BEGIN RETAKE OF
PART OF REEL #65.

BORODKIN, G. Ye.

To: BORDKIN; V.F.

BORODKIN, G.Ye.

Intramedullary osteosynthesis with a metallic nail for fractures of the long bones in young children and adolescents. Ortop., travm. i protez. 18 no.5:36-40 S-O '57. (MIRA 12:9)

1. Iz Okruzhnogo voyennogo gospitalya (nach. - B.N.Sokolov) i kliniki gospital'noy khirurgii (zav.kafedroy - prof.M.A.Kholimskiy) Khabarovskogo meditsinskogo instituta.
(FRACTURES)

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6

KARASEVA, Anastasiya Fedorovna; BORODKIN, I.A., spets. red.;
ZAV'YALOVA, A.N., red.; GERASIMOVA, Ye.S., tekhn. red.

[New method for planning diversified article production]
Novyi metod planirovaniia mnogonomenklaturnogo proizvodstva. Moskva, Ekonomizdat, 1962. 93 p. (MIRA 15:6)
(Factory management)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6"

BORODKIN, Igor' Arkad'yevich; ZAV'YALOVA, A.N., red.

[Economics and planning in the rubber industry] Ekonomika i planirovanie rezinovoi promyshlennosti. Moskva, Ekonomika, 1964. 204 p. (MIRA 17:7)

BORODKIN, LEV I.

KATSURA, Leonid Borisovich; [redacted] zhurnalist; LARINA, L.M., redaktor; KIRSANOVA, [redacted] redaktor

[An innovator's days spent in improving the practice of various plants] Mezhzavodskie dni novatora. [Moskva] Izd-vo VTsSPS "Profizdat," 1957. 92 p. (MIRA 10:11)

1. Zaveduyushchiy otdelom proizvodstvenno-massovoy raboty Leningradskogo oblastnogo soveta profsoyuzov (for Katsura).
(Efficiency, Industrial)

BORODKIN, Lev Issakovich,; ZELENKO, G.A., red.; RAKOV, S.I., tekhn. red.

[Beginning of a great work] Nachalo bol'shogo dela. [Moskva]
Izd-vo VTsSPS, 1958. 74 p. (MIRA 11:12)
(Leningrad--Works councils)

BORODKIN, L.I.; GRAMMATIKOV, V.A., red.; LEVONEVSKAYA, L.G., tekhn. red.

[Workers' meetings at the plant] Rabochee sobranie na predpriiatii; iz opyta provedeniia obshchikh sobranii, proizvodstvenno-tekhnicheskikh konferentsii i proizvodstvennykh soveshchanii na promyshlennykh predpriiatiiakh Leningrada. [Leningrad] Lenizdat, 1958. 111 p. (MIRA 11:9)

(Factory management)

BORODKIN, M.

The school lathe work shop. Prof.-tekh.obr. 11 no.7:20-21 O '54.
(MLRA 7:11)

1. Prepodavatel' remeslennogo uchilishcha No. 30. (Moskovskaya oblast')
(Machine-shop practice--Study and teaching)

Borodkin, M.

AUTHOR: Borodkin, M., Teacher 27-58-3-6/17

TITLE: Lessons in Special Technology (Uroki spetsial'noy tekhnologii) Theoretical Training Including Practical Demonstration of Working Methods on Machine Tools (Provedeniye teoreticheskikh zanyatiy s prakticheskim pokazom priyemov raboty na stanke)

PERIODICAL: Professional'noye Tekhnicheskoye Obrazovaniye, 1958, # 3, pp 14-17, (USSR)

ABSTRACT: A close contact between theoretical and practical training must be maintained by teachers of special technologies, designing, metal technologies, mechanics and mathematics. A detailed description of teaching methods, preparatory work and practical demonstration on the T-4A machine tool is given. Educational aids and handbooks are utilized and laboratory work is carried out. Field trips have proved benificial and satisfactory.

The drawing up of technological cards for the treatment of machine parts, is suggested as a means to connect theoretical and practical training.

ASSOCIATION: Remeslennoye uchilishche # 30 (g. Kolomna)
(The Industrial School # 30 at Kolomna)

AVAILABLE: Library of Congress

Card 1/1

BORODKIN, M., prepodavatel' spetsial'noy tekhnologii

Models of measuring instruments. Prof.-tekh. obr. 20 no.9: 16-17 S '63. (MIRA 16:11)

1. Gorodskoye professional'no-tekhnicheskoye uchilishche No.30, Kolomna.

1. BORODKIN, N. A.

2. USSR (600)

4. Ural Mountains - Ore Deposits

7. Report on the magnetometric activities, carried on during the fall of 1942 in the territory of Volkovskiy copper-vanadium deposit. (Abstract.) Izv.Glav. upr.geol.fon. no. 3, 1947

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

BORODKIN, V.

Problems of classification in chemical industries. Sots. trud no.4:41-44 Ap '57. (MIRA 10:6)

(Chemical industries) (Job analysis)

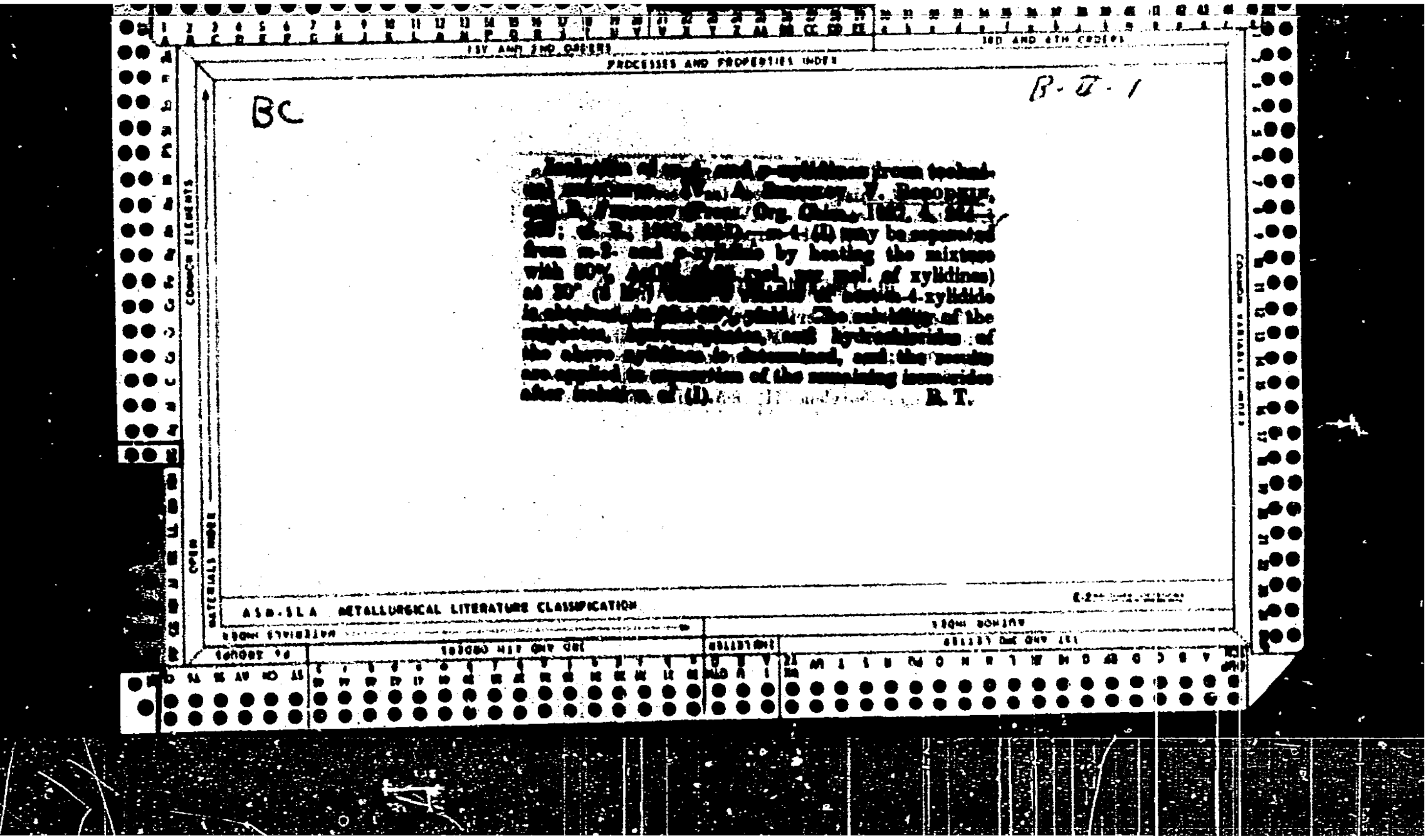
"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6

BORODKIN, V.; POGOSTIN, S.

"Organization and planning of a chemical enterprise" by M.M.Fedorovich. Reviewed by V.Borodkin, S. Pogostin. Sots. trud 5 no.6:156-159 Je '60. (MIRA 13:11)

(Chemical industries)
(Fedorovich, M.M.)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6"



1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

BC

B-II-1

Isolation of [illegible] and p-xylidines from technical xylidines. [illegible] A. [illegible], V. [illegible], and [illegible] Org. Chem. [illegible]; cf. [illegible] (I) may be separated from m-5- and p-xylidine by heating the mixture with 80% AcOH [illegible] mol. per mol. of xylidines) at 20° ([illegible]) [illegible] of aceto-4-xylidide is obtained in [illegible] yield. The solubility of the xylidines, [illegible], and hydrochlorides of the above xylidines is determined, and the results are applied to separation of the remaining isomerides after isolation of (I). R. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

CA

10

Separation of technical xylidine mixtures. V. V. F. Borodkin and V. N. Kisel'nikov. *J. Applied Chem.* (U.S.S.R.) 18, 59-61(1945).—Tech. xylidine mixt. (100 g., contg. 65% *m*-isomers and 35% *p*-isomers) is stirred with AcOH until cool and the ppt. of xylidine acetate is filtered off and washed with AcOH; optimum results are obtained with 80% AcOH in 80% mol. amt. at 20°, when a 45-7% yield of ppt. is obtained of 90-2% pure acetate of the *m*-isomer (1,3-dimethyl-4-aminobenzene). The mother liquor is treated with 1 equiv. of dil. H_2SO_4, cooled to 20°, and the pptd. sulfate of the *p*-isomer (1,4-dimethyl-2-aminobenzene), mixed with the sulfate of the *o*-isomer, is filtered off (the ppt. analyzing 83% *p*-isomer) in 25% yield. The final mother liquor upon neutralization gave residual xylidines averaging 44% *o*- and *p*-isomers and 56% *m*-isomer. G. M. Kosolapoff

COMMON ELEMENTS

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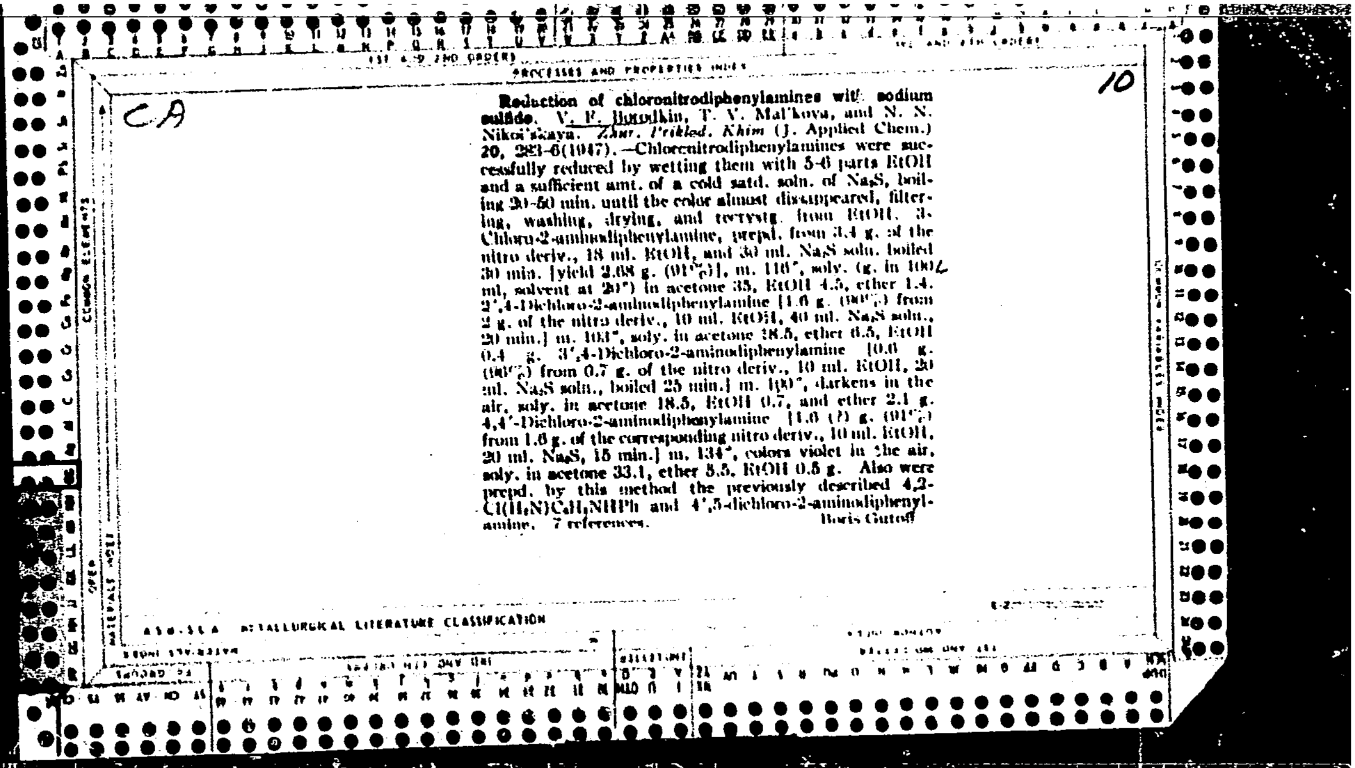
1ST AND 2ND LETTER

2ND LETTER

3RD AND 4TH ORDERS

MATERIALS INDEX

1ST GROUPS



PROCESSES AND PROPERTIES INDEX

CA

10

Reduction of chloronitrodiphenylamines with sodium sulfide. V. F. Borodkin, T. V. Mal'kova, and N. N. Nikol'skaya. *Zhur. Priklad. Khim* (J. Applied Chem.) **20**, 223-6(1947).—Chloronitrodiphenylamines were successfully reduced by wetting them with 5-6 parts EtOH and a sufficient amt. of a cold satd. soln. of Na_2S, boiling 30-50 min. until the color almost disappeared, filtering, washing, drying, and recrystg. from EtOH. 3-Chloro-2-aminodiphenylamine, prepd. from 3.4 g. of the nitro deriv., 18 ml. EtOH, and 30 ml. Na_2S soln. boiled 30 min. [yield 2.08 g. (91%)], m. 110°, soly. (g. in 100 ml. solvent at 20°) in acetone 35, EtOH 4.5, ether 1.4. 2',4-Dichloro-2-aminodiphenylamine [1.6 g. (90%) from 2 g. of the nitro deriv., 10 ml. EtOH, 40 ml. Na_2S soln., 20 min.] m. 103°, soly. in acetone 18.5, ether 6.5, EtOH 0.4 g. 3',4-Dichloro-2-aminodiphenylamine [0.6 g. (90%) from 0.7 g. of the nitro deriv., 10 ml. EtOH, 20 ml. Na_2S soln., boiled 25 min.] m. 100°, darkens in the air, soly. in acetone 18.5, EtOH 0.7, and ether 2.1 g. 4,4'-Dichloro-2-aminodiphenylamine [1.6 (?) g. (91%) from 1.6 g. of the corresponding nitro deriv., 10 ml. EtOH, 20 ml. Na_2S, 15 min.] m. 134°, colors violet in the air, soly. in acetone 33.1, ether 5.5, EtOH 0.5 g. Also were prepd. by this method the previously described 4,2-$Cl(H_2N)C_6H_3NHPh$ and 4',5-dichloro-2-aminodiphenylamine. 7 references.

Boris Gutoff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PA 75T10

BORODKIN, V. F.

USSR/Chemistry - Alkalinity, Determination of May/Jun 1948

Chemistry - Sulfonic Acids

"Alkalimetric Determination of Carbazole-3-Sulfo Acid," V. F. Borodkin and T. V. Mal'kova, Ivanovo Inst Chem Tech, 1½ pp

"Zhur Analit Khimii" Vol III, No 3 186-7

Describes simple and quick method of alkalimetric determination of carbazole-3-sulfo acid in presence of other polysulfonic acids. Submitted May 1947.

75T10

[redacted]

BORODKIN, V. F.

PA 64T7

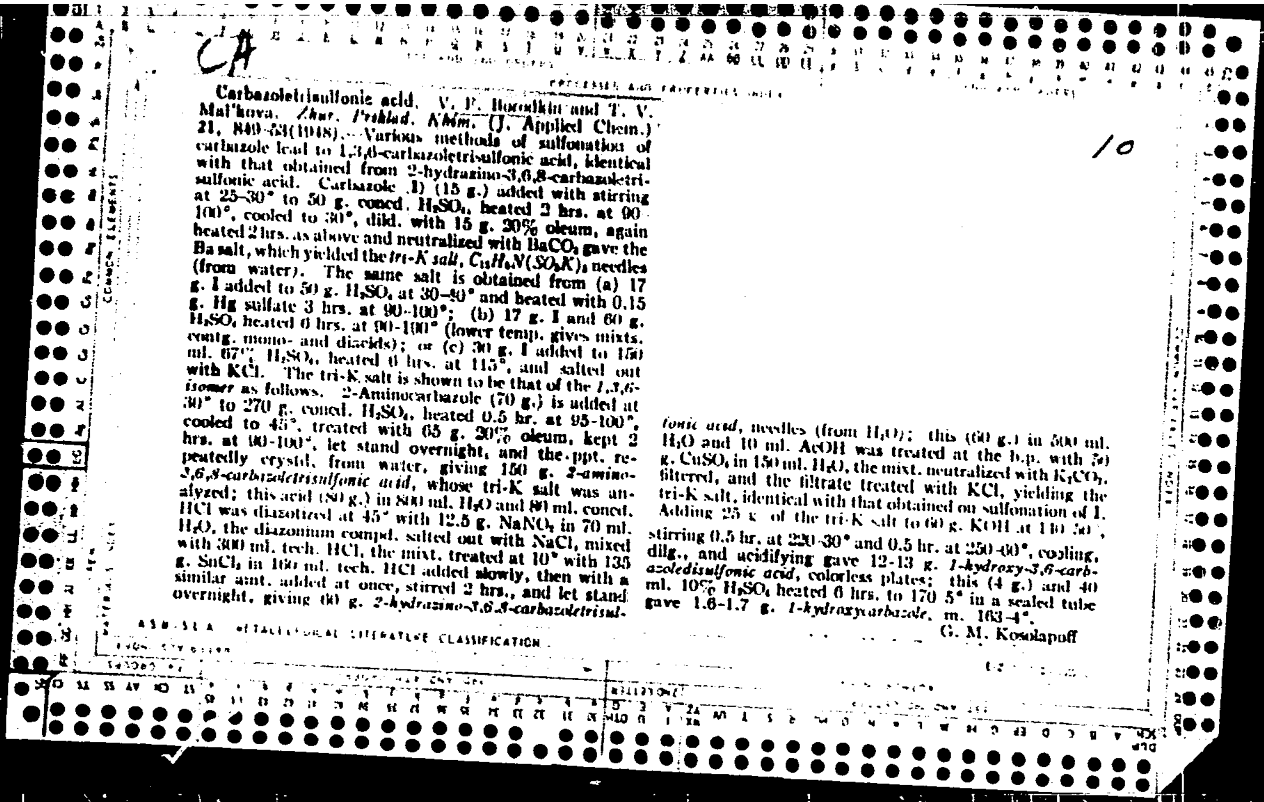
USSR/Chemistry - Indicators **Feb 1948**
Chemistry - Alkalimetry

"Alkalimetric Identification of Carbazole-2,3,6,8-Tetra-Sulfo Acids," V. F. Borodkin, T. V. Mal'kova, Ivanovo Chem Technol Inst, 2 pp

"Zhur Prik Khim" Vol XXI, No 2 171-172

Describes subject method in the presence of isomers of carbazole sulfo acid and sulfuric acid. Submitted 2 Jun 1947.

[redacted] 64T7



CA

PROCESSES AND PROPERTIES INDEX

10

Carbazoletrisulfonic acid. V. F. Borodkin and T. V. Mal'kova. *Zhur. Priklad. Khim.* (J. Applied Chem.) 21, 849-53(1948).—Various methods of sulfonation of carbazole lead to 1,3,6-carbazoletrisulfonic acid, identical with that obtained from 2-hydrazino-3,6,8-carbazoletrisulfonic acid. Carbazole (I) (15 g.) added with stirring at 25-30° to 50 g. concd. H_2SO_4, heated 3 hrs. at 90-100°, cooled to 30°, dild. with 15 g. 30% oleum, again heated 2 hrs. as above and neutralized with $BaCO_3$ gave the Ba salt, which yielded the *tri-K salt*, $C_{12}H_6N(SO_3K)_3$, needles (from water). The same salt is obtained from (a) 17 g. I added to 50 g. H_2SO_4 at 30-40° and heated with 0.15 g. Hg sulfate 3 hrs. at 90-100°; (b) 17 g. I and 60 g. H_2SO_4 heated 6 hrs. at 90-100° (lower temp. gives mixts. contg. mono- and diacids); or (c) 30 g. I added to 150 ml. 67% H_2SO_4, heated 6 hrs. at 115°, and salted out with KCl. The tri-K salt is shown to be that of the *1,3,6-isomer* as follows. 2-Aminocarbazole (70 g.) is added at 30° to 270 g. concd. H_2SO_4, heated 0.5 hr. at 95-100°, cooled to 45°, treated with 65 g. 20% oleum, kept 2 hrs. at 90-100°, let stand overnight, and the ppt. repeatedly crystd. from water, giving 150 g. *2-amino-3,6,8-carbazoletrisulfonic acid*, whose tri-K salt was analyzed; this acid (80 g.) in 800 ml. H_2O and 80 ml. concd. HCl was diazotized at 45° with 12.5 g. $NaNO_2$ in 70 ml. H_2O, the diazonium compd. salted out with NaCl, mixed with 300 ml. tech. HCl, the mixt. treated at 10° with 135 g. $SnCl_2$ in 160 ml. tech. HCl added slowly, then with a similar amt. added at once, stirred 2 hrs., and let stand overnight, giving 60 g. *2-hydrazino-3,6,8-carbazoletrisulfonic acid*, needles (from H_2O); this (60 g.) in 500 ml. H_2O and 10 ml. AcOH was treated at the b.p. with 50 g. $CuSO_4$ in 150 ml. H_2O, the mixt. neutralized with K_2CO_3, filtered, and the filtrate treated with KCl, yielding the tri-K salt, identical with that obtained on sulfonation of I. Adding 25 g. of the tri-K salt to 60 g. KOH at 110-50°, stirring 0.5 hr. at 220-30° and 0.5 hr. at 250-60°, cooling, dilg., and acidifying gave 12-13 g. *1-hydroxy-3,6-carbazoledisulfonic acid*, colorless plates; this (4 g.) and 40 ml. 10% H_2SO_4 heated 6 hrs. to 170-5° in a sealed tube gave 1.6-1.7 g. *1-hydroxycarbazole*, m. 163-4°.

G. M. Kosolapoff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6

USSR/Chemistry - Phenylamines Oct 48
Chemistry - Synthesis

"Synthesis of Chloro-2-Nitrodiphenylamines," V. F. Borodkin, Ivanovo Chem Tech Inst, 8 pp

"Zhur Priklad Khim" Vol XXI, No 10 987-94

Studies conditions of synthesis of possible chloro-2-nitrodiphenylamines by substitution for a chlorine atom in phenyl- and chloro-phenylamine groups of chloro and dichloronitro compounds. Shows that when they are synthesized from isomeric dichloro nitrobenzenes, movement of chlorine atom can be arranged in the series: 2,5-dichloro nitrobenzene (1) > 2,3 (1) > 2,4 (1) > 2,6 (1). Submitted 9 Feb 48.

43/49T15

PA 43/49T15

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6"

BORODKIN, V. F.

PA 43/49T22

USSR/Chemistry - Hydrolysis
Chemistry - Acids

Oct 48

"Hydrolysis of Carbazole-3-Sulfo Acid," V. F. Borodkin, T. V. Mal'kova, Ivanovo Chem Tech Inst, 5 pp

"Zhur Priklad Khim" Vol XXI, No 10 1052-6

Studies hydrolysis of subject acid in presence of hydrochloric and sulfuric acid. Shows that degree of hydrolysis is not proportional to concentration of acid, and depends only on temperature and duration of the reaction. Under similar conditions, reaction is completed more easily in presence of hydrochloric acid. Submitted 17 Oct 47.

43/49T22

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6

BA

1D

Isolation of carbazole and anthracene from raw anthracene. V. F. [illegible] (*J. appl. Chem. U.S.S.R.*, 1960, [illegible], 763—766).—A sulphonation mixture is prepared by adding $Cl\cdot SO_3H$ acid to dry $NPhMe_2$ dissolved in dry PhCl. To this, the mixture of carbazole and anthracene or raw anthracene in the form of a suspension in $NPhMe_2$ is added at 18—20°. The resulting carbazole-9(*N*)-sulphonic acid is neutralised and then separated in the usual way. From a 45% anthracene containing 45% of carbazole, a 60—65% carbazole can be obtained in this way, whilst from a 10% raw anthracene containing 30% of carbazole a technical 85—87% carbazole is obtained. An increase in temp. or longer time of reaction increase the formation of carbazole-3-sulphonic acid.

I. B. I. ZABA.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6"

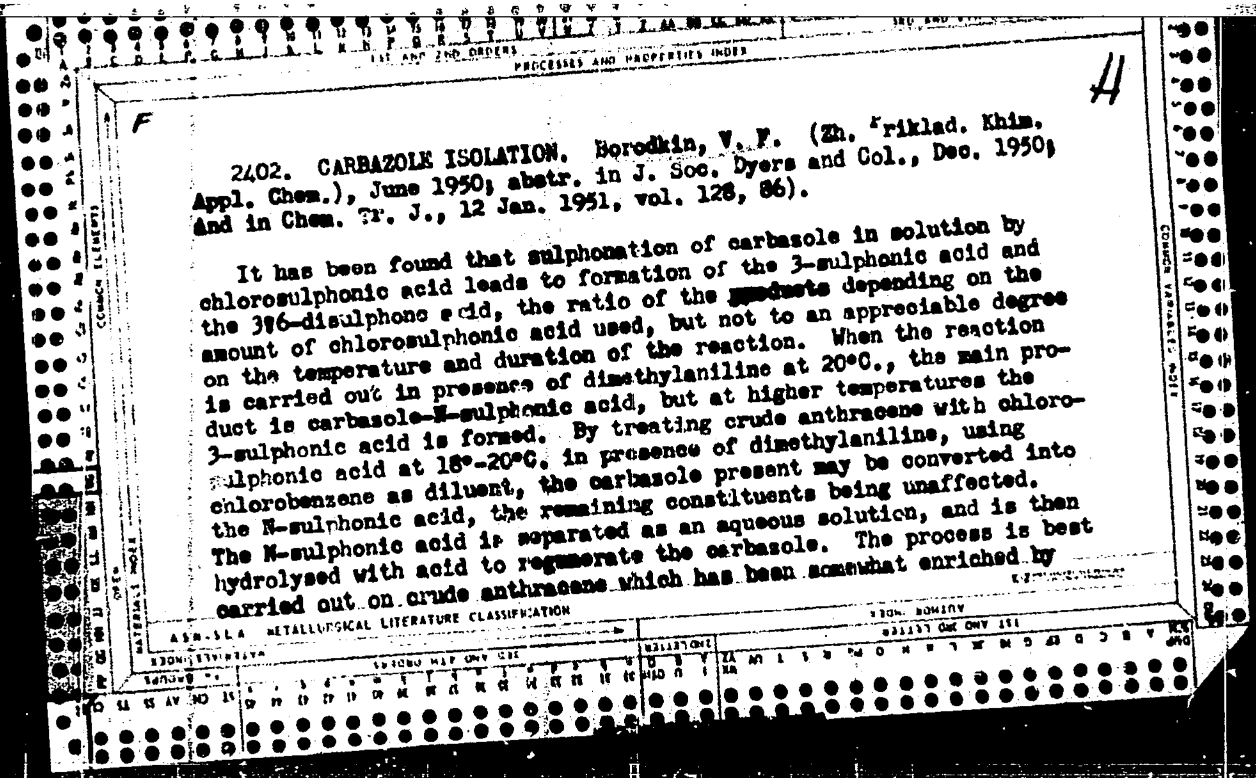
CA

/10

Sulfonation of carbazole in organic solvents. V. F. Borodkin (Ivanovo Inst. Chem. Technol.). *J. Applied Chem. U.S.S.R.* 23, 803-6(1950)(Engl. translation); cf. *C.A.* 43, 6205e.—The prepn. of pure mono- and disulfonic acids of carbazole (I) under various conditions was studied. I in 15-18 parts $PhNO_2$ was cooled to 8-10° and treated with varying amts. of $ClSO_3H$ (II) at different temps. and times, the mixt. neutralized with Na_2CO_3 soln., the $PhNO_2$ steam-distd., the aq. soln. filtered to remove unreacted I, and the sulfonic acids were pptd. as Ba salts. Variation of the time (1 or 3 hrs.) or temp. (10-11°, 15-17°, 28-30°) of reaction made very little difference. Use of 1 mol. II/mol. I gave 83-87% 3-carbazolesulfonic acid (III), identified as its o-chloroaniline salt (?), m. 215.5-16.0°; 3 or 4 mols. II/mol. I gave 85-98% (lower temps. better) 3,6-carbazoledisulfonic acid (IV), identified as its benzidine salt, insol. in water; 2 mols. II/mol. I gave a mixt. of III and IV; 6 mols. II/mol. I at 15-17° gave only 71% IV, [illegible] 1,3,6-carbazoletrisulfonic acid was formed. IV could be detd. by pptn. as its benzidine salt and titration with NaOH soln. When III and IV were present together, III could be sepd. by salting out and detd. by the method of Borodkin and Mal'kova, (*C.A.* 43, 8714d). I was also sulfonated in the presence of $PhNMe_2$ (V). A suspension of I in V was added to a soln. of II and V in PhCl, and the mixt. neutralized with Na_2CO_3 soln. after 3 hrs. at a const. temp., steam-distd. to remove the solvents, and filtered to remove unreacted I; the products were III and 9-carbazolesulfonic acid (VI). The best yield (88%) of VI was obtained by using 2 mols. II, 6 mols. V, and 7 mols. PhCl/mol. I at 20-21°. The amt. of III produced was increased by using more solvent or more II or raising the reaction temp. VI was detd. in the presence of other sulfonic acids by warming in acid soln. and weighing the I formed. Richard I. Akawie

CA

Separation of carbazole and anthracene from crude anthracene. V. P. Borodkin (Ivanovo Inst. Chem. Technol.). *J. Applied Chem. U.S.S.R.* **23**, 807-10(1950)(Engl. translation).—An attempt was made to sep. carbazole (I) from crude anthracene by sulfonation of I with $ClSO_3H$ in $PhNMe_2$ and PhCl to 9-carbazolesulfonic acid (II), followed by acid hydrolysis of II to I. Tests were made on synthetic mixts. of I and anthracene (III) by the procedure of B. (cf. following abstr.). The best recovery was 99.5% of I of 99.8% purity from a mixt. of 40% I and 60% III. An enriched crude anthracene contg. 45% III and 47% I was subjected to this procedure, but the hydrolysis of the resultant II gave I contaminated with tarry impurities. Purifying this enriched crude anthracene first with superheated steam resulted in a com. I of about 60% purity. The yield of II depends on keeping the temp. and reaction time down. Reprocessing of this com. I did not increase the purity. A 12% crude anthracene washed with hot water gave an enriched crude anthracene contg. 30% I and 19% III; sulfonation under the same conditions gave a com. I of 85-87% purity in up to 58% yield. R. I. A.



1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

F

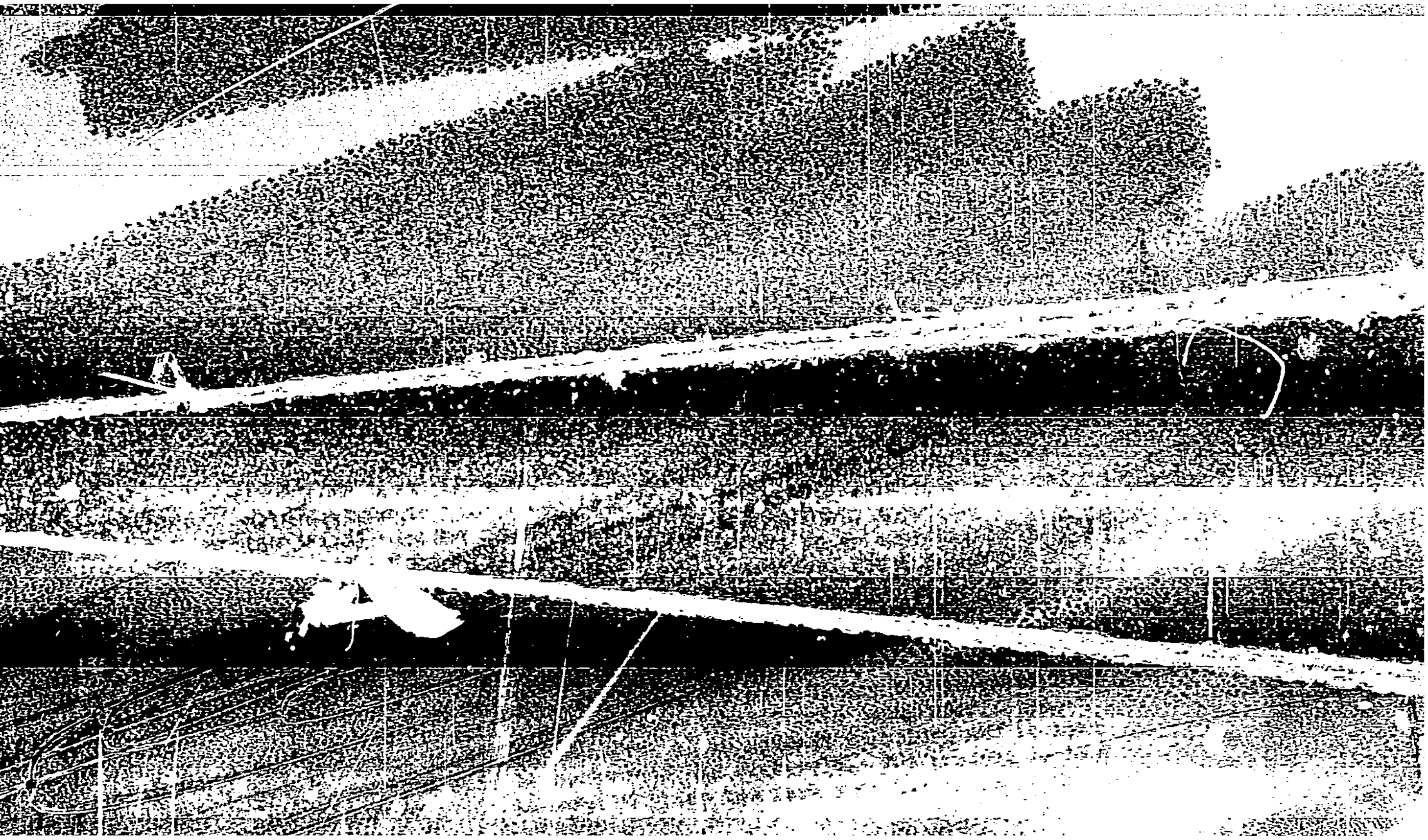
H

2402. CARBAZOLE ISOLATION. Borodkin, V. F. (Zh. Priklad. Khim.
Appl. Chem.), June 1950; abstr. in J. Soc. Dyers and Col., Dec. 1950;
And in Chem. Tr. J., 12 Jan. 1951, vol. 128, 86).

It has been found that sulphonation of carbazole in solution by
chlorosulphonic acid leads to formation of the 3-sulphonic acid and
the 3,6-disulphonic acid, the ratio of the products depending on the
amount of chlorosulphonic acid used, but not to an appreciable degree
on the temperature and duration of the reaction. When the reaction
is carried out in presence of dimethylaniline at 20°C., the main pro-
duct is carbazole-N-sulphonic acid, but at higher temperatures the
3-sulphonic acid is formed. By treating crude anthracene with chloro-
sulphonic acid at 18°-20°C. in presence of dimethylaniline, using
chlorobenzene as diluent, the carbazole present may be converted into
the N-sulphonic acid, the remaining constituents being unaffected.
The N-sulphonic acid is separated as an aqueous solution, and is then
hydrolysed with acid to regenerate the carbazole. The process is best
carried out on crude anthracene which has been somewhat enriched by

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

treatment with boiling water. The quality of the technical carbazole obtained is stated to be in no way inferior to that produced by methods involving treatment with pyridine bases or fusion with caustic potash.



64

(70-75,6)

Sulphonation of carbazole in organic solvents. V. F. Borodkin (*J. appl. Chem. U.S.S.R.*, 1951, **23**, 759—762). The sulphonation of carbazole (I) by Cl·SO$_3$H in PhNO$_2$, PhCl, C$_2$H$_4$Cl$_2$, AcOH, Ac$_2$O and in a mixture of PhCl and NPhMe$_2$ was investigated. When 1 g.-mol. of Cl·SO$_3$H is used per 1 g.-mol. of I, carbazole-3-sulphonic acid is obtained, whereas when 3 g.-mol. of Cl·SO$_3$H are used, a disulphonic acid is produced. When PhNO$_2$ is used as solvent, the yield of carbazole-3-sulphonic acid is 82·8—87·4%, and the yield of carbazole-3 : 6-disulphonic acid is 84·4—95·6% at 10—30°; the yield does not depend on the time of reaction. Sulphonation in presence of NPhMe$_2$ gives carbazole-9(N)-sulphonic acid at 20—21° the yield is 52·6—86% depending on the concn. of Cl·SO$_3$H and the proportion of solvents. At higher temp. (30—35°) carbazole-3-sulphonic acid is formed. J. B. J. Zaba

5(1)

AUTHORS: Borodkin, V. F., Usacheva, K. V. SOV/153-58-3-24/30

TITLE: Copper Phthalocyanine Synthesis From Phthalic Anhydride (Sintez ftalotsianina medi iz ftalevogo angidrida)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 3, pp 142 - 145 (USSR)

ABSTRACT: One of the industrial production methods of copper phthalocyanine is that mentioned in the title. A mixture of phthalic anhydride, urea, copper chloride and catalyst is heated at 170 - 220° for several hours ("baking"). Inert organic diluters supply higher yields. In publications there are, however, no data available on the dependence of the yields of the final product on the nature of the catalyst and diluter. This gap should be filled by the authors of the present paper. In reactions with nitrobenzene or trichlorobenzene as diluters 18 compounds were tested as catalysts. The most active catalysts were molybdenum compounds, with ammonium molybdate being the best (96.0% yield of the final product) (Table 1). Nitrobenzene offered the best yield, 85.5%, of all diluters used. Table 3 shows the yields without diluters. Also in this

Card 1/3

Copper Phthalocyanine Synthesis From Phthalic Anhydride SOV/153-58-3-24/30

case ammonium molybdate proved to be the best catalyst: yield up to 84%. Thus, the influence of the mentioned diluter increases the yield by 10 - 15%. The temperature influence at the end of the baking process is as follows: at 235° the yield of the final product is by about 10 - 13% higner than that obtained at 200°. The increase of the amount of urea decreases the yield if boric acid is used as a catalyst. If in such cases ammonium molybdate acts as a catalyst the yield increases by 2 - 4%. When using cupric chloride instead of cuprous chloride the yield of copper phthalocyanine decreased by 10 - 15%. The presence of crystal water is of no importance to the yield. There are 4 tables and 4 references.

ASSOCIATION: Ivanovskiy khimiko-tekhnologicheskiy institut (Ivanovo Institute of Chemical Technology); Kafedra tekhnologii promezhutochnykh produktov i krasiteley (Chair of the Technology of Intermediate Products and Dyestuffs)

Card 2/3

Copper Phthalocyanine Synthesis From Phthalic Anhydride SOV/153-58-3-24/30

SUBMITTED: September 10, 1957

Card 3/3

5(1, 2, 3)

SOV/153-58-5-22/28

AUTHORS: Borodkin, V. F., Usacheva, K. V., Dormidontova, A. I.

TITLE: The Dissolution and Reprecipitation of Copper Phthalocyanine (Pereosazhdeniye ftalotsianina medi)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 5, pp 131-135 (USSR)

ABSTRACT: Only after the dissolution and reprecipitation of the β-modification of copper phthalocyanine (dissolution in sulfuric acid, separation with water) it is transformed to the α-modification with valuable coloric properties, and which, in contrast to the β-modification is widely used as blue dye. The conditions for this process determine to a high degree the quality of the dye. None of the data in publications at hand mentions the dependence of the coloristic properties of the dye upon its production conditions. The Soviet "goluboy ftalotsianinovyy" (phthalocyanine light blue or sky-blue, respectively) has for a long time been insufficient especially as regards its shade. The present work is part of a comprehensive investigation and deals with the dissolution and reprecipitation. Commercial copper phthalocyanine synthesized according to the urea process was used for this investigation (42-48% admixtures).

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SOV/153-58-5-22/2

The Dissolution and Reprecipitation of Copper Phthalocyanine

furthermore that copper phthalocyanine which had been purified by boiling with HCl. The investigation is divided into four sections dealing with the effect of the following factors upon the shade of the dye: 1) The state of the copper phthalocyanine in the acid; 2) The temperature prevailing during the process; 3) Castor oil, and 4) Dispergators. Based on the results obtained the authors arrived at the following conclusions: The use of castor oil in this process renders this process difficult and does not secure good coloristic properties of the dye. Among several substances used as dispergators in this process "Emul'far FM" (triethanol amine soap) proved to be the best. The optimum conditions for this process are: Dissolution of the commercial copper phthalocyanine in 96% sulfuric acid at a ratio of 1 : 10 at a temperature of not above 25°. Then the precipitation by injection of the solution through a jet into a 30% sulfuric acid containing triethanol amine soap is carried out. The sulfuric acid and the water used for this process must not contain any mechanical impurities.
There are 7 references, 6 of which are Soviet.

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SOV/153-58-5-22/28

The Dissolution and Reprecipitation of Copper Phthalocyanine

ASSOCIATION: Ivanovskiy khimiko-tekhnologicheskiy institut, Kafedra tekhnologii krasiteley i promezhutochnykh produktov (Ivanovo Chemo-Technological Institute, Chair of the Technology of Dyes and Intermediates)

SUBMITTED: October 5, 1957

Card 3/3

BORODKIN, V.F.

Synthesis of phthalocyanine from phthalonitrile. Zhur. prikl. khim. v. 31 no.5:813-816 My '58. (MIRA 11:6)
(Phthalocyanine) (Phthalonitrile)

BORODKIN, Vasiliy Fedorovich; IVANOV, P.P., red.; PANKRATOV, A.I., tekhn.red.

[Silk from wood, paints from petroleum] Shelk - iz dereva, kraski - iz nefti. Ivanovo, Ivanovskoe knizhnoe izd-vo, 1959. 72 p. (MIRA 13:5)
(Textile fibers, Synthetic) (Petroleum chemicals)

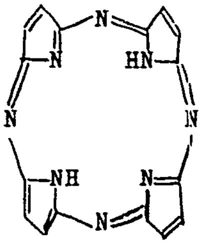
5(3) SOV/153-2-3-22/29

AUTHOR: Borodkin, V. F.

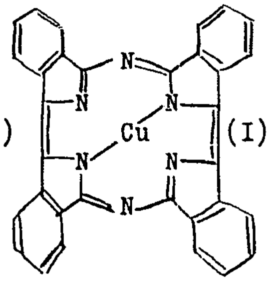
TITLE: On the Color of Phthalocyanine Dyes and Pigments

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 3, pp 424-429 (USSR)

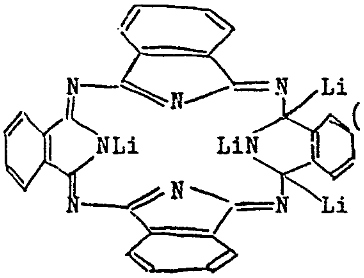
ABSTRACT: The tetraazoporphine cycle, a closed conjugate system (Formula (A)), is the basic substance of the phthalocyanine dyes and pigments:



(A)



(I)



(II)

This conjugate system is the reason of the deep color of all compounds of this type. The author synthesized two cycloisoindolenines hitherto not described in publications: Cu-cyclo-

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bisdiphthalidimine (Formula (I)) and tetralithium-cyclotetraisoindolenine (Formula (II)). Compound (I) was produced by heating diphthalide with urea, copper chloride, and ammonium molybdate in nitrobenzene. The blue product has the absorption maximum in bromo naphthalene at 675 $m\mu$ and is insoluble in most of the organic solvents and in weakly mineral acids. Compound (II) was produced by heating phthalic acid nitrile with metallic lithium in absolute ethanol. Tetralithium cyclotetraisoindolenine is red-violet and has its absorption maximum in bromo naphthalene at 500 $m\mu$. It is insoluble in water, methanol, and ethanol, in butanol, isoamyl alcohol, aromatic hydrocarbons, nitrobenzene, chloro- and bromo naphthalene it is soluble. The two syntheses are described in detail in an experimental part. Moreover, also Co-dimethoxy cyclotetraisoindolenine was synthesized (according to reference 13). The measurement of the absorption spectra was made with a spectrophotometer SF-4. By means of the three compounds synthesized the author showed that only a disturbance or a shortening of the conjugate system in the tetraazoporphine nucleus leads to a shift of the absorption maximum towards shorter wave lengths and thus to lighter colors. Table 1 gives a survey on the

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published data concerning the absorption of substituted tetraazoporphines, phthalocyanines, and their complex compounds. Table 2 shows the absorption maxima of macrocycles with a structure similar to that of phthalocyanines. There are 2 tables and 14 references, 1 of which is Soviet.

ASSOCIATION: Ivanovskiy khimiko-tekhnologicheskiy institut Kafedra tekhnologii krasiteley i poluproduktov (Ivanovo Institute of Chemical Technology, Chair of Technology of Dyes and Semiproducts)

SUBMITTED: March 25, 1958

5(1,3)

SOV/153-2-4-28/32

AUTHORS: Borodkin, V. F., Smirnov, R. P., Prigul'naya, V. A.

TITLE: Interaction of Diimino-isoindoline With Diamines

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 4, pp 619 - 621 (USSR)

ABSTRACT: The product mentioned first in the title (1-imino-3-amino-iso-indolenine) is an intermediate product of copper-phthalocyanine synthesis (Ref 1). It reacts readily with aromatic mono- and diamines (Refs 2,3). At the same time, compounds are formed which can be used in the synthesis of macrocycles (Ref 3). In connection with the investigation of macrocycles, the authors obtained interaction products of the substance under discussion with substituted m-phenylene diamine, benzidine, and its derivatives, diamino-carbazol and diamino-dibenzyl (see Diagram). In the diagram, A denotes benzene, toluene, chlorobenzene, methoxy benzene, diphenyl amine, diphenyl, 3,3-dimethyl-diphenyl, 3,3-dimethoxy diphenyl, carbazol, and dibenzyl. Upon interaction of diimino-isoindoline with aromatic diamines, condensation products with good yields are formed. These products have absorption spectra in the near ultra-violet and violet part of the spectrum. Elec-

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Interaction of Diimino-isoindoline With Diamines SOV/153-2-4-26/32

tron-donating substituents (CH_3, OCH_3) shift the absorption maximum in the substances produced with m-phenylene-diamine derivatives into the range of longer waves as compared with nonsubstituted products. The same substituents shift the maximum in the direction of short waves in the case of compounds produced with benzidine. Attempts are made to explain this phenomenon. There are 3 references, 1 of which is Soviet.

ASSOCIATION: Ivanovskiy khimiko-tekhnologicheskiy institut; Kafedra tekhnologii krasiteley i promezhutochnykh produktov(Ivanovo Institute of Chemical Technology; Chair of Technology of Dyes and Intermediate Products)

SUBMITTED: June 21, 1958

Card 2/2

BORODKIN, V.F.

Reactive dyes. Izv.vys.ucheb.zav.; tekh.tekst.prom. no.3:102-105
'60. (MIRA 13:7)

1. Ivanovskiy khimiko-tekhnologicheskiy institut.
(Dyes and dyeing—Cellulose)

87424

S/153/60/003/004/030/040/XX
B020/B054

11.4600 also 2209

AUTHORS: Borodkin, V. F., Smirnov, R. P.

TITLE: Analogs of Naphthalocyanine, Synthesis and Study of Properties

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1960, Vol. 3, No. 4, pp. 718 - 720

TEXT: The main component of the structure of naphthalocyanine (tetranaphthenotetrazaporphyrine), as well as of phthalocyanine, is a closed conjugate tetrazaporphyrine chain (Ref.1). As was shown by the example of phthalocyanine analogs (Ref.2), the changes in the conjugate chain, connected with its breakdown and shortening, lead to a change of properties of the newly obtained compounds. Therefore, an investigation of the naphthalocyanine analogs containing one or two (II) phenyl radicals, one phenyl- and one (III) or two (IV) isoindole radicals, and a comparison of their properties with those of phthalocyanine analogs, were of interest. Naphthalocyanine analogs differ from phthalocyanine analogs only by

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Analogs of Naphthalocyanine, Synthesis and Study of Properties

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B020/B054

a higher content of π-electrons and benzoindole radicals instead of isoindole radicals. It is, therefore, to be expected that the difference in properties of naphthalocyanine- and phthalocyanine analogs will be small, like the difference between naphthalocyanine and phthalocyanine. Naphthalocyanine analogs were obtained by the procedure described in Ref.2; they were, however, isolated from the solution in butyl alcohol by precipitation with methyl alcohol. The substances were then purified by crystallization from chloro benzene until reaching the constant melting point. The authors describe synthesis and properties of the following compounds: 9,18; 28,34-tetraaza-29,33-phenylenetribenzoisoindoline (I), 9,15; 24,30-tetraaza-10,14; 25,29-diphenylenedibenzoisoindoline (II), 9,16;25,32-tetraaza-26,30-phenylenedibenzotriisoindoline (III), and 7,16;23,29-tetraaza-24,28-phenylenebenzotriisoindoline (IV). It is shown that the substitution of the benzoisoindole radicals in naphthocyanine by phenyl- and isoindole radicals effects a shift of the absorption maximum to shorter wavelengths. There are 2 Soviet references.

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87727

Analogs of Naphthalocyanine, Synthesis and Study of Properties

S/153/60/003/004/030/040/XX
B020/B054

ASSOCIATION: Ivanovskiy khimiko-tekhnologicheskiy institut, kafedra tekhnologii krasiteley i poluproduktov (Ivanovo Institute of Chemical Technology, Department for the Technology of Dyes and Semifinished Products)

SUBMITTED: July 15, 1958

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Card 3/4

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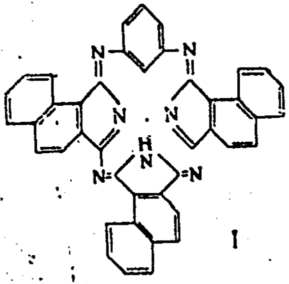
S/153/60/003/004/030/040/XX
B020/B054



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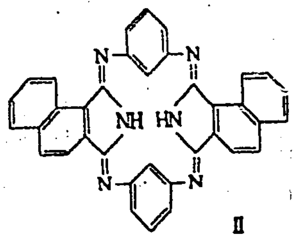

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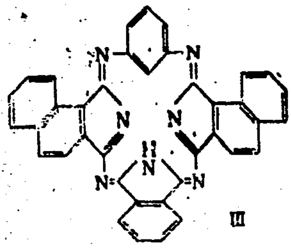
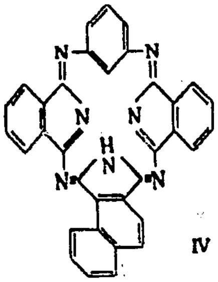


III



IV

Card 4/4

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6

S/153/60/003/005/012/016
B013/B058

AUTHORS: Borodkin, V. F., Smirnov, R. P.

TITLE: Substituted Analogs of Phthalocyanine. Synthesis and Study of Properties

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1960, Vol. 3, No. 5, pp. 915-919

TEXT: Eleven macrocycles - analogs and substituents of phthalocyanine - not described in publications, were produced in this study: 11-nitro-2,14,21,27-tetraaza-22,26-phenylene triisoindoline, $C_{30}H_{16}N_8O_2$, boiling point 380°-382°C; 3,18-dinitro-7,14,21,27-tetraaza-22,26-phenylene triisoindoline, $C_{30}H_{15}N_9O_4$, boiling point 387°-388.5°C; 3,11,18-trinitro-7,14,21,27-tetraaza-22,26-phenylene triisoindoline, $C_{30}H_{14}N_{10}O_6$, boiling point 420°-421°C; 3,17-dinitro-7,13,20,26-tetraaza-8,12,21,25-diphenylene diisoindoline, $C_{28}H_{16}N_8O_4$, boiling point 438°-438.5°C; 11-amino-7,14,21,27-tetraaza-22,26-phenylene triisoindoline, $C_{30}H_{18}N_8$, boiling point

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315.6°C; 3,8-diamino-7,14,21,27-tetraaza-22,26-phenylene triisoindoline, $C_{30}H_{19}N_9$, boiling point 308°-309°C; 3,11,18-triamino-7,14,21,27-tetraaza-22,26-phenylene triisoindoline, $C_{30}H_{20}N_{10}$, boiling point 391°-391.5°C; 3,17-diamino-7,13,20,26-tetraaza-8,12,21,25-diphenylene diisoindoline, $C_{28}H_{20}N_8$, boiling point 372°-374°C; 7,13,20,26-tetraaza-8,12-pyridyl-21,25-phenylene diisoindoline, $C_{27}H_{16}N_7$, boiling point 388°-389°C; 9,15,24,30-tetraaza-10,14-pyridyl-25,29-phenylene dibenzo isoindoline, $C_{35}H_{20}N_7$, boiling point 415°C (decomposes); 2,3,4,5,15,16,17,18-octachloro-7,13,20,26-tetraaza-8,12,21,25-diphenylene diisoindoline, $C_{28}H_{10}N_6Cl_8$, boiling point 450°C (decomposes). The maximum of the absorption spectrum is bathochromically displaced on introduction of amino groups into isoindole radicals of phthalocyanine analogs with a benzene radical (Table 1). On introduction of nitro groups a bathochromic displacement is also observed at the beginning. This displacement is greater on introduction of only one nitro group than on introduction of only one amino group. An accumulation of nitro groups, however, results in a hypsochromic displacement. This is

Substituted Analogs of Phthalocyanine. Synthesis and Study of Properties

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B013/B058

presumably connected with a decrease in electron density in the ring. The presence of two amino or nitro groups in phthalocyanine analogs with two benzene radicals is of no consequence in the absorption spectrum. Bathochromic displacement occurs in the presence of 8 chlorine atoms. In phthalocyanine analogs with a benzene and pyridine radical, the absorption maxima are in the range of longer waves than in analogs with 2 benzene radicals. This can be explained by the fact that an "individed" electron pair of the nitrogen atom participates in the conjugation. The absorption values (λmax) of the substituted phthalocyanine analogs are tabulated. There are 1 table and 3 Soviet references.

ASSOCIATION: Ivanovskiy khimiko-tekhnologicheskiy institut, Kafedra tekhnologii krasiteley i poluproduktov (Ivanovo Institute of Chemical Technology, Department of Technology of Dyes and Semifinished Products)

SUBMITTED: July 9, 1958

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S/079/60/030/05/30/074
B005/B016

AUTHOR: Borodkin, V. F.

TITLE: Analogs of Phthalocyanine. Synthesis and Investigation of Properties

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 5, pp. 1547-1553

TEXT: The author of the present paper synthesized 15 analogs of phthalocyanine. From among these 15 macrocycles, the following 12 have not yet been described in publications: 25-chloro-7,14,21,27-tetraaza-22,26-phenylenetriisoindoline; 24-methyl-, 24-methoxy-, and 24-chloro-7,13,20,26-tetraaza-8,12,21,25-diphenylene diisoindoline; 7,12,19,25-tetraaza-8,11,20,24-diphenylene diisoindoline; 23-methyl-, 23-methoxy-, and 23-chloro-7,12,19,25-tetraaza-8,11,20,24-diphenylene diisoindoline; 7,14,21,27-tetraaza-8,13-naphthylene-22,26-phenylene diisoindoline; 25-methyl-, 25-methoxy-, and 25-chloro-7,14,21,27-tetraaza-8,13-naphthylene-22,26-phenylene diisoindoline. To synthesize these compounds, equimolecular quantities of the correspondingly substituted derivative of 1,3-di-(1-imino-3-isoindolinylidene-amino)-benzene and 1,3-diimino-isoindoline (1,3- or

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Analogs of Phthalocyanine. Synthesis and Investigation of Properties

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B005/B016

1,4-phenylene diamine, or 1,4-naphthylene diamine, respectively) were boiled in butanolic solution under reflux until the separation of ammonia was completed. The precipitate was filtered and washed with hot methanol or recrystallized from suitable solvents. The author determined the compositions and solubilities of the resultant macrocyclic compounds and took their absorption spectra. The substitution of one or two isoindole nuclei of phthalocyanine by one or two benzene rings was shown to cause a shift of the absorption maximum toward the region of shorter wave lengths. Substituents on the benzene nucleus have little or no influence upon the absorption spectrum. In two special sections of the paper, a rational nomenclature and the scientific nomenclature for the 15 macrocyclic compounds synthesized are given on the basis of the Soviet nomenclature of organic compounds. The experimental part gives the individual initial products used for the synthesis of the macrocyclic compounds. Yields, melting points, and the results of the ultimate analysis are given for all 15 compounds synthesized. The students V. I. Yerichov, M. I. Sorokina, and A. L. Smirnova took part in the experimental work. A. P. Terent'yev (Ref. 5) is mentioned in connection with the nomenclature of macrocyclic compounds. There are 6 references, 2 of which are Soviet.

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Analogs of Phthalocyanine. Synthesis and Investigation of Properties

S/079/60/030/05/30/074
B005/B016

ASSOCIATION: Ivanovskiy khimiko-tekhnologicheskiy institut (Ivanovo Institute of Chemical Technology)

SUBMITTED: July 11, 1958

Card 3/3

KLYUYEV, V.N.; BORODKIN, V.F.

Transformation of o-carboxyphenylsulfinic acid. Izv.vys.ucheb.zav.; khim.i khim.tekh. 3 no.6:1079-1081 '60. (MIRA 14:4)

1. Ivanovskiy khimiko-tekhnologicheskiy institut, kafedra tekhnologii krasiteley i poluproduktov.
(Benzenesulfinic acid)

BORODKIN, V.F.; KUZNETSOVA, S.S.

Dyeing with azo dyes containing methyl sulfonic ester groups.
Izv.vys.ucheb.zav.; tekh.tekst.prom. no.4:80-83 '61. (MIRA 14:9)

1. Ivanovskiy khimiko-tekhnologicheskiy institut.
(Dyes and dyeing--Textile fibers)

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6

BORODKIN, V.F.; SMIRNOV, R.P.

Phthalocyanine and its derivatives from diiminoisoindolines. Izv. vys. ucheb. zav.; khim. i khim. tekh. 4 no. 2:287-290 '61. (MIRA 14:5)

1. Ivanovskiy khimiko-tekhnologicheskiy institut. Kafedra tekhnologii krasiteley i poluproduktov.
(Phthalocyanine) (Isoindoline)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6

BORODKIN, V.F.

Chlorination of copper phthalocyanine in a fluidized bed. Izv.vys.-ucheb.zav.;khim.i khim.tekh. 4 no.4:665-667 '61. (MIRA 15:1)

1. Ivanovskiy khimiko-tekhnologicheskiy institut, kafedra tekhnologii krasiteley i promezhutochnykh produktov.
(Phthalocyanine) (Chlorination)

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L 16160-63 EPR/EWP(j)/EPF(c)/EWT(m)/BDS ASD Ps-4/Pc-4/Pr-4 RM/WW

ACCESSION NR: AR3005156 S/0058/63/000/006/D026/D028

SOURCE: RZh. Fizika, Abs. 6 D168

71

AUTHORS: Borodkin, V. F.; Smirnov, R. P.

TITLE: Absorption spectra of substituted analogs of phtalocyanin and analogs of naphtalocyanine

CITED SOURCE: Tr. Vses. mezhvuz. nauchnotekh. konferentsii po vopr. sinteza i primeneniya organ. krasiteley, 1961. Ivanovo, 1962, 30-33

TOPIC TAGS: ultraviolet spectrum, visible spectrum, substituted phtalocyanine analog , naphtalocyanine analog

TRANSLATION: The absorption spectra of symmetrical and asymetrical substituted analogs of phtalocyanine (substitutes -- nitro- or amino-groups) and analogs of naphtalocyanine. are investigated in the ultraviolet and visible regions. It is found that in the case of accumulation of amino-groups in the iso-indole residues, the maximum of the absorption is displaced bathochromally to the long-wave region, while in the case of accumulation of the nitro-groups it is shifted to the short-wave region. Substitution of the benzoisoindole residues in naphtalocyanine by

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L 16160-63

ACCESSION NR: AR3005156

phenyl and iso-indole residues leads to a shift of the maximum of absorption to the shorter wavelengths.

DATE ACQ: 5Jul63 SUB CODE: PH ENCL: 00

Card 2/2

BORODKIN, V.F.; KUZNETSOVA, S.S.

Preparation and properties of dyes with methylsulfoester groups.
Izv.vys.ucheb.zav.; khim.i khim.tekh. 5 no.1:141-149 '62.
(MIRA 15:4)

1. Ivanovskiy khimiko-tekhnologicheskiy institut, kafedra tekhnologii krasiteley i poluproduktov.
(Dyes and dyeing)

BORODKIN, V.F.

All-Union Interuniversity Conference on the Synthesis and Uses of Dyes. Izv.vys.ucheb.zav.; khim.i khim.tekh. 5 no.1:177-178 '62. (MIRA 15:4)

1. Rukovoditel' sektsii sinteza krasiteley Vsesoyuznoy mezhvuzovskoy konferentsii po sintezu i primeneniyu krasiteley.
(Dyes and dyeing—Congresses)

L 17757-63 EWP(j)/EPF(c)/EWP(q)/EWT(m)/BDS AFFTC Pc-4/Pr-4 RM/WW/JD

ACCESSION NR: AP3005899 S/0153/63/006/003/0475/0478

67

66

AUTHORS: Borodkin, V. F.; Gnedina, V.A.

TITLE: Analogs of copper phthalocyanin. Synthesis and study of properties

SOURCE: IVUZ. Khimiya i khimicheskaya tekhnologiya, v. 6, no. 3, 1963, 475-478

TOPIC TAGS: phthalocyanin analog, copper phthalocyanin analog, di-iminoisoindoline, meta-phenylenediamine, dimethylformamide, copper acetate

ABSTRACT: In previous papers, the authors described the synthesis and properties of the products of the interaction of di-iminoisoindoline with meta-phenylenediamine and its substituents and of phthalocyanin analogs obtained from these compounds and containing one or two hydrogen atoms. Here they report on compounds achieved by substituting metals for these H atoms. They synthesized 2 symmetrical analogs of phthalocyanin containing 2 diphenylcyclohexane remnants and seven analogs of copper phthalocyanin. The former had the same properties as phthalocyanin analogs containing benzene and naphthalene remnants, and, like the latter, yielded copper compounds on boiling in dimethylformamide with copper acetate. The copper phthalocyanin analogs were less soluble in organic solvents

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L 17757-63

ACCESSION NR: AP3005899

than the phthalocyanin analogs and more resistant to heating and the action of mineral acids. In the presence of concentrated sulfuric acid, the copper in the copper phthalocyanin analogs is replaced by H atoms, which is not the case with copper phthalocyanin itself.

ASSOCIATION: Ivanovskiy khimiko-tekhnologicheskiy institut (Ivanov chemical engineering institute)

SUBMITTED: 15May62 DATE ACQ: 16Sep63 ENCL: 00

SUB CODE: CH NO REF SOV: 003 OTHER: 000

Card 2/2

BORODKIN, V.F.; KUZNETSOVA, S.S.; SMIRNOV, L.N.

Sulfoxymethylation of pigments. Izv.vys.ucheb.zav.;khim.i khim.tekh.
6 no.5:847-850 '63. (MIRA 16:12)

1. Ivanovskiy khimiko-tekhnologicheskiy institut, kafedra tekhnologii krasiteley i promezhutochnykh produktov.

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6

BORODKIN, V.F.; LIFENTSEV, O.M.

Interaction of 1,3-indandione with m-phenylenediamine and its substitution derivatives. Izv.vys.ucheb.zav.;khim.i khim.tekh. 6 no.4:647-651 '63. (MIRA 17:2)

1. Ivanovskiy khimiko-tekhnologicheskiy institut. Kafedra tekhnologii krasiteley i promezhutochnykh produktov.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6"

SMIRNOV, R.P.; GNEDINA, V.A.; BORODKIN, V.F.

Synthesis and study of the properties of macrocycles. Part 1: Interaction of diamino-β-isoindigo with hydrazine salts. Izv. vys. ucheb.zav.; khim. i khim. tekh. 6 no.6:1022-1024 '63. (MIRA 17:4)

1. Ivanovskiy khimiko-tekhnologicheskiy institut, kafedra tekhnologii organicheskikh krasiteley i poluproduktov.

SMIRNOV, R.P.; BORODKIN, V.F.; LUK'YANOVA, G.I.

Synthesis of metal complex compounds of asymmetrical macrocycles.
Izv.vys.ucheb.zav.; khim. i khim. tekh. 7 no. 1:118-121 '64.
(MIRA 17:5)

1. Ivanovskiy khimiko-tekhnologicheskiy institut, kafedra tekhnologii organicheskikh krasiteley i poluproduktov.

ACCESSION NR: AP4025264 S/0153/63/006/006/1022/1024

AUTHOR: Smirnov, R. P.; Gnedina, V. A.; Borodkin, V. F.

TITLE: Synthesis and investigation of properties of macrocyclic compounds. I. Reaction of diamino-beta-isoindigo with hydrazine salts.

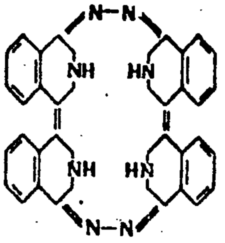
SOURCE: Ivuz. Khimiya i khimicheskaya tekhnologiya, v. 6, no. 6, 1963, 1022-1024

TOPIC TAGS: macrocyclic compound, diaminoisoindigo hydrazine reaction product, copper macrocyclic compound complex, nickel macrocyclic compound complex, IR spectra, stability, structure, imino group

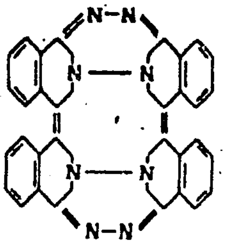
ABSTRACT: The properties and stability of the macrocyclic compound formed by the reaction of diamino-beta-isoindigo with hydrazine hydrochloride in nitrobenzene were investigated. From the literature the product would be assigned the formula I. The authors however maintain the product has imidic hydrogen atoms as in the formula II;

Card 1/3

ACCESSION NR: AP4025264



I



II

The latter structure is supported by IR spectra (maximum at 3230 cm^{-1}, characteristic for imino group, which disappears on complexing with metal). Copper and nickel complexes of the macrocyclic compound were prepared -- these are new in the literature. The complexes are very stable. Their absorption bands were shifted toward the long wave region of the spectra in comparison to the spectrum of the uncomplexed macrocyclic compound. Orig. art. has: 1 table and 2 formulas.

ASSOCIATION: Ivanovskiy khimiko-tekhnologicheskiy institut Kafedra tekhnologii organicheskikh kraciteley i poluproduktov (Ivanov Chemical Technological Institute)

ACCESSION NR: AP4025264

SUBMITTED: 11Jan63 DATE ACQ: 10Apr64 ENCL: 00

SUB CODE: GC NO REF SOV: 004 OTHER: 002

Card 3/3

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6

ACCESSION NR: AP4037233 S/0153/64/007/001/0118/0121

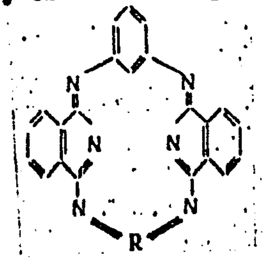
AUTHOR: Smirnov, R. P.; Borodkin, V. F.; Luk'yanova, G. I.

TITLE: Synthesis of metallic complexes of unsymmetrical macrocyclic compounds

SOURCE: Ivuz. Khimiya i khimicheskaya tekhnologiya, v. 7, no. 1, 1964, 118-121

TOPIC TAGS: unsymmetrical macrocyclic compound, metal complex, cobalt complex, nickel complex, copper complex, synthesis, absorption spectra, thermal stability, chemical stability, naphthoisoindoline containing macrocycle

ABSTRACT: New metallic complexes of unsymmetrical macrocyclic compounds were synthesized and the effect of complex formation on the absorption spectra, and the thermal and chemical stability of the macrocyclic compounds were studied. Compounds of the formula A

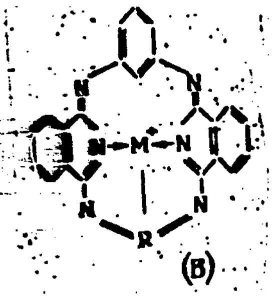


(A)

Card 1/3

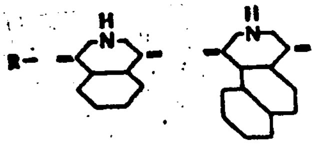
APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6"

[illegible]: AP4037233



(B)

M = divalent metal



were prepared by reacting 1,3-di-(1-imino-3-isoindolinylidenamino)-benzene with 1-amino-3-iminoisoindoline or 1-amino-3-naphthoisoindolenine. Copper, nickel and cobalt complexes (formula B) were prepared by dissolving the previously prepared compounds in pyridine, dimethylformamide or butanol with equimolecular amounts of the metal acetate or chloride, boiling for $\frac{1}{2}$-$3\frac{1}{2}$ hours, filtering the precipitate

Card 2/3

ACCESSION NR: AP4037233

and washing. The metal complex compounds have higher thermal stability and lower solubility in organic solvents and acids than the nonmetallic compounds. The 3380 cm^{-1} maximum is absent in the IR spectra of the metal complexes, indicating the metals are in the "window" of the macrocyclic compounds. The absorption spectra are shifted toward the longer wave region of the spectrum, the amount of shift depending on the metal (greatest with Cu and least with Ni). Orig. art. has: 1 table and 2 formulas.

ASSOCIATION: Ivanovskiy khimiko-tekhnologicheskiy institut (Ivanov Chemical Engineering Institute) Kafedra tekhnologii organicheskikh krasiteley i poluproduktov (Department of the Technology of Organic Dyes and Intermediate Products)

SUBMITTED: 08Feb63 ENCL: 00

SUB CODE: OC NO REF SOV: 004 OTHER: 002

Card 3/3

BOCHENKOVA, K.A.; BORODKIN, V.F.

Synthesis and study of active azo dyes with a chloroethylsulfamide group.] Izv.vys.ucheb.zav.; khim. i khim.tekh. 7 no.2:287-291 '64.
(MIRA 18:4)

1. Ivanovskiy khimiko-tekhnologicheskiy institut, kafedra tekhnologii krasiteley i promezhutochnykh produktov.

PETROVA, R.A.; BORODKIN, V.F.

Chloromethylation of arylaminoanthraquinone dyes. Izv. vys. ucheb. zav.; khim. i khim. tekh. 7 no.3:472-475 '64.
(MIRA 17:10)

1. Ivanovskiy khimiko-tekhnologicheskiy institut, kafedra tekhnologii krasiteley i promezhutochnykh produktov.

BORODKIN, V.I.; DANILOVA, A.I.

Means for improving the assortment of petroleum refinery products in the Lvov Economic Region. Neft. i gaz. prom. 3:57-59 Jl-S '65. (MIRA 18:11)

L 3555-66 EWT(m)/EWP(j) RM

ACCESSION NR: AP5024402 6 UR/0286/65/000/015/0081/0081

AUTHORS: Borodkin, V. F.; 44,55 Semenova, T. S.; 44,55 Silant'yeva, V. G. 44,55 3/ B

TITLE: A method for obtaining colored polystyrole, 15,44,55 Class 39, No. 173410 15

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 81

TOPIC TAGS: polystyrole, polymer, styrole, monomer, acryl

ABSTRACT: This Author Certificate presents a method for obtaining colored polystyrole by polymerizing styrole in the presence of a pigment containing an active group instrumental in the formation of chemical union between the pigment and the monomer in the process of polymerization. To broaden the assortment of materials for dying polystyrole, 15 pigments of the acrylic active group are used.

ASSOCIATION: Ivanovskiy khimiko-tekhnologicheskiy institut (Ivanovo Institute of Chemical Engineering) 44,5

SUBMITTED: 05Jun64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 000 OTHER: 000

Card 1/1

BOCHENKOVA, K.A.; BORODKIN, V.F.

Synthesis and study of active azo dyes with a chloroethylsulfamide group. Izv. vys. ucheb. zav.; khim. i khim. tekh. 8 no.3:459-464 '65. (MIRA 18:10)

1. Ivanovskiy khimiko-tekhnologicheskiy institut, kafedra tekhnologii krasiteley i poluproduktov.

BORODKIN, V.I., kandidat ekonomicheskikh nauk; SKRIPNIK, A.M., kandidat ekonomicheskikh nauk; BERMAN, A.Ya., kandidat tekhnicheskikh nauk.

"Economic aspects of the nonferrous metallurgy in the U.S.S.R." S.A.Pervushin and others. Reviewed by V.I.Borodkin, A.M.Skripnik, A.Ia. Berman. TSvet.met.29 no.9:86-88 S '56. (MIRA 9:10)
(Nonferrous metals--Metallurgy) (Pervushin, S.A.)

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6

BORODKIN, V.I.

[redacted]tandard efficiency of apparatus and installations.
Khim.prom. no.3:170-175 Ap-My '57. (MLRA 10:7)
(Chemical engineering--Equipment and supplies)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6"

14(7) SOV/92-58-8-26/36

AUTHOR: Borodkin, V.I. Engineer

TITLE: Fixing the Length of the Continuous Operating Period of a Processing Unit (Normirovaniye prodolzhitel'nosti mezhremontnogo perioda tekhnologicheskikh ustanovok)

PERIODICAL: Neftyanik, 1958, Nr 8, pp 29-30 (USSR)

ABSTRACT: The author states that the refinery processing unit shutdowns for maintenance occupy 10-20 percent of the calendar year. That is why an extension of their continuous operating periods and a shortening of the time needed for maintenance are an extremely important matter. Regulations on the length of continuous-operating periods of various petroleum-refining apparatus have become obsolete, and it is evident that the prescribed length of uninterrupted operations can be extended without damaging the equipment. It is therefore necessary to make a study of how an extended operating period would affect the equipment. Data given in Fig. 1 make it clear that an extended length of the continuous-operation period increases

Card 1/2

Fixing the Length (Cont.) 92-58-8-26/36

the amount of repair work to be carried out very little and lowers the cost of repair operations in relation to each day's operation. However, a number of factors should be taken into account for establishing respective rules. The consumption of fuel, steam, and electric power increases with extension of the operating period length, but not in the same proportion in all processing units. The extension of the length of the continuous-operating period affects the cost of production in two different ways. The limited number of repair operations increases the quantity of products yielded by the processing unit. On the other hand, the higher consumption ratio of fuel and electric power burdens the production cost in this case. Analyzing the economic aspect of the problem, the author shows in Table 2 to what extent expenditures depend on the length of the continuous-operating period. As a result, the author comes to the conclusion that the most economical way to run his processing unit at the L'vov refinery is to shut it down for maintenance and repairs after 90-120 days of continuous operation.

ASSOCIATION: L'vovskiy neftepererabatyvayushchiy zavod (The L'vov Refinery)

Card 2/2

BORODKIN, V.I.

Method for calculating the cost of production in petroleum refining. Izv.vys.ucheb.zav.; neft' i gaz 2 no.11:123-130 '59. (MIRA 13:4)

1. L'vovskiy politekhnicheskiy institut.
(Petroleum--Refining)

BORODKIN, Valentin Iosifovich; YENISHERLOVA, O.M., vedushchiy red.;
POLOSINA, A.S., tekhn.red.

[Analysis of production planning and industrial management in petroleum refining] Analiz proizvodstvenno-khoziaistvennoi deiatel'nosti v neftegazopererabotke. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1960. 173 p. (MIRA 13:3)

(Petroleum--Refining) (Industrial management)

STEFANOVSKIY, Yevgeniy Yevgen'yevich; BORODKIN, V.I., kand. tekhn. nauk, dots., retsenzent; VED', Ye.I., kand. tekhn. nauk, dots., retsenzent; RYDNIK, V.L., kand. ekon. nauk, otv. red.; FISHCHENKO, B.V., red.; TROFIMENKO, A.S., tekhn. red.

[Economics of the silicate industry of the U.S.S.R.] Ekonomika silikatnoi promyshlennosti SSSR. Khar'kov, Izd-vo Khar'kovskogo univ., 1962. 204 p. (MIRA 16:12)
(Silicates)

BORODKIN, Valentin Iosifovich; POGOSTIN, S.Z., otv. red.; GRINSHPON, F.O., red.; MALYAVKO, A.V., tekhn. red.

[Setting up technical norms for industries using processing equipment]Tekhnicheskoe normirovanie v apparaturnykh proizvodstvakh. L'vov, Izd-vo L'vovskogo univ., 1962. 284 p. (MIRA 16:2)

(Chemical industries—Production standards)

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6

BORODKIN, Valentin Iosifovich; GAL'PERSON, Ye.B., red.; TITSKAYA,
B.F., ved. red.; YAKOVLEVA, Z.I., tekhn. red.

[Organization and planning of work in petroleum refining]
Organizatsiia i planirovanie raboty neftepererabatyvaiushchego predpriiatiia. Moskva, Gostoptekhizdat, 1963. 285 p.
(MIRA 17:1)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6"

L 59650-65 EWT(d)/EPA/EWP(f)/EPF(n)-2/EPR/T-2/EPA(bb)-2/EWP(1) Po-4/Pa-4/Pq-4/Pg-4/Ps-4/Pk-4/Pl-4 IJP(c) WW/BC

ACCESSION NR: AP5001127

S/0286/64/000/022/0078/0078 48
B

AUTHORS: Borodkin, V. I.; Sarantsev, K. B.; Shabashov, S. Z.

TITLE: Remote starting device for gas turbines. Class 46, No. 166556

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 22, 1964, 78

TOPIC TAGS: gas turbine control, turbine starting, remote control, remote control system, servomechanism

ABSTRACT: This Author Certificate introduces a gas turbine starting device as described in Author Certificate No. 149280 (see Fig. 1 on the Enclosure). To close automatically the working fluid inlet valve and to decouple the turbine expansion engine from the turbine shaft, a speed regulator is installed in the hydraulic supply line to the valve servoactuator. This speed regulator connects the line to the drain when the turbine reaches operating speed, while the servomotor of the valve is equipped with a terminal shut-off which is connected to the electromagnetic circuit of the slide valve. To provide a warning for the turbine expansion engine disconnect, an alternate version has a slider valve connected in the hydraulic supply line to the clutch servoactuator. This slider valve is mechanically

Card 1/3

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6

connected to the valve rod and only actuates the supply line after the valve is closed. Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 21Nov63

ENCL: 01

SUB CODE: PR

NO REF SOV: 000

OTHER: 000

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L 59650-65
ACCESSION NR: AP5001127 ENCLOSURE: 01

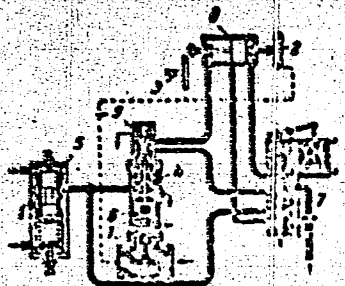

Fig. 1.

1- working fluid inlet valve; 2- turbine expansion engine; 3- turbine shaft; 4- supply valve servomotor; 5- speed regulator; 6- terminal shut-off; 7- electromagnetic spool valve; 8- servoactuator; 9- slider valve.

3/3 dDP

L 02281-67 EWT(1)/T IJP(c) AT

ACC NR: AP6025243 SOURCE CODE: UR/0057/66/036/007/1198/1201

50
B

AUTHOR: Borodin, V.S.; Kagan, Yu.M.; Lyagushchenko, R.I.

ORG: none

21

TITLE: Investigation of a hollow cathode discharge. 2.

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 7, 1198-1201

TOPIC TAGS: gas discharge, hollow cathode, electric field, electron energy, electron distribution

ABSTRACT: This paper is a sequel to an earlier paper by V.S.Borodin and Yu.M.Kagan (ZhTF, 36, 181, 1966) in which the experimental techniques were described and the earlier results presented. The previous work showed that the electron energy distribution in a hollow cathode differs from that in a positive column in that itx maximum occurs at a lower electron energy and it falls off less rapidly with increasing energy. Probe measurements in a 10 cm long 2 cm diameter hollow cathode have now shown, in agreement with the findings of E.Badareu and I.Popescu (Phys. Rev., 5, No. 1, 1960 /Abstracter's note: the reference appears to be to Rev. de Physique, Bucharest/), that the electric field within a hollow cathode is very weak. Measurements of the electron energy distribution within the hollow cathode were extended beyond the previous upper limit of 40 eV to some hundreds of eV with the aid of a two-grid electrostatic analyzer.

UDC: 537.525

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6

SOV/124-58-3-2640

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 3, p 14 (USSR)

AUTHOR: Borodkin, V. V.

TITLE: A Method of Experimental Determination of the Resistance of Free Wheels to Rolling (Metod eksperimental'nogo opredeleniya soprotivleniya svobodnykh koles perekatyvaniyu)

PERIODICAL: V kn.: Sb. trudov po zemledel'cheskoy mekhanike. Moscow, Sel'khozgiz, 1954, Vol 2, pp 61-72

ABSTRACT: Making use of the works of V. A. Zheligovskiy, the author derives a theoretical formula for the traction required for a free wheel with a smooth rim. The formula takes into account only the energy expended for rolling and not that for slippage. For the purpose of verifying the formula, experimental determinations are presented of the traction required by a two-wheel cart in the condition of an earth canal. The results of the above experiment are presented in tabular form as are the numerical values obtained in accordance with the formula given and with those of Grandvoin and Letoshnev.

Card 1/1

N. P. Rayevskiy

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6

BCRODKIN, V.V., kand.tekhn.nauk; SHAROV, N.M., inzh.

Results of testing caprone bushings on plows. Trakt. i sel'khozmash. 32 no.10:24 0 '62. (MIRA 15:9)

1. TSentral'naya mashinoispytatel'naya stantsiya.
(Plows)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6"

BORODKIN, Vasiliy Vladimirovich, kant. tekhn. nauk; ANIKEYEV, Ye. red.

[Reclaiming brushlands by plowing the brush under] Osvoenie zakustarennykh zemel' metodom zapashki kustarnika. Smolensk, Smolenskoe knizhnoe izd-vo, 1963. 49 p. (MIRA 17:7)

BORODKIN,Ye., inzhener

Dolly for removing and replacing gear boxes and the reducing gears of the rear axle on freight trucks. Avt.transp.33 no.7:36 Jl'55.
(Motor trucks--Repairing) (MIRA 8:12)

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6

L 02307-67 EWT(1)

ACC NR: AR6016563 SOURCE CODE: UR/0196/65/000/012/B003/B003

AUTHOR: Borodkin, Ye. A.

35
B

TITLE: Experimental investigation of incremental hysteresis cycles by the ballistic method

SOURCE: Ref. zh. Elektrotekhnika i energetika, Abs. 12B16

REF SOURCE: Tr. Mosk. energ. in-ta, vyp. 60, ch. 2, 1965, 77-85

TOPIC TAGS: magnetic hysteresis, hysteresis loop, ferrite core, alternating magnetic field

ABSTRACT: The ballistic method was used for studying the processes by which incremental hysteresis cycles are established for ferrite cores 21 made of 0-1000, K-65 and VT-2 materials as well as for OL-28/40-6.5 ribbon cores made of cold-rolled grain-oriented steel. The specimens were demagnetized by heating above the Curie point or by using a damped alternating field. A steady-state (symmetric) hysteresis loop is produced in specimens demagnetized by heating after the magnetizing field is switched 10-20 times. A symmetric cycle is produced immediately in specimens demagnetized by an alternating field. The incremental cycles are established in an identical manner for all materials. When ribbon cores are demagnetized by a damped alternating field and then remagnetized, the total change in flux density is

Card 1/2 UDC: 621.318.13

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L 02307-67

ACC NR: AR6016563

20-30% greater than when heating is used for demagnetization. The method of demagnetization has a weak effect on the total conversion of flux density in ferrite cores. [Moscow Power Engineering Institute]. V. Glotov. [Translation of abstract]

SUB CODE: 09

BORODKIN, Yu.S.; ZAYNASHEVA, N.V.; TOMILINA, I.V.

Comparative features of action of tetraethylammonium iodide and its monochlor derivative on the N-cholinoreactive systems. Trudy LSGMI 37:163-170 '58. (MIRA 12:8)

1. Kafedra farmakologii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav.kafedroy - deystvitel'nyy chlen AMN SSSR prof. S.V.Anichkov).

(TETRAETHYLAMMONIUM, eff.,
tetraethylammonium iodide & its monochlor deriv. on N-cholinoreactive system in skeletal musc. in cats (Rus))
(MUSCLES, eff. of drugs on
same)

BORODKIN, Yu. S. Cand Med Sci -- (diss) "Effect of derivatives of imidazoledicarboxylic acid upon the central nervous system." Len, 1959. 14 pp (Inst of Experimental Med of the Acad Med Sci USSR. Department of Pharmacology), 200 copies (KL, 44-59, 129)

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6

ANICHKOV, S.V.; BORODKIN, Yu.S.

Effect on the central nervous system of new competing antagonists of purine series alkaloids. Vest. AMN SSSR 14 no.1:14-19 '59. (MIRA 12:2)

1. Iz otdela farmakologii Instituta eksperimental'noy meditsiny AMN SSSR (zav. otdelom-deystvitel'nyy chlen AMN SSSR prof. S.V. Anichkov).

(PURINES, antagonists,
N-methyl deriv. of 4,5-imidazoledicarboxamide, eff. onCNS (Rus))
(IMIDAZOLES, effects,
same)
(CENTRAL NERVOUS SYSTEM, eff. of drugs on,
N-methyl deriv. of 4,5-imidazoledicarboxamide (Rus))

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206510001-6"

BORODKIN, Yu.S.

Central effect of imidazoledicarboxylic acid derivatives [with summary in English]. Farm. i toks. 22 no.1:11-15 Ja-F '59.

(MIRA 12:4)

1. Otdel farmakologii (zav. - deystvitel'nyy chlen AMN SSSR prof. S.V. Anichkov) Instituta eksperimental'noy meditsiny AMN SSSR.

(IMIDAZOLES, effects,
N,N,1-trimethyl-4,5-imidazoledicarboxamide & N,N,-dimethyl-4,5-imidazoledicarboxamide, on CNS (Rus))
(CENTRAL NERVOUS SYSTEM, effect of drugs on,
N,N,1-trimethyl-4,5-imidazoledicarboxamide &
N,N-dimethyl-4,5-imidazoledicarboxamide (Rus))