A low-temperature catalytic ...

S/080/60/033/012/016/024
D209/D305

ing of lateral bonds. Unsaturated compounds formed are intermedia-
te products in low-temperature cracking reactions and represent a
potential source of methane, naphthene and aromatic hydrocarbons.
There are 4 tables and 6 Soviet-bloc references.

SUBMITTED: June 14, 1960

Card 3/3

S/081/62/000/021/011/069
B156/B101

AUTHORS: Bogomolov, A. I., Panina, K. I.

TITLE: Low-temperature catalytic conversions of organic compounds
on clay. II. Conversion of oleic acid

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 21, 1962, 134, abstract
21Zh68 (Tr. Vses. neft. n.-i. geologo-razved. in-ta; no. 174,
1961, 17 - 25)

TEXT: If oleic acid (I) is kept for 10 hrs at 250°C in contact with
active clay, it undergoes complex transformations resulting in gaseous
reaction products, liquid hydrocarbons, acids, condensation products on
the clay, water of dissociation, and acid resins. The gaseous products
consist mainly of low-molecular-weight saturated and unsaturated hydro-
carbons. When experiments were carried out in a glass vessel, 25% of the
volume of gases was CO_2, and CO and H_2 were entirely absent; this elimi-
nates the conversion of I into CO and H_2O and diolefine as the primary
product. The yield of liquid hydrocarbons is ~30 % related to I. Of
these, 50 % are gasoline and kerosene fractions, and ~50 % distillate oil

, 1/2

Low-temperature catalytic conversions...   S/081/62/000/021/011/069
                                              B156/B101

fractions and undistilled residue. The liquid hydrocarbons are a mixture of aromatic, saturated and naphthenic hydrocarbons, the latter predominating. The saturated hydrocarbons are only present in the gasoline and kerosene fractions, while the oil fractions consist, in practice, of aromatic and naphthenic hydrocarbons and mixed hybrid forms of them. A small amount of unsaturated hydrocarbons is found in the gasoline fraction. A method of converting I by cyclizing it into ketones is proposed. By means of subsequent polymerization and hydrogen disproportioning reactions, these ketones can be converted to monocyclic and polycyclic hydrocarbons. For communication I, see RZhKhim, 1960, no. 22, 88136. [Abstracter's note: Complete translation.]

Card 2/2

BOGOMOLOV, A.I.; PANINA, K.I.

Low-temperature catalytic conversions of organic compounds on clay. Report No. 3: Conversion of waxes. Trudy VNIGRI no.174:26-34 '61.   (MIRA 14:12)

(Beeswax)

BOGOMOLOV, A.I.; SMIRNOVA, A.I.

Catalytic properties of natural clays containing hygroscopic
moisture. Trudy VNIGRI no.174:54-60 '61.   (MIRA 14:12)
                    (Clay)
                    (Catalysis)

BOGOMOLOV, A.I.; LYUTKEVICH, Ye.M.; PANINA, K.I.

Petroleums of White Russia. Trudy VNIGRI no.174:271-27 '61.

(MIRA 14:12)

(White Russia--Petroleum)

BOGOMOLOV, A.I., red.

[Industrializing the assembly of apartment gas equipment]
Industrializatsiia montazha vnutrikvartirnogo gazovogo
oborudovaniia. Moskva, Izd-vo M-va kommun.khoz. RSFSR,
1963. 13 p.   (MIRA 17:8)

1. Russia (1917- R.S.F.S.R.) Ministerstvo kommunal'nogo
khozyaystva. Pusko-naladochnoye upravleniye gazovogo kho-
zyaystva.

BOGOMOLOV, A.I.; PANINA, K.I.; ANDREYEVA, L.G.

Characteristics of the chemical composition of petroleums
in the southern Mangyshlak Peninsula. Trudy VNIGRI no.218:
54-61 '63.   (MIRA 17:3)

BOGOMOLOV, A. I.; KATCHENKOV, S.M.

Brief reports on the results of creating new methods and apparatus
in the All-Union Petroleum (Scientific Research) Geological Pros-
pecting Institute in 1957-1960. Trudy VNIGRI no.212. Geokhim.sbor.
no.8:213-219 '63.   (MIRA 16:12)

KHOTYNTSEVA, L.1.; BOGOMOLOV,A.I.; FAYZULLINA, Ye.M.

Reduction of high-molec r weight aliphatic ketones to
hydrocarbons in the presence of aluminosilicate atalysts.
Dokl. AN SSSR 155 no. 5:1152-1154 Ap '64.   (MIRA 17:5)

1. Vsesoyuznyy neftyanoy nauchno-issledovatel'skiy geologo raz-
vedochnyy institut. Predstavleno akademikom B.A.Kazanskim.

BOGOMOLOV, A.I.; SHIMANSKIY, V.K.

Characteristics of the composition of light methane petroleum
hydrocarbons as related to the conditions of their formation.
Zhur. prikl. khim. 38 no.10:2377-2379 O '65.   (MIRA 18:12)

1. Submitted May 28, 1964.

YUFIN, Andrey Pavlovich, prof., doktor tekhn.nauk; BOGOMOLOV,
A.I., prof., doktor tekhn.nauk, retsenzent; TEPLOV, V.A.,
doktor tekhn.nauk, prof., retsenzent; SAMSONOVA, M.T.,
red.

[Hydraulics, hydraulic machinery and hydraulic drive] Gidravlika,
gidravlicheskie mashiny i gidroprivod. Moskva, Vysshaia shkola,
1965. 426 p.   (MIRA 18:12)

BOGOMOLOV, A.I.; PANINA, K.I.

Carbazole in the composition of Bogachevka petroleum in Kamchatka.
Zhur. prikl. khim. 38 no.7:1635-1636 Jl '65.   (MIRA 18:7)

BOGOMOLOV, Anatoliy Ivanovich, prof.; MIKHAYLOV, Konatantin
        Aleksandrovich, prof. Prinimal uchastiye SHATAN, V.S.,
        kand. tekhn. nauk; UGINCHUS, A.A., prof., doktor tekhn.
        nauk, retsenzent; KISELEV, P.G., dots., kand. tekhn.
        nauk, retsenzent; AL'TSHUL', A.D., retsenzent;
        OBREZKOV, S.S., inzh., nauchn. red.

        [Hydraulics] Gidravlika. Moskva, Izd-vo lit-ry po stroit.
        1965. 632 p.   (MIRA 18:7)

Bogomolov, A.M.

USSR/Cultivated Plants - Fodder.   M.

Abs Jour   : Ref Zhur - Biol., No 4, 1958, 15707

Author   : A.M. Bogomolov
Inst   : -
Title   : Corn Variety Testing at the Benyakonskaya Experimental
              Station.
              (Sortoispytaniye kukuruzy na Benyakonskoy opytnoy
              stantsii).

Orig Pub   : V sb.: Kukuruza v BSSR. Minsk, AN BSSR, 1957, 114-119.

Abstract   : At the Benyakonskaya Experimental Station in Grodnens-
              kaya Oblast' corn varieties were tested in field crop
              rotations. The late ripening varieties Voronezhskaya
              76 and the hybrid Moldavskiy 1 were notable for their
              yield of total mass. The early variety Sibiryachka
              did not stand on equal footing with them in its
              amount of dry matter, its over-all yielding capacity
              being rather low.

Card 1/1

BOGOMOLOV, A.M.

USSR/ Cosmochemistry. Geochemistry. Hydrochemistry   D.

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11540

Author   : Bogomolov A.M., Andreyev P.F.
Title   : On Group Composition of Some Petroleum of Northeastern Caucasus and
             On a New Type of Petroleum

Orig Pub : Zh. prikl. khimii, 1956, 29, No 6, 957-958

Abstract : Discussion article. See RZhKhim, 1955, 37099

Card 1/1

Distr: 4E4j/4E3d

2454. PETROLEUM FROM THE TRIDEDZHIK REGION IN THE MANGYSHLAK PENINSULAR. Dogomolov, A.Ir—Trud. Vsesoyu. Naft. nauch.-issled. razved. Inst. (Proc. Petrol. Explor. Inst., U.S.S.R.), 1956, (95), 397-399; abstr. in Ref. Zh. Khim. (Ref. J. Chem., Moscow), 1957, (13), 45466). The discovery is announced of a tarry crude with a specific gravity of 0.945, a viscosity of

769 cs at 50°C, 4.4% of fractions boiling below 300°C, and 0.25% sulphur. The distillate boiling below 550°C contains 26.4% aromatic and naphthenic and 24.6% methane series compounds. This group composition makes it similar to some of the South Emba crudes from the Cretaceous.

BOGOMOLOV, A. M., Cand Agr Sci -- (diss) "Increase the crop qualities of the seeds of winter rye." Minsk, 1958. 20 pp (Acad Agr Sci BSSR, Inst of Agriculture), 100 copies (KL, 16-58, 121)

-79-

BOGOMOLOV, A.M., inzh.; SIDORCHENKO, P.G., inzh.

Making 408.7 meters of driftage in one month. Shakht. stroi. no.12:
23-24 D '59.   (MIRA 13:3)

1.Trest Krasnoarmeyskshakhtostroy.
                    (Mine engineering)

BOGOMOLOV, A.M., mashinist

By working harder today you will reap more tomorrow.
Elek. i tepl. tiaga no.6:8-10 Je '62.   (MIRA 15:7)

1. Depo Moskva-Sortirovochnaya-Ryazanskaya.
                     (Railroads--Employees)

BOGOMOLOV, A.M.; MOROZOVA, I.D.; OS'N'KINA, N.A.; ROZHKOVA, R.I.; MARCHENKO,
G.A.; MITASOV, D.G.; SRAGOVICH, V.G., kand.fiz.-matem.nauk, otv.red.;
ORLOVA, I.A., red.

[Programs in linear algebra.] Programmy po lineinoi algebre.
Moskva, 1964. 62 p. (Akademiia nauk SSSR. Vychislitel'nyi
tsentr. Standartnye i tipovye programmy dlia mashin "Ural,"
no.7)
(MIRA 18:1)

SOV/112-59-3-5318

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 3, p 146 (USSR)

AUTHOR: Bogomolov, A. M.

TITLE: Physical Principles of the Electromagnetic Method of Flow Metering (Fizicheskiye osnovy elektromagnitnogo metoda izmereniya techeniy)

PERIODICAL: Uch. zap. Leningr. vyssh. inzh. morsk. uch-shche, 1957, Nr 6, pp 73-78

ABSTRACT: The influence of shunting the electrodes by a potentiometer input impedance, of short circuiting the electrodes by steady water layers or by bottom soil, and of wind and water drifts upon the accuracy of measurement of sea-current speeds is examined.

Card 1/1

KOVNER, M.A.; BOGOMOLOV, A.M.

Method of calculating the oscillation frequency of systems having a periodical structure. Uch.zap. Sar.un. Vyp.fiz. 56:100-112 '57.

(MIRA 12:11)

(Benzene)

9.7800

S/194/61/000/010/048/082
D256/D301

AUTHOR: Bogomolov, A.M.

TITLE: Two logic diagrams of comparative code-generating method

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 10, 1961, 51, abstract 10 V428 (V sb. Nauchno-tekhn. konferentsiya molodykh spetsialistov. Vses. n.-i. in-t gidrotekhn. M.-L., Gosenergoizdat, 1959, 88-91)

TEXT: In investigating and operating hydro-engineering projects a large number of variable parameters is measured so that a computer is required for analysis of the data. It is proposed applying a digital code for subsequent feeding of the data into the computer immediately at the output of the measuring instruments. The comparative method is considered as the most promising one. Further development of the method leads to two alternative ways of

Card 1/2

Two logic diagrams...

S/194/61/000/010/048/082
D256/D301

producing the logic system, both suitable for expressing physical parameters in the binary system. $\underline{/}$ Abstracter's note: Complete translation $\underline{/}$

Card 2/2

9,8300

S/119/60/000/001/002/013
B019/B067

AUTHORS: Bogomolov, A. M., Engineer, Petrov, V. P., Candidate of
Technical Sciences, and Shchadrina, Ye. N., Engineer

TITLE: Constructive Properties in the Use of Printing Tele 2 1
Receiver in Digital Measuring Systems

PERIODICAL: Priborostroyeniye, 1960, No. 1, pp. 4 - 6

TEXT: This paper deals with the use of industrially produced digital
printing apparatus for remote measurement systems. Good results were
obtained by using telegraph receivers. The authors discuss block diagrams
of digital measuring systems combined with a telegraph receiver. The
starting circuit for the telemetric telegraph receiver which is necessary
in these circuits, is described in detail. Also a diode system is des-
cribed which converts the informations given in the decimal system into
the five-place telegraphy code. Furthermore, the authors discuss the
circuit of a telemetric device in which an CT-35 (ST-35) apparatus is
used as distributer. This circuit counts pulses in the places of hundreds,

Card 1/2

88998

Constructive Properties in the Use of   S/119/60/000/001/002/013
Printing Telegraph Receiver in Digital   B019/B067
Measuring Systems

tens, and units. The circuit of a telemetric pick-up with a telegraph
transmitter of type T-50 (T-50) is also thoroughly discussed. There are
5 figures and 3 Soviet references.

Card 2/2

3.5000
9.8000
6.7800

S/531/60/000/103/001/002

AUTHORS: Petrov, V. P., A. M. Bogomolov, and Ye. N. Shadrina

TITLE: Automatic Bridge Telemetering Meteorological Station (ATMS-M)

SERIAL: Glavnaya geofizicheskaya observatoriya. Trudy, no. 103, 1960.
Voprosy razrabotki meteorologicheskikh priborov, 10-31

TEXT: An experimental bridge-type automatic telemetering meteorological station
(mostovaya avtomaticheskaya teleizmeritel'naya meteorologicheskaya stantsiya --
ATMS-M) has been developed at the Main Geophysical Observatory im. A. I. Voyeykov.
It is covered by author's patent certificate No. 125916, dated 22 May 1959, issued to
V. Petrov, A. M. Bogomolov, and Ye. N. Shadrina. It is designed to play a fundamental
role in the thoroughgoing automation of the national hydrometeorological network, an
object regarded by Soviet meteorologists to be of great importance and urgency. The
ATMS differs basically from other automatic telemetering stations in that it uses a
bridge-type coordinating and coding device (mostovoye koordinatno-kodiruyushcheye
ustroystvo -- MKKU), but it also incorporates a number of other significant innova-
tions. This version operates on electromechanical principles, but it could also be
made contactless. Fig. 1 is a functional diagram of the ATMS. The operations

Card 1/2

Automatic Bridge Telemetering Meteorological
Station (ATMS-M)   S/531/60/000/103/001/002

involved in automatic measurement, conversion, transmission and relaying of meteoro-
logical information are symbolically described. The ATMS consists of seven principal
units: a univibrator (Fig. 2); a sweep device for the commutator system (Fig. 3); the
commutator system (Fig. 4); the bridge-type coordinating and coding apparatus (MKKU)
(Fig. 5); the coding network; a sweep reading device (Fig. 9); and a counter (Fig. 10).
The layout of the ATMS as a whole is shown in a large foldout (Fig. 7). The function
of each unit is briefly described, followed by a description of the sequence of opera-
tion of the units. A highly detailed description is provided for the MKKU and several
other units. Special sections deal with: the coding cycle for the transmission of the
readings from the individual measuring instruments; the length of time required for
performance of various operations; the accuracy of coding and the reliability of
station operation; and the possibilities of automated storage of meteorological in-
formation on punched cards. There are 10 references: 8 Soviet, 1 German, and 1
English.

Card 2/2

BOGOMOLOV, A.M.; PETROV, V.P.; SHCHADRINA, Ye.N.

Structural characteristics of the use of a teleprinter in digital
measuring system. Priborostroenie no.1:4-6 Ja '61.   (MIRA 14:1)
(Telemeter)

BOGOMOLOV, A.M.

Micrometer-type indicator with a recording device. Priborostroenie
no.3:22 Mr '61.   (MIRA 14:3)
                    (Electronic instruments)

ANDREYEV, O.B.; BOGOMOLOV, A.M.; PETROV, V.P.

Parametron is a highly reliable member of electronic computers.
Priborostroenie no.3:18-20 Mr '62.   (MIRA 15:4)
                (Electronic calculating machines)

9. 7300

S/119/62/000/010/002/003
D201/D308

AUTHORS: Bogomolov, A.M. and Petrov, V.P.

TITLE: Devices for digital processing of measurement data

PERIODICAL: Priborostroyeniye, no. 10, 1962, 11-13

TEXT: The authors consider a non-linear analog to digital
data converter for non-monotonic non-linearities and for non-linear-
ities having a large value of the second derivative. The converter
is based on the approximation with variable quantization levels and
digital storage of the non-linearity data. The converter was used
by the authors in an instrument with automatic non-linearity compen-
sation and in an automatic telemetering meteorological station (V.P.
Petrov and A.M. Bogomolov. Author's certificate No. 13566, May 19,
1960, Byulleten' izobreteniy, 1961, no. 2). The device requires
two storage elements, one for the actual values of measured data and
one for the amplitude of the n-th quantization level. It is stated
that the non-linear analog converter may be used in instruments
operating on the principle of voltage-to-digital conversion. For

Card 1/2

Devices for digital ...

S/119/62/000/010/002/003
D201/D308

sampling-type instruments the digital non-linear converters should
be used. The block and functional diagrams of a possible version
of this converter are given and its operation described. The input
and output quantities in this converter are represented by a binary
code, the non-linearity data are stored in a memory unit, the non-
linearity table has 16 columns. If the quantity to be linearized
is represented by a pulse sequence, one can use a counting non-lin-
ear converter in which the non-linearity is introduced by setting
the slopes of the sections of a piece-wise linear function. This
is done by setting determined values of translation coefficient.
The unit with variable translation coefficient is a counter with
feedback through the comparison circuit. The code, controlling the
translation coefficients is applied to the input of the latter.
The circuits are stated to reflect the basic trends in the develop-
ment of non-linear converters with digital feeding-in of non-linear
data. There are 4 figures.

Card 2/2

L 12247-63   EWT(d)/BDS/EEC-2/EED-2   S/271/63/000/004/023/045
AEDC/AFFTC/ASD/AFMDC/ESD-3/AFMTC/APGC/SSD   Pn-4/Pq-4

AUTHOR: Bogomolov, A. M.

TITLE: Principles of setting up digital telemetric systems with automatic
processing devices

PERIODICAL: Referativnyy zhurnal, Avtomatika, telemekhanika i vychislitel'naya
tekhnika, no. 4, 1963, 61, abstract 4A382 (the collection Geofiz.
priborostr.; Vyp. 11, Leningrad, Gostoptekhizdat, 1962, 57-67)

TEXT: It is pointed out that the following variant in setting up a measuring
process is the most promising: nonlinear primary measuring apparatus - linear
standard - graduated table. Here there is no requirement for unification of measur-
ing equipment as regards degree of nonlinearity, while finding the unknown values
from data of the graduated table can be accomplished with the help of a universal
computer. The author adduces a structural scheme for the realization of this mea-
suring process for the case of centralized gathering of information; for example,
in telemetric systems of gas- or oil-pipelines and in telemetric systems of auto-
matic meteorological stations. He examines algorithms of the process of graduated
processing of information, and block-diagrams for devices for realizing them in
cases where the graduated table contains a spectrum of values of the processed

Card 1/2

L 12247-63

S/271/63/000/004/023/045

Principles of setting .....

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magnitude corresponding to their true values; also when the table contains correc-
tions relating to whole hundreds of three-digit decimal values of the processed
magnitude. In the latter case the intermediate values of the corrections are inter-
polated and compiled with the value of the processed magnitude. In the second case,
fewer operations are required for finding the true values, but the volume of record-
ing is greater. The tables of the true values may be preserved in 45-column per-
forated cards, the author suggests, the cards being filled with up to four tables.
The author gives circuits and describes the operation of an automatic telemetric
meteorological station utilizing the method of graduated information processing.
There are five illustrations and a five-item bibliography. O. B.

/Abstracter's note: Complete translation/

bm/ac
Card 2/2

BOGOMOLOV, A.M.; PETROV, V.P.

Analysis of the potential uses of the double coding method.
Geofiz. prib. no. 12:75-81 '62.   (MIRA 17:5)

1. Glavnaya geofizicheskaya observatoriya imeni A.I.Voyeykova.

BOGOMOLOV, A.M.; DIMAKSYAN, A.M.; PETROV, V.P.

Principles of constructing an automatic hydrological telemetering
system. Trudy GGI no.101:19-43 '63.   (MIRA 16:7)
   (Hydrometeorology) (Telemeter) (Automatic control)

BOGOMOLOV, A.M.

Algorithms of the measuring process and ways of achieving their
constructive realisation. Trudy GGI no.101:44-50 '63. (MIRA 16:7)
(Algorithms) (Automatic control)

BOGOMOLOV, A.M.

Apparatus for digital processing of measurement data.   Trudy GGI
no.101:51-55 '63.   (MIRA 16:7)
                    (Electronic digital computers)

BOGOMOLOV, A.M.; PETROV, V.P.

Method of double coding and its prospects. Trudy GGI no.101:
56-60 '63.   (MIRA 16:7)
                    (Electronic digital computers)

KUZNETSOV, A.F.; BOGOMOLOV, A.M.; NERONOVA, G.P.

Experimental study of the functional nodes of a processing
device of the automatic hydrologic telemetering station.
Trudy GGI no.115:14-62 '64.

(MIRA 18:9)

BOGOMOLOV, A.M.; KOUZOV. N.A.

Use of the functional node method of designing in the construction of automatic measuring devices. Trudy GGI no.115:63-80 '64.

(MIRA 18:9)

BOGOMOLOV, Anatoliy Mikhaylovich; KOROBOV, Boris Vladimirovich;
VINNIKOVA, I.A., red.

[Programming for the "Ural-2" and "Ural-4" digital computer]
Programmirovanie dlia EVM "Ural-2" i "Ural-4". Saratov, Izd-
vo Saratovskogo univ., 1965.   482 p.   (MIRA 18:10)

L 25582-66   EWT(d)/T/EWP(t)   IJP(c)   BB/GG
ACC NR: AM6004768   Monograph   UR/
                                                                        62
                                                                        59
Bogomolov, Anatoliy Mikhaylovich; Korobov, Boris Vladimirovich   /341

Programming for "Ural-2" and "Ural-4" electronic computers (Programmirovaniya dlya
EVM "Ural-2" i "Ural-4") Saratov, Izd-vo Saratovskogo univ., 1965. 482 p. illus.,
Errata slip inserted. 3,500 copies printed

TOPIC TAGS: digital computer, computer technique, computer input unit, computer
programming

PURPOSE AND COVERAGE: The book describes the most widely used Soviet electronic com-
puters "Ural-2" and "Ural-4" and their programming. It is based on work done on the
"Ural-2" computer at the programming division of the Computer Center of the Saratov
State University. Particular attention is paid to the use of punched cards as
bearers of the initial information. The book deals with the construction and opera-
tion of the individual units, the representation of the numbers and commands, the
command system, programming with punched-card and punched-tape input, programming
systems based on the use of standard subroutines, and proofing methods. A special-
ized method for solving polynomials of one variable, and a specialized interpreting
system for calculations with complex numbers, an index programming system for solving
problems with complex multiple-step indexation, linear-algebraic compilation, and
various standard programs are also described. The authors thank K. I. Barbashova,
YE. S. Selivestrova, E. M. Mametov, V. S. Zyuzin, V. M. Gur'yanov, YU. M. Kogtev,
I. D. Morozova, N. A. Osen'kina, R. L. Rozhkova, V. V. Amel'chenko, D. V. Speranskiy,

Card 1/3

L 25582-66

ACC NR: AM6004768

_3_

V. R. Kardashov, YU. P. Tokarev, and V. L. Temkin for participating in the work. Chs. I--VII were written by B. V. Korobov, Chs. VIII--XIII by A. M. Bogomolov, and Ch. X was written jointly. The second part of the book, which contains a set of programs for numerical methods, is scheduled to be published in 1965.

TABLE OF CONTENTS [abridged]:

Card   2/3

L 25582-66

ACC NR: AM6004768

SUB CODE: 09/12/ SUBM DATE: 18Mar65

Card   3/3 dda

Bogomolov, A.M

USSR/ Physical Chemistry - Molecule. Chemical Bond   B-4

Abs Jour   : Referat Zhur - Khimiya, No 3, 1957, 7199

Author   : Kovner, M.A. and Bogomolov, A.M.
Title   : A General Theory of Vibrational Spectra of the Normal
              Monoalkylbenzenes

Orig Pub   : Optika i spektroskopiya, 1956, Vol 1, No 3, 364-373:
              Correction, ibid, No 8, 1040

Abstract   : A model with C_s symmetry is used for ethylbenzene. The
              secular equations for the vibrations symmetrical (31)
              and antisymmetrical (17) to the plane of the ring have
              been set up using the force constants for benzene and
              the ethyl group. The latter are known for paraffin hy-
              drocarbon. From the solutions of the secular equations
              the characteristic and noncharacteristic frequencies of
              the monoalkylbenzenes have been determined. A complete
              interpretation of the vibrational spectra of ethylbenzene
              and the higher monoalkylbenzenes (up to $C_{22}H_{38}$) is

Card 1/3   - 22 -

USSR/ Physical Chemistry - Molecule. Chemical Bond.   B-4

Abs Jour   : Referat Zhur - Khimiya, No 3, 1957, 7199

proposed. In the simplified model the C_6H_5, CH_2, and
CH_3 groups are replaced by points; using this approxi-
mation, an equation is set up giving the dependence of
the valence vibrations of C-C on the number of C-C bonds.
Non-homogeneities at the end of the carbon chain are ta-
ken into account. The calculated frequencies are compa-
red with the C-C frequencies observed in the spectra of
a large number of monoalkylbenzenes. All these frequen-
cies are included in the range 740-1200 cm^{-1}. For the
calculation of the intensity of these vibrations, a ge-
neralized form of the formula obtained by L.I. Vidro and
M.V. Vol'kenshteyn (Dokl. AN SSSR, 1952, Vol 85, No 6,
1243) for a homogeneous chain is used. Assuming that
$i - 4.'$ (. ' , .\ ' are the derivatives of the polari-
zability of the C-C bond in the direction of the bond
and at right angles to it), the relative intensities of
the various C-C bond frequencies. Deviations of the

Card 2/3   - 23 -

USSR/ Physical Chemistry - Molecule. Chemical Bond.

B-4

Abs Jour   : Referat Zhur - Khimiya, No 3, 1957, 7199

observed intensities from the calculated values are ex-
plained by the superposition of the other frequencies on
the C-C frequencies. In the case of long chains, appre-
ciable intensities are observed only for the extreme
frequencies at 1200 and 800 cm^{-1}.

Card 3/3

- 24 -

KOVNER, M.A.; BOGOMOLOV, A.M.

Structure and vibration spectra of various aromatic hydrocarbons.
Fiz. sbor. no.3:84-88 '57.   (MIRA 11:8)

1. Saratovskiy gosudarstvennyy universitet im. N.G. Chernyshevskogo.
                        (Hydrocarbons—Spectra)

AUTHORS: Kovner, M.A. and Bogomolov, A.M.   51-4 -3-4/30

TITLE: Vibrational Spectra of Aromatic Compounds. V. Calculation and Interpretation of Vibrational Spectra of Metaxylene. (Kolebatel'nye spektry aromaticheskikh soyedineniy. V. Raschet i interpretatsiya kolebatel'nykh spektrov metaksilola.)

PERIODICAL: Optika i Spektroskopiya, 1958, Vol.IV, Nr.3, pp.301-308 (USSR).

ABSTRACT: The authors calculate frequencies of vibrations and give a full interpretation of vibrational spectra of metaxylene. Their calculations are based on two variants of the force constants. The variant No.1 is based on the following values of non-active frequencies B_{2u} of C_6H_6: 1110.1648 cm^{-1}, and for C_6D_6: 825.1577 cm^{-1}. In this variant the force constant for the CCC angles external to the molecular ring (K_γ) is taken to be 0.71, and the force constants of interaction of these angles with CCH angles of methyl groups (m_β, n_β) are taken to be 0.12 and
Card 1/3   — 0.02 respectively. In the variant No.2 the B_{2u}

Vibrational Spectra of Aromatic Compounds. V.   51- 4 3-4/30

frequencies for C_6H_6 and C_6D_6 are taken to be 1152.1310 and 838.1287 cm^{-1} respectively, with $K_\gamma = 1.10$ and $m_\beta = n_\beta = 0$. Table 1 gives the force constants in A_1 symmetry coordinates, and Table 2 gives the force constants in B_1 symmetry coordinates. The force constants of interaction of coordinates of methyl groups were taken from Ref.13. Other force constants are equal to zero. Table 3 collects all known experimental data on Raman, infrared and phosphorescence spectra of metaxylene. The same table gives the results of calculations obtained on the basis of the two variants given above. Both these variants do not apply to A_2 and B_2 vibrations. Some calculations were made using a third variant, which differed from variant No.2 in values of m_β (0.12) and n_β (- 0.02). The results of calculations based on the third variant did not differ greatly from those of the variant No.2 and are not given in the paper.

Card 2/3

Vibrational Spectra of Aromatic Compounds. V.   51- 4 -3-4/30

The calculations carried out by the present authors give better agreement between experimental and calculated vibrational frequencies of metaxylene if the variant No.2 is used (with values for the non-active B_{2u} frequencies taken from Refs.11-12). A note added in proof says that the results of the present paper agree with those published by Wilmhurst and Bernstein in Canad. J. Chem., Vol. 35,911 (1957). There are 3 tables, 1 figure and 30 references, 12 of which are Soviet, 6 English, 5 American, 4 French, 1 German, 1 Indian and 1 Danish.

ASSOCIATION: Saratov State University. (Saratovskiy gosudarstvennyy universitet.)

SUBMITTED: May 21, 1957.

1. Cyclic compounds--Spectra

Card 3/3

9(6)

AUTHOR: Bogomolov, A. M., Engineer   SOV/119-59-7-12/18

TITLE: A Detecting Device for the Automatic Change-over of the Measuring
               Range of a Bridge Circuit

PERIODICAL: Priborostroyeniye, 1959, Nr 7, pp 26-27 (USSR)

ABSTRACT: In the introduction the necessity of the automatic change-over
               of the measuring range in numerous measuring instruments is
               pointed out, and a possible variant of this circuit for an
               electronic temperature-recording instrument is discussed. If,
               in this instrument, the quantity to be measured exceeds the
               measuring range on one or on the other side, contacts are
               short-circuited and pulses are produced which cause a corre-
               sponding adjustment of the measuring range. The automatic ad-
               justment of the measuring range is carried out by means of
               electromagnets. There are 1 figure and 1 Soviet reference.

Card 1/1

$\mathcal{5.3100}$

AUTHORS: Kovner, M.A. and Bogomolov, A.M.

67153
SOV/51-7-6-7/38

TITLE: Vibrational Spectra of Aromatic Compounds. VI. Calculation and
Interpretation of the Vibrational Spectra of Orthoxylene

PERIODICAL: Optika i spektroskopiya, 1959, Vol 7, No 6, pp 751-755 (USSR)

ABSTRACT: By interpretation of the vibrational spectra of orthoxylene
(alkylbenzene) the authors mean carrying out of the following
four tasks. (1) Division of the observed frequencies into fundamental
and composite; calculation of those fundamental frequencies which are
not observed for various reasons so that a complete system of 3N-6
fundamental frequencies is obtained (here N is the number of atoms);
correlation of the fundamental frequencies with irreducible representations
(symmetry types) of the symmetry group to which the molecule belongs.
(2) Attribution of the fundamental frequencies of a given type of
symmetry to vibrations of bonds or variations of valence angles, in
particular attribution of the fundamental frequencies to vibrations of
the ring and the alkyl groups. (3) Correlation of vibrations (frequencies)
of the ring in alkyl benzene with those of benzene. (4) Representation
of the composite frequencies as linear combinations of the fundamental
frequencies. In the earlier papers only the tasks Nos 1 and 4 were

Card 1/3

67153

SOV/51-7-6-7/38

Vibrational Spectra of Aromatic Compounds. VI. Calculation and Interpretation of the Vibrational Spectra of Orthoxylene

carried out completely. The tasks 2 and 3 were only partially fulfilled since the vibration-form coefficients were not known. The present paper reports a complete interpretation including tasks 2 and 3, because the authors could now use the values of the vibration-form coefficients calculated by A.M. Bogomolov for all frequencies of the orthoxylene molecule. These coefficients were determined using a technique developed by Mayants (Ref 1) for obtaining accurate values of the roots of secular equations and a consequent determination of the vibration-form coefficients which are the eigen-vectors of the secular-equation matrices. To fulfil tasks 2 and 3, calculations were carried out using two systems of ring vibrational symmetry coordinates: (1) a system of coordinates of the approximate symmetry D_{6h} (Ref 4) and (2) a system of coordinates of the exact symmetry C_{2v}, which are sums and differences of pairs of equivalent coordinates shown in a figure on p 752 and pairs of coordinates of the type ρ (displacement of the C--H and C--C bonds from the plane of the ring) and of the type χ (non-planar vibrations of the carbon skeleton of the ring). The results are shown in a table on p 753 which lists the observed and calculated fundamental frequencies of orthoxylene. Cols 2, 5 and 7 give the values of the observed

Card 2/3

67153
SOV/51-7-6-7/38

Vibrational Spectra of Aromatic Compounds. VI. Calculation and Interpretation of the Vibrational Spectra of Orthoxylene

Raman (Refs 13, 16-19), infrared absorption (Refs 20-23) and luminescence (Refs 11, 14) frequencies, respectively. The calculated frequencies are listed in col 8; in the majority of cases the calculated and empirical frequencies agree satisfactorily. The symmetries are given in col 9 and the bonds or valence angles responsible for the particular frequencies are listed in col 10. Col 11 gives the frequencies of benzene corresponding to the appropriate frequencies of orthoxylene. There are 1 figure, 1 table and 25 references, 11 of which are Soviet, 9 English, 1 Danish, 1 German, 1 Indian, 1 translation and 1 from an international journal. The authors also give a correction to an earlier paper (Ref 7).

SUBMITTED: April 10, 1959

Card 3/3

BOGOMOLOV, A.M.

Vibration spectra of aromatic compounds. Part 8. Characteristic
vibration of 1, 2 -o-disubstituted benzenes. Opt.i psektr. 10
no.3:322-327 Mr '61.   (MIRA 14:8)
    (Aromatic compounds--Spectra)   (Benzene--Spectra)

BOGOMOLOV, A.M.

Vibrational spectra of aromatic compounds. Part 12.
Characteristic vibrations of p-disubstituted benzenes.
Opt. i spektr. 12 no.2:186-193 F '62.   (MIRA 15:2)
                        (Benzene--Spectra)

BOGOMOLOV, A.M.

Vibration spectra of aromatic compounds. Part 14. Characteristic
vibrations of metasubstituted benzenes. Opt.i spektr. 13
no.2:159-168 Ag '62.   (MIRA 15:11)
                    (Benzene--Spectra)

BOGOMOLOV, A.M.

Vibrational spectra of aromatic compounds. Part 16.
Characteristic vibrations of 1,2,3-substituted benzenes.
Opt. i spektr. 13 no.3:331-334 S '62.   (MIRA 15:9)
                    (Benzene—Spectra)

SOLODOVNIK, F.S.; BOGOMOLOV, A.V.; ZHURAVSKIY, Yu.V.; FROLOV, A.G.

Electromagnetic metal sheet distributor. Biul.TSIICHM no.4:51
'61.   (MIRA 14:10)
(Electromagnets)

ACCESSION NR: AP4018366   S/0120/64/000/001/0061/0068

AUTHOR: Bogomolov, A.V.; Budagov, Yu. A.; Vasilenko, A.T.; Dzhelepov, V.P.;
D'yakov, N.I.; Ivanov, V.G.; Kladnitskiy, V.S.; Lepilov, V.I.; Lomakin, Yu. F.;
Moskalev, V.I.; Flyagin, V.B.; Shetet, T.I.; Shlyapnikov, P.V.

TITLE: Meter-long bubble chamber in a magnetic field

TOPIC TAGS: bubble chamber, meter long bubble chamber, 10 Gev particle
beam, bubble chamber in magnetic field, electromagnet bubble chamber

ABSTRACT: A bubble chamber with a sensitive volume of $1 \times 0.5 \times 0.38$ m is
described. The chamber is intended for studying the particle beams up to 10 Gev
obtained from the OIYaI proton synchrotron. The chamber design was described
earlier (Yu. A. Budagov, et al. International Conference on High-Energy
Acceleration and Instrumentation, Berkeley, 1960); more details are supplied in
the present article. Propane or some other liquid suitable for a particular
experiment may serve as a working fluid. The chamber is placed in a 17-kilo-
oersted magnetic field derived from a 2,200-kw electromagnet. The error in a

Card 1/2

ACCESSION NR: AP4018366

5-Gev/s-pulse measurement, evaluated from multiple scattering in propane, is ± 3.2%. In 1963, the chamber was installed at the output of the magnetic circuit of a π^--meson beam whose energy lies between 4 and 7 Gev. "The authors consider it their duty to thank V. N. Sergiyenko, N. I. Frolov, K. A. Baycher, and the personnel of the experimental shop for their help in building the outfit. The authors are thankful to V. I. Veksler, N. I. Pavlov, and I. V. Chuvilo for their assistance in constructing the magnetic circuit of the π^- -meson beam. We are indebted to A. S. Strel'tsov, B. Ye. Gritskov, B. V. Rozhdestvenskiy, and L. N. Fedulov for designing and building the magnet. The authors are deeply grateful to N. P. Moshkov, V. A. Lebedev, and S. P. Zunin who spent much effort and skill in all stages of constructing and aligning the outfit." Orig. art. has: 8 figures.

ASSOCIATION: Ob"yedinenny*y institut yaderny*kh issledovaniy (Joint Institute of Nuclear Studies)

SUBMITTED: 22Mar63   DATE ACQ: 18Mar64   ENCL: 00

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

Card 2/2

BOGOMOLOV, B. (Maj., Engr.) and STEPANOV, V. (Capt., Engr.)

"Laying and maintenance of metal coverings," The Herald of the Air Fleet, 1952.

KAZIMIROVA, Yelena Dmitriyevna; NIKOLAYEV, Aleksey Petrovich;
ALENDER, I.Z., inzh., red.; BOGOMOLOV, B.A., red.;
PLAKSHE, L.Yu., tekhn.red.

[German-Russian dictionary on woodworking] Nemetsko-russkii
slovar' po derevoobrabotke. Pod red. I.Z.Alendera. Moskva,
Glav.red.inostr.nauchno-tekhn.slovarei Fizmatgiza, 1962.
215 p.   (MIRA 15:5)
(Woodwork—Dictionaries)
(German language—Dictionaries—Russian)

GRABOV, Isaak Naumovich; AKKERMAN, D.A., red.; BARANOV, A.M., red.;
    BOGOMOLOV, B.A., red.; GUSEV, N.P., red.; MURONETS, I.I.,
    red.; POGREBNAYA, L.L., red.; KRYUCHKOVA, V.N., tekhn. red.

[German-Russian dictionary on welding] Nemetsko-russkii slovar'
po svarke. Moskva, Glav.red.inostr. nauchno-tekhn.slovarei
Fizmatgiza, 1962. 246 p.   (MIRA 15:7)
        (German language—Dictionaries—Russian)
            (Welding—Dictionaries)

BUNIN, Dmitriy Anatol'yevich; SHUBIN. Anatoliy Alekseyevich;
        BOGOMOLOV, B.A., red.; AKSEL'ROD, I.Sh., tekhn. red.

        [Concise German-Russian dictionary on automatic and remote
        control]Kratkii nemetsko-russkii slovar' po avtomatike i
        telemekhanike. Moskva, Glav.red.inostr.nauchno-tekhn.slova-
        rei Fizmatgiza, 1962. 531 p.   (MIRA 15:9)
          (German language—Dictionaries—Russian language)
              (Automatic control—Dictionaries)
                (Remote control—Dictionaries)

BOGOMOLOV, B.A., red.; BARANOV, A.M., red.; MURONETS, I.I., red.;
GUSEV, N.P., red.; PANKIN, A.V., red.; VACHAYEVA, Z.P.,
red.-leksikograf; VILENSKAYA, O.V., red.1-leksigogr.;
ARTEMOV, L.V., red.-leksikogr.; YEREMINA, N.N., mlad. red.;
VANSOVSKAYA, L.Ye., mlad. red.; CHEKRYZHOV, P.F., spets.red.;
PLAKSHE, L.Yu., tekhn. red.

[German-Russian polytechnical dictionary] Nemetsko-russkii
politekhnicheskii slovar'. Podgotovleno pri redaktsionnom
uchastii izdatel'stva "Tekhnika" GDR. Moskva, Glavnaia red.
inostrannykh nauchno-tekhn. slovarei Fizmatgiza, 1963. 812 p.
(MIRA 17:1)

ALEKSANDROVA, M.A.; ASINOVSKIY, E.I.; BALANDIN, V.V.; BRODYANSKIY,
V.M., kand. tekhn. nauk; VAKHRAMEYEVA, Ye.A.; VERBA, M.I.,
kand. tekhn. nauk; VORONIN, T.A., kand. tekhn. nauk;
GIRSHFEL'D, V.Ya., kand. tekhn. nauk; DEYCH, M.Ye., prof.
doktor tekhn. nauk; IVIN, F.A.; LAPSHIN, M.I., kand. tekhn.
nauk; LIPOV, Yu.M., kand. tekhn. nauk; LYUBARSKAYA, A.F.;
MAKARENKO, I.D.; MIRIMOVA, V.M.; NEVLER, S.Ye.; ROZANOV,
K.A., kand. tekhn. nauk; ROTACH, V.Ya., kand. tekhn. nauk;
KHMEL'NITSKIY, R.Z., kand. tekhn. nauk; SHEVCHENKO, E.G.;
BOGOMOLOV, B.A., red.; VAYNSHTEYN, K.N., spets. red.;
LICHAK, S.K., spets. red.

[German-Russian heat engineering dictionary] Nemetsko-
russkii teplotekhnicheskii slovar'. Moskva, Sovetskaia
entsiklopediia, 1964. 512 p.   (MIRA 18:1)

1. Moscow. Energeticheskiy institut. 2. Moskovskiy energe-
ticheskiy institut (for all except Vaynshteyn, Lichak).

BOGOMOLOV, B.D.

PA 41/49T3

USSR/Chemistry - Nopinene   Apr 49
Chemistry - Turpentines, Nopinene
of

"Beta-Pinene of Sulfate and Oleoresin Turpen-
tines," B. D. Bogomolov, A. A. Sokolova, Arch-
angel Inst of Forest Tech imeni V. V.
Kuybyshev, 4 pp

"Dok Ak Nauk SSSR" Vol LXV, No 4

Establishes that beta-pinene of sulfate turpen-
tine is levorotatory and is identical with beta-
pinene of oleoresin turpentine. Mistaken as-
sertion of Aschan, Halse and Dedichen on the

41/49T3

USSR/Chemistry - Nopinene (Contd)   Apr 49

presence of d-beta-pinene in sulfate turpentine
resulted from use of careless rectification.
Submitted by Acad A. N. Nesmeyanov, 29 Jan 49.

41/49T3

BOGOMOLOV, B. D.

(3)

Improvement of methods of collecting sulfate turpentines and Sulfan. B. D. Bogomolov and A. A. Sokolova (Wood Tech. Inst., Archangel). Bumash. Prom. 25, No. 0, 16-19 (1950); Chem. Zentr. 1951, II, 466; cf. C.A. 45, 2910h.— Various condensation units for the recovery of sulfate turpentine and Sulfan (a mixt. of readily volatile org. S compds.

of disagreeable odor) from the waste products of sulfate pulp production are described. About 8–10 kg. turpentine can be recovered from 1 ton of cellulose.   M. G. M.

1. BOGOMOLOV, B. D.: SOKOLOVA, A. A.

2. USSR (600)

4. Lignin

7. Alkaline sulphate lignin. Bym.prom. 27 no. 9 1952

9. Monthly List of Russain Accessions, Library of Congress, February 1953. Unclassified.

BOGOMOLOV, B. D., SOKOLOVA, A. A.

Sulfur Organic Compounds

Production and properties of sulfane. Bum. prom. 28, No. 4, 1953.

Monthly List of Russian Accessions, Library of Congress
June 1953. UNCL.   .

BOGOMOLOV, G.V.

3166*   Sulfate Compounds Formed During Sulfate Cooking of Cellulose. Sernblya soedineniia pri sul'fatnof varke tsellulozy. (Russian.) B. D. Bogomolov. Bumazhnaia Promyshlennost', v. 29, no. 6, June 1954, p. 8-10.

Elimination of odor of sulfate pulping by determining yield of sulfate compounds and studying its dependence on temperature of cooking. Graphs, tables, diagram. 8 ref.

BOGOMOLOV, B.D.

The use of sulfate soap for soap manufacture. A. A. Sokolova, B. D. Bogomolov, and V. A. Leusheva. *Bumazh. Prom.* 31, No. 2, 10-19(1956).—Russian com. yields of raw sulfate soap (I) varied from 50 to 80 kg./ton of pulp. Production directions issued for mills which do not have fractionation equipment recommend: taking up the I in H_2O, filtering, adding NaCl or Na_2SO_4 to salt out the soap, and treating with H_2SO_4 to form refined tall oil (II), which is washed, dried, and used in soap manufacture. The black liquor from the I settling tanks is treated with the NaCl soln. from the salting-out step, and the mixt. is treated with the $NaHSO_4$-Na_2SO_4-lignin soln. from the purified soap decompn. step to give a lignin ppt., which is sepd. and washed. The sepn. of lignin from 1 l. of soln. required 206 g. $NaHSO_4$. For a plant producing 300 tons per day of kraft pulp, and with a yield of 60 kg. I per ton of pulp, the $NaHSO_4$ formed during the decompn. of the soap is 3.5 tons per day, which is sufficient to give 2 tons of lignin per day. The yield of II from salt-treated I was 15% higher than the yield of II from crude I, and 10-15% less H_2SO_4 was used in the conversion of the soap to tall oil. Soap prepd. from 60% animal fats and 40% tall oil was found to have excellent detergent, emulsification, and foam stability properties, and would be suitable for domestic use.

John Lake Keays

$Bogomolov, B. D.$

USSR /Chemical Technology. Chemical Products   I-27
     and Their Application

     Wood chemistry products. Cellulose and its
     manufacture. Paper.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 32682

Author : Bogomolov B.D.

Inst   : Leningrad Academy of Wood Technology

Title   : ·Some Problems of the Chemism of Sulfate and
          Soda Cooking of Cellulose

Orig Pub: Tr. Leningr. lesotekhn. akad., 1956, No 75,
          173-182

Abstract: To determine the chemism of wood delignification
          a study was made of lignins (I) obtained as a
          result of sulfate- and soda-, rapid and slow,

Card 1/3

USSR /Chemical Technology. Chemical Products   ⊤.27
    and Their Application

    Wood chemistry products. Cellulose and its
    manufacture. Paper.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 32682

    and multistage cooking of spruce and pine wood.
    The carboxyl group content of $\underline{I}$ was determined
    by Ca acetate sorption, the summative content
    of carboxyls and phenolic hydroxyls by sorption
    of $Ba(OH)_2$, and the content of phenolic hydroxyls
    -- by difference. A parallel study of copper-
    ammonia $\underline{I}$ and alkali sulfate $\underline{I}$ showed that in
    the process of sulfate cooking there are formed
    carboxyl groups, acidic OH, and a portion of the
    methoxyls is split off with formation of methyl-
    sulfur compounds and methanol; splitting off of
    methoxyls increases with increasing temperature
    of the cooking. In multistage cooking an increase

Card 2/3

USSR /Chemical Technology. Chemical Products
and Their Application   I-27

Wood chemistry products. Cellulose and its
manufacture. Paper.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 32682

of the temperature brings about an increase of
the summative content of COOH, phemol and enol
OH and a decrease of the methoxyl content of I
as the cooking progresses; the latter is con-
firmed by vanillin yields obtained from samples
of I at different stages of the cooking. With
increase of the sulfide content of the cooking
liquor the S-content of I increases.

Card 3/3

BOGOMOLOV, B.D., kand.tekhn.nauk; MEL'NIKOV, S.F., inzh.; KARABANOV, F.F., inzh.

Woodpulp and paper industry of Archangel Province. Bum.prom.
32 no.11:23-27 N '57.   (MIRA 11:1)
            (Archangel Province--Paper industry)
            (Archangel Province--Woodpulp industry)

AUTHORS: Sokolova, A. A., Bogomolov, B. D.,
Krupkina, F. A., Brodskiy, G. S., Afanas'yeva, N. V.   SOV/156 58-3-40/52

TITLE: Alkaline Lignin as Initial Substance for the Production of
Plastics (Shchelochnoy lignin kak syr'ye dlya proizvodstva
plasticheskikh mass)

PERIODICAL: Nauchnyye doklady vysshey shkoly, Khimiya i khimicheskaya
tekhnologiya, 1958, Nr 3, pp. 556 - 558 (USSR)

ABSTRACT: Alkaline lignin represents a valuable starting material for the
production of plastics, since it contains reactive groups. The
authors prepared samples and determined the technical data as
well as the physical and chemical properties of products of
alkaline lignin. The optimum method for the production of
phenol-lignin formaldehyde resin was determined. Based on inves-
tigations on the physico-chemical and electric properties of
the pressed samples the following optima mixture was worked out:
phenol 100 parts, lignin 100 parts, formaldehyde 17 parts,
sulfuric acid 2 parts. By using this formula in the production
of phenol lignin formaldehyde resins about 50% phenol and 40%
formaldehyde can be saved. The stability of alkaline lignin in
storing for 2 years was investigated and the results obtained

Card 1/2

Alkaline Lignin as Initial Substance for the
Production of Plastics

SOV/156-58-3-40/52

showed that the alkaline lignin is subjected to a change of
its structure, with the formation of acid groups and an increase
of the oxy groups. There are 2 tables and 2 references,
which are Soviet.

ASSOCIATION: **Kafedra** organicheskoy khimii i khimii drevesiny
Arkhangel'skogo lesotekhnicheskogo instituta (Chair of Organic
Chemistry and Cellulose Chemistry at the Arkhangel'sk Wood-
Technical Institute)

SUBMITTED: February 15, 1958

Card 2/2

BCGOMOLOV, B.D.; YELIZAROVSKIY, N.V.

Improve the preparation of hydrolysis raw material at lumber mills.
Gidroliz. i lesokhim. prom. 11 no.2:13-14 '58.   (MIRA 11:3)

1. Arkhangel'skiy lesotekhnicheskiy institut.
                    (Wood waste)   (Hydrolysis)

VERSHUK, Vasiliy Iosifovich, starshiy nauchnyy sotrudnik; GURICH, Nina
Aleksandrovna, kand.tekhn.nauk. Prinimala uchastiye ZARAKOVSKAYA,
A.I., nauchnyy sotrudnik. BOGOMOLOV, B.D., red.; SARMATSKAYA,
O.I., red.izd-va; PARAKHINA, N.L., tekhn.red.

[Methods of the analysis of raw materials and products of the
wood resin and turpentine industry] Metody analiza syr'ia i
produktov kanifol'no-skipidarnogo proizvodstva; prakticheskoe
rukovodstvo dlia rabotnikov khimicheskikh laboratorii i otdelov
tekhnicheskogo kontrolia. Moskva, Goslesbumizdat, 1960. 190 p.
                                              (MIRA 13:9)
1. TSentral'nyy nauchno-issledovatel'skiy lesokhimicheskiy
institut (for Zarakovskaya).
      (Gums and resins)   (Turpentine)

BOGOMOLOV, B.D., kand.tekhn.nauk; GROBUNOVA, O.F., inzh.

Cymene as a valuable product of the sulfite pulp production.
Bum.prom. 35 no.9:9-11 S '60.   (MIRA 13:9)

1. Arkhangel'skiy lesotekhnicheskiy institut.
        (Cymene)   (Woodpulp industry--By-products)

BOGOMOLOV, B.D.; DOROKHINA, I.S.; KLIMENKOV, V.S.

Using dimethyl sulfide derivatives in the production of fibers
on the basis of acrylonitrile and its copolymers. Khim.volok.
no.2:14-16 '62.   (MIRA 15:4)

1. Arkhangel'skiy lesotekhnicheskiy institut (for Bogomolov).
2. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo
volokna (for Dorokhina, Klimenkov).
   (Sulfide)   (Textile fibers, Synthetic)   (Acrylonitrile)

KIRPICHNIKOV, P.A.; CHUMAKOV, N.S.; BOGOMOLOV, B.D.; MOSKVA, V.V.

Certain methods for improving the technological properties of
artificial leather. Trudy KKHTI no.26:23-31 '59.   (MIRA 15:5)
(Leather, Artificial)

BOGOMOLOV, Boris Dmitriyevich; SOKOLOVA, Aleksandra Aleksandrovna;
GORDON, L.V., red.; KHOT'KOVA, Ye.S., red.izd-va; VDOVINA,
V.M., tekhn. red.

[By-products of sulfate pulp manufacture; chemistry and
technology] Pobochnye produkty sul'fatno-tselliuloznogo
proizvodstva; khimiia i tekhnologiia. Moskva, Goslesbum-
izdat, 1962. 432 p.   (MIRA 16:5)
              (Woodpulp industry--By-products)

SMOLENSKIY, K.I., red.; KOLOMEYER, V.Z., tekhn. red.; SHENDAREVA,
L.V., tekhn. red.; BOGOMOLOV, B.D., red.

[Fiberboard]Drevesno-voloknistye plity; trudy. Pod red. B.D.
Bogomolova. Moskva, TSentr. biuro tekhn. informatsii bu-
mazhnoi i derevoobrabatyvaiushchei promyshl., 1961. 121 p.
(MIRA 16:4)

1. Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya po pro-
izvodstvu i primeneniyu drevesno-voloknistykh materialov i
plastikov. Archangel.
(Hardboard)

ACC NR: AP7002541 (A)   SOURCE CODE: UR/0413/66/000/023/0017/0017

INVENTOR: Lazaryants, E. G.; Ivanova, A. I.; Kopylov, Ye. P.; Bogomolov, B. D.; Bugrov, V. P.; Pisarenko, A. P.; Rubina, S. I.; Chudakov, M. I.; Kosmodem'yanskiy, L. V.; Yemel'yanov, D. P.; Tsaylingol'd, V. L.

ORG: none

TITLE: Method of obtaining active lignin. Class 12, No. 188966

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 17

TOPIC TAGS: rubber, active lignin, lignin, organic solvent, rubber chemical

ABSTRACT: This Author Certificate introduces a method of preparing active lignin by treatment with alkali. To increase the reinforcing properties of the lignin when it is introduced into rubber in the dry state, an alkali solution of the lignin is treated with water-soluble organic solvents such as alcohols, ketone, and rosin soap precipitated with an acid in the finely disperse state and then dried. [Translation]   [NT]

SUB CODE: 07/SUBM DATE: 17Feb64/
Card 1/1   UDC: 547.992.3-188.07

BOGOMOLOV, B. N., Cand Tech Sci -- (diss) "Research into fosterite refractory materials as fettling material for the sintering zone in rotating furnaces in the cement industry." Moscow, 1959. 31 pp; including the cover; (Ministry of Higher Education USSR, Moscow Order of Lenin Chemical Technology Inst im D. I. Mendeleyev); 200 copies; price not given; (KL, 17-60, 151)

15(2)

AUTHORS: Budnikov, P. P., Bogomolov, B. N.   SOV/131-59-6-6/15

TITLE: The Role of Periclase in Forsterite Refractories Products
                (Rol' periklaza v forsteritovykh ogneuporakh)

PERIODICAL: Ogneupory, 1959, Nr 6, pp 263-267 (USSR)

ABSTRACT: In the present article, the authors examine the influence of
                MgO-surplus in forsterite refractories products with regard to
                their interaction with cement clinkers of various mineralogical
                compositions. The chemical compositions of fire-proof forsterite
                products of the works "Magnezit" is given in table 1, that of
                the clinkers used for this purpose can be seen in table 2.
                Table 3 gives the heating conditions of the specimens, and
                figure 1 shows the test specimens. The figures 2, 3, 4, and 5
                show periclase in various forms. Conclusion: Periclase represents the
                part of forsterite refractories products with the highest
                reactivity. There are 7 figures, 3 tables, and 5 Soviet
                references.

ASSOCIATION: Khimiko-tekhnologicheskiy institut im. Mendeleyeva
Card 1/1   (Chemical Technological Institute imeni Mendeleyev) NIITsement

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SOV/80-32-10-2/51

AUTHORS: Budnikov, P. P., Bogomolov, B. N.

TITLE: Fosterite Titanium-Containing Refractories

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 10, pp
              2139-2148 (USSR)

ABSTRACT: This is a study of minimum periclase-content fosterite
              refractories with preservation of their valuable prop-
              erties and improvement of their thermal properties.
              Valuable properties include: good refractory prop-
              erties, high temperature of deformation under load,
              low thermal conductivity, tendency to form strong
              and dense coatings, and cement-clinker resistance.
              Periclase saturation with clinker components weakens
              refractory structure. Two types of batches were
              prepared: those containing 0-20% "MK" brand MgO,
              and those with a 0.5-4% technical TiO_2 content.
              The batches were mixed in a laboratory ball mill,
              moistened with sulfite-alcohol slops (1.24 g/cm^3
              mix), and formed. The bricks were dried at 125^0
              and burned at $1,650^0$. The effect of TiO_2 and free

Card 1/7   periclase content is shown in Figs. 1 and 2 .

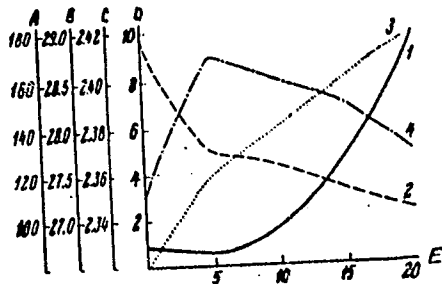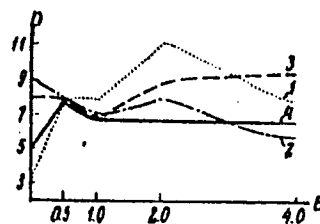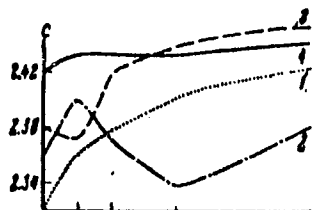Fosterite Titanium-Containing Refractories

75653
SOV/80-32-10-2/51

Fig. 1. Properties of fosterite refractories with different MgO content: (A) strength (kg/cm²); (B) porosity (%); (C) density (g/cm³); (D) thermal stability; (E) MgO content (%); (1) strength; (2) porosity; (3) density; (4) thermal stability.

Card 2/7

Fosterite Titanium-Containing Refractories

75653
SOV/80-32-10-2/51

Fig. 2. Properties of fosterite. titanium-containing refractories: (A) Strength (kg/cm^2); (B) porosity (%); (C) density (g/cm^3); (D) thermal stability; (E) TiO$_2$ content (%). MgO content (%): (1) 0; (2) 5; (3) 10; (4) 20.

Card 3/7

Fosterite Titanium-Containing Refractories   75653
                                                          SOV/80-32-10-2/51

Study of microstructure and phase composition by X-
rays with a URS-501 unit showed fosterite concretions
in all cases. Effect of MgO content: 0% porous struc-
ture; 5%, appearance of magnesite and glass formation;
>10% MgO, in addition to monticellite, hematite, mag-
netite, free periclase, and an unidentified MgO-con-
taining crystal appear, and the magnoferrite content is
increased. Effect of TiO_2: 0.5%, traces of Mg titanate;
1 to 2%, appearance of monticellite and Mg titanates,
improved fosterite concretion; 4%, Mg titanate dendrites
increase and magnetite crystals cause cracks in the
concretion. Clinker resistance: a portland cement
clinker from the "Gigant" ("Giant") Plant, containing
(in %): C_3S, 52.3; C_2S, 21.2; C_3A, 11.3; C_4Ar, 11.6;
MgO, 3.4; $CaSO_4$, 0.67(Abstracter's note: This is the
way these contents are given in the original.) was the
reagent. Results: 0-5% MgO, negligible interaction with
clinker; 20% MgO, surface formation of magnetite,
monticellite, and pyroxenes, periclase grain dispersion;

Card 4/7

Fosterite Titanium-Containing Refractories

75653
SOV/80-32-10-2/51

0% TiO_2, magnetite and pyroxene formation; 1 to 2% TiO_2, formation of monticellite and magnesium titanates. To study the effect of mix particle size, the samples given in Fig. 2 were compounded, moistened with sulfite-alcohol slops (1.243 g/cm^3) and molded in a PG-100 press at 850 kg/cm^2. Table 4 shows the effect of particle size on the properties of these refractories. Conclusions: refractories containing 5-7% periclase and 1-2% TiO_2 are dense, and highly heat-, and clinker-resistant. Those with up to 2% TiO_2 are suitable for use as cement rotary-kiln lining. Presence of more than 10% MgO lowers clinker resistance. Uzberg, A. I., Faynerman, B. A., and Mitrokhina, N. S., took part in the experiment. There are 7 tables; 6 figures; and 9 Soviet references.

SUBMITTED: April 22, 1959
Card 5/7

Fosterite Titanium-Containing Refractories

75653
SOV/80-32-10-2/51

Cumulative screen analysis

PARTICLE SIZE (IN mm)	CUMULATIVE FRACTION RETAINED (IN %)					
	3	2	1	0.5	0.5	—
1	—	15	20	10	55	100
2	—	5	15	20	60	100
3	—	—	10	25	65	100
4	—	—	—	30	70	100
CONTROL	5	15	20	5	55	100

Table 2.

Card 6/7

Fosterite Titanium-Containing Refractories

75653
SOV/80-32-10-2/51
Table 4

Properties of fosterite refractories of various particle sizes in the batch

BATCH	GRAIN SIZE BATCH Nr	BULK DENSITY	SHRINKAGE ON BURNING		COMPRESSIVE STRENGTH (kg/cm²)	APPARENT POROSITY (in %)	REFRACTORY DENSITY	WATER ABSORPTION (in %)
			ALONG HEIGHT	ALONG DIAMETER				
I 93% DUNITE, 7% CALCINED-MAGNESIA	1	2.627	1.24	1.48	150	28.5	2.35	12.0
	2	2.610	1.10	1.32	148	29.1	2.35	12.4
	3	2.592	1.68	1.57	150	28.6	2.36	12.2
	4	2.601	1.84	1.33	202	28.2	2.38	11.8
II 93% DUNITE, 7% CALCINED-MAGNESIA 1% (of 100%)TiO₂	1	2.640	1.35	1.64	200	27.2	2.30	11.4
	2	2.618	1.36	1.95	212	28.0	2.39	11.7
	3	2.628	1.65	1.34	257	27.6	2.40	11.5
	4	2.605	2.28	2.18	288	27.9	2.41	11.6
III 100% DUNITE, 1% (of 100%) TiO₂	1	2.618	1.67	1.77	162.5	28.3	2.38	11.8
	2	2.623	1.36	1.48	178	28.6	2.39	12.0
	3	2.608	1.30	1.51	203	29.4	2.37	12.4
	4	2.576	3.30	1.92	286	27.5	2.41	11.4
CONTROL BATCH: 75% DUNITE, 25% CALCINED-MAGNESIA	PLANT BATCH	2.695	1.43	1.22	233	25.8	2.47	10.5

Card 7/7