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Practical Studies in Organic Catalysis 36

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Practical Studies in Organic Catalysis   SOV/2924

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Practical Studies in Organic Catalysis   SOV/2924

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KOMAROV, V.A.; CHERNIKOVA, Ye.A.; KOMAROV, G.V.; LEONCHIK, Z.I.

Mechanism of the catalytic action of metal oxides in the reaction of decomposition of formic acid. Vest. LGU 15 no.16:120-133 '60.

(MIRA 13:8)

(Metallic oxides)   (Formic acid)

(Catalysts)

5.1190 5.3200

$5(4)$

68336

AUTHORS: Komarov, V. A., Chernikova, Ye. A.,   S/076/60/034/01/006/044

Kvyatkovskaya, G. R., Piganova, Ye. A. (Leningrad)   B010/B014

TITLE: The Effect of the Admixture of Some Oxides to Aluminum Oxide
Upon the <u>Catalytic</u> Properties of the Latter in the Decomposition
of <u>Isopropyl Alcohol</u>

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol 34, Nr 1, pp 43 - 45 (USSR)

ABSTRACT: In this paper the authors investigated the effect of various
oxide admixtures upon the catalytic properties of aluminum
oxide. The admixtures and their concentrations were chosen in
such a manner that their addition could effect an extension of
the lattice of the basic oxide. The investigation of the oxide
preparations as catalysts comprised the determination of the
initial reaction temperature at the beginning of gas formation
(Ref 3) and the performance of experiments at different tempera-
tures and volume rates. Results are compiled in tables 1 and 2.
Herefrom it follows that the initial temperature hardly depends
on the presence of admixtures. The decomposition rate of iso-
propyl alcohol is somewhat influenced by 1 mole% of the admix-

Card 1/2   tures, and is increased according to their character and experi-

Card 2/2

KOMAROV, V.A.; CHERNIKOVA, Ye.A.; KOMAROV, G.V.

Effect of admixtures to aluminum and iron oxides on the catalytic decomposition of formic acid. Zhur. fiz. khim. 36 no.3:
540-545 Mr '62.
(MIRA 17:8)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

BAZHINOV, A.G.; GARIN, N.S.; KAMORSKIY, N.M.; KOMAROV, V.A.

Sterilization of nutrient media using β-propiolactone. Lab.delo
8 no.5:46-49 My '62.   (MIRA 15:12)
                        (HYDRACRYLIC ACID)
            (BACTERIOLOGY—CULTURES AND CULTURE MEDIA)

FOKIN, A.V.; SKLADNEV, A.A.; KOMAROV, V.A.

Acylating action of mixed anhydrides of fluorine-containing carboxylic acids. Zhur.ob.khim. 33 no.10:3271-3274 O '63.

(MIRA 16:11)

KHARITONOV, N.P.; KONSTANTINOVA, G.T.; KHUDOBIN, Yu.I.; KOMAROV, V.A.

Catalytic reaction of trialkyl (aryl) silanes with allyl alcohol.
Izv. AN SSSR Ser.khim. no.10:1749-1756 0 '63.   (MIRA 17:3)

1. Institut khimii silikatov im. I.V.Grebenshchikova AN SSSR.

DOLGOV, B.N.; VINTER, G.; KOMAROV, V.A.; KHARITONOV, N.P.;
KHUDOBIN, Yu.I.

Interaction between pentaerythritol and trialkyl silanes
in the presence of some metal halides. Izv. AN SSSR. Ser.
khim. no.12:2146-2152 D '63.   (MIRA 17:1)

1. Institut khimii silikatov im. I.V. Grebenshchikova AN
SSSR i Leningradskiy gosudarstvennyy universitet.

KNUNYANTS, I.L.; DYATKIN, B.L.; FOKIN, A.V.; KOMAROV, V.A.

Nitration of perfluoroisobutylene. Izv. AN SSSR. Ser. khim.
no.8:1425-1429 Ag '64.   (MIRA 17:9)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

L 21735-65 ' EWT(m)/EPF(c)/EPR/EWP(j)   Pc-4/Pr-4/Ps-4   SSD(a)/RPL   RM/WW

ACCESSION NR: AP4044703   S/0062/64/000/008/1425/1429   /2

AUTHOR: Knunyants, I. L.; Dyatkin, B. L.; Fokin, A. V.; Komarov, V. A.

TITLE: Nitration of perfluoroisobutylene

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 8, 1964, 1425-1429

TOPIC TAGS: perfluoroisobutylene, nitration, nitrogen tetroxide reaction, nitroperfluorobutylnitrite, perfluoroisobutyldinitrite, nitroperfluorobutanol, bistrifluoromethylglycolic acid

ABSTRACT: Perfluoroisobutylene was heated with an equimolecular amount of
. . . . . . at 170-180C for 6-8 hours to attain nearly complete con-
. . . Nitroperfluoro-tert.-butyl nitrite (compound VI in the Enclosure),
. . . . and a fraction boiling 30-100C, apparently a mixture of per-
. . . . . e-dinitrite, (CF₃)₂C(ONO)CF₂ONO . . . . . conversion products
. . . . Hydrolysis of the 30-100C fraction gave a . . . fluoromethylglycol-
ic acid (X) in 27% yield based on initial perfluoroisobutylene. Nitroperfluoro-

Card 1/3

L 21735-65

ACCESSION NR: AP4044703

tert.-butanol (IX) was obtained in 23% yield, based on initial perfluoroisobutylene,

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR

SUBMITTED: 28Dec62   ENCL. 01

SUB CODE: GC, MT   NO REF SOV: 005   OTHER: 004

Card 2/3

L 21735-65

ACCESSION NR: AP4044703

$$\frac{CF_3}{CF_3}C = CF_2 \xrightarrow[\;O-N=O\;]{O-N=O} \left[\frac{CF_3}{CF_3}C-CF_2NO_2\right] \xrightarrow{\cdot O-N=O} \frac{CF_3}{CF_3}C-CF_2NO_2 \;(VI)$$
$$\underset{ONO}{\cdot H_2O}$$

$$\left[\frac{CF_3}{CF_3}C-CF_2ONO\right] \xrightarrow{\cdot O-N=O} \frac{CF_3}{CF_3}C-CF_2ONO \xrightarrow{H_2O} \frac{CF_3}{CF_3}C-COOH \quad \frac{CF_3}{CF_3}C-CF_2NO_2$$
$$\underset{ONO}{} \qquad \underset{OH}{} \qquad \underset{OH}{}$$
$$(X) \qquad\qquad (IX)$$
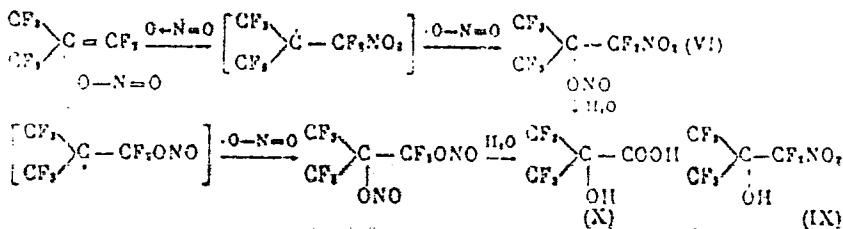
Card 3/3

L 11059-65 EWT(m) DIAAP/SSD/AFWL/ESD(t)
ACCESSION NR: AP4046390   S/0056/64/047/003/0855/0859

AUTHORS: Bochin, V. P.; Zherebtsova, K. I.; Komarov, V. A.;
Krasnov, L. V.; Litvin, V. F.; Nemilov, Yu. A.

TITLE: Elastic scattering of deuterons by separated nickel and zinc
isotopes

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47,
no. 3, 1964, 855-859

TOPIC TAGS: nickel, zinc, isotope, elastic scattering, deuteron
scattering, isotopic effect

ABSTRACT: The angular distributions of the elastically scattered
_____ were measured with a 90° magnetic analyzer. The deuteron
_____ was 6.5 MeV, close to the optimal value for studying the in-
_____ of the surface structure on the angular distribution of
elastically scattered deuterons. The experimental method was de-

Card 1/3

L 11059-65
ACCESSION NR: AP4046398 $\Box$

scribed elsewhere (Nemilov and Litvin, PTE, No. 2, 32, 1960). The targets were thin self-supporting foils (~ 2 mg/cm^2) of separated isotopes of nickel and zinc, prepared in accordance with a previously described procedure (Bochin et al., Report on (D, p) Reactions at the Paris Congress on Nuclear Physics, 1964). A distinct isotopic effect was observed in the elastic scattering of the deuterons, resulting in a systematic increase in the deviation of the cross section from the Rutherford cross section as pairs of neutrons are added to an even-even nucleus. Computer calculations of the elastic d-d scattering, using the optical model with the Woods-Saxon potential, have shown that the observed isotopic effect can be attributed to a difference in the diffuseness of the nuclear boundaries in the different isotopes. Comparison of theory and experiment yielded the nuclear boundary diffuseness parameter for all the stable isotopes of nickel and zinc. Orig. art. has: 2 figures, 2 formulas, and 1 table.

Card 2/3

L 11053-65
ACCESSION NR: AP4046398

ASSOCIATION: Leningradskiy gosudarstvenny*y universitet (Leningrad
University)

                    Apr64   ENCL: 00

SUB CODE: NP   NR REF SOV: 008   OTHER: 009

Card 3/3

BOCHIN, V.P.; ZHEREBTSOVA, K.I.; KOMAROV, V.A.; KRASNOV, L.V.; LITVIN, V.F.;
NEMILOV, Yu.A.

Study of (d,p) stripping reactions on nuclei of medium atomic weight.
Part 3. Vest. LGU 20 no.10:34-51 '65.   (MIRA 18:7)

FOKIN, A.V.; KOMAROV, V.A.; SKLADNEV, A.A.; DAVYDOVA, S.M.

Reactivity of nitroperfluoroalkyl nitrites and products of their transformation. Part 1: Reaction of nitroperfluoroalkyl nitrites with hydrogen sulfide. Zhur. ob. khim. 35 no.9:1662-1664 S '65

Reactivity of nitroperfluoroalkyl nitrites and products of their transformation. Part 2: Reaction of nitroperfluoroalkyl nitrites with mercaptans. Ibid.:1664-1666   (MIRA 18:10)

L 45129-66 EWT(1)/EWT(m)/EWP(e)/T WW/DJ/WE/WH
ACC NR: AP6020382 (N)   SOURCE CODE: UR/0114/66/000/006/0035/0038

AUTHOR: Yuditskiy, F. L. (Candidate of technical sciences); Yegorov,
P. G. (Engineer); Komarov, V. A.   46
                                                              B
ORG: none

TITLE: Tests of graphite piston rings in the gas plungers of diesel
fuel pumps

SOURCE: Energomashinostroyeniye, no. 6, 1966, 35-38

TOPIC TAGS: engine piston, graphite, diesel engine

ABSTRACT: The article reports the results of tests of the wear
resistance and service life of piston rings made of different brands of
antifriction graphite materials, to determine the optimum cast iron-
graphite pair under conditions of dry friction in a gas medium, at
comparatively high temperatures. The wear was determined by six
measurements of each ring. The relative wear and the rate of wear were
determined from the value of the absolute wear. The test materials for
the rings were native materials Brands AO-1500S05 and 2P-1000, and
Brand A5V3 made by the "Acheson" company. Results (tabulated) indicate
that, of the three materials tested, the best wear resistance was shown

Card 1/2   UDC: 621.887.621.892.7.001.4

L 45129-66
ACC NR: AP6020382

by a calcined dense material without metallic impregnations (2P-1000).
The average rate of wear of this material was 0.13 microns/hr. If the
permissible relative wear is taken at 15%, such rings could operate for
10,000 hours without replacement. The material from the "Acheson"
company was less resistant in a gas medium, the wear being 3-4 times
greater than for AO-1500S05 and 10 times greater than for 2P1000. In
general, the results are said to confirm the possibility of using
graphite piston rings, with dry friction, in the cylinders of motors.
Orig. art. has: 3 figures and 2 tables.

SUB CODE: 21, 11/ SUBM DATE: none/ ORIG REF: 005

Card 2/2 MJS

L 32682-66   EWT(m)/EWP(j)   RM/FDN/JW

ACC NR: AP6012527   SOURCE CODE: UR/0062/66/000/003/0466/0472

AUTHOR: Knunyants, I. L.; Fokin, A. V.; Komarov, V. A.

ORG: none

TITLE: Nitration of perfluoropropylene with nitrogen dioxide and investigation of nitration products

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 3, 1966, 466-472

TOPIC TAGS: nitration, organic chemistry, nitrogen oxide, fluorine compound, PROPYLENE

ABSTRACT: The present study is a continuation of work reported in *Dokl. AN SSSR*, III, 1035 (1956). The synthesized nitration products are given in the following table along with some of their properties:

UDC: 542.958.1 + 661.723-16

Card 1/3

L 32682-66

ACC NR: AP6012527

Formula	Boiling point °C (pressure, mm Hg)	d_4^{20}	n_D^{20}	Formula	Boiling point °C (pressure, mm Hg)	d_4^{20}	n_D^{20}
$CF_3-CF-CF_2$ ⎪ ONO NO$_2$	57	1,637	1,3276	$CF_3-C-CF_2NO_2$ OH OC$_2$H$_5$	118,5	1,391	1,3520
$CF_3-C-CF_2NO_2$ OH OH	119—120	1,638	1,3560	CF_3 〉C—CH$_3$ CF_2NO_2 O—C—O	68(44)	1,616	1,3621
$CF_3-C-CF_2NO_2$ O	32—33	1,5350	1,2955	CHF_2NO_2	42—43	1,4605	1,3158
$CF_3-C-CF_2NO_2$ OH Cl	37	1,609	1,3500	$CF_3-CH-CH_3$ NO$_2$ OH	64—63(25)	1,390	1,3825
$CF_3-C-CF_2NO_2$ OH Br	50	1,935	1,3758	CF_3-CH_2-OH NO$_2$	65(40)	1,4792	1,3780
$CF_3-C-CF_2NO_2$ OH CN	64—65(20)	1,6282	1,3495	CH$_3$ CF_3-C-CH_3 NO$_2$ OH	55(35)	1,2950	1,3915

During nitration of perfluoropropylene with nitrogen dioxide, nitroperfluoroisopropyl nitrile and dinitroperfluoropropane form. Hydrolysis of nitroperfluoroisopropyl nitrite produces nitroperfluoroacetone hydrate which upon dehydration produces anhydrous

Card 2/3

L 32682-66

ACC NR: AP6012527 O

nitroperfluoroacetone. The chemical properties of nitroperfluoroacetone were investi-
gated and some of its derivatives were synthesized. Nitroperfluoroacetone reacts with
basic compounds to form difluoronitromethane and trifluoroacetic acid derivatives. The
reaction of nitroperfluoroacetone with nitrosyl fluoride produces the same perfluoro-
isopropyl nitrite as that produced by heating of perfluoropropylene with nitrogen diox-
ide, which proves the structure of nitroperfluoroisopropyl nitrite according to the re-
action

$$CF_3-CF=CF_2 + N_2O_4 \rightarrow [CF_3-CF-CF_2NO_2]$$

O—N—O | O—N—O

| NO

CF₃—CF—CF₃ | CF₃—CF—CF₃ | CF₃—CF—CF₃
NO₂ NO₂ | NO NO₂ | ONO NO₂
(I) | (VI) | (III)
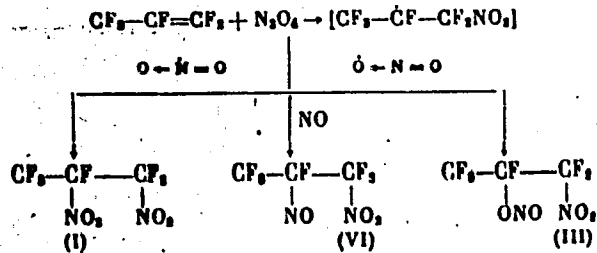
which corresponds to structure III. Orig. art. has: 1 table.

SUB CODE: 07/   SUBM DATE: 21Nov63/   ORIG REF: 005/   OTH REF: 005

Card 3/3

LIMAR', T.F.; UVAROVA, K.A.; BULACHEVA, A.F.; SGYVUBM, A.S.; BEDNOVA, I.N.;
MAKOVSKAYA, E.B.; SOLOMEINA, G.I.; DOLMATOV, Yu.D.; BOBYRENKO, Yu.
Ya.; KOGAN, F.I.; KOVALENKO, P.N.; IVANOVA, Z.I.; FOKIN, A.V.;
KOMAROV, V.A.; SOROCHKIN, I.N.; DAVYDOVA, S.M.; RAVDEL', A.A.;
GORELIK, G.N.; DAUKSHAS, V.K. [Dauksas, V.]; PIKUNAYTE, L.A.
[Pikunaite, L.]; SHARIPOV, A.Kh.; SHABALIN, I.I.; STEPNOVA, G.M.;
SHMIDT, Ye.V.; DUBOV, S.S.; STRUKOV, O.G.

Scientific research papers f the members of the All-Union
Mendeleev Chemical Society (brief information). Zhur. VHKO
10 no.3:350-360 '65.
(MIRA 18:8)

1. Donetskiy filial Vsesoyuznogo nauchno-issledovatel'skogo
instituta khimicheskikh reaktivov i osobo chistykh khimicheckikh
veshchestv (for Limar', Uvarova, Bulacheva). 2. Ural'skiy nauchno-
issledovatel'skiy khimicheskiy institut (for Shubin, Bednova,
Makovskaya, Solomeina). 3. Chelyabinskiy filial Gosudarstvennogo
nauchno-issledovatel'skogo i proyektnogo instituta mineral'nykh
pigmentov (Dolmatov, Bobyrenko). 4. Rostovskiy-na-Donu univer-
sitet (for Kogan, Kovalenko, Ivanova). 5. Leningradskiy tekhnolo-
gicheskiy institut imeni Lensoveta i Institut mineral'nykh
pigmentov (for Ravdel', Gorelik). 6. Vil'nyusskiy gosudarstvennyy
universitet imeni Kpsukasa (for Daukshas, Pikunayte). Nauchno-
issledovatel'skiy institit neftekhimicheskikh proizvodstv (for
Sharpipv, Shabalin). 8. Tomskiy politekhnicheskiy institut
imeni Kirova (for Stepnova, Shmidt).

KOMAROV, V.A. (Kuybyshev)

Efficient distribution of materials in structures. Izv. AN SSSR.
Mekh. no.5:85-87 S-O '65.
(MIRA 18:10)

BOCHIN, V.P.; ZHEREBTSOVA, K.I.; ZOLOTAREV, V.S.; KOMAROV, V.A.;
    KRASNOV, L.V.; LITVIN, V.F.; NEMILOV, Yu.A.; PISKORZH, Sh.

Study of (d, p) stripping reactions and (d, d) elastic
scattering on nuclei of mean atomic weight. Part 1. Vest.
LGU 18 no.22:68-77 '63.   (MIRA 17:1)

BOCHIN, V.P.; ZHEREBTSOVA, K.I.; ZOLOTAREV, V.S.; KOMAROV, V.A.;
KRASNOV, L.V.; LITVIN, V.F.; NEMILOV, Yu.A.;
NOVATSKIY, B.G.

Study of (d, p) stripping reactions and (d, d) elastic
scattering on nuclei of mean atomic weight. Part 2. Vest.
LGU 18 no.22:78-84 '63.   (MIRA 17:1)

KOMAROV, V. A.

USSR/Physics of the Earth - Geophysical Prospecting, O-5

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 36466

Author: Komarov, V. A.

Institution: None

Title: Concerning the Problem of the Investigation of the Phenomenon of Induced Polarization in Geophysical Prospecting

Original Periodical: Sb. nauch. tekhn. inform. (M-vo geol. i okhrany nedr), 1955, No 1, 73-75

Abstract: The fields of induced polarization are nonstationary and amount to hundredths and thousandths of the value of the polarizing field. The VITR has produced and tested a model of apparatus for recording the induced polarization. D-c amplifiers were used with an input impedance of more than one megohm, jointly with a photographic recorder, designed on the basis of a FR-2 apparatus. The recording scale goes up to 3 mm/mv. Reliable measurements of the induced polarization were obtained with one second after disconnecting

Card 1/2

KOMAROV, V.A.

IOFFE, L.M.; KOMAROV, V.A.; SEMENOV, M.V.

Use of a.c. industrial stray currents prospecting. Vop.rud.geofiz.
no.1:128-130 '57.   (MIRA 10:10)
    (Prospecting--Geophysical methods)   (Terrestrial electricity)

KOMAROV,V.A.

The nature of electric fields of induced polarization and
possibilities of using them for ore prospecting. Vest.LGU
12 no.6:29-40 '57.   (MLRA 10:5)
        (Electric fields) (Prospecting--Geophysical methods)

SOV/169-59-5-4558

Translation from: Referativnyy zhurnal, Geofizika, 1959, Nr 5, p 41 (USSR)

AUTHORS: Komarov, V.A., Ioffe, L.M., Khloponina, L.S., Semenov, M.V.

TITLE: Induced Polarization of Rocks and Ores and Its Utilization in Electric Prospecting ✓

PERIODICAL: Tr. Vses. n.-i. in-ta metodiki i tekhn. razvedki, 1958, Nr 1, pp 236 - 257

ABSTRACT: The authors note that the conclusions of various investigators on the possibilities and the methods of detecting ore bodies on the basis of the data of the induced polarization method (IP), are contradictory. In connection with this fact, the necessity arose to study more in detail the IP of rocks and ores both in the laboratory and under field conditions, and also to elaborate the practice of observations of IP fields and to design equipment guaranteeing the reliability of measurements. A device has been developed, which allowed the performing of oscillographic registration of the curves of diminution of ΔU_{IP} and other quantities, and ensured a sufficiently accurate measure-

Card 1/2

KOMAROV, V. A., Candidate Geolog-Mineralog Sci (diss) -- "Induced polarization

of rock and ore and its use in prospecting for ore deposits". Leningrad, 1959.

18 pp (Min Higher Educ USSR, Leningrad Order of Lenin State U im A. A. Zhdanov),

150 copies (KL, No 23, 1959, 162)

3(8)   SOV/132-59-2-6/16
AUTHORS: Komarov, V.A. and Ryss, Yu.S.

TITLE: Some of the Results of Applying the Method of Induced
               Polarization in the Polymetallic Ore Deposits of the
               Rudnyy Altay (Nekotoryye rezul'taty primeneniya meto-
               da vyzvannoy polyarizatsii na polimetallicheskikh me-
               storozhdeniyakh Rudnogo Altaya)

PERIODICAL: Razvedka i okhrana nedr, 1959, Nr 2, pp 31 - 37 (USSR)

ABSTRACT: Observations of fields of induced polarization ("vy-
               zvannaya polyarizatsiya") were conducted according to
               the scheme of median gradient with the dispersion of
               feeding electrodes from 100 to 1,500 m; that of re-
               ceiving electrodes was 10 to 50 times less. The po-
               larizing current, 5 to 10 a, was on for 2 to 5 minutes.
               The strength of the current(i) in the feeding line
               and the difference of potentials between the receiv-
               ing electrodes (ΔU_{pr}) were measured and the value of
               the apparent specific resistance (ρ_k) calculated.
               After the polarizing current was switched off, the
Card 1/3   difference of potentials in the induced polarization

SOV/132-59-2-6/16

Some of the Results of Applying the Method of Induced Polarization
in the Polymetallic Ore Deposits of the Rudnyy Altay

field (ΔU_{vp}) between the same electrodes was measured.
The percentage value of the ratio

$$\eta = \frac{\Delta U_{vp}}{\Delta U_{pr}}$$

has been taken as a basic interpretation parameter.
The utilization of a high resistance equipment with an
oscillographic registration on photographic paper of
curves of decrease in ΔU_{vp} gave exact data on the value
of ΔU_{vp} at any given moment. The authors applied the
method of induced polarization to prospecting in Zmei-
nogorsk and Zyryanovsk districts of the Rudnyy Altay
for polymetallic deposits, and found that observed
changes in the value η indicated different mineral
ores of variable conductivity. For rocks not contain-
ing any ore, the value η usually did not exceed 2%.

Card 2/3

SOV/132-59-2-6/16

Some of the Results of Applying the Method of Induced Polarization
in the Polymetallic Ore Deposits of the Rudnyy Altay

In the ore bearing districts, this value often exceeded
4% and in some parts of the Zmeinogorsk district it
reached 15-20%. The excessive value η , caused by the
polarization of ores, was considered as an anomaly of
the induced polarization field, and the authors describe
three different categories of anomalies according to
the correlation of the η , ΔU_{xp} and ρ_k curves; each
category of anomalies being connected with deposits
of metals which react differently to polarization.
A full description of all experiments is given. There
are 4 graphs, 2 profiles and 3 Soviet references.

ASSOCIATION: Kamenskaya geofizicheskaya ekspeditsiya Sibirskogo geo-
fizicheskogo tresta (Kamenskaya Geo-Physical Expedition
of the Siberian Geo-Physical Trust). Vsesoyuznyy nauch-
no-issledovatel'skiy institut metodiki i tekhniki
razvedki (All-Union Scientific Research Institute of
Methods and Technology of Survey)

Card 3/3

S/169/62/000/003/022/098
D228/D301

AUTHORS: Komarov, V. A. and Sheynmann, S. M.

TITLE: Trial application of the induced polarization and the
             phase-amplitude measurement methods of electrical
             prospecting

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 3, 1962, 25, ab-
             stract 3A209 (Byul. nauchno-tekhn. inform M-vo geol.
             i okhrany nedr SSSR, no. 4 (32), 1961, 26-34)

TEXT: The methods of induced polarization and phase-amplitude mea-
surement give good results for deposits of impregnation ores; here,
in addition to prospecting for mineralized zones by induced polari-
zation methods, it is possible to detail the structure of ore zones,
appraise their depositional features, and estimate the approximate
concentration of sulfides. Multifrequency techniques -- the double-
loop method and the method of dipole induction magnetic profiling --
are being put into practice. The application of these methods per-

Card 1/2

Trial application of ...

S/169/62/000/003/022/098
D228/D301

mits the exposure of orebodies and the approximate estimation of
their depositional features. /Abstracter's note: Complete trans-
lation.7

Card 2/2

KOMAROV, V.A., inzh.

Defects in the clamps of air switches. Energetik _9 no.12:22-23
D '61.   (MIRA 15:1)

(Electric cutouts)

KOMAROV, V.A.

Elements of the theory of the induced polarization method.
Trudy VITR no.3:138-171 '61.   (MIRA 15:7)
                    (Electric prospecting)

KOMAROV, V.A.

Induced polarization method and prospects of its use in searching for disseminated ores. Sov.geol. 5 no.6:130-134 Je '62.   (MIRA 15:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metodiki i tekhniki razvedki.
                        (Electric prospecting)
                        (Ore deposits)

KNUNYANTS, I.L.; FOKIN, A.V.; KOMAROV, V.A.

Nitration of perfluoroproylene with nitrogen dioxide.
Zhur. VKHO 7 no.6:709-710 '62.   (MIRA 15:12)
                              (Propene)
                              (Nitrogen oxide)

KOMAROV, V.A.; ABDULAYEVA, S.A.; CHERNIKOVA, Ye.A.

Reactions between tin oxides and isopropyl alcohol.
Kin.i kat. 3 no.6:920-926 N-D '62.   (MIRA 15:12)

1. Leningradskiy gosudarstvennyy universitet imeni Zhdanova.
        (Tin oxide)   (Isopropyl alcohol)
                    (Catalysis)

AUTHOR: Komarov, V. A.

S/169/63/000/002/113/127
D263/D307

TITLE: The induced polarization method and its possibilities
               in the search for disseminated ores

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 2, 1963, 31, ab-
               stract 2D184 (Sov. geologiya, 1962, no. 6, 130-134)

TEXT: Induced polarization (IP) anomalies are produced by electron-
conducting minerals and cannot as a rule be classified by the IP
method according to the composition of mineralization. This neces-
sitates the use of combined geophysical and geological methods in
detailed accounts of geological and structural characteristics of
the regions studied. On the example of applying the IP method on one
part of Rudnyy Altay, it is shown that, with considerable separation
of electrodes, it is possible to eliminate the effects of covering
deposits and to study the distribution of polarizability in funda-
mental rocks, working on the ground surface. From the position and
intensity of characteristic maxima on the η_h vertical sounding

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The induced polarization ...

S/169/63/000/002/113/127
D263/D307

curves in accordance with the theoretical basis of the IP method it is possible to assess the depth and magnitude of more or less localized ores. In the presence of certain conditions IP anomalies are found above ore formations covered by ore-less rocks to a thickness of tens of meters or more. IP is successfully applied to the discovery of widely developed ore mineralization zones and of the most promising regions in these zones, to the detailed study of known zones of ore mineralization, to the resolution of 'blind' ore-bearing and ore-less basic intrusions (with which are connected Cu-Ni deposits), and to the sorting out of conductivity anomalies exposed by other electric prospecting methods. The method is re-commended for the discovery of ore accumulations between boreholes and mining works and for the assessment of the amount of electro-conducting minerals in rocks. /¯Abstracter's note: Complete transla-tion._7

Card 2/2

KOMAROV, V. A.; CHERNIKOVA, Ye. A.; KOMAROV, G. V.; LEONCHIK, Z. I.

Mechanism of the catalytic action of metallic oxides in the
reaction of decomposition of formic acid. Part 1: Composition
of the reaction products. Zhur. fiz. khim. 36 no.12:2577-2581
D '62.
                                        (MIRA 16:1)

1. Leningradskiy gosudarstvennyy universitet imeni Zhdanova.

    (Formic acid)   (Metallic oxides)   (Catalysis)

KNUNYANTS, I. L.; FOKIN, A. V.; DYATKIN, B. L.; KOMAROV, V. A.

Action of nitrogen dioxide on perfluoroisobutylene. Zhur.
VKHO 8 no.2:239-240 '63.   (MIRA 16:4)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

(Nitrogen oxides) (Propene)

KOMAROV, V.A.

Feature of ρ_k anomalies for gradient establishment. Uch. zap.
LGU no.320:96-99 '63.   (MIRA 16:9)

(Electric prospecting)

KOMAROV, V.A., starshiy nauchn. sotr., red.

[Using the method of induced polarization in prospecting
for ore deposits] Primenenie metoda vyzvannoi poliariza-
tsii pri poiskakh rudnykh mestorozhdenii. Moskva, Izd-vo
"Nedra," 1964. 144 p.   (MIRA 17:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metodiki
i tekhniki razvedki.

VLOROV, V.A.; VAN SU-O [Wang Su-c]

Catalytic synthesis of dinonyl ether. Izv.vys.ucheb.zav.;
khim.i khim.tekh. 8 no.4:700-701 '65.

(MIRA 18:11)

1. Leningradskiy gosudarstvennyy universitet imeni Zhdanova.,
kafedra organicheskoy khimii.

MASLOV, P.V.; KOMAROV, V.A.

Catalytic ketonisation of C₉ - C₁₀ normal primary alcohols.
Zhur.prikl.khim. 38 no.3:697-699 Mr '65.
(MIRA 18:11)

1. Submitted Febr. 7, 1964.

L 53933-65   EWT(m)/EPF(c)/EPR/EWP(j)/EWA(c)   Fc-4/Pr-4/Ps-4   RPL   WW/
ACCESSION NR: AP5016225   JW/RM   UR/0063/65/010/003/0354/0355
                                               542.958.1 + 547.321

AUTHOR: Fokin, A.V.; Komarov, V.A.; Sorochkin, I.N.; Davydova, S.M.

TITLE: Nitration of 1,1,1-trifluoropropylene by nitrogen dioxide and a study of the
nitration products

SOURCE: Vsesoyuznoye khimicheskoye obshchestvo. Zhurnal, v. 10, no. 3, 1965,
354-355

TOPIC TAGS: nitration, olefin, nitrogen oxide, nitration product

ABSTRACT: The nitration of olefins having the general formula $Rf-CH=CH_2$ (where Rf =
... CF₃) was studied. Because .... be separated
... ... nation of the reaction mixture ... ... treated with
... ... reaction mixture was extracted with ethyl ... and ... ... solution was
... and fractionated. 3-Nitro-1,1,1-trifluoro-2-propanol (I, 80% yield) and 3-nitro-1,1,1-
... ... and nitrate (II, 17% yield) ... ... is also obtained
by treating I with a nitrating mixture:

$$CF_3-CH-CH_2 \xrightarrow[H_2SO_4]{HNO_3} CF_3-CH-CH_2$$
$$\quad \text{OH} \quad \text{NO}_2 \qquad\qquad \text{ONO}_2 \quad \text{NO}_2$$
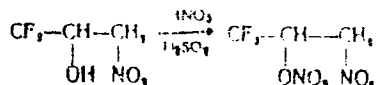
Card 1/3

L 53933-65
ACCESSION NR: AP5016226

Bromination of I in an alkaline medium produced 3-nitro-3-bromo-1,1,1-trifluoro-2-propanol:

$$CF_3-CH-CH_2 \longrightarrow CF_3-CH-CHBrNO_2$$
$$\quad\ \ \ |\ \ \ \ |\qquad\qquad\qquad |$$
$$\quad\ \ \ OH\ \ NO_2\qquad\qquad\ \ \ OH$$
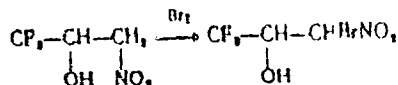
and the reaction of I with acetyl chloride yielded 1,1,1-trifluoro-3-nitro-2-propanol:

$$CF_3-CH-CH_2 + CH_3COCl \longrightarrow CH_3-\overset{O}{\overset{\|}{C}}-OCH\overset{CF_3}{\underset{CH_2NO_2}{}}$$
$$\quad\ |\ \ \ \ |$$
$$\quad\ OH\ \ NO_2$$
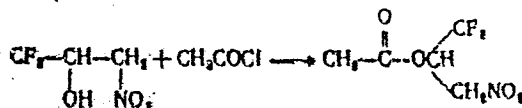
On the basis of the products obtained, the nitration of 1,1,1-trifluoropropylene may be represented as follows:

$$N_2O_4 \rightleftharpoons 2NO_2 \rightleftharpoons 2O-N=O$$

$$CF_3-CH=CH_2 \xrightarrow{NO_2} CF_3-CH-CH_2NO_2 \xrightarrow{ON=O}$$

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ACCESSION NR: AP5016126

$$CF_3-CH-CH_3 \xrightarrow{\substack{H_2O}} CF_3-CH-CH_3$$
$$\underset{ONO\ NO_2}{} \qquad \underset{OH\ NO_2}{}$$

$$\xrightarrow{O} CF_3-CH-CH_3$$
$$\underset{ONO_2\ NO_2}{}$$
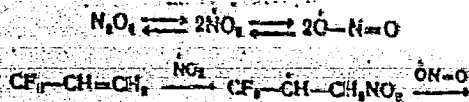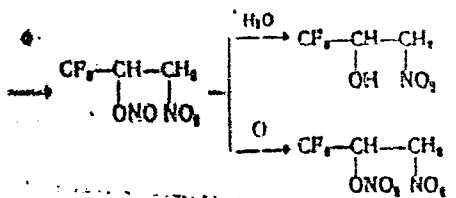
Orig. art. has: 5 formulas.

ASSOCIATION: none

SUBMITTED: 28Aug64   ENCL: 00   SUB CODE: OC

NO REF SOV: 000   OTHER: 004

Card 3/3

KOMAROV, V.A.; PLATONOVA, V.I.; RODIMENKOVA, N.A.; KHARITONOV, N.P.;
KHUDOBIN, Yu.I.

Effect of alcohol structure and solvent composition on the
kinetics of the alkaline solvolysis of trialkylsilanes.
Zhur. fiz. khim. 38 no.9:2139-2144 S '64.   (MIRA 17:12)

1. Institut khimii silikatov imeni Grebenshchikova AN SSSR,
Leningrad.

GTRSPL   No. 45

licism and Bibliography

Skochinski, A.A. and Komarov, V.B., Mine Ventilation, 1949. Reviewed by V.V. Vladimirski.
316-8

Akademiya Nauk S.S.S.R.,   Doklady   Vol. ∥ No. 2

2491. MINE VENTILATION SKOCHINSKII, A.A. AND KOMAROV, V. B. (MOSCOW:
REV. IN IZVEST. AKAD. NAUK SSSR, OTDEL. TEKH. NAUK (BULL. ACAD. SCI.
SSSR., SECT. TECH. SCI.), FEB. 1951, 316-318).
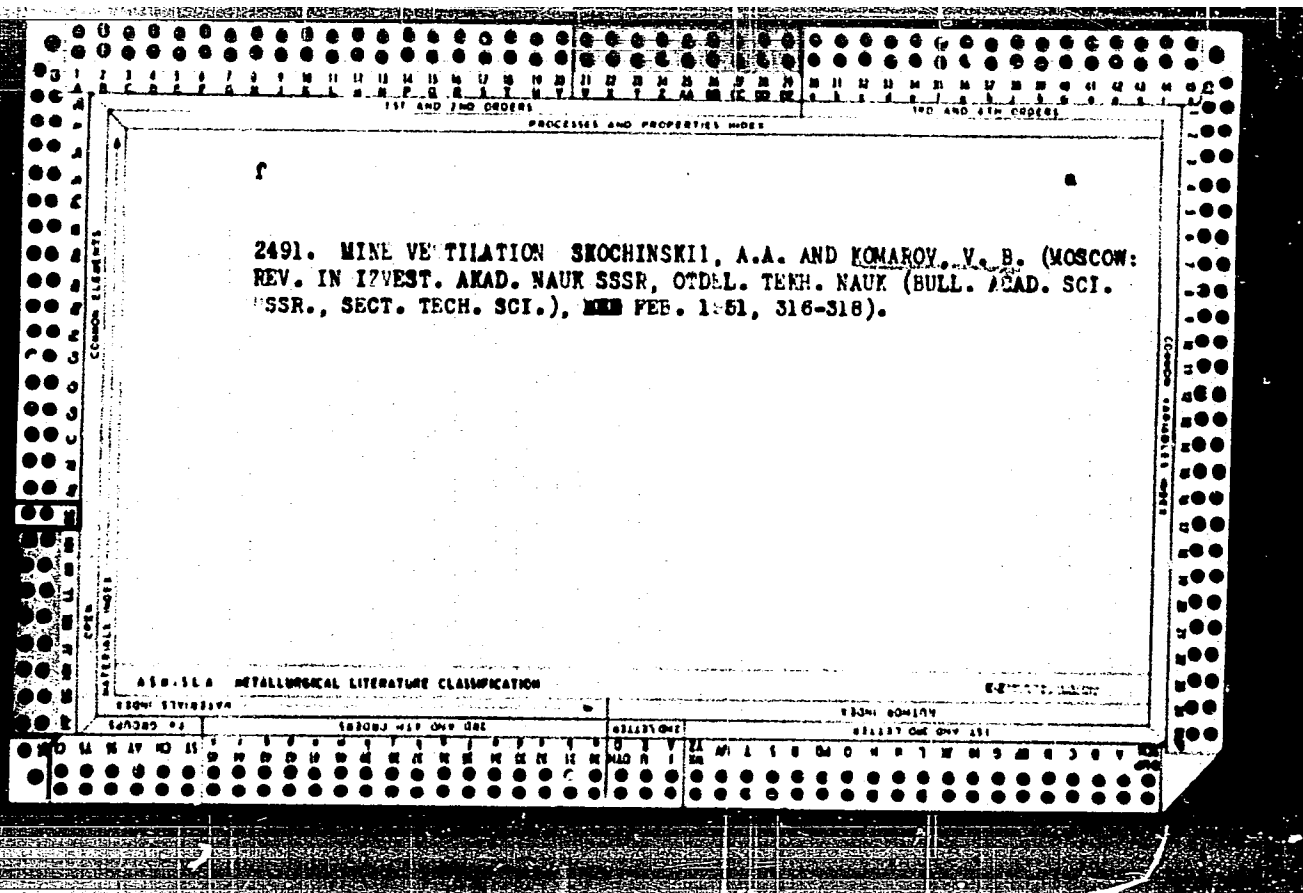
1. BOKIY, O. E., GERONT'YEV, V. I., PROF., DUBRAVA, T. S. DOCENT., LAKOZA, N. P., PROF. KOMAROV, V. B., PROF., SUKHANOV, A. F., PROF., SHKLAYRSKIY, F. N., PROF.

2. USSR (600)

4. Zvorykin, A. A.

- 7. Essays on the history of Soviet mining engineering. A. A. Zvorykin. Reviewed by O. B. Bokiy, Prof., V. I. Geront'yev, Docent T. S. Dubrava, Prof. N. P. Lakoza, Prof. V. B. Komarov, Prof., A. F. Sukhanov, Prof. F. N. Shklayrsky. Gor.zhur. no 10, 1952.

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

1. GORODETSKIY, P. I. : DUBRAVA, T. S. : KOMAROV, V. B. : SUKHANOV, A. F.

2. USSR (600)

4. Bokii, Boris Ivanovich, 1873-1927

7. Outstanding worker in mining and technology. Gor. zhur. no. 10, 1952

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

MILETICH, Anton Fedorovich, KOMAROV, V.B., prof., doktor tekhn, nauk, otvetst-
vennyy red.;GRISHAYENKO, N.N., red. izd-va; IL'INSKAYA, G.N., tekhn.
red.; SHKLYAR, S.Ya., tekhn. red.

[Controlling mine ventilation by depression readings] Kontrol'
provetrivaniia shakht metodom depressionnykh s"emok. Pod red.
V.B. Komarova. Izd.2., perer. i dop. Moskva, Ugletekhizdat, 1958.
144 p.   (MIRA 11:7)
   (Mine ventilation)

GRANSKIY, Viktor Isidorovich; KOMAROV, V.B., prof., doktor tekhn.nauk,
retsenzent; POZIN, M.Ye., prof., doktor khim.nauk, retsenzent;
TUMAREV, A.S., prof., doktor tekhn.nauk, retsenzent; KARPOV,
V.G., dotsent, kand.tekhn.nauk, retsenzent; BLYUMBERG, V.A.,
kand.tekhn.nauk, retsenzent; BESPALOV, I.V., inzh., retsenzent;
RIVLIN, L.B., inzh., retsenzent; ANSEROV, M.A., kand.tekhn.nauk,
obshchiy red.; VOLOSHIN, D.A., red.; TOLOCHINSKAYA, B.M.,
bibliogr.red.

[Guide to technical reference books] Putevoditel' po tekhnicheskim
spravochnikam. Pod obshchei red. M.A.Anserova. Leningrad, Gos.
publichnaia biblioteka im. M.E.Saltykova-Shchedrina, 1958. 334 p.
                                                        (MIRA 12:8)

                (Bibliography--Technology)

SKOCHINSKIY, Aleksandr Aleksandrovich, akademik; KOMAROV, Vladimir
Borisovich, prof.; GRISHAYENKO, M.I., otv.red.; SABITOV,
A., tekhn.red.; KOROVENKOVA, Z.A., tekhn.red.

[Mine ventilation] Rudnichnaia ventiliatsiia. Izd.3. Moskva,
Ugletekhizdat, 1959. 632 p.   (MIRA 12:8)
             (Mine ventilation)

KOMAROV, V.B.

   Research work in the Department of Mine Ventilation and Safety
   Measures.   Zap. LGI 38   no.1:3-7   1959   (MIRA 14:3)
            (Mine ventilation—Research)

        Leningrad Mining Institute imeni G.U. Plekhanov

S/035/62/000/003/025/053
A001/A101

AUTHOR: Komarov, V. B.

TITLE: An experience of constructing profiles in regions of kimberlite
             tubes using aerial photographs without a geodetic control network

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 3, 1962, 13-14,
             abstract 3G114 (V sb. "Primeneniye aerometodov pri poiskakh korennykh
             mestorozhd. almazov", Moscow-Leningrad, AN SSSR, 1960, 66-84)

TEXT: The author considers a simplified graphical-analytical method of
processing plan aerial photographs by means of special measuring grids, which
takes into account the effect of elements of reciprocal orientation and makes
possible their simple determination. He describes the theory of the method,
practical ways of processing aerial photographs using readings of the statoscope
and results of experimental works on constructing profiles on the basis of
1 : 7,000 aerial photographs along the route without a geodetic control network.
The profiles obtained were compared with profiles plotted from topographic maps
and using data of a 4-order leveling. The root-mean-square error in determining
heights of points turned out to be 1.2 m. To process aerial photographs, a set

Card 1/2

An experience of constructing profile ...

S/035/62/000/003/025/053
A001/A101

of measuring grids is required constructed for inclination angles of photographs
to the base ranging from 0 to 5° with intervals of each 10'. The calculation
of measuring grids, their construction and method of employing are described.
The application of the method described will reduce field work for compiling
structural maps of Yakutiya regions on scales 1 : 100,000 and even 1 : 50,000,
and will enable one to construct them under conditions of office work. There are
5 references.

R. Vol'pe

[Abstracter's note: Complete translation]

Card 2/2

MUSTEL', P.I.; DYAD'KIN, Yu.D.; BOKIY, B.V.; KELL', L.N.; KOMAROV, V.B.;
SEMEVSKIY, V.N.; BORISOV, D.F.; GOLOVIN, G.M.; USEVICH, I.V.;
DUBRAVA, T.S.; SHABLYGIN, A.I.; ZOLTOLAREV, N.D.; GALAYEV, N.Z.;
SIGACHEV, A.Ye.; PANENKOV, Yu.I.; SENUK, D.P.; KOPYLOVA, Ye.V.

Pavel Ivanovich Gorodetskii; an obituary. Gor zhur. no.5:77 My '60.
(MIRA 14:3)

(Gorodetskii, Pavel Ivanovich, 1902-1950)

KOMAROV, V.B.; FOMICHEV, V.I.

Unevenness of gas escape in mine sections. Zap. LGI 46 no.1:6-11
'62.   (MIRA 16:6)
                        (Mine gases)

ASATUR, K.G., dotsent, kand.tekhn.nauk; KOMAROV, V.B., prof., doktor tekhn.
nauk; KUROCHKIN, N.N., dotsent, kand.tekhn.nauk; SEVERIN, L.P., dotsent,
kand.tekhn.nauk

Temperature of air heating in mine heating units. Ugol' 38 no.3:56-57
Mr '63.   (MIRA 18:3)

1. Leningradskiy gornyy institut im. G.V.Plekhanova.

KOMAROV, V.B., doktor tekhn.nauk; MEDVEDEV, N.I., kand.tekhn.nauk

Duration of ventilating development workings and stopes. Gor.zhur.
no.12:52-54 D '64.   (MIRA 18:1)

1. Leningradskiy gornyy institut (for Komarov). 2. Permskiy
politekhnicheskiy institut (for Medvedev).

ABRAMOV, Fedor Alekseyevich; DOLINSKIY, Vitaliy Andreyevich;
    IDEL'CHIK, Isaak Yevseyevich; KERSTEN, Igor' Oskarovich;
    TSODIKOV, Veniamin Yakovlevich; KOMAROV, V.B., prof.,
    doktor tekhn. nauk, retsenzent; GRISHAYENKO, M.I., ved.red.

    [Aerodynamic resistance in mine workings and subway tunnels]
    Aerodinamiches' -e soprotivlenie gornykh vyrabotok i tonnelei
    metropolitena. [By] F.A.Abramov i dr. Moskva, Nedra, 1964.
    185 p.   (MIRA 18:1)

85887

$9,2180$ $(3203, 1162)$
$24,7300$ $(1043, 1160)$

S/048/60/024/011/023/036
B006/B060

AUTHORS: Komarov, V. D. and Fesenko, Ye. G.

TITLE: Study of the Effect of an Isomorphic Substitution of Ti Ions Upon the Phase Transformation in $BaTiO_3$

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960, Vol. 24, No. 11, pp. 1391-1393

TEXT: This is the reproduction of a lecture delivered at the Third Conference on Ferroelectricity which took place in Moscow from January 25 to 30, 1960. Several authors have already studied the effect of iron upon the structure of $BaTiO_3$. In this connection, mention is made of B. M. Vul and I. M. Gol'dman as well as the Fiziko-matematicheskiy nauchno-issledovatel'skiy institut pri RGU (Scientific Research Institute of Physics and Mathematics of Rostov State University), where $BaTiO_3$ was crystallized in iron crucibles and where a seignettoelectric modification was always found besides the nonseignettoelectric one, and the hexagonal phase was imagined to be stabilized by iron ions. This was confirmed by

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Study of the Effect of an Isomorphic
Substitution of Ti Ions Upon the Phase
Transformation in BaTiO$_3$

S/048/60/024/011/023/036
B006/B060

later studies made on BaTiO$_3$ - BaFeO$_3$ systems, and the transition
temperature from the hexagonal into the perovskite-type modification was
established at 1460°C. The authors examined the effects of other elements
of the iron group (Co,Ni) and other trivalent ions upon the BaTiO$_3$
structure. Polycrystalline specimens were prepared for this purpose and
were submitted to X-ray and dielectric analyses. The BaTiO$_3$ specimens were
prepared at 1280°C from an oxide mixture, sintered at 1430°C, and submitted
to heat treatment at 1380°C. The following results were obtained:
1) Ni^{2+} content > 2mole% and Co^{2+} > 8mole% stabilized the hexagonal phase
after the heat treatment at 1380°C. With increasing Ni- and Co content
there occurred first a drop of the Curie temperature and of the ε maximum,
and next, the seignettoelectric properties vanished (transition to the
hexagonal modification). 2) Cr^{3+} and Mn^{4+} ions had a similar effect, but
no drop was observed as to the Curie point. A stabilization of the
hexagonal modification was observed at concentrations of over 2mole%.
3) The effect of the radius of ions replacing Ti isomorphically was studied

Card 2/3

KOMAROV, V. D.

"The Nature of Snow-Cover Occurrence in a Locality, and the Formation of a Spring Flood," pp 37-42.
(Meteorologiya i Gidrologiya, No 6 Nov/Dec 1947)

SO: U-3218, 3 Apr 1953

KOMAROV V. D.

"Formation of Thawed Run-off in Small Water-Collecting Headers", Trudy TsIP, No 9 (36), 1948 (20-21)

SO: U-3 39, 11 Mar 1953

KOMAROV, V. D.

Voprosy gidrologicheskikh prognozov (Problems in hydrological forecasting).   Leningrad,
Gidrometeoizdat, 1951. 92 p.

SO: Monthly List of Russian Accessions, Vol 6, No. 3, June 1953

KOMAROV, V. D.

231T83

USSR/Meteorology - Thaw Water   Oct 52

"Some Peculiarities in Formation of Thaw Runoff on a Small Watershed," V. D. Komarov, Cand Tech Sci, Moscow, Cen Inst of Forecasting

"Meteorol i Gidrol" No 10, pp 15-21

States that study of motion of thaw water is important for estimation of spring floods. Author states that he pointed it out in 1939 ("Meteorol i Gidrol" No 10, 11, 1939) in studies of the Oka River. He notes that he also gave data on flow of thaw water in "Trudy Tsentralnogo Instituta

231T83

Prognozov" /Transactions of Central Institute of Forecasting/ No 9, 1948. Author states that his attempt to clarify the origin of this flow will facilitate the forecasting of floods.

231T83

plains of the U.S.S.R., considering snow accumulation and evaporation. Pt. I deals with snow cover and its characteristics for analysis and forecasting of spring floods; Pt. II, snow melt and methods of calculating it for a river basin; III, effect of soil conditions on snow melt; IV, effect of melt water on soil condition; V, water balance of river basins; VI, long range runoff forecasting for flood from water balance; VII, territorial runoff forecasting; VIII, forecasting peak runoff; IX, forecasting daily water discharge from snow melt data. Literature (Russian) is thoroughly reviewed and annotated. Albedo, radiation balance, water content of snow, effect of forests, ice, diurnal and seasonal effects are considered from an empirical as well as a theoretical standpoint. Many mathematical models, diagrams and illustrative charts are included along with computation tables and extensive

U.S.S.R.

KOMAROV, V. D.

USSR/Physics of the Hydrosphere - Dynamics of Sea and Land Water, N-2

Abst Journal: Referat Zhur -Fizika, No 12, 1956, 36278

Author: Komarov, V. D.

Institution: None

Title: Concerning the Calculation of Water Yield of the Melting Snow
Cover

Original
Periodical: Tr. Tsentr. in-ta prognozov, 1956, No 44, 89-94

Abstract: Explanation of the physical side of this phenomenon. The equa-
tions derived for the water yield include the melting rate of the
snow and its water-containing ability. With respect to the last
factor, it is indicated that it has not been well studied, but ap-
parently, it depends principally on the structure of the snow.
Based on the critical analysis of many experimental data, a con-
clusion is drawn that the water-containing ability of the average-
grain snow is usually 0.12-0.16 (92% of measurements) and in the
case of large-grain snow it is 0.10-0.14 (85% of measurements).

Card 1/2

Komarov, V. D.

AUTHOR: Komarov, V. D.

TITLE: Investigation of Water Permeability of Frozen Soil (Issledovaniye vodopronitsayemosti merzloy pochvy)

PERIODICAL: Meteorologiya i Gidrologiya, 1957, No. 2, pp. 10-18 (U.S.S.R.)

ABSTRACT: Tests on water permeability of frozen soil were conducted from 1954-1955 in the Central Permafrost Laboratory of the Academy of Sciences of the U.S.S.R. under the scientific guidance of N. A. Tsytovich. Variations in permeability of various soils such as monoliths and sands are analyzed in verbal descriptions, graphs, formulas, and tables. Inter alia, experiments demonstrated: 1. Seepage of water into frozen soil is accompanied by a partial freezing of the former as indicated by presence of newly formed ice crystals and veins; this new formation decreased the initial permeability to zero, while a t^0 rise and cementation decrease of the soil was noted (Fig. 3). 2. Seepage into soil which had ceased soon after the advent of water on its surface recurred as soon as the soil began to thaw from the top. Such a pattern occurred even when soil humidity reached minimum moisture capacity prior to freezing.

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Investigation of Water Permeability of Frozen Soil

3. Underthawing soil which does not admit water leads to a renewal of water penetration when thickness of frozen layer is decreased to 8-10 cm. 4. After thawing, the podzolic soil used in the tests had a filtration coefficient of 20-30 mm/hr. 5. Mean t° of frozen soil can be assumed to be an index of the cold supply and of latent heat connected with phase transformations of connected water. Hence the t° of frozen soil is a main factor of its infiltrational capacity.

The author developed additional points: 1. Permeability of frozen soil with a given iciness and t° is heterogeneous for various oil types (e. g., chernozem, light and heavy podzolic soil, etc.). 2. Formation of a considerable ice rind on frozen soil owing to its store of cold and phase transformations of connected water should be considered. 3. Heightened seepage of water in a basin which is common at the beginning and end of the snow thawing period is related to the increased infiltrational ability of frozen soil in the period from the outset of thawing until the soil pores are ice-clogged.

In substantiation of his paper, Komarov cites: 1. A. K. Filippova and S. I. Kharchenko (16, 17) (State Hydrological Institute) who obtained a dependence of infiltrational ability upon degree of cementation of soil. Komarov objects to their findings on grounds of their "purely qualitative" nature. 2. Tsytovich, who (20, 21, 22) held that

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Investigation of Water Permeability of Frozen Soil

non-freezing water is in equilibrium with outer influences: t^0, pressure, and concentration and composition of water-solvent salts. 3. L. N. Stepanov, who in 1951 derived a filtration coefficient equalling 3 mm/min based on a test of seepage into frozen sand; his results agreed well with Komarov's. 4. Ye. N. Tsikin, who in spring of 1954 studies frozen chestnut-brown soil and concluded that low t^0 of such soil can obstruct its saturation by melt water whenever the pores along which seepage moves are fine and when ice plugs blocking further penetration of water are formed. 5. Observational materials of the Valdai Scientific-Investigatory Hydrological Laboratory (VNIGL) (7, 8) collected from 1950-51 which he considers most suitable for analyzing seepage pattern of melt water penetrating frozen soil during snow thawing; data of this laboratory confirm in essence the author's conclusions on this question. In 1950, for drainage area No. 3, the runoff coefficient in the first thawing days was c. 0.2, in the mid-period, c. 1.0, and c. 0.8 at the end. In contrast, an increased seepage of melt water at the inception of snow thawing occurred in 1951 (Abstractor's Comment: author does not so state, but presumably the increased seepage took place in same areas).

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Investigation of Water Permeability of Frozen Soil

Two tables in text present data 1) characterizing mechanical composition of test sands and 2) on soil qualities (porosity, maximum hygroscopic humidity, and minimum field moisture capacity) for five categories of depths down to 50 cm. arranged by 10 cm. intervals. Three text figures are graphs portraying: 1) intensity and amount of water seepage; variation in t^0 of frozen sand at different depths, 2) filtration coefficient of frozen sand as a function of its humidity (before freezing) and 3) results of tests made from 14-15 June 1954 giving intensity of seeped water, amount of water entering since the start of the test, pattern of soil t^0 at depths of 4, 11, and 16 cm, water and air t^0, wherein soil was thawed from beneath at the end of the tests. One formula is presented on page 11, having the

form $K_M = 15e^{-0.295\alpha} - 0.022$, in which K_M is the filtration coefficient of frozen sand and alpha is the wetness of the sand, prior to freezing, in % of dry batch weight.

There are 25 references, of which 23 are Slavic, 1 English, and 1 Swedish.

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Investigation of Water Permeability of Frozen Soil

ASSOCIATION: Author was associated with the Central Permafrost Laboratory of the Academy of Sciences of the U.S.S.R. in connection with conducted tests.

PRESENTED BY:

SUBMITTED:

AVAILABLE:

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KOMAROV, V.D.

Water permeability of frozen sand. Mat. po lab. issl. merzl. grunt. no.3:142-148 '57.   (MIRA 10:11)
        (Sand)   (Permeability)   (Frozen ground)

KOMAROV, V.D.

Theory and calculation (prognosis) of snow high water of small
lowland rivers. Trudy TSIP no.50:3-39 '57.   (MLRA 10:8)
                          (Stream measurements)

KOMAROV, L.D.

Laboratory investigation of water permeability of frozen grounds.
Trudy TSIP no.54:3-42 '57.   (MIRA 10:8)
            (Frozen ground)   (Soil absorption)

AUTHOR: Komarov, V. D.   50-58-3-4/22

TITLE: Regularities in the Distribution of Coefficients of
               Snowmelt Flood Flow   and of the Losses of Melted Snow
               in the Time of Melting on the Territory of the European Part
               of the USSR (Osnovnyye zakonomernosti raspredeleniya
               koeffitsiyentov stoka snegovogo polovod'ya i poter' vod v
               period tayaniya na Yevropeyskoy territorii SSSR)

PERIODICAL: Meteorologiya i Gidrologiya, 1958, Nr 3, pp 28-33 (USSR)

ABSTRACT: Beginning from the year 1947 a number of investigations was
               published which represent the conditions of the formation
               of the spring efflux and which also contain the data on the
               coefficients of the spring efflux and the losses of melted
               snow in the time of melting in individual water reservoirs
               and regions of the European part of the Soviet Union. The
               paper by P. F. Idzon on the distribution of the coefficients
               of the spring efflux and the losses of melted water on the
               European territory of the Soviet Union was also published.
               But Idzon was forced to use very approximate charts of norms
Card 1/3   of the water supplies in the snow blanket and of the efflux

Regularities in the Distribution of Coefficients of   50-58-3-4/22
Snowmelt Flood Flow   and of the Losses of Melted
Snow in the Time of Melting on the Territory of the
European Part of the USSR

in the period of flowoff as basis for his calculations.
The spring precipitations were very approximately calculated,
too. The observation data collected at present on the efflux
of the rivers in the period of floods and its factors permit
completely to determine the regularity of the geographical
distribution of the quantities of the losses of melted snow
in the time of melting and of the quantities of efflux of
the melting in the European part of the USSR. The solution
of this problem is facilitated by the fact that during
recent years the method for the calculation of the partial
values of the water conservation of the water reservoirs in
the period of floods was already considerably determined.
Now it is also possible to subject to an analysis the already
determined regularities of the variation coefficient of the
spring efflux in this region. For the investigation of the
loss distribution of melted snow in the flat land of the
European part of the USSR the observation data for the time
from 1936 to 1953 were treated according to a uniform method.
These data referred to 95 water reservoirs mainly with a
Card 2/3   surface of from 3.000 to 12.000 km^2. Among this material were

Regularities in the Distribution of **Coefficients of**   50-58-3-4/22
Snowmelt Flood Flow and of the Losses of Melted Snow in
the Time of Melting on the Territory of the European Part of
the USSR

also the data on the efflux of the rivers in the time of
floods, on the water supplies in the snow blanket at the
beginning of the melt, on the ice crust on the surface of
the ground, on the precipitations in the time of snow-melting
etc. The data given in the article confirm that in the wood
zone the losses of melted snow can be considerable and re-
present a water layer of a height of about 30 mm. This
quantity completely corresponds to the chart (figure 1). The
distribution of the multiannual average quantities of the
efflux of the snow floods in the region is represented on
another chart (figure 2). The course of the isocurves of the
quantities of efflux is in connection with the distribution
in the region with summary losses, as well as with the water
supplies in the snow blanket plus the precipitations in the
melting period in the time from 1936 to 1953. There are 2
figures and 22 references, all of which are Soviet.

Card 3/3   1. Snow--Melting   2. Inland waterways--Water supply   3. Water
                  --Conservation   4. Hydrology--USSR

KOMAROV, V.D.

Problems in hydrological forecasting. Factors governing spring discharges
of rivers in the forest zone of the European part of the U.S.S.R.

Trudy.TSIP no.75:3-10 '58.   (MIRA 11:11)
                       (Rivers)

KOMAROV, V. D.: Doc Geogr Sci (diss) -- "The spring runoff of the plains rivers of the European portion of the USSR, the conditions of its formation, and methods of prognosis". Moscow, 1959. 24 pp (Main Admin of the Hydrometeorological Service of the Council of Ministers USSR, Central Inst of Weather Forecasting), 150 copies (KL, No 13, 1959, 101)

KOMAROV, Valentin Dmitriyevich; SUBBOTIN, A.I., otv.red.; SOROKINA, N.I., red.; ZAKH, I.M., tekhn.red.

[Spring runoff of lowland rivers in the European part of the U.S.S.R., conditions influencing its formation and methods used in predicting it] Vesennii stok ravninnykh rek Evropeiskoi chasti SSSR, usloviia ego formirovaniia i metody prognozov. Moskva, Gidrometeor.izd-vo (otd-nie), 1959. (MIRA 12:8) 294 p.   (Runoff)

APOLLOV, Boris Aleksandrovich; KALININ, Gennadiy Pavlovich; KOMAROV,
Valentin Dmitriyevich; SHATILINA, M.K., red.; VLADIMIROV, O.G.,
tekhn.red.; BRAYNINA, M.I., tekhn.red.

[Hydrological forecasts] Gidrologicheskie prognozy. Leningrad,
Gidrometeor.izd-vo, 1960.   406 p.   (MIRA 13:11)
                    (Hydrology)

S/196/63/000/001/009/035
E193/E383

AUTHORS: Fesenko, Ye.G., Karamarov, O.P., Komarov, V.D. and
             Shpolyanskiy, Ya.A.

TITLE: A study of the effect of isomorphic displacement of
             Ti ions by Cr, Mn, Co or Ni ions on the phase-
             transformation in $BaTiO_3$

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika,
             no. 1, 1963, 18, abstract 1 B58. (In collection:
             Segnetoelektriki (Ferroelectrics), Rostov-na-Donu,
             Rostovsk. un-t, 1961, 96-100)

TEXT: $BaTiO_3$ specimens, pure and with Cr, Mn, Co or Ni
additions, were studied. The pure $BaTiO_3$ specimens were synthesized
from $BaCO_3$ and TiO_2 (with 1 mole.% excess of the latter constituent)
at a sintering temperature of 1553 °K (1280 °C). For the
preparation of alloyed specimens, $BaTiO_3$ powder with Cr_2O_3, MnO_2,
$CoCO_3$, NiO or Ni_2O_3 additions was ball-milled for 4 h, compacted
and sintered in a silit furnace. It was established that replacing
the Ti ions in $BaTiO_3$ by Cr, Mn, Co or Ni increased the rate of
recrystallization and reduced the sintering temperature and the
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A study of S/196/63/000/001/009/035
                                       E193/E383

temperature at which the perovskite modification changed to
hexagonal. Comparison of the results of X-ray analysis, study of
the temperature-dependence of ε in the 293-413 °K (20-140 °C)
range (at 5 x 10⁵ c.p.s.) and measurements of the piezomodulus of
various specimens led to the conclusion that - depending on the
temperature of the final sintering (1653 °K, i.e. 1380 °C, or
1703 °K, i.e. 1430 °C) - specimens with a low concentration of Ni
and Co (and, probably, Cr and Mn) additions could·have either
perovskite or hexagonal structure with correspondingly high or low
values of ε . The state and properties of specimens after repeated
annealing depended on the temperature of the last treatment, which
indicated that the transformation from perovskite to hexagonal
modification was reversible. There are 2 figures and 3 references.
[Abstracter's note: Complete translation.]

Card 2/2

L 10040-63   RWT(1)/EPF(n)-2/EWP(q)/EWT(m)/BDS/T-2/EEC(b)-2/ES(s)-2--AFFTC/
ASD/ESD-3/SSD--Pu-4/Pt-4--CG/IJP(C)/WH/JD
ACCESSION NR: AR3000359

S/0058/63/000/004/E051/E051

SOURCE: RZh. Fizika, Abs. 4E343

AUTHOR: Fesenko, Ye. G.; Kramarov, O. P.; Komarov, V. D.; Shpolyanskiy, Ya. A.

TITLE: Investigation of the effect of isomorphous substitution of Ti ions by
Cr, Mn, Co, and Ni ions on phase transformations in $BaTiO_3$

CITED SOURCE: Sb. Segnetoelektriki. Rostov-na-Donu, Rostovsk, un-t, 1961, 96-100

TOPIC TAGS: Barium titanate, effect of isomorphous substitutions, dielectric
properties, piezoelectric modulus

TRANSLATION: An X-ray structural investigation was made of $BaTiO_3$ with
different additives, the dielectric constant Epsilon was measured by a resonant
method, and the static piezo-modulus was measured. Replacement of the Ti ions
with Ni and Co ions leads to a reduction in the transition temperature of the
perovskite modification into a hexagon. With increasing Ni concentration, a
decrease in the Curie temperature and in the maximum of Epsilon takes place, and

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at a concentration Ni greater than 2%, the ferroelectric properties disappear. The decrease in the Curie temperature is connected with a decrease of the spontaneous deformation of Ba Ti O sub 3 upon introduction of the Ni ions, while the decrease of Epsilon and the disappearance of the ferroelectric properties with appearance of non-ferroelectric hexagonal modification. The piezo-modulus of specimens with 0.15% nickel does not change, while at 0.5% it decreases to 220-250 absolute units, and at the same time there is a noticeable increase in the stability of the piezo-modulus with time. For specimens with Co, no hexagonal phase is observed up to 8% Co. The piezo-modulus d sub 3 sub 3 in specimens with 1.5-6% Co amounts to 350-450 absolute units and has high time stability. For specimens with Cr and Mn, a characteristic feature is a reduction in Epsilon without a change in the Curie temperature, this being connected with the formation of the hexagonal phase. When the content of Cr and Mn is greater than 2%, the hexagonal phase occupies more than 50% of the volume of the specimen, while the remaining volume contains the perovskite modification with a spontaneous deformation 0.01 which is characteristic of Ba Ti O sub 3. The piezo-modulus does not change upon introduction of Cr and Mn. L. Mirkin

DATE ACQ: 14May63   ENCL: 00   SUB CODE: PH

cs/ja

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ACCESSION NR: AR4042160   S/0196/64/000/005/B019/B019

SOURCE: Ref. zh. Elektrotekhnika i energetika, Abs. 5B82

AUTHOR: Fesenko, Ye. G.; Prokopalo, O. I.; Komarov, V. D.; Shpolyanskiy, Ya. A.

TITLE: Investigation of the influence of modifiers with pentavalent cations on the properties of barium titanate

CITED SOURCE: Izv. Leningr. elektrotekhn. in-ta, vy*p. 51, 1963, 252-259

TOPIC TAGS: pentavalent cation, barium titanate, dielectric property, x ray diffraction analysis, crystal lattice

TRANSLATION: Dielectric properties were investigated of ceramic samples of $VaTiO_3$ with different concentrations of impurities of V_2O_5 (0. 8; 1. 6; 2. 4 mole %), Sb_2O (1; 2; 3; 5 mole %), Nb_2O and Ta_2O_5 (0.5; 1.3; 5; 10 mole %): the dependence of. ε on the intensity of a variable electric field (E up to 12 kv/cm), reversible

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ACCESSION NR: AR4042160

ϵ (E up to 10 kv/cm) at 50 cps, hysteresis loop, piezoelectric modulus d_{33} and dependence on temperature of ϵ from 20 to 160°C (for samples with impurities of V_2O_5 at 1 Mc and $E = 30$ v/cm, for samples with impurities of Sb_2O_5 at 1 kc and $E = 200$ v/cm. X-ray diffraction analysis of samples was also conducted. Alloyed impurities were introduced into preliminarily synthesized $BaTiO_3$ by means of 4 hour mixing in a ball mill and subsequent sintering at 1350-1450°C. Introduction of V_2O_5 does not change the character of the dependence of ϵ on temperature; however, ϵ at θ decreases and θ is displaced in the direction of low temperatures (by 3 to 4 degrees if the samples were burned at 1350°C, and up to 7 degrees if the samples were burned at 1425°C). Samples with lowered θ possess, accordingly, lowered tetragonality. With increase of concentration of V_2O_5 d_{33} decreases and P is increased. In $BaTiO_3$ with Sb_2O_5 impurities, ϵ depends on E; ϵ at θ is sharply lowered, and the mean value of c/a decreases. The assumption is made that in these samples there takes place the mechanism of relaxation polarization. With the increase of concentration of Sb_2O_5, d_{33} decreases (upon addition of 5 mole % Sb_2O_5, d_{33} decreases from 45 to 60 cges). With the growth of f from 60 kc to 20 Mc, ϵ decreases, and tan δ grows. In $BaTiO_3$ with Nb_2O_5 impurities, with the increase of concentration of impurities, ϵ at θ decreases almost by one order; however, the value of θ is not changed. Analogous results were also obtained for $BaTiO_3$ with

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Ta_2O_5 impurities. Decrease of ϵ in these samples (with impurities of Nb_2O_5 and Ta_2O_5) is explained by the structural distortions of the crystal lattice, and also partially by the presence of intercrystalline layers of ceramics. The assumption on the stabilization of ferroelectric modification of $BaTiO_3$ upon addition of 5-valent cation impurities is confirmed by the fact that upon alloying them with $BaTiO_3$, formation of a nonferroelectric hexagonal phase is not observed. Five illustrations. Bibliography: 10 references. [Rostov-on-Don State University].

SUB CODE: IC, SS   ENCL: 00

Card 3/3

KAKHANOV, V.G.; KOMAROV, V.D.

Electric circuit for control by induction braking during the testing of automobile units. Avt. prom. 30 no.11:16-17 N '64
(MIRA 18:2)

1. Moskovskiy avtozavod imeni Likhacheva.

BEFANI, Nenila Feofanovna; KALININ, Gennadiy Pavlovich; KOMAROV, V.D., otv. red.; KOZHINA, Z.M., red.

[Exercises and methodological developments on hydrologic forecasts] Uprazhneniia i metodicheskie razrabotki po digrologicheskim prognozam. Leningrad, Gidrometeoizdat, 1965. 438 p.   (MIRA 18:5)

L 7848-66   EWP(e)/EPA(s)-2/EWT(m)/EWP(i)/EPA(w)-2/EWP(t)/EWP(b)   IJP(c)   JD/W

ACC NR: AP5028115   SOURCE CODE: UR/0048/65/029/011/2038/2041

AUTHOR: Komarov,V.D.; Prokopalo,O.I.; Fesenko,Ye.G.

ORG: Rostov-on-the Don State University (Rostovskiy-na-Donu gosudarstvenyy universitet)

TITLE: Classification of dopants for barium titanate /Report, Fourth All-Union Conference on Ferro-electricity held at Rostov-on-the Don 12-16 September 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 11, 1965, 2038-2041

TOPIC TAGS: ferroelectric material; barium titanate, dopant

ABSTRACT: It is proposed that dpoants for barium titanate be classified into the following four groups: A) those which monotonically shift the Curie point without reducing the dielectric constant or giving rise to appreciable relaxation polarization; B) those which at low concentrations do not considerably lower the Curie point and at large concentrations give rise to relaxation polarization processes; C) those which do not greatly shift the Curie point but reduce the dielectric constant at all temperatures owing to the formation of compounds that are not isomorphous with barium titanate; and D) those which considerably reduce the Curie temperature with an accompanying general reduction of the dielectric constant at higher concentrations owing to transformation of the barium titantate to the hexagonal (nonferroelectric) modification. Twenty-two dopants are assigned to these classes as shown in the table.

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