

205

Begin

REEL
532

SMIRNOV, P.M.

SMIRNOV, P.M., inzh.

Using the method of two points in determining heat-insulation
properties of textile fabrics. Izv.vys.ucheb.zav.; tekhn.prom.
no.6:52-62 '58. (MIRA 12:4)

1. Leningradskiy institut tochnoy mekhaniki i optiki.
(Textile fabrics—Testing)

SMIRNOV, P.M., inzh.

Thermoregulator of dryers for lacquer coverings. Energetik 8
no.5:26-27 My '60. (MIRA 13:8)

(Drying apparatus)

Chemical Abstracts
Vol. 48 No. 5
Mar. 10, 1954
Soils and Fertilizers

The decomposition of crop residues from perennial grasses and the influence of nitrogen fertilizers on the yield of spring wheat in relation to the time of plowing under the soil. I. V. Gulyaiko, P. M. Smirnov, K. M. Khallov, V. I. Kurelenok, and A. F. Kurochkina. *Izvest. Timiryazev. S'khol'sk. Inst.* No. 2(3), 41-53(1953). — It is shown that plowing under a soil crop in the early fall supplies more available N than plowing it under in late fall. In the latter case the N becomes associated with complex unhydrolyzable forms. Data are presented showing the increase in yield of spring wheat.
I. S. Ioffe

SMIRNOV, P. M.

Chem / Ninety years of agrochemistry at the Timiryazev Academy. - 2
A. G. Shestakov and P. M. Smirnov. *Izvest. Timiryazev.*
Sel'skokhoz. Akad. 1953, No. 6, 51-58. J. S. Ioffe

Smirnov, P.M.

AG The influence of methods of applying superphosphate and supplementary fertilizer ingredients on the utilization of phosphorus by plants. I. V. Gulyakin, P. M. Smirnov, B. P. Pleshkov, and T. V. Shimyreva (K. A. Timiryazev Agr. Acad., Moscow). *Pochvovedenie* 1955, No. 7, 23-36.—Plot expts. were conducted with oats and potatoes to study the influence of superphosphate, contg. tagged P mixed with manure and limestone, on the intake of P by plants. Deep incorporation of the phosphates is utilized more efficiently than shallow incorporation. The latter method gives better utilization of P in the early stages of growth, whereas the former method gives better utilization in the later stages of growth. The best method of supplying P is some row application and deep incorporation of phosphates. Mixed with manures, the P application gives better results in the later stages of growth than without manure. Limestone reduces the intake of P. Addns. of NH_4NO_3 when placed in the row decreases the intake of P in the early stages of growth and increases it in the later stages. 32 references.
J. S. Joffe

③

SMIRNOV, P.M., kandidat sel'skokhozyaystvennykh nauk.

Using fertilizers on soddy and podzol soils (based on experience in Kaliningrad Province). V.V.Tserling, I.G.Vazhenin. Reviewed by P.M.Smirnov. Vest. AN SSSR 25 no.1:133-134 Ja '55. (MLRA 8:3)
(Fertilizers and manures)(Tserling, V.V.)(Vazhenin, I.G.)

SMIRNOV, P.M.

62 ⁴ Effect of nitrogen, potassium, and organic matter on utilization of phosphorus from superphosphate by potatoes. P. M. Smirnov and B. P. Pleshkov (K. A. Timiryazev Agr. Acad., Moscow). *Doklady Akad. Nauk S.S.S.R.* 103, 673-5 (1955).—P in the form of P^{32} -labeled superphosphate, N as NH_4NO_3 , and K as KCl were used as the added fertilizer materials in tests with potato plants. Superphosphate alone or with added N, K or org. matter, gave a pos. effect on supply of the plants with P, although the 3 addends were of considerable benefit. Plants grown with these addends absorb more P from the soil than do controls without added superphosphate.
G. M. Kosolapoff

(1)

USSR/Soil Cultivation. Mineral Fertilizers.

J-3

Abs Jour: Ref Zhur-Biologiya, No 1, 1958, 1255.

and nitrogen on chestnut soils, but potassium is not effective at all. Full mineral fertilization with 45 kg./hectare of N, P, and K is equal to the average strength of manure. The greatest effect is obtained when fertilizer is spread two-thirds in the autumn at ploughing and 1/3 before sowing.

Card : 2/2

-25-

USSR / Soil Science. Mineral Fertilizers.

J

Abs Jour: Ref Zhur-Biol., No 7, 1958, 29494.

Author : Gulyakin, I.V., Smirnov, P.M. Pleshkov, B.P.,
Shmyreva, T.V.

Inst : Not given.

Title : Plant Phosphorous Uptake in Relation to the Meth-
ods of Application of Superphosphate and Accom-
panying Fertilizers. (Postupleniye fosfora v
rasteniya v zavisimosti ot sposobov vneseniya
superfosfata i sputstvuyushchikh udobreniy).

Orig Pub: Dokl. Mosk. s.-kh, akad. im K. A. Timiryazeva,
1956, vyp. 22, 304-314.

Abstract: The effect of the methods and depth of applica-
tion on plant P absorption and the role of or-
ganic substances, lime and other fertilizers
when applied together with P_0 were studied in

Card 1/3

23

USSR/Soil Science. Mineral Fertilizers.

J-3

Abs Jour: Ref Zhur-Biol., No 6, 1958, 24731.

Author : Peterburgskiy, A.V.; Isarov, Kh. K.; Smirnov,
P.M.; Yudin, F. A.

Inst :

Title : Effectiveness of Fertilization in the Unirrigated
Agriculture of the South-East.

Orig Pub: Dokl. Mosk. s.-kh. akad. im. K.A. Timiryazeva, 1956,
vyp. 23, 65-73.

Abstract: Data of experimental stations and kolkhozes in
the south-eastern regions of the USSR on the
effectiveness of manure and mineral fertilizers
in unirrigated agriculture is given. Manure ap-
plied in bare fallow under winter crops in doses
of 20-40 t./ha. increases the harvest of the grain

Card : 1/2

SMIRNOV, P.M., kand.sel'skokhozyaystvennykh nauk

Effect of soil moisture on the assimilation of phosphorus by
plants. Izv. TSKhA no.4:99-114 '58. (MIRA 11:10)
(Soil moisture) (Plants--Assimilation) (Phosphorus)

SMIRNOV, P.M., kand.sel'skokhozyaystvennykh nauk, dotsent; MARKAGRAF, G.,
student

Effect of nutrition on the development of oat radicles and the
intensiveness of their phosphorus absorption [with summary in
English]. Izv. TSKhA no.5:45-55 '60. (MIRA 13:11)
(Plants--Nutrition) (Cats)

SMIRNOV, I.M., kand. sel'skokhoz. nauk, dotsent

Effect of a methodical use of fertilizers in crop rotations
on the nitrogen content of soils. Izv. TSKHA no.6:93-103 '63.
(MIRA 17:8)

SMIRNOV, P.M., dotsent, kand. sel'skokhoz. nauk; YUDIN, A.A., dotsent,
kand. sel'skokhoz. nauk

Effectiveness of mineral fertilizers in spot placement. Izv.
TSKHA no.1:34-47 '64. (MIRA 17:4)

1. Kafedra agrokhimii i biokhimii Moskovskoy ordena Lenina
sel'skokhozyaystvennoy akademii imeni Timiryazeva.

... ..
... ..
... ..

... ..
... ..

... ..
... ..

Сельскохозяйственный институт земледелия и животноводства. Минск

Transformation of nitrogen compounds in plant-organisms and
plant-mineral-organism fertilizers and their effectiveness.
Tr. TSKHA no.6:72-85 '64 (MIRA 13:1)

1. Кафедра агрохимии Московского ордена Ленина сельскохозяйственного института имени К.А. Тимирязева.

MANEVICH, A.Z.; ZHOROV, V.I.; SMIRNOV, P.N.

Experimental and clinical basis for the rational use of anesthesia equipment in fluothane anesthesia and anesthesia with an azeotropic mixture. Eksper. khir. i ~~anest.~~ no.1: 74-78'63. (MIRA 16:10)

1. Iz kafedry fakul'tetskoy khirurgii (zav. - prof. I.S. Zhorov) sanitarno-gigiyenicheskogo fakul'teta I Moskovskogo ordena Lenian meditsinskogo instituta imeni I.M.Sechenova i Onkologicheskogo instituta imeni P.A.Gertsena (dir.-prof. A.N.Novikov).

(ANESTHESIA) (HALOTHANE)
(AZEOTROPES)

L 14461-66 EWT(m)/EWP(j) RM

ACC NR: AP6002969

(A)

SOURCE CODE: UR/0286/65/000/024/0140/0140

24
B

INVENTOR: Volkov, Yu. N.; Smirnov, P. N.; Plotnikova, G. P.

ORG: none

TITLE: A device for applying finishing compounds to paper. Class 55, No. 177273
[announced by the Central Scientific Research Institute of Furniture and Plywood
(Tsentral'nyy nauchno-issledovatel'skiy institut fanery i mebeli)]

15, 44

15

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965, 140

TOPIC TAGS: paper industry machinery, finishing machine, paper

ABSTRACT: This Author's Certificate introduces a device for applying finishing compounds based on water dispersion polymers to paper. The device contains a bobbin for unwinding the roll of paper, a tension roller, a takeup roller for the paper web and a wiper blade. The thickness of the coating is controlled by mounting a feeder table in front of the wiper blade and using a flexible plate with one end connected to the feeder table and the other end riding on the paper web.

Card 1/2

UDC: 676.51.051

e

SMIRNOV, P.P.

Dynamics of the physical development of women students of the first years at the Kalinin Medical Institute. Trudy KGMi no.10: 76-78 '63. (MIRA 18:1)

1. Iz kafedry fizicheskogo vospitaniya (zav. kafedroy P.P. Smirnov), Kalininskogo gosudarstvennogo meditsinskogo instituta.

21/49T53

USSR/Medicine - Adonis, Preparation
Medicine - Pharmacopoeia

Jul 48 |

"Adonis Herb (Adonis Vernalis)," Prof P. S. Smirnov,
3 pp

"Fel'dsher i Akusherka" No 7

General discussion on subject plant with special
reference to its medicinal properties.

21/49T53

SMIRNOV, P.S.

Effect of sowing immature seed on the variability in sugar beet plants.
Agrobiologia 5:788-789 S-0 '64. (MIRA 17:11)

1. Chuvashskiy gosudarstvennyy pedagogicheskiy institut, Cheboksary.

SMIRNOV, P.S.

Effect of an atomic explosion on the state of the atmosphere.
Izv.AN SSSR Ser.geofiz. no.10:1227-1231 0 1966. (MIRA 10:1)
(Atomic bomb) (Atmosphere)

CHIRIKOV, V. I.

Significance of the interaction of various organs in the flowering of plants. Fiziol.rast. 12 no.1:120-125 Ja-F '65.

(MIRA 18:3)

1. Kafedra osnov sel'skokhozyaystvennogo proizvodstva Chuvashskogo pedagogicheskogo instituta imeni Yakovleva, Cheboksary.

SMIRNOV, P.T.

Using oscillograph-sweep oscillators in scaling down frequencies.
Izm.tekh. no.2:89 Mr-Ap '58. (MIRA 11:3)
(Oscillators, Electron-tube)

LIBEROV, Boris Isaakovich, kand.tekhn.nauk; VASIL'CHENKO, Z.N., inzh.,
vedushchiy red.; SMIRNOV, P.V., inzh., red.; PONAMAREV, V.A.,
tekhn.red.

[Using high-viscosity cracking residue and cracking gas in
furnaces of cracking installations] Ispol'zovaniya vysokoviazkikh
kreking-ostatkov i kreking-gaza v pechakh krekin-ustanovok.
Moskva, Filial Vses. in-ta nauchnoi i tekhn.inform., 1956. 23 p.
(Informatsiia o nauchno-issledovatel'skikh rabotakh. Tema 28,
no.I-56-198) (MIRA 10:12)

(Cracking process--Waste products)

ZERNYAKOV, Boris Stepanovich; TREBELEV, Aron Markovich; BURLAKOV, Vladimir Ievgen'yevich; POLIVANOV, Vasilii Fedorovich; MANZON, Eduard Abramovich; DUNAYEV, Yuriy Andreyevich; UDAL'TSOV, A.N., glavnyy red.; MALOV, A.N., kand.tekhn.nauk, red.; TUCHINSKIY, N.V., inzh., red.; ZASLAVSKIY, M.L., inzh., red.; SMIRNOV, P.V., inzh., red.; NEUSYPIN, A.M., inzh., red.

[New method of preparing aluminum alloys in electric furnaces; Efforts to avoid losses in brass smelting; Use of rolled metal with variable cross section for the manufacture of truck trailer axles; New design of rotor blades for low capacity hydraulic turbines; Lubricant collection in settling basins] Novyi sposob prigotovleniia aliuminievykh splavov v elektricheskikh pechakh; Bor'ba s poteriami pri plavke latuni; Primenenie prokata peremennogo secheniia dlia izgotovleniia osei avtopritsepa; Novaia konstruktsiia lopastei rabochikh kolez gidroturbin maloi moshchnosti; Sbor masla v otstoinikakh. Moskva, 1956. 12 p. (Peredovoi proizvodstvenno-tekhnicheskii opyt. Ser.19. Ekonomiia materialov i novye materialy, primeniyaemye v mashinostroenii. No.T-56-363/6). (MIRA 13:3)

1. Akademiya nauk SSSR. Institut nauchnoy i tekhnicheskoy informatsii.

(Technological innovations)

KRINETSKIY, Ivan Ivanovich, kand. tekhn. nauk; MORDVINOVA, N.P., inzh.,
ved. red.; SMIRNOV, P.V., inzh., red.; SOROKINA, T.M., tekhn.
red.

[Stand for testing electrical automatic angular velocity control-
lers] Stend dlia ispytaniia avtomaticheskikh regulatorov skorosti
vrashcheniia elektricheskogo tipa. Moskva, Filial Vses.in-ta
nauchn. i tekhn. informatsii, 1958. 10 p. (Peredovoi nauchno-
tekhnicheskii i proizvodstvennyi opyt. Tema 42. No.P-58-71/8)
(MIRA 16:2)

(Automatic control)
(Electric controllers--Testing)

SMIRNOV, P. V.

Economical innovation with a great potential. Izobr. i rats. no. 2:11
F '61. (MIRA 14:2)

1. Nachal'nik tekhnicheskogo otdela Bryanskogo sovnarkhoza.
(Bryansk Province—Textile machinery—Technological innovations)

11318

S/057/62/032/009/001/014
B125/B186

AUTHORS: Popov, A. V., Smirnov, P. V., and Shukeylo, I. A.

TITLE: Magnetic deflector

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 9, 1962, 1037 - 1039

TEXT: The authors constructed and tested a magnetic deflector which can be used in the injection systems of cyclic accelerators or in strong-focusing cyclotrons for inflecting the beam into the toroidal chamber. This magnetic deflector (Fig. 1) is 30 cm long and consists of an iron core and of two plane parallel rails. These are flown through by currents of equal strength but opposite direction and constitute a winding connected to the power source. The beam is deflected through a given angle within the space enclosed by the horizontal rails and the vertical plane surfaces of the core. The iron core renders the field within the deflector homogeneous if $b/d \ll 1$. b is the height of the central current-carrying part of the rail. The outer rail has the same effect even if this condition is not fulfilled. The scattered field of the inner current is compensated by the field of the current in the outer rail. The deflector is cooled by water flowing through pipes. An 800-a current in the rails induces a magnetic
Card 1/3

SMIRNOV, P.V.

Some data on the distribution of fascioliasis of swine and 'ts
therapy in the northern districts of Sverdlovsk Province. Trudy
Gel'm. lab. 9:294-295 '59. (MIRA 13:3)
(SVERDLOVSK PROVINCE--LIVER FLUKE) (PARASITES--SWINE)
(ANTHELMINTICS)

SMIRNOV, P.V.; BELETSKAYA, L.V.; BORODIYUK, N.A. (Moskva)

Morphological changes in experimental polyarthrits induced in white rats by β -hemolytic Streptococcus A. Arkh. pat. 21 no.9: 16-21 '59. (MIRA 14:8)

1. Iz laboratorii kokkovykh infektsiy Otdela ranevykh infektsiy (zav. - deystvitel'nyy chlen AMN SSSR prof. G.V.Vygodchikov) Instituta epidemiologii i mikrobiologii imeni N.F.Gamalei AMN SSSR (dir. - prof. S.N.Murontsev). (STREPTOCOCCAL INFECTIONS) (ARTHRITIS)

SMIRNOV, Petr Vasil'yevich; ZHITOMIRSKIY, Emmanuil Grigor'yevich;
KORSENEV, A., otv.red.; POGODIN, Yu., red.izd-va; TELEGINA, T.,
tekhn.red.

[Finances of supply and sale organizations] Finansy snabzhen-
chesko-sbytovykh organizatsii. Moskva, Gosfinizdat, 1959.
130 p. (MIRA 13:3)

(Finance)

SMIRNOV, Petr Vasil'yevich; TARAS'YANTS, Ruben Bogdanovich; FURDUYEV,
P.V., red.; VORONOV, V.V., red.; PONOMAREVA, A.A., tekhn.red.

[Organization and planning of the marketing of industrial
products in the U.S.S.R.] Organizatsiia i planirovanie sbyta
promyshlennoi produktsii v SSSR. Pod obshchei red. P.V.Furdueva.
Moskva, Gosplanizdat, 1960. 391 p. (MIRA 13:8)
(Marketing)

LOKSHIN, E.Yu., doktor ekon. nauk; ANDREYEVA, O.I., kand. ekon. nauk, dots.; VOROSHILOVA, T.S., kand. ekon. nauk, dots.; SALOMTSEV, V.K., kand. ekon. nauk, dots.; SMIRNOV, P.V., kand. ekon. nauk, dots.; TARAS'YANTS, R.B., kand. ekon. nauk, dots.; FASOLYAK, N.D., kand. ekon. nauk, dots.; LOZOV, Ya.D., st. prepod.; SHMELEVA, Z.S., st. prepod.; NOVIKOV, D.T., aspirant; PORA-LEONOVICH, B.N.; ALEKSANDROVSKIY, V.V.; BURSHTEYN, I.I.; EYDEL'MAN, B.I., red.; MOZGALEVSKAYA, S.A., mlad. red.; GERASIMOVA, Ye.S., tekhn. red.

[Manual for the supplying and selling of materials and equipment] Spravochnik po material'no-tekhnicheskomu snabzheniiu i sbytu. Moskva, Ekonomizdat, 1963. 344 p.
(MIRA 17:1)

1. Nachal'nik ekonomicheskogo otdela Upravleniya material'no-tekhnicheskogo snabzheniya Soveta narodnogo khozyaystva Moskovskogo gorodskogo ekonomicheskogo rayona (for Pora-Leonovich).
2. Nachal'nik otdela snabzheniya 1-go Gosudarstvennogo podshipnikovogo zavoda (for Aleksandrovskiy).

CHELNOKOV, G. tr Aleksandrovich; MORDVINOVA, N.P., inzh., ved. red.;
SMIRNOV, P.V., inzh., red.; SOROKINA, T.M., tekhn. red.

[Pulse programming device for the automatic control of
foundry processes] Impul'snyi komandoapparat dlia avtomatiza-
tsii tekhnologicheskikh protsessov liteinogo proizvodstva.
Moskva, Filial Vses. in-ta nauchn. i tekhn. informatsii, 1958.
10 p. (Peredovoi nauchno-tekhnicheskii i proizvodstvennyi
opyt. Tema 42. No.P-58-85/10) (MIRA 16:3)
(Founding) (Programming (Electronic computers))

SMIRNOV, P.V.

Capron insulation for tools. Mashinostroitel' no.10:17 0 '63.
(MIRA 16:12)

SMIRNOV, P.V.

Council of innovators at the Leningrad Carburetor Plant.
Mashinostroitel' no.9:11-12 S '64. (MJRA 17:10)

ACCESSION NR: AP4034912

S/0181/64/006/005/1343/1355

AUTHORS: Fridrikhov, S. A.; Smirnov, P. V.; Serebrov, L. A.

TITLE: Some peculiarities of electron excited conductivity in dielectrics

SOURCE: Fizika tverdogo tela, v. 6, no. 5, 1964, 1343-1355

TOPIC TAGS: electron excited conductivity, dielectric, electron contact method, electric contact method

ABSTRACT: The specific features involved in two principal methods of experimental investigation of electron-excited conductivity in dielectrics were examined. It is shown that these features substantially affect the recorded values of excited currents. The electron-contact method does not permit direct observations, and the coefficient of excited conductivity must be determined indirectly, such as by recording the change in surface charge of the target. But measurements are dependent on secondary factors, such as field strength in the sample and the dark current (which cannot be measured independently of the excited current). The electrical-contact method is free from the inadequacies of the electron-contact method, but by this method the original current of electrons acting on the sample is unknown, and errors may result from this. In using the latter method, it is

Card

1/2

SMIRNOV, P.V.

Devices for repairing electric equipment. Mashinostroitel'
no.2:10-11 F '65. (MIRA 18:3)

VYAL'TSEV, A.N.; KEDROV, B.M.; KONDRAT'YEVA, N.A., aspirant;
RODNYI, N.I.; SMIRNOV, P.V., aspirant; CHERNAVSKIY,
S.Ya., aspirant; TENIKOV, A.G., red.

[Contradictions in the development of natural science]
Protivorechiia v razvitii estestvoznaniia. Moskva, Nauka,
1965. 351 p. (MIRA 18:9)

1. Akademiya nauk SSSR. Institut istorii yestestvoznaniya
i tekhniki. 2. Chlen-korrespondent AN SSSR (for Kedrov).

SMIRNOV, P.Ya., inzh.; VINARSKIY, A.P., inzh.

Modernization of the URKnS-4 flux feeder and simplification of the diagram for the oxy-flux cutting equipment. Svar. proizv. no.7:32 J1 '64. (MIRA 18:1)

1. Svarochnaya laboratoriya tresta "Zaporozhmetallurgomontazh".

YASTREBOV, F.V., inzh.; SMIRNOV, P.Va.

Welding brass with the LKBO 62-02-004-05 self-fluxing wire. Svar.proizv.
no.10:35-36 0 '64. (MIRA 18:1)

1. Trest "Zaporozhmetallurgmontazh".

Смирнов, П. Я.

MEKLER, A.G., kandidat tekhnicheskikh nauk; GOVORKOV, N.A., inzhener, retsenzent; YEBREMENKO, N.T., inzhener, retsenzent; SMIRNOV, P.Ye., inzhener, redaktor; MODEL', B.O., tekhnicheskly redaktor

[Electric equipment for hoisting and transporting machinery] Elektro-
oborudovanie pod"emno-transportnykh mashin. Moskva, Gos. nauchno-
tekh. izd-vo mashinostroitel'noi lit-ry, 1954. 372 p. (MLRA 8:4)
(Electric machinery) (Hoisting machinery)

SMIRNOV, P. T.

Agriculture & Plant & Animal Industry.

Forage plant cultivation on the collective farms. Saratovskie obl. gos. ind-vo, 1950.

9. Monthly List of Russian Accessions, Library of Congress, April 1952 ~~1953~~, Uncl.

SMIRNOV, P.Z.

[Green fodder plan] Zelenyi konveier. [Saratov] Saratovskoe kn-vo,
1954. 41 p. (MIRA 9:11)
(Pastures and meadows) (Forage plants)

TOPOLOV, E.; ASADULLIN, Sh.; BIRINTAYEV, M.; KUTEROV, A.; SMIRNOV, B.;
TOPOLOV, E.; VALIYKHANOV, F.

Exclusion of a circulation-loss zone using a packer. Burenia
no.3:29-33 '65. (MIRA 18:5)

1. Trest "Bashzapadneft'erazvedka".

SMIRNOV, R.A., Inzh., BAYER, H.A., Inzh.

A method of compiling short-term forecasts of a rise in the
ground water level. Gidr stroi. 32 no.7:37-39 JJ '62.

(MIRA 15:7)

(Water, Underground)

SMIRNOV, P.A.

Balance investigations in the Kamenskiy sole irrigation massif.
Trudy VSEGEEO no.10:127-135 '64. (MIRA 17:10)

1. Gidrogeologicheskaya stantsiya Gosudarstvennogo komiteta
Soveta Ministrov po vodonu khozyaystvu UkrSSR.

1. Introduction

2. Description of the project and its objectives. The project is aimed at the construction of an artificial reservoir and irrigation system. The project is located in the area of the village of [redacted], [redacted] district, [redacted] region. The project is planned to be completed by the end of 1979.

(11. 7:9)

INTRODUCTION

1. The present report is a preliminary synthesis of the results of the work carried out in the Institute of Physics of the Academy of Sciences of the USSR.

(MIRA 1810)

2. The present report is a preliminary synthesis of the results of the work carried out in the Institute of Physics of the Academy of Sciences of the USSR.

ABUSHIK, A.F.; NETSKAYA, A.I.; POZNER, V.M.; SHNEYDER, G.F.; TIL'KINA, K.F.;
SA'YOYLOVA, R.B.; SMIRNOV, R.F.; POLENOVA, Ye.N.; MANDEL'SHTAM, M.I.;
LYUBIMOVA, P.S.

New genera and species of Ostracoda. Trudy VNIGRI no.115:232-299
'58. (MIRA 11:10)

(Ostracoda, Fossil)

KAZARINOV, Yu.M.; KOLOMENSKIY, Yu.A., assistant; SMIRNOV, R.I., nauchnyy
sotrudnik

Effect of fluctuation noises on the precision of auto-tracking
systems having astaticism of first order and a pass band controlled
by input signals. Izv. vys. ucheb.zav.; prib. no.2:3-12 '58.
(MIRA 11:7)

Leningradskiy elektrotekhnicheskiy institut im. V.I. Ul'yanova
(Lenina).

(Remote control--Noise)

SMIRNOV, R.N.

Use of aerial photographic materials in investigating the trans-
Volga region for land improvement purposes. Pochvovedenie no.4:
78-80 Ap '62. (MIRA 15:4)

1. Yuzhnyy gosudarstvennyy institut po proyektirovaniyu vodnogo
khozyaystva.
(Volga Valley Reclamation of land) (Aerial photogrammetry)

SMIRNOV, R. N.

SMIRNOV, R. N. -- "Chemical Structure of Moscow Lignite According to Data Obtained by Oxidation and Nitration with Nitric Acid." Sub 30 Dec 52, Inst of Mineral Fuels, Acad Sci USSR. (Dissertation for the Degree of Candidate in Chemical Sciences).

SO: Vechernaya Moskva January-December 1952

Smirnov, R. N.

✓ Some properties of aromatic polycondensed (polynuclear) hydrocarbons. R. N. Smirnov. *Trudy Inst. Goryuch. Iskopaemnykh, Akad. Nauk S.S.S.R., Otdel. Tekh. Nauk* 5, 61-71 (1954).—A review of the structure and properties of 30 polynuclear hydrocarbons isolated from coal. 29 references. W. M. Sternberg

Chem

AM

LFH

2000

SMIRNOV, R.N.

3
1-4E3d

1495. OXIDATION OF VASELINE OIL AND KEROSENE WITH ATMOSPHERIC AIR AND
PERIC ACID. Losev, I.P. and Smirnov, R.N. (Moscow Acad. Sci. U.S.S.R.,
1954, "Problems of Oxidation of Hydrocarbons (Problemy Okisleniya
Uglevodorodov)", 152-166; abstr. in Ref. Zh. Khim. (Ref. J. Chem., Moscow),
1956, (24), 79058). A vaseline distillate oil and kerosene were oxidized in

the presence of catalysts (manganese naphthenate and a 8:1.5 mixture of
potassium permanganate and sodium carbonate). Oxidation with air passing at
10 l./min. at 115°C, with 1% manganese naphthenate produced, as a percentage
of the vaseline oil, 51-38% mixed acids, 35-50% of which were carboxylic and
65-50% hydroxy acids. From the kerosene it produced 15-21% mixed acids,
6-30% of which were carboxylic and 85-70% hydroxy acids. From the mixture of
"volatile" acids, the following were separated by fractionation: 37.3%
formic acid, 24.8% acetic, 4.6% propionic, 3.2% butyric and 6% valeric acid.
Further oxidation of oxidized vaseline oil with peric acid (specific gravity
1.35 to 1.39) at 70-80°C gives a product containing multibasic acids and acids
having simultaneously carboxyl, carbonyl and hydroxyl groups. The oxidation
products of petroleum fractions may be important in the manufacture of drying
oils, varnishes, plasticizers, additives in the vulcanization of rubber,
production of tars, etc.

fra 00/0

SMIRNOV, R. V.

160. SOME PROPERTIES OF AROMATIC POLYCONDENSED HYDROCARBONS. SMIRNOV, R. V. (Trud. Inst. gor. iskop. (Trud. Inst. chem. i fiz. Akad. Nauk S.S.S.R.), 1955, vol. 5, 61-72). A number of these compounds are discussed with a view to throwing light on the molecular structure of coal. (L)

EM LFH

0000

SMIRNOV, R.N.

USSR/ Mining - Chemical technology

Card 1/2 Pub. 22 - 35/51

Authors : Titov, N. G.; Khrisanfova, A. I.; Kanavets, P. I.; and Smirnov, R. N.

Title : Certain properties of coal, dangerous on account of sudden discharges

Periodical : Dok. AN SSSR 101/2, 327-329, Mar 11, 1955

Abstract : Certain chemical characteristics of coal considered dangerous on account of sudden discharges of coal and gas are analyzed. Chemical and thermographic investigations showed that not all coal layers have a high peroxide number and exothermal effects characteristic for the decomposition of peroxides. Considered dangerous are such coal layers as contain large amounts of peroxides.

Institution :

Presented by: Academician A. A. Skochinskiy, December 3, 1954

Periodical : Dok. AN SSSR 101/2, 327-329, Mar 11, 1955

Card 2/2 Pub. 22 - 35/51

Abstract : The heat liberated during decomposition of labile peroxides as well as CO₂, CO and H₂O cause intensive desorption of gases absorbed by the coal, thus initiating a gas discharge. A method of neutralizing dangerous coal layers underground is recommended. Eight references: 5 USSR and 3 English (1897-1953). Table graphs.

USSR/Chemical Technology - Chemical Products and Their Application. Treatment of
Solid Mineral Fuels, I-12

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62509

Author: Titov, N. G., Khrisanfova, A. I., Kanavets, P. I., Smirnov, R. N.

Institution: None

Title: Characteristics of Coal Involving Potential Hazards of Sudden
Flareback

Original
Periodical: Khimiya i tekhnologiya topliva, 1956, No 1, 43-49

Abstract: Investigation of coal samples from 16 seams of the Donets fields was
conducted by thermographic analysis, determination of microhardness
and heat of damping and also of peroxide number. It is shown that
coal from different blocks of the same seam differs in physical
chemical and physicochemical properties as well as in composition
and content of peroxides (P). On heating of P containing coal there
is observed occurrence of exothermic effects at relatively low
temperatures (even at 36°C), which is due to decomposition of P,

Card 1/2

Card 2/2

SMIRNOV, R. N.

3

Vinylation of coal. M. F. Shostakovskii, N. G. Titov and R. N. Smirnov (*Zh. prikl. Khim.*, 1956, 29, 463-468).—A sample of coal containing 20–30% oxygen was taken; its chemical and petrographic analyses are given. Hydroxyl groups were determined by the Schotten-Baumann method, showing that saponified coal products are of lower mol. structure than untreated coal. 3.13% CO groups present had to be reduced to OH-groups before vinylation. Vinylation took place at 170–175°; the detailed method is given. 10.8% vinyl groups were found in the coal and 6% volatile low-mol. ethers. Up to 40% of the organic mass dissolves in alcohols, ethers, benzene, toluene, acetone and light petroleum. R. LORD.

SMIRNOV, R. N.

Vinylation of coal of the Moscow Basin. M. F. Shostakovskii, N. G. Timov, and R. N. Smirnov. *J. Appl. Chem. U.S.S.R.* 29, 503-7(1956)(Engl. translation).—Sec. C.A. 50, 14205c. B. M. R.

37

AUTHOR: Smirnov, R. N., (Moscow) SOV/76-32-9-24/46

TITLE: Mercurization of Graphite (O merkurirovanii grafita)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol 32, Nr 9,
pp 2107 - 2111 (USSR)

ABSTRACT: Three sorts of graphite were examined; graphite, mercury acetate and radical vinegar . were brought to reaction in ampules at 152 ± 10 C. Samples were taken at regular intervals. The results of the chemical analysis are to be seen on the table and figure 1. H.A. Pustovalova co-operated in the carrying out of the analysis. The thermographic analysis was carried out in accordance with Kurnakov's method. X-ray analysis was carried out by V.S. Shortstkina, V.I. Kashteevkin and B.V. Lukin (5 debyeograms in figure 4). The result is that there are two types of \gg CH groups in graphite: aromatic and olefinic. Considerable discrepancy exists between the hydrogen content in the original graphite and the content of mercury in the mercury derivate. This points to the existence of a third sort of an inactive \gg CH group. The result of the whole paper is that the

Card 1/2

Mercurization of Graphite

SP7/76-32-9-24/36

graphite rings have a more complicated structure on their boundary than the classic structure model of Bernal (Ref 1) indicates. There are 4 figures, 1 table, and 20 references, 5 of which are Soviet.

ASSOCIATION: Akademiya nauk SSSR, Institut goryuchikh iskopayemykh
(Academy of Sciences, USSR, Institute for Burnable Minerals)

SUBMITTED: April 9, 1957

Card 2/2

SMIRNOV, R.N.

Mercurization of polystyrene. Dokl. AN SSSR 119 no.3:508-510
Mr '58. (MIRA 11:6)

1. Institut goryuchikh iskopayemykh AN SSSR. Predstavleno akademikom
A.V. Topchiyevym.
(Styrene) (Mercury organic compounds)

SMIRNOV, R.N.

Hydrolytic dissociation of mercury organic compounds of oxidized
coal. Trudy IGI 8:172-182 '59. (MIRA 13:1)
(Coal) (Mercury organic compounds)

SOV/74-28-7-2/5

5(3)

AUTHOR:

Smirnov, R. N.

TITLE:

Modern Concepts of Coal Structure (Sovremennyye predstavleniya o strukture uglia)

PERIODICAL:

Uspokhi khimii, 1959, Vol 28, Nr 7, pp 826 - 849 (USSR)

ABSTRACT:

Though the present paper is mainly devoted to the evaluation of modern theories and hypotheses on the structure and properties of organic coal, data from other sciences and disciplines had to be taken into account. Chemically speaking, coal is an extremely complex geological substance consisting of an organic and an inorganic part. Generally, concepts on coal structure consist of three main hypotheses: low-molecular, high-molecular, and colloidal hypotheses. The aromatic polycondensed hydrocarbons in the structure of coal are regarded as its main constituent in each of the three hypotheses. In the same way, the existence of hydrogen, oxygen, sulfur, and nitrogen atoms at the periphery of the molecule is generally recognized. The low-molecular hypothesis explains, in the main, the basic scientific concepts of coal. The hypothesis on the high-molecular structure of organic coal is based on the assumption that coal is in an

Card 1/3

Modern Concepts of Coal Structure

NOV/74-20-7-2/5

infusible and insoluble state, similar to many polycondensed resins at the end of the B- and during the C-phase. Though this hypothesis has to be taken seriously, it has not been fundamentally proved. The hypothesis on the colloidal structure of bituminous coal was for some time warmly advocated by quite a number of scientists who tried to explain the results of various tests - from X-ray analysis to coking - from the point of view of colloid chemistry. However, all these facts could also be explained by other hypotheses. Considering the present stage of coal-chemistry, none of these hypotheses can be recognized as a theory since they do not furnish any definite knowledge of the coal-structure, nor predict any new, unknown properties of coal. This, however, is the main characteristic of all scientific theories. (Ref 82). The development of coal-chemistry and thermochemistry on the one hand and that of industry on the other has also shown its effects of the development of chemical technology. This can be proved by a number of outstanding occurrences during the last few years (Refs 83-92). Knowledge of coal-structure is still incomplete at present and chemists are as yet unable to establish formulas for the structure of coal. Of primary importance would be the solution of the problem

Card 2/3

Modern Concepts of Coal Structure

SOV/74-28-7-2/5

concerning the structural principle of the carbon skeleton of different types of coal, i.e., a common characteristic of this type of organic compounds would have to be found. Only then the problems concerning differences and peculiarities of the structure of different types of coal could be solved. There are 4 figures, 8 tables, and 113 references, 53 of which are Soviet.

ASSOCIATION: In-t goryuchikh iskopayemykh AN SSSR (Moskva) (Institute of Mineral Fuels, AS USSR, Moscow)

Card 3/3

SMIRNOV, Roman Nikitich; KARAVAYEV, N.M., otv.red.; NEKRASOV, A.S.,
red.izd-va; GUSEVA, A.P., tekhn.red.

[Investigating the structure of coals by the oxidation and
nitration method] Issledovanie struktury uglei metodom okisle-
niia i nitrovaniia. Moskva, Izd-vo Akad.nauk SSSR, 1960. 88 p.
(MIRA 13:3)

1. Chlen-korrespondent AN SSSR (for Karavayev).
(Coal--Analysis)

84514

S/190/60/002/004/015/020
B004/B056

IS 9200 2109,2209,1436

11.2211

AUTHOR:

Smirnov, R. N.

TITLE:

Mercurized Rubbers. I. Mercurized Butadiene-rubbers

PERIODICAL:

Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 4,
pp. 558-562

TEXT: The author speaks about mercurizing rubber samples produced by N. A. Klauzen. There were 1) СКБМ (SKBM) butadiene-rubber with 65% polymerization of the butadiene molecules in 1.4-position and 32% in 1.2-position; 2) СКБ (SKB) butadiene-rubber with 58% in 1.2-position, 30% in 1.4-position of polymerized butadiene molecules; 3) natural isoprene rubber polymerization of the isoprene in 1.4-position, and 4) СКК-30А (SKS-30A) copolymer of butadiene with styrene (1 : 1) with 78-80% 1.4 bonds and 18-20% 1.2 bonds. Mercurizing was carried out by means of mercuryacetate in water acidified with acetic acid at 94 - 98°C. Two kinds of products were obtained: a pulverulent (A) one with 73 - 70% mercury, and pieces (B), which were mercurized only on the surface and

Card 1/3

Mercurized Rubbers. I. Mercurized
Butadiene-rubbers

84514

S/190/60/002/004/015/020
B004/B056

whose Hg content was between 2.9 and 29%. Mercurization was easier in methanol, ethanol of n-butanol and in glacial acetic acid. The addition of a mixture of H₂O₂ and 98% acetic acid catalyzes mercurization and shortens the duration of the reaction from 12 - 21 h to 2 - 5 h. Accumulation of Hg to the double bonds, but also substitution of hydrogen of the methyl groups by Hg occurs. The mercurized rubbers become highly electric by friction. In the case of longer friction, mercury is liberated. The samples exhibited good electric conductivity but low elasticity. Small quantities applied to aluminum cause considerable crystal formation and corrosion of the aluminum. Fig. 1 shows the thermograms recorded on mercurized natural rubber according to the method by N. S. Kurnakov (Ref. 9). Already at 35°C, decomposition set in. The X-ray pictures recorded by Kasatochkin and S. L. Davydova (Fig. 2) prove that by mercurization a transition from amorphous to the crystalline state took place as a result of weighting the chain with Hg. As a type of the bonds obtained, the formula is given (rubber): OR.Hg.OCOCH₃. The molecular weight in individual samples attained 2,000,000. A paper by L. G. Makarova and A. N. Nesmeyanov is mentioned.

Card 2/3

83816

S/190/60/002/005/006/015
B004/EJ67

15.9201 only 2209

11.2211

AUTHOR:

Smirnov, R. N.

TITLE:

Mercurized Rubbers. II. Reaction of Mercury Derivatives of
Butadiene Rubbers with p-Nitrobenzoyl Chloride

PERIODICAL:

Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 5,
pp. 679-684

TEXT: The author studied the reactivity of mercurized butadiene rubbers which he described in an earlier paper (Ref. 1). p-nitrobenzoyl chloride, introduced into the compound (OH)HgAc by the Schotten - Baumann reaction, served as reagent. The reactions with rubber of the types СКБМ (SKBM), СКБ (SKB), ККС-30А (SKS-30A) and natural rubber are described, and the results are discussed. Polymercury derivatives of polybutadienes were obtained. Mercury substituted hydrogen which was bound to the doubly bound carbon atom, as well as some hydrogen atoms of the >CH₂ groups

which were in a position to the double bond. $\text{>C=C<} + \text{HgAc}_2 + \text{ROH}$
→ $\begin{matrix} \text{>C-C<} \\ | \quad | \\ \text{RO} \quad \text{HgAc} \end{matrix}$. In this case, the valency angle, which increases with the

Card 1/3

SMIRNOV, R.N.

Mechanism of the hydrolytic decomposition of mercury organic
compounds of oxidized coal. Trudy IGI 14:118-122 '60.

(MIRA 13:12)

(Mercury organic compounds)

(Hydrolysis)

SMIRNOV, R.N.

Dual reactivity of oxidized coal. Trudy IGI 14:123-136 '60.
(MIRA 13:12)

(Chemical reactions)

(Hydrolysis)

SMIRNOV, R.N.

Hydrolytic decomposition of oxidized coals. Dokl. AN SSSR
133 no.2:383-385 J1 '60. (MIRA 13:7)

1. Institut goryuchikh iskopayemykh Akademii nauk SSSR.
Predstavleno akademikom M.M. Shemyakinym.
(Coal) (Hydrolysis)

26994

S/191/61/000/009/004/007
B110/B218

17 4312

15 8460 also 2209

AUTHORS:

Popov, V. A., Nikolayev, I. N., Smirnov, R. N.,
Kondrat'yeva, V. A.

TITLE:

Production of heat-resistant polymers by pyrolysis. Foam
cokes

PERIODICAL:

Plasticheskiye massy, no. 9: 1961, 26-28

TEXT: The authors produced heat-resistant foamed materials by coking various gas-filled plastics. Initial foamed-material specimens were placed in a special mixture, [Abstracter's note: not indentified.] and uniformly heated to a temperature exceeding that of their pyrolysis; then they were again uniformly cooled to room temperature. The material did not come in contact with air, and the volatile products were removed. The authors found that the original configuration of the initial specimen may be preserved with uniform reduction of all dimensions in an oriented position with respect to the thermal field. The relations between chemical structure, behavior in pyrolysis, and properties of foam cokes were determined. Foamed materials of linear thermoplastic (polystyrene, polyvinyl chloride) and linear, weakly thermosetting polymers (polyurethane, epoxy resins) were

26994

S/191/61/000/009/004/007
B110/B218

X

Production of heat-resistant...

destroyed. Foam cokes were produced from foamed, hardened high-molecular plastics with rigid trimeric structure and numerous crosslinks: foamed phenoplastics, organosilicon foamed materials and their modifications, and foamed materials produced on epoxy resin basis, the bisphenol of which was substituted by a multifunctional complex on the basis of bivalent phenols (foamed material P(ER)). The number of crosslinks affects the heat resistance decisively. Aromatic nuclei do not affect it in linear, only in steric polymers. The volume weights of the initial foamed plastics and the foam cokes obtained from them lie very close to each other, a slight increase (7-10 %) in the weight of the latter is explained by the removal of volatile pyrolysis products. As compared with the initial foamed plastics, the foam cokes have higher rigidity, heat resistance, and compressive strength both at room and at high temperatures. This holds true especially for foam cokes from initial foamed materials consisting of trimeric polycondensates and linear-structure polymers. The yield in volatile products in coking is not additive but depends on the interaction between polymers and radicals formed in their pyrolytic cleavage. In contrast to non-conducting foamed plastics, foam cokes are weakly conductive. The change in weight and linear dimensions of PK-20 (FK-20) foamed plastics with different amounts of fillers show that the

26994

S/191/61/000/009/004/007
B110/B218

Production of heat-resistant...

latter (particularly C-containing fillers, such as graphite, carbon black, coke) change the yield in volatile pyrolysis products considerably. They improve the stability of geometric dimensions, mechanical strength, and electrodynamic parameters of foam cokes but reduce their compressive strength at high temperatures.) Finely disperse Al powder added is supposed to react with radicals formed in pyrolysis. Al, Al_2O_3 , SiO_2 do not affect the yield in volatile products, but reduce the compressive strength at high temperatures. Carbon-containing fillers increase the yield in foam cokes, and reduce the heat resistance to deformation. Metal salts of orthosilicic acid ($ZrSiO_4$, $CaSiO_4$) increase the strength at high temperatures. FK-20 foam cokes with and without fillers preserve, during pyrolysis, their original structure. Microphotographic studies have shown that the characteristic features of the foam structure such as distribution of unit cells, presence or absence of cavities and cracks, etc., remain practically unchanged in pyrolysis. The authors suggest the use of foam cokes as light, highly heat-resistant, heat-insulating materials chemically resistant and heat-resistant sorbents, electrical engineering materials and catalyst supporters. There are 3 figures, 4 tables, and 8 references: 7 Soviet and 1 non-Soviet.

Card 3/5

26994

S/191/61/000/009/CC4/007
B110/B218



Production of heat-resistant...

Table 4. Physicomechanical properties of FK-20 foamed plastics containing different fillers, before and after coking. Legend: (1) filler, (2) filler amount, %, (3) volume weight, g/cm^3 , (4) specimen weight, g, (5) loss in weight, (6) yield in foam coke, % by weight, (7) specimen dimensions after coking, mm. (8) compressive strength limit after 1 hr heating to $300^{\circ}C$, kg/cm^2 , (9) before coking, (10) after coking, (11) without filler, (12) without filler, (13) Al powder, (14) industrial Al_2O_3 , (15) $Al_2O_3 \cdot SiO_2$, (16) chemically pure SiO_2 (no. 171), (17) $ZrSiO_4$ mineral, (18) ditto, (19) $CaSiO_4$ mineral, (20) industrial graphite, (21) acetylene black, (22) carbon black no. 137, (23) coke of foamed plastic FK-20.

38270

S/190/62/004/006/017/026
B110/B138

15
AUTHORS: Korshak, V. V., Smirnov, R. H.

TITLE: Variation in the state of aggregation of polymers due to mercurization

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 6, 1962, 889-893

TEXT: The relationship was studied, between the structure of an initially amorphous polymer and the possibility of its transformation into the crystalline state as a result of mercurization. Natural rubber dissolved in xylene was mixed with 10% aqueous mercury acetate solution. After 30 days a cheesy cream-colored precipitate with 32.86% bonded Hg was obtained from the emulsion by adding alcohol and 10% NaCl solution. The rubbers (K5M (SKBM), CKE (SKB) and KC-30-A (SKS-30-A) formed crystalline mercury derivatives $(OH) \cdot Hg(CH_3COO)_2$, with the coefficients: $k = 1.15$, $k = 0.664$; $k = 1.09$, $k = 0.49$; $k = 2.42$, $k = 1.04$. Ebonite powder (24.76% S) produced a mercury derivative of disordered structure with 31.75% Hg. Casein, gelatin and albumin were mercurized with aqueous NaOH and 15 g yellow mercuric oxide. The Hg content of the derivatives was: 41.12% (casein),

Card 1/3

S/190/62/004/006/017/026
B110/B138

Variation in the state of...

31.62% (gelatin), 32.76% (albumin). Novolack K-18/2 (K-18/2) (linear structure, melting point 87°C, free phenol content 6.5%) from the "Karbolit" plant was extracted for eight days in a Soxhlet apparatus. Part was converted into an infusible, insoluble state, probably of polyoxy-cyclophane lattice structure (according to V. V. Korshak, Khimiya vysokomolekulyarnykh soyedineniy (Chemistry of High-molecular Compounds), Izd. AN SSSR, 1950). Mercurization was carried out for 6 hr at 90°C of 2 days at room temperature, with aqueous 10% mercury acetate (20% surplus). The mercury derivatives of phenol were extracted from the bright red powder by means of water, alcohol and acetone, and a crystalline substance with the substitution coefficient 0.572 (related to the monomercurysoligen) was obtained. Cresylic resin with H₂O₂ as catalyst and mercury acetate produced a yellowish brown product with 46.56% Hg. The mercury derivative of petroleum coke contained 27.22% Hg. Results: During mercurization amorphous polymers of non-, or weakly built-up linear structure become crystalline through phase transformation. Built-up amorphous polymers of trimeric structure do not become crystalline. Built-up polymers and albumin polymers form crystalline compounds with low yield. Since the macromolecules get heavier by Hg enrichment, the carbon atoms are

Card 2/3

POPOV, V.A.; SMIRNOV, R.N.; KULYAY, Z.T.; KONDRAT'YEVA, V.A.

Preparation of heat-resistant polymer materials by pyrolysis
methods. Foam graphites. Plast. massy no.12:18-21 '62.
(MIRA 16:1)
(Polymers—Thermal properties) (Pyrolysis)

SMIRNOV, R.N.

Oxidation reaction and some problems of the structure of
coal. Trudy IGI 21:16-68 '63. (MIRA 16:11)

OMIRNOV, R.N.; KARAVAYEV, N.M.

Nature of the systems of conjugate bonds in coals. Dokl. AN
SSSR 182 no. 3:597-599 My '65. (MIRA 18:5)

1. Institut goryuchikh iskopayemykh. 2. Chlen-korrespondent
AN SSSR (for Karavayev).

SMIENOV, R.N.; GOROZHANKIN, G.S.; KONOVALOV, N.N.

Practices in natural zoning in the Caspian Lowland for soil
improvement purposes. Pochvovedenie no.9:26-30 S '65.

(MIRA 18:10)

SMIRNOV, R.O. [Smyrnov, R.O.], student geol.-geograf.fakul'teta;
ROZOVSKIY, L.B. [Rozovs'kiy, L.B.], nauchnyy rukovoditel',
dots.

Empiric formula for predicting shoreline erosion of reservoirs
during the first years of their operation (under conditions
similar to those at Kakhovka Reservoir). Pratsi Od.un. Zbir.
stud.rob. 149 no.5:145-147 '59. (MIRA 13:4)

1. Odesskiy gosudarstvennyy universitet.
(Reservoirs) (Beach erosion)

SMIRNOV, R.P., inzh.

Indirect-excitation reserve for water-wheel generators. Elek. sta.
29 no.7:81-82 J1 '58. (MIRA 11:10)

(Electric generators)

SMIRNOV, R.P., inzh.; MAVLYANOV, T.R.

Operation of hydrogenerators with partial excitation.
Elek. sta. 34 no.3:47-49 Mr '63. (MIRA 16:3)
(Turbogenerators)

5(1,3)
AUTHORS:SOV/153-2-4-2B/32
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-isoindolenine) 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-

Card 1/2

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 (tetra-naphthenotetrazaporphyrine), 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 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

Card 1/4

87424
 S/153/60/003/004/030/040/XX
 B020/B054

Analogues of Naphthalocyanine, Synthesis and
 Study of Properties

a higher content of π -electrons and benzindole 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-phenylene-tetribenzisindoline (I); 9,15; 24,30-tetraaza-10,14; 25,29-diphenylenedibenzisindoline (II); 9,16; 25,32-tetraaza-26,30-phenylenedibenzotriisindoline (III), and 7,16; 23,29-tetraaza-24,28-phenylenedibenzotriisindoline (IV). It is shown that the substitution of the benzisindole radicals in naphthalocyanine by phenyl- and isindole radicals effects a shift of the absorption maximum to shorter wavelengths. There are 2 Soviet references.

Card 2/4

87727

Analogs of Naphthalocyanine, Synthesis and Study of Properties S/153/60/003/004/030/040/KK
B020/B054

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

SUBMITTED: July 15, 1958

Card 3/4

S/153/60/005/005/012/016
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° - $382^{\circ}C$; 3,18-dinitro-7,14,21,27-tetraaza-22,26-phenylene triisoindoline, $C_{30}H_{15}N_9O_4$, boiling point 387° - $388.5^{\circ}C$; 3,11,18-trinitro-7,14,21,27-tetraaza-22,26-phenylene triisoindoline, $C_{30}H_{14}N_{10}O_6$, boiling point 420° - $421^{\circ}C$; 3,17-dinitro-7,13,20,26-tetraaza-8,12,21,25-diphenylene diisoindoline, $C_{28}H_{16}N_8O_4$, boiling point 438° - $438.5^{\circ}C$; 11-amino-7,14,21,27-tetraaza-22,26-phenylene triisoindoline, $C_{30}H_{18}N_8$, boiling point

Card 1/3

Substituted Analogs of Phthalocyanine.
Synthesis and Study of Properties

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

315.6°C; 3,8-diamino-7,14,21,27-tetraaza-22,26-phenylene triisindoline, $C_{30}H_{19}N_9$, boiling point 308°-309°C; 3,11,18-triamino-7,14,21,27-tetraaza-22,26-phenylene triisindoline, $C_{30}H_{20}N_{10}$, boiling point 391°-391.5°C; 3,17-diamino-7,13,20,26-tetraaza-8,12,21,25-diphenylene diisindoline, $C_{28}H_{20}N_8$, boiling point 372°-374°C; 7,13,20,26-tetraaza-8,12-pyridyl-21,25-phenylene diisindoline, $C_{27}H_{16}N_7$, boiling point 388°-389°C; 9,15,24,30-tetraaza-10,14-pyridyl-25,29-phenylene dibenzo isindoline, $C_{35}H_{20}N_7$, boiling point 415°C (decomposes); 2,3,4,5,15,16,17,18-octachloro-7,13,20,26-tetraaza-8,12,21,25-diphenylene diisindoline, $C_{28}H_{10}N_6Cl_8$, 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

Card 2/3