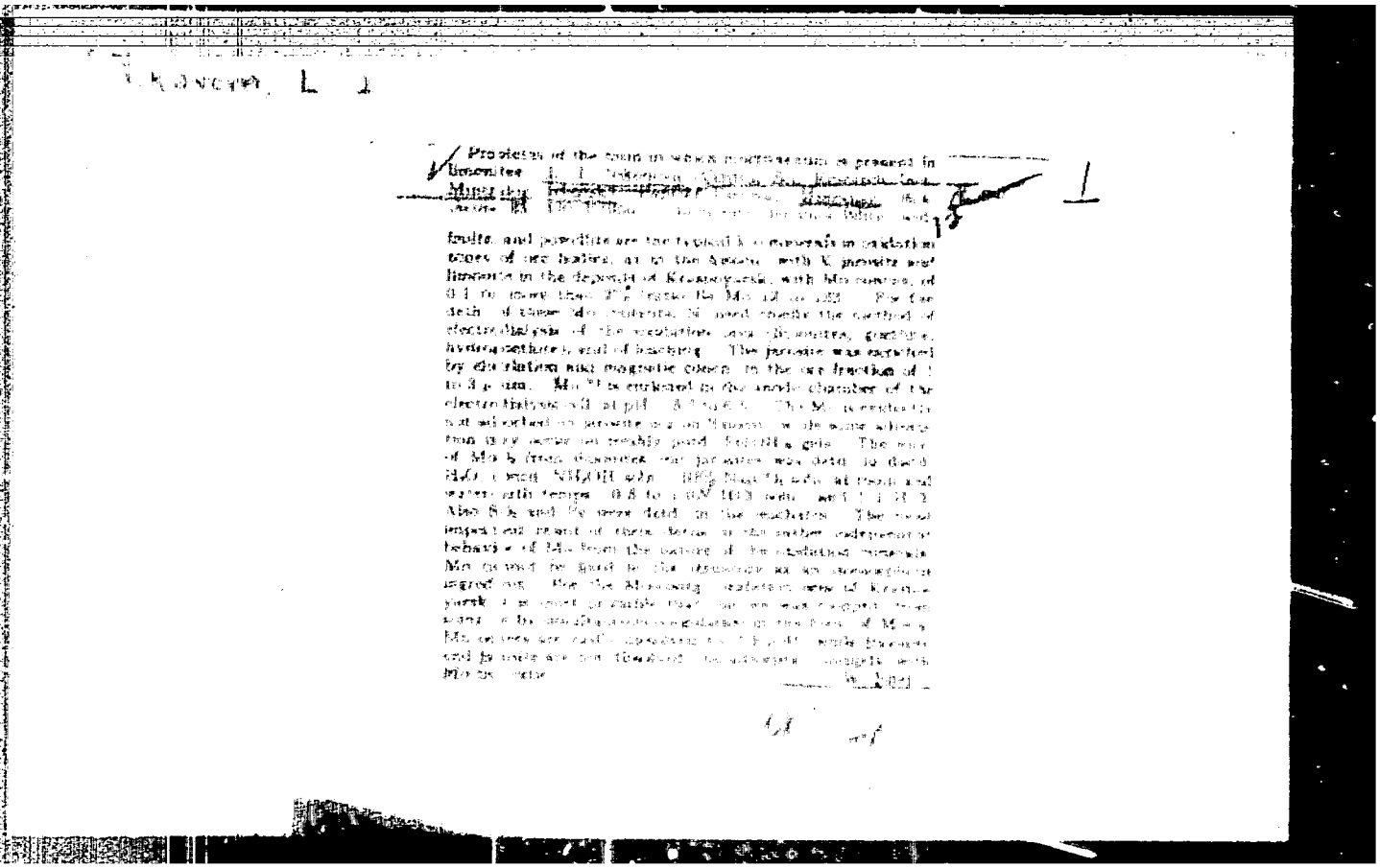
Card 2/2

KHITROV, V.T.; NIKONOVA, L.G.

For a careful storing and economical use of materials. Gor. khoz. Mosk. 31 no.3:14-16 Mr '57. (MIRA 10:4)
(Building materials)

NIKONOVA, Lyudmila Grigor'yevna; KUZNETSOV, P.V., red.; PONOMAREVA, A.A., tekhn. red.

[Ways of saving materials in construction] Puti ekonomii material'nykh resursov v stroitel'stve. Moskva, Izd-vo ekon. lit-ry, 1961. 45 p. (MIRA 15:4)
(Construction industry)



S/081/62/000/017/034/102
B162/B101

AUTHOR: Nikonova, L. I.

TITLE: The problem of exact determination of small quantities of selenium and tellurium in minerals and in the ores of non-ferrous metals

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 17, 1962, 155, abstract 17D91 (Sb. nauchn. tr. Irkutskiy n.-i. in-t redk. met., no. 9, 1961, 21 - 30)

TEXT: All varieties investigated for determining Se and Te by the colorimetric method give underrated results for the quantities of the elements in the order of 0.03 - 0.1 mg. The most widely used method of denitrating with sulfuric acid and precipitating subsequently both elements together by tin chloride from a hydrochloric solution involves systematic errors within the limits of 25 - 47%, and the method of denitrating with formalin still bigger. Much better results are obtained by the method which includes precipitation from a nitric acid solution. For Se they may be even increased a little (up to 10%), when it is

Card 1/2

NIKONOVA, A. V.

PHASE I BOOK EXPLOITATION SOV/4093

Vsesoyuznoye soveshchaniye po fizike, fiziko-khimicheskim svoystvam ferritov i fizicheskim osnovam ikh primeneniya. 3d, Minsk, 1959

Ferrity; fizicheskiye i fiziko-khimicheskiye svoystva. Doklady (Ferrites; Physical and Physicochemical Properties. Reports) Minsk, Izd-vo AN BSSR, 1960. 655 p. Errata slip inserted. 4,000 copies printed.

Sponsoring Agencies: Nauchnyy sovet po magnetizmu AN SSSR. Otdel fiziki tverdogo tela i poluprovodnikov AN BSSR.

Editorial Board: Resp. Ed.: N. N. Sirota, Academician of the Academy of Sciences BSSR; K. P. Belov, Professor; Ye. I. Kondorskiy, Professor; R. R. Polivanov, Professor; R. V. Telesnin, Professor; G. A. Smolenskiy, Professor; E. N. Shol'ts, Candidate of Physical and Mathematical Sciences; R. M. Smolyarenko; and L. A. Bashkirov; Ed. of Publishing House: S. Kholyavskiy; Tech. Ed.: I. Volokhanovich.

PURPOSE: This book is intended for physicists, physical chemists, radio electronics engineers, and technical personnel engaged in the production and use of ferromagnetic materials. It may also be used by students in advanced courses in radio electronics, physics, and physical chemistry.

COVERAGE: The book contains reports presented at the Third All-Union Conference on Ferrites held in Minsk, Belorussian SSR. The reports deal with magnetic transformations, electrical and galvanomagnetic properties of ferrites, studies of the growth of ferrite single crystals, problems in the chemical and physicochemical analysis of ferrites, studies of ferrites having rectangular hysteresis loops and multicomponent ferrite systems exhibiting spontaneous rectangularity, problems in magnetic attraction, highly coercive ferrites, magnetic spectroscopy, ferromagnetic resonance, magneto-optics, physical principles of using ferrite components in electrical circuits, anisotropy of electrical and magnetic properties, etc. The Committee on Magnetism, AS USSR (S. V. Vonsovskiy, Chairman) organized the conference. References accompany individual articles.

Ferrites (Cont.) SOV/4093

Card 9/18

Card 4/18

NIKONOVA, L.Ye.

Comparison of declinations in I.A. Piukov's "Catalogue of 192 stars" with Boss' general catalogue and the GCS system. Uch.zap.Kaz.un. 116 no.1:69-73 '55. (MLRA 10:5)

1.Kafedra astronomii.
(Stars--Catalogs)

NIKONOVA, L.Ye.

Observations of lunar occulations of stars in Kazan. Astron.tsir. no.231: 28-29 N '62. (MIA 16:4)

1. Astronomicheskaya observatoriya gosudarstvennogo universiteta, Kazan'. (Occultations)

NIKONOVA, L.Ye.

Observations of lunar occultations of stars at the Astronomical Observatory of the Kazan University from September 1962 to April 1963. Biul.Inst.teor.astron. 9 no.6:579 '64.

(MIRA 17:12)

FIRSOVA, L.Ye.

Observations of occultations of stars by the moon in Kazan.
Biul. Inst. teor. astron. 10 no.1:90 '65. (MIRA 18:12)

1. Astronomicheskaya observatoriya Kazanskogo universiteta.
Submitted February 24, 1965.

1. NIKONOVA, M. G.
2. USSR (600)
4. Fishes - Caspian Sea
7. Commercial survey on the Caspian. Ryb. khoz. 28, no. 9, 1952.

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

NIKONOVA, M. P.

10-110. The Use of Dry Reagents For Analysis of Ores and Minerals In Field Conditions. N.S. Polukhin and M.P. Nikonova. Journal of Analytical Chemistry (U.S.S.R.), v. 2, July-Aug. 1947, p. 236-238. (In Russian.)

Use of dry reagents for the detection of boron, vanadium, nickel, antimony, and chromium using spot reactions.

Immediate source clipping

MIKONOVA, M. P.

USSR/Chemistry-Rare Earths
Chemistry-Quantitative Analysis

Nov/Dec 47

"Quantitative Approximate Semimicro Identification of Cerium and the Amount of Rare Earths in Ores and Minerals," N. S. Poluektov, M. P. Mikonova, 2 pp

"Zhur Anal Khim" Vol III, No 6

Method described has worked successfully in subject field. Cerium is determined by a colorimetric reaction using hydrogen peroxide in a carbonate solution in the presence of sodium citrate. Sum of rare-earth oxides can be determined by another weighing method. Current torsion microscales which have platinum cups make it possible to weigh precipitates obtained during course of analysis.

Submitted 20 Feb 47

PA 49/49T31

NIKONOVA, M. P.

1-4E2c

Determination of lithium in ores by the method of flame photometry. N. S. [illegible], L. L. [illegible], and M. P. Nikonova. [illegible] 11, 10-18 (1957). — In [illegible] assembled app. a soln. contg. Li is atomized by a stream of air mixed with acetylene and burned in a non-luminous flame. The intensity of the flame filtered through a monochromator which passes only the Li line 670.8 mμ is measured photometrically with a circuit using a galvanometer. The effect of Na is neutralized by adding a [illegible] of red glass filter. By this method 0.0[illegible] Li/ml can be detd. Li (0.01-4%) was detd. in ores with an accuracy of ±2-4%. [illegible]

Chem. [illegible]

AUTHORS: Poluektov, N. S., Nikonova, M. P., Layderman, Ts. A., [illegible], U. S. 75-6-6/23

TITLE: Flame Spectrophotometric Determination of Strontium in Minerals (Opredeleniye strontsiya v rudakh po metodu spektrofotometrii plameni).

PERIODICAL: Zhurnal Analiticheskoy Khimii, 1957, Vol. 12, Nr 6, pp. 699-703 (USSR).

ABSTRACT: By applying a flame spectrophotometer with a monochromator of the type YM-2 with a photomultiplier and a sensitive galvanometer, strontium is determined in two ways:
1 - At a higher content of strontium.
2 - At a strontium-content from 0,1 to 0,001 %.
The line 460,7 mμ with an air-acetylene-flame was used as line of determination. The mineral is first converted into a solution by the disintegration of alkali in order to remove the sulphates. H_3PO_4 has an intensely extinguishing effect. The disturbing aluminum and other elements are removed by precipitation with ammonium hydroxide. The disturbing effect of calcium is eliminated by adding ammonium chloride to the photometric solution. In the case of small

Card 1/2

Flame Spectrophotometric Determination of Strontium in Minerals. 75-6-6/23

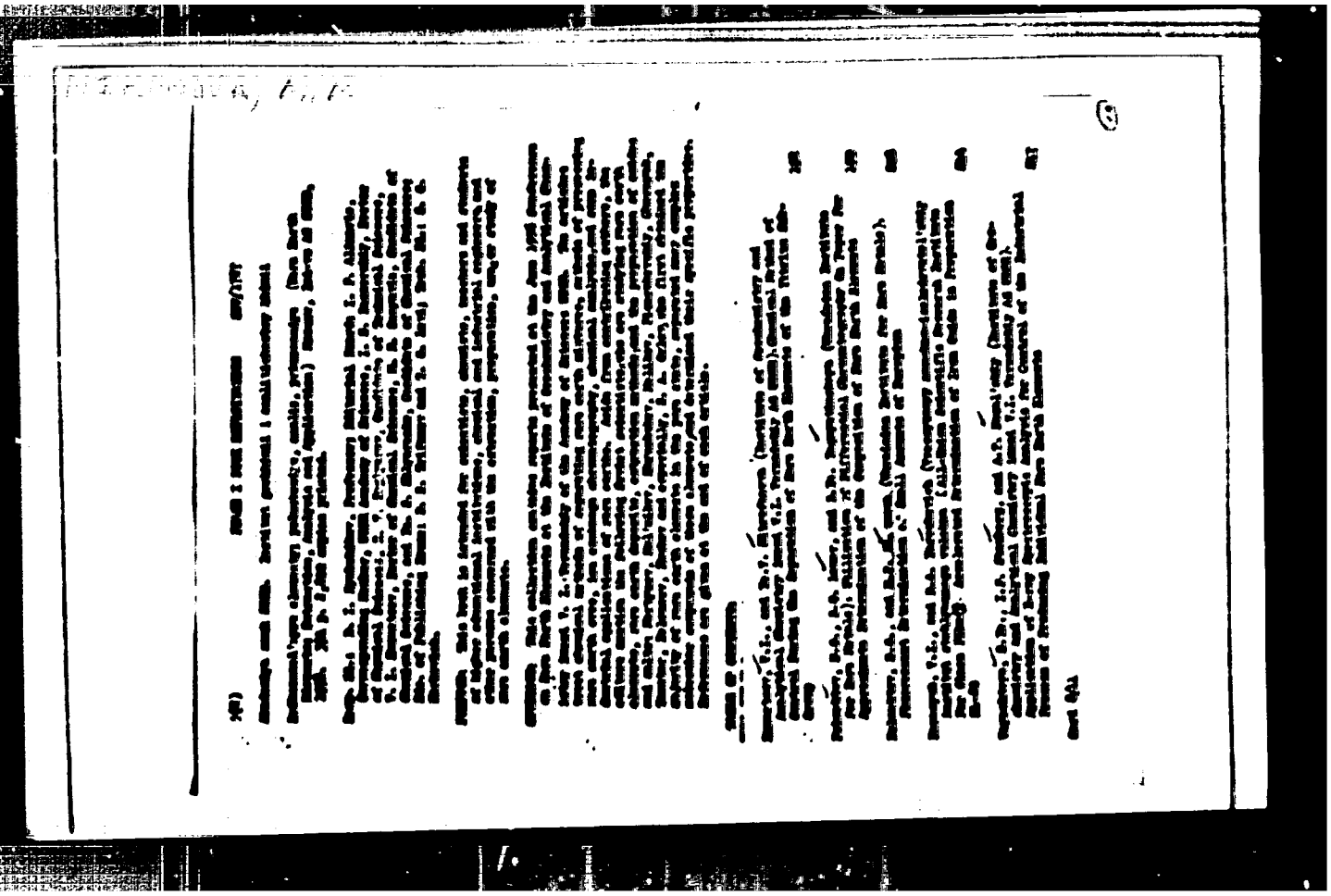
quantities of strontium, calcium oxide in a quantity of 30 mg/ml is added to the standard specimen to be analyzed.
The standard solutions were produced with 1, 2, 5, 10, 20, 50, and 100 γ ml SrO.
There are 4 figures, 3 tables, and 13 references, 3 of which are Slavic.

SUBMITTED: April 2, 1957.

AVAILABLE: Library of Congress.

1. Minerals-Stronium determination 2. Flame spectrophalometric-Applications

Card 2/2



Nikonova M. P.

AUTHORS: Poluektov, N. S., Nikonova, M. P., Vitkun, R. A. 75-1-7/26

TITLE: The Determination of Sodium and Potassium in Minerals With the Aid of Flame Spectrophotometry (Opredeleniye natriya i kaliya v mineralakh po metodu spektrofotometrii plameni)

PERIODICAL: Zhurnal Analiticheskoy Khimii, 1958, Vol 13, pp 48-55 (USSR)

ABSTRACT: In an earlier paper the authors worked out instructions for the flame-photometric determination of lithium, rubidium and cesium (refs. 1,2). In the flame-photometric determination of elements in solutions the mutual influence of the elements and the composition of the solutions have to be taken into account, as the intensity of the radiation of the element to be investigated is thereby influenced. In the present paper the authors investigated the published data on the mutual influence of the elements (refs. 10-16) in order to be able to work out a suitable course of the analysis. For the determination of sodium and potassium they used a flame spectrophotometer which was built upon a universal monochrometer of the type YM-2 this device is of

Card 1/5

The Determination of Sodium and Potassium in Minerals With the Aid of Flame Spectrophotometry

tions of up to 100 γ Na per ml for illuminating-gas flame and acetylene flames were examined. A linear dependence of the radiation intensity on the concentration exists only up to 10 γ Na per ml. Therefore the samples in the ranges between 10 and 100 γ Na/ml are compared with 2 standard solutions the concentrations of which are similar to those of the sample. The influence of accompanying elements upon the radiation of sodium and potassium in illuminating-gas flames and acetylene flames was investigated. Based on these investigations conditions for the determination of those metals with a higher accuracy were found.

By the determination of potassium it was found that the degree of the ionization of potassium is decisive for the intensity of radiation. The concentration of the ionized potassium atoms is obtained from the equation:

$$\frac{[K^+][e^-]}{[K]} = \text{const.}$$

where $[K]$, $[K^+]$ and $[e^-]$ are the concentrations of the potassium

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atoms, potassium ions and the electrons in the flame. Based on this equation the following rules governing the mutual intensification of the radiation intensity in alkali metals are obtained: Metals easy to ionize (rubidium, cesium) cause a higher effect than metals worse to ionize (lithium), as they more intensively disturb the equilibrium by a high increase in the concentration of the electrons. 2. The intensifying action of other metals is highest at low concentrations of potassium, because a comparatively large portion of potassium atoms is ionized then. 3. The intensification of the radiation of potassium on addition of another metal in increasing concentrations tends toward a limit which is given by the complete ionization of potassium and which is the faster attained the lower the ionization potential of the added metal. 4. The intensification effect of radiation is higher in flames in which a larger part of the atoms is ionized. This is the case in flames with very high temperatures. On the basis of these investigations instructions for the determination of sodium and potassium in minerals were worked out which are accurately given here. The method permits the determination of contents of every individual alkali metal from 0,1-3,0% with an accuracy of ±3%.

The Determination of Sodium and Potassium in Minerals With the Aid of Flame Spectrophotometry

75-1-7/26

There are 5 figures, 6 tables, and 16 references, 2 of which are Slavic.

ASSOCIATION: Institute of General and Inorganic Chemistry, Academy of Sciences of the Ukrainian SSR, Laboratories in Odessa (Russian Text not Given)

SUBMITTED: December 17, 1956.

AVAILABLE: Library of Congress.

1. Sodium - Determination 2. Potassium - Determination
3. Flame spectrophotometers - Applications

Card 5/5

POLUEKTOV, N.S.; KONONENKO, L.I.; VITKUN, R.A.; NIKONOVA, M.P.

Quenching europium luminescence in crystals of chelate compounds in the presence of other rare earth elements. Opt. i spektr. 17 no.1:73-77 Jl '64.
(MIRA 17:9)

5(2)

AUTHORS: Polnektov, N. S., Nikonova, M. P. SOV/75-13-6-2/21

TITLE: On the Mutual Influence of Elements on the Radiation Intensity in a Flame (O vzaimnom vliyanii elementov na intensivnost' izlucheniya v plameni) Communication I. Two Sprayers Technique (Soobshcheniye I. Primeneniye tekhniki dvukh raspyliteley)

PERIODICAL: Zhurnal analiticheskoy khimii, 1958, Vol 13, Nr 6, pp 635-642 (USSR)

ABSTRACT: The mutual influence of alkali metals on the radiation in a flame has been found by several authors already (Refs 3-12) and may be explained by ionization processes of the metal atoms in the flame. The equilibrium between atoms, ions and electrons is therein established: $\frac{P_{metal^+} \cdot P_{e^-}}{P_{metal}} = K$ (Refs 13,14), where P is the corresponding partial pressure. On the introduction of another ionizing metal into the flame the partial pressure of the electrons increases which involves a decrease of P_{metal^+} and an increase of P_{metal}. By this

Card 1/4

effect all known rules can be explained which are related to a mutual intensification of the radiation of alkali metals in the flame. The cause of a decrease of the radiation intensity of an alkali metal in the presence of another one lies in the variation of the dissociation degree of metal salts on the addition of large amounts of other metal salts (Ref 4). The dissociation of a metal halide must obey the law of mass action: $\frac{P_{metal} \cdot P_X}{P_{metalX}} = K.$ P is again the corresponding partial pressure. By addition of further halogen atoms P_X is increased and P_{metal} accordingly decreased which causes a decrease of the radiation intensity of the element in the flame. This effect is denoted as "anion effect". It does not only occur with alkali metal salts, but also with acids and their ammonium salts (Ref 15). This effect depends on the nature of the acid and on its concentration and attains maximum intensity in phosphoric acid (Ref 17). A further

effect is the formation of compounds between metal oxides. It effects the elimination of the radiation of alkaline-earth metals in the presence of a sufficient quantity of aluminum salts (Ref 17). This effect can be used for the determination of traces of alkali metals in the presence of alkaline-earth metals (Refs 21,22). This effect is due to the formation of stable difficultly volatile compounds of low thermal conductivity (e.g. $CaAl_2O_4$), which cannot evaporate when passing through the flame (Refs 22-24). The authors of the present paper investigated the mechanism of the influence of foreign substances upon the intensity of the radiation of alkali metals and alkaline-earth metals in the flame. On the basis of the effects described the mechanism of this interaction is different in different cases. The experimental studies were performed by means of a device in which the two solutions were sprayed in separated sprayers and then conducted to one common torch. This device is illustrated and described in the paper. It permitted the experimental confirmation

On the Mutual Influence of Elements Upon the Radiation Intensity in a Flame. Communication I. Two Sprayers Technique

SOV/75-13-6-2/21

of the mechanisms - assumed in the paper - for the action on the radiation intensity of elements in the flame exerted by foreign substances. There are 2 figures, 5 tables, and 24 references, 6 of which are Soviet.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN USSR, laboratorii v Odessa (Institute of General and Inorganic Chemistry, AS UkrSSR, Laboratories at Odessa)

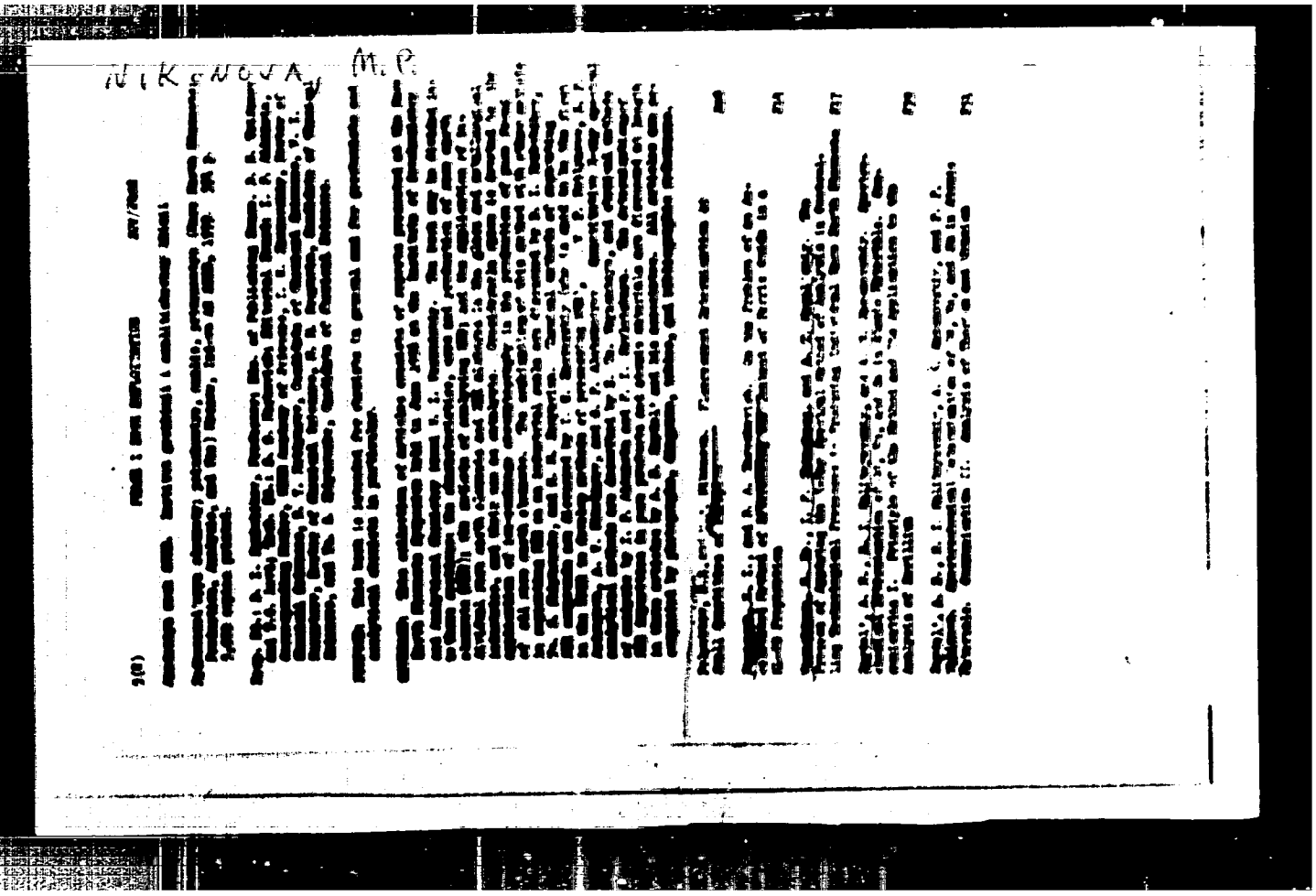
SUBMITTED: June 3, 1957

Card 4/4

POLUEKTOV, N.S.; NIKONOVA, M.P.

Determining small amounts of alkali metals in cesium salts by means of flame photometry. Zav. lab. 24 no.5:528-531 '58. (MIRA 11:6)

1. Institut obshchey i neorganicheskoy khimii Akademii nauk USSR.
(Cesium--Analysis) (Alkali metals--Analysis)
(Photometry)



5(4)

AUTHORS: Poluektov, N. S., Nikonova, M. P. SOV/32-25-3-2/62

TITLE: On the Relation Between Radiation Intensity and the Concentration of Alkali Metals in the Flame-photometric Method (O zavisimosti mezhdu intensivnost'yu izlucheniya i kontsentratsiyey shchelochnykh metallov pri plamenno-fotometricheskom metode)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 3, pp 263-268 (USSR)

ABSTRACT: A thorough investigation into the shape of the so-called concentration curves (cc) in flame-photometric analyses of alkali metals was carried out because the inclination of the Rb 780 mμ line is in contrast with the theory. The shape of the (cc) was determined in illuminating gas-air flames (1700° C) and acetylene-air flames (2090° C). A spectrophotometer (with a UM-2 monochromator and FEU-19 and FEU-22 photomultipliers) which has already been described (Refs 9-10) was used. The working method is described. The measurements were repeated for several times and the functional diagrams lg I of lg C were drawn from the mean values. In the illuminating gas flame (Fig 2) an increase in the inclination of the curve may be

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observed at small concentrations of K, Rb, and Cs (Table). In comparison to the illuminating gas flame the curves for K, Rb, and Cs which were obtained in the acetylene flame have another shape (Fig 3). For a more precise determination of the changes in the inclination of the (cc) the angular coefficient for each section of the curve in the range of from 10^{-2} to $5 \cdot 10^{-5}$ mol was calculated (Table). It was found that at concentrations of 10^{-3} - 10^{-4} mol the angle of inclination increases and $tg \alpha$ = 1.4 for K and Rb and 1.55 for Cs. The unproportionally strong decrease in the line intensity at a reduction of the concentration is explained in reference [1] by the influence exercised by ionization. According to this assumption it is found that in the case of strong ionization the line intensity is proportional to the square of the concentrations of the atoms which are put into the flame ($tg \alpha = 2$), while in the case of a weak ionization the radiation intensity is directly proportional to the concentration ($tg \alpha = 1$). In the intermediate range $tg \alpha$ changes from 2 to 1. The difference between the (cc) in the acetylene and

On the Relation Between Radiation Intensity and the Concentration of Alkali Metals in the Flame-photometric Method SOV/32-25-3-2/62

illuminating gas flame is explained by a comparison of the ionization constants (Table 2) calculated according to the formula given in reference 8 and the partial pressure of the metal atoms. There are 7 figures, 2 tables, and 12 references, 5 of which are Soviet.

ASSOCIATION: Laboratoriya Instituta obshchey i neorganicheskoy khimii AN USSR (Laboratory of the Institute of General and Inorganic Chemistry of the AS UkrSSR)

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NIKONOVA, M. I.

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PHASE I BOOK EXPLOITATION SOV/5747

Vsesoyuznoye soveshchaniye po redkim shchelochnym elementam. 1st, Novosibirsk, 1958.

Redkiye shchelochnyye elementy; sbornik dokladov soveshchaniya po khimii, tekhnologii i analiticheskoy khimii redkikh shchelochnykh elementov, 27-31 yanvarya 1958 g. (Rare Alkali Elements; Collection of Reports of the Conference on the Chemistry, Technology, and Analytical Chemistry of Rare Alkali Elements, Held 27-31 January, 1958) Novosibirsk, Izd-vo Sibirskogo otd. AN SSSR, 1960. 93 p. 1000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Sibirskoye otdeleniye. Khimiko-metallurgicheskiy institut.

Resp. Ed.: T. V. Zabolotskiy, Candidate of Technical Sciences; Members of Editorial Board: A. S. Mikulinskiy, Professor, Doctor of Technical Sciences, A. T. Logvinenko, Candidate of Technical Sciences, F. F. Barkova, Candidate of Chemical Sciences; Ed.: V. M. Bushuyeva; Tech. Ed.: A. F. Kazurova.

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Rare Alkali Elements; Collection (Cont.) SOV/5747

PURPOSE : This book is intended for chemical engineers and technicians working in metallurgical and mining operations and related enterprises.

COVERAGE: The collection contains reports which deal with the physical and analytical chemistry of rare alkali elements and their compounds and their reactions with mineral ores and salts. Methods of extraction and modern analytical techniques and equipment are also discussed. No personalities are mentioned. References accompany individual articles.

TABLE OF CONTENTS:

POLUEKTOV, N.S.; NIKONOVA, M.P.; GRINZAYD, S.E.

Brief reports. Zav.lab. 26 no.2:160 '60. (MIRA 13:5)

1. Laboratoriya Instituta obshchey i neorganicheskoy khimii Akademii nauk USSR.
(Chemistry, Analytical)

POLUEKTOV, N.S.; NIKONOVA, K.P.; GRINZAID, S.K.

Determination of lithium and cesium in ores by the use of a flame photometer with an integrator. Zav.lab. 26 no.2:161-163 '60. (MIRA 13:5)

1. Laboratoriya Instituta obshchey i neorganicheskoy khimii Akademii nauk USSR.
(Lithium--Analysis)
(Cesium--Analysis)
(Photometers)

NAZARENKO, V.A.; SUSTOVA, M.B.; RAVITSKAIA, K.V.; NIKONOVA, N.P.

Determination of calcium, aluminum, and chromium impurities in antimony. Zav.lab. 28 no.5:537-539 '62. (MIRA 15:6)

1. Institut obshchey i neorganicheskoy khimii AN USSR.
(Antimony--Analysis) (Metals--Analysis)

ACCESSION NR: AP4035084 S/0032/64/000/005/0553/0554

AUTHORS: Poluektov, N. S.; Meshkova, S. B.; Nikonova, M. P.

TITLE: Determination of calcium admixtures in samples of hafnium and zirconium by flame photometry

SOURCE: Zavodskaya laboratoriya, no. 5, 1964, 553-554

TOPIC TAGS: hafnium, hafnium salt, zirconium, zirconium salt, calcium admixture determination, calcium zirconate formation, calcium hafnate formation, photometric radiation intensity, oxyquinoline radiation

A method was developed for counteracting the diminution of calcium radiation in flame photometry by adding oxyquinoline. Aliquots of 100-400 mg hydrous $ZrOCl_2$, $Zr(NO_3)_4$, $Zr(SO_4)_2$, or $HfOCl_2$ were dissolved in 3 ml of hot 6-normal HCl. They were then diluted to 10 ml, and equal portions were placed in three 10-ml test tubes. A standard solution of calcium salt was added to two of these (to bring the concentration of Ca to 0.25-0.50 and 2.5-5.0 micrograms/liter respectively). This was followed by adding 1 ml of a 20% oxyquinoline solution in acetic acid.

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ACCESSION NR: AP4035084

After dilution to the 10-ml mark, the solutions were studied by flame photometry. It was found that for a portion of the reagents containing 0.5 micrograms of calcium per liter the method sensitivity was 0.005%. In another series of experiments calcium was determined in metallic zirconium and hafnium. Here the first step consisted of dissolving 50 mg of the metal in 0.5 ml HF for Hf and in 1.0 ml HF for Zr (in the presence of 1 ml of a $SrCl_2$ solution). After evaporation, 1 ml of 6-normal HCl and 100 mg HBO_3 were added, and the mixture was heated until its dissolution was completed. The subsequent procedure was similar to the one described above. By this method it was possible to determine calcium in zirconium foil, in solid and powdered zirconium, and in powdered hafnium. The sensitivity of the method was again 0.005%. Orig. art. has: 2 tables and 2 charts.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii Akademii nauk USSR, laboratorii v Odessa (Institute of General and Inorganic Chemistry, Academy of Sciences, Ukrainian SSR, Odessa Laboratory)

SUBMITTED: 00 DATE ACQ: 20May64 ENCL: 00

SUB CODE: GE NO REF SOV: 002 OTHER: 002

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ACCESSION NR: AP4042981 S/0051/64/017/001/0073/0077

AUTHORS: Poluektov, N. S.; Kononenko, L. I.; Vitkun, R. A.; Nikonova, M. P.

TITLE: Quenching of luminescence of europium in intra-complex compounds in the presence of other rare-earth elements

SOURCE: Optika i spektroskopiya, v. 17, no. 1, 1964, 73-77

TOPIC TAGS: europium, luminescence quenching, rare earth element, energy level, spectrum analysis

ABSTRACT: With an aim at its possible application to analysis, a study was made of the effect of extraneous rare earth elements on the glow intensity I_{Eu} of europium in precipitates of mixed phenanthroline-atrphane and phenanthroline-tenoiltrifluoroacetone complexes. The experimental procedure is described. A correlation was established between $\log I_{Eu}$ and the difference between the energy of

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ACCESSION NR: AP4042981

the triplet state of the molecule of the complex and the nearest lower energy level of the extraneous rare-earth ion. In benzene solutions of the same complexes, in which molecules of Eu compounds and other rare-earth element compounds enter separately, there is no influence of the rare-earth ions on I_{Eu}. It is suggested on the basis of the results that the sensitivity of rare-earth element analysis methods based on the measurement of the fluorescence of precipitates of complex compounds will depend to a considerable degree on the extraneous rare-earth elements present. Orig. art. has: 6 figures.

ASSOCIATION: None

SUBMITTED: 060ct63 ENCL: 00

SUB CODE: OP, IC NR REF SOV: 004 OTHER: 007

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ACCESSION NR: AP4041765 S/0032/64/030/007/0779/0783

AUTHORS: Kononenko, L. I.; Poluektov, N. S.; Nikonova, M. P.

TITLE: Extraction fluorimetric determination of samarium and europium in a mixture of oxides of rare earth elements

SOURCE: Zavodskaya laboratoriya, v. 30, no. 7, 1964, 779-783

TOPIC TAGS: rare earth element, rare earth analysis, fluorimetric determination, samarium, europium, samarium phenanthroline thenoyltrifluoroacetone, europium phenanthroline thenoyltrifluoroacetone, triple samarium complex, triple europium complex, benzene complex extraction, spectrograph ISP 51, fluorescent spectrum

ABSTRACT: A method for extracting and analyzing rare earths is presented. It involves the formation of triple complexes of samarium and europium with phenanthroline (PT) and thenoyltrifluoroacetone (TTFA). These complexes are extracted with benzene, and are examined fluorimetrically. From 1 to 2 ml of the solution containing the chlorides of Sm and Eu at a pH range of 4-5 are placed into a separatory funnel. To these solutions are added 1 ml of a 4% solution of urotropin, 0.1 ml of a 0.5% alcohol solution of TTFA, and 0.15-0.25 ml of a 3% alcohol solution of PT. The mixture is diluted with water to the 5-ml mark, allowed to stand

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ACCESSION NR: AP4044893 S/0032/64/030/009/1055/1057

AUTHORS: Nikonova, M. P.; Mishchenko, V. T.; Poluektov, N. S.

TITLE: Spectrophotometric determination of praseodymium and neodymium impurities in compounds of the cerium subgroup

SOURCE: Zavodskaya laboratoriya, v. 30, no. 9, 1964, 1055-1057

TOPIC TAGS: spectrophotometry, rare earth, absorption band, praseodymium, neodymium, cerium / SF 10 spectrophotometer

ABSTRACT: The possibility of determining Pr and Nd in small quantities in solutions, without lowering the sensitivity of determination, has been achieved by diaphragm restriction of light beams passing through a rectangular vessel (50 mm long) containing the solution. The light beams entering the vessel are restricted by diaphragms, passing through only a thin layer of solution (amounting to 8-10 mg). Measurements were made with an SF-10 spectrophotometer. Pr was determined by an absorption band with maximum at 444 mμ, Nd by a band with a maximum at 522 or at 742.5 mμ. Graphs were plotted to show dependence of optical density (at these maximums) on the concentration of solutions (chlorides of pure rare earths). The

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calibration graphs are rectilinear. The presence of large concentrations of the base element had no substantial effect on the height or position of the absorption in the spectrum. Little difficulty was encountered in determining Pr or Nd in preparations of La and Ce. But some difficulty was encountered with Sm compounds because of the coincidence of the weak absorption band of Sm (443.0 mμ) with the Pr band (444 mμ). Results were obtained by comparing densities of 443 with 416 in Sm, however. Maximum errors of determination ranged from 5.3 to 10%. The sensitivity in some determinations is greater than with the spectrograph, and the technique is simpler. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii Akademii nauk UkrSSR (Institute of General and Inorganic Chemistry of the Academy of Sciences, UkrSSR)

SUBMITTED: 00 ENCL: 00

SUB CODE: OP NO REF SOV: 003 OTHER: 002

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KONONENKO, L.I.; POLUEKTOV, N.S.; NIKONOVA, M.P.

Extraction-fluorometric determination of samarium and europium in a mixture of rare-earth oxides. Zav. lab. 30 no.7:779-783 '64. (MIRA 18:3)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

NIKONOVA, M.P., MYSHCHENKO, V.T.; POLUEKTOV, N.S.

Spectrophotometric determination of praseodymium and neodymium impurities in the preparations of the ceria subgroup. Zav. lab. 30 no.9:1055-1057 '64. (MIRA 18:3)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

FEDOROV, V.I., inzh.; NIKONOVA, M.T.

Construction and modernization of dragline excavator buckets.
Gor. zhur. no.4:38-40 Ap '60. (MIRA 14:6)

1. Uralmashzavod, Sverdlovsk.
(Excavating machinery)

KOZLENKO, G.P.; NIKONOVA, [illegible]

Some geophysical data on hypogenic tectonics of the near-Caspian depression. Dokl.AN SSSR 112 no.6:1095-1097 F '57. (MLRA 10:5)

1.Nizhnevolzhskiy razvedochnyy geofizicheskiy trest i Saratovskiy gosudarstvennyy universitet im. N.G. Chernyshevskogo. Predstavleno akademikom N.S. Shatskim.
(Caspian depression--Geology, Structural)

NIKONOVA, N.A.

Basic tectonic features of the northwestern boundary zone of the Caspian Lowland in the light of geophysical (seismic) data. Uch.-zap. SGU 74:299-302 '60. (MIRA 15:7)
(Caspian Lowland--Seismic prospecting)

NIKONOVA, N. A.

"Study of Integumentary Fat of Far Eastern Whales as Industrial Raw Material." (Dissertation for Degree of Candidate of Technical Sciences) Acad Sci USSR, Far Eastern Branch imeni V. L. Komarov, Vladivostok, 1955

SO: M-1036 28 Mar 56

NIKONOVA, N. A.: Master Agric Sci (diss) -- "The effect of the place and method of production of the seeds of fruit crops on their yield and quality". Moscow, 1958. 22 pp (Moscow Order of Lenin Agric Acad im K. A. Timiryazev), 110 copies (KL, No 4, 1959, 129)

NIKONOVA, Nina Andreyevna; SINITSINA, N.S., red.; GUREVICH, M.M., tekhn. red.

[Radish]Redis. Moskva, Sel'khozgiz, 1961. 71 p. (MIRA 15:9)
(Radishes)

MATSENTOV, D.I., kand.sel'skokh.nauk.; VASHCHENKO, S.F., kand.sel'skokh. nauk; NIKONOVA, N.A., kand. sel'skokh. nauk; CHEKUNOVA, Z.I., kand. sel'skokh. nauk; FAYNBERG, L.S., nauchnyy sotrudnik; GAVRIL'YEV, I.G., aspirant; VASIL'YEVA, Ye., red.; POKHLEBKINA, M., tekhn. red.

[Advanced practices for vegetable growing under glass] Peredovoi opyt ovoshchevodov zashchishchennogo grunta. Moskva, Mosk. rabochii, 1962. 102 p. (MIRA 16:6)

1. Sotrudniki Nauchno-issledovatel'skogo instituta ovoshchnogo khozyaystva (for all except Vasil'yeva, Pokhlebkina).
(Moscow Province--Vegetable gardening)
(Greenhouse management)

GATKIN, Ye.D.; LYUBKIN, I.V.; NIKONOVA, N.A.

Hospital outpatient service for patients with lupus erythematosus and psoriasis. Vest. derm. i ven. 37 no.7:67-69 Jl '63 (MIRA 16:12)

1. Altayskiy krayevoy kozhno-venerologicheskiy dispanser (glavnyy vrach Ye.D. Gatkin).

ACC NR: AT7000579 (A) SOURCE CODE: UR/0000/63/000/[illegible]0/0173/0176

AUTHOR: Shmel'kova, L. P.; Nikonova, N. A.

ORG: none

TITLE: Determination of the whale carcass quality

SOURCE: Vladivostok. Dal'nevostochnyy tekhnicheskiy institut rybnoy promyshlennosti i khozyaystva. Trudy, no. 3, 1963, 173-176

TOPIC TAGS: food technology, quality control, food sanitation

ABSTRACT: The most characteristic places for determining the freshness of a whale's meat are 1) sample of muscle tissue taken from the spine after the removal of the spine fillet, 2) meat-bone mixture obtained during the cutting of the spine, and 3) liver samples. The sample selection must be timed with the process of whale sectioning. The estimate of the whale quality must be made on the basis of external whale condition indexes and the chemical composition of its tissues. The quality of the whale carcass, in addition to the length of time measured from the moment the whale is killed, also depends on the conditions of the kill, temperature, volume of the forced air, mode of transportation, etc. The raw meat of the whale undergoing processing should be classified according to the retention of its freshness into three catagories: 1) very fresh meat, 2) fresh meat, and 3) spoiled meat. The very fresh meat is intended for canning, or making frozen edibles or fodder. Furthermore, the

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