

BUKH, S.

In a typing shop. Prom.koop. no.7:16 J1 '57.

(MLRA 10:8)

1. Nadhal'nik tsekha mashinopisi arteli invalidov inemi XIX parts"yezda.
(Kiev--Typewriting)
(Blind--Employment)

BUKH. S. S.

36832. Otsillegraficheskiye pokazatli arterial'nogo davleniya u zkorovykh lits
(pri razlichnykh funktsional'nykh probakh). Trudy Med. in-ta (Izhev. gos. med in-t),
t. IX, 1949, c. 190-95

SO: Letopis' Zhurnal'nykh Statey, Vol. 50, Moskva, 1949

BALENKO, A.F., inzhener; BUKH, V.M., inzhener.

The EM-201 multibucket excavator. Stroiki der.mashinestr. no.7:5-6
Jl '56. (Excavating machinery) (MIRA 9:10)

BUKH, V.M.

PRAVOSUDOVICH, N.P., inzhener; BUKH, V.M., inzhener; MOZENBLAT, A.Ya.,
inzhener.

The ET-142 trench cutting machine. Stroi.f dor.mashinestr. no.1:16-18
Ja '57. (MLRA 10:2)
(Excavating machinery)

KOZLOV, T.I., prof., doktor ekon.nauk, otv.red.; BREGEL', E.Ya., prof., doktor ekon.nauk, red.; BUKH, Ye.M., dotsent, kand.ekon.nauk, red.; ZHEBRAK, M.Kh., prof., doktor ekon.nauk, red.; ISAKOV, V.I., dotsent, kand.ekon.nauk, red.; FREYMUND, Ye.N., dotsent, kand.ekon.nauk, red.; SHEVCHUK, A.V., kand.ekon.nauk, red.; SHIFMAN, A.G., dotsent, kand.ekon.nauk, red.; SHCHAPINA, T.A., dotsent, kand.ekon.nauk, red.; USTIYANTS, V.A., red.; MELENT'YEV, A.M., tekhn.red.

[Problems in statistics and accounting; a collection of articles on machine accounting] Voprosy statistiki i ucheta; sbornik statei po mekhanizatsii ucheta. Moskva, Gos.stat.izd-vo, No.2. 1959. 350 p. (MIRA 13:6)

1. Moscow. Ekonomiko-statisticheskiy institut.
(Machine accounting)

KOZLOV, T.I., prof., otv. red.; BREGEL', E.Ya., prof., red.; BUKH, Ye.M.,
dots., red.; ZHEBRAK, M.Kh., prof., red.; ISAKOV, V.I., dots., red.;
FREYMUNDT, Ye.N., dots., red.; SHIFMAN, A.G., dots., red.; SHCHA-
PINA, T.A., dots., red.; SHEVCHUK, A.V., kand. ekonom. nauk, red.;
SHENTISIS, Ye.M., red.; PYATAKOVA, N.D., tekhn. red.

[Problems in statistics and accounting] Voprosy statistiki i ucheta.
Moskva, Gosstatizdat, TsSU SSR. No.3. [Collection of articles on
labor productivity statistics in industry] Sbornik statei po sta-
tistike proizvoditel'nosti truda v promyshlennosti. 1961. 145 p.
(MIRA 14:8)

1. Moscow. Ekonomiko-statisticheskiy institut.
(Productivity--Accounting)

BORISOV, Ye.F., dots.; BREGEL', E.Ya., prof.; BUKH, Ya.M., dots.;
VASHENTSEVA, V.M., dots.; GOLEVA, Yu.P., kand. ekon. nauk;
GOLEVA, A.P., kand. ekon. nauk; DEMOCHKIN, G.V., dots.;
DONABEDOV, G.T., kand. ekon. nauk; YERMOLOVICH, I.I., dots.;
KALYUZHNYI, V.M., dots.; KORNEYEVA, K.G., dots.; KUZNETSOVA,
A.S., prof.; MIROSHNICHENKO, V.S., dots.; MIASNIKOV, I.Ya.,
kand. ekon. nauk; PIKIN, A.S., dots.; SIDOROV, V.A.; SMIRNOV,
A.D., dots.; SOLOV'YEVA, K.F., dots.; SOROKINA, I.F., dots.;
TARUNIN, A.F., kand. ekon. nauk; KHARAKHASH'YAN, G.M., prof.;
MENDEL'SON, A.S., red.; SHVEYTSEY, Ye.K., red.; ROTOVA, R.S.,
red.; GARINA, T.D., tekhn. red.

[Economics of socialism] Politicheskaya ekonomiya sotsializ-
ma. Moskva, Gos.izd-vo "Vysshaya shkola," 1963. 476 p.
(MIRA 17:2)

ASHIMOV, M.A.; SHCHEGOL', Sh.S.; SADYKH-ZADE, S.I.; ASKEROV, A.K.;
BUKH, Yu.D.

Using azoiyat-A as an emulsifier in the emulsion polymerization
of rubber. Sbor. nauch.-tekh. inform. Azerb. inst. nauch.-tekh.
inform. Ser. Nefteper. i khim. prom. no.2:3-14 '62.

(MIRA 18:9)

ASHIMOV, M.A.; RAFIYEV, M.M.; DADASHEVA, Z.A.; SULTANOVA, Kh.M.; BUKH, Yu.D.;
MURSALOVA, M.A.

Synthesis of demulsifiers based on the oxidation products of a dearomatized
reflux fraction and a testing of their demulsification properties with several
oils of the Azerbaijan. Azerb. khim. zhur. no.1:18-22 '65. (MIRA 18:7)

1. Institut neftekhimicheskikh protsessov AN AzerSSR.

BUKHA, V.

Some results of paleomagnetic investigations of primary eruptive rocks in Czechoslovakia. Izv. AN SSSR. Ser. geofiz. no.1:54-59
Ja '61. (MIRA 14:1)

1. Chekhoslovatskaya Akademiya nauk, Geofizicheskiy institut.
(Czechoslovakia—Rocks—Magnetic properties)
(Magnetism, Terrestrial)

BUKH-CHECHIK, S.I., dotsent (Kiyev)

Treating chronic odontogenic osteomyelitis of the mandible.
Probl. stom. 3:159-162 '56 (MLRA 10:5)
(JAWS--DISEASES) (OSTEOMYELITIS)

BUKH-CHICHIK, S.I., dots. (Kiyev)

Surgical method in the over-all treatment of paradentosis. Probl.
stom. 4:317-321 '58. (MIRA 13:6)
(GUMS--SURGERY)

BUKH-CHECHIK, S.I., dotsent (Kiyev)

Trimecaine (mesocaine) in maxillofacial surgery. Probl. oral-surg.
khir. no.1:7-10 '65. (MIRA 18:10)

BUKH-CHECHIK, S.I., dotsent

Surgical tactics in the treatment of various forms and stages of
parodontosis. Vrach, delo no.7:707-709 JI '59. (MIRA 12:12)

1. Kafedra khirurgicheskoy stomatologii (zav. - prof. N.V. Fetusov)
Kiyevskogo meditsinskogo instituta.
(GUMS--DISEASES) (DENTISTRY, OPERATIVE)

BUKH-VINER, V. Ye.

V. Ye. Bukh-Viner - "Method of Increasing the Noise Protection of Multi-channel Repeated Systems."

Authors' Certificates, Elektrosvyaz', 1958, No. 7, pp 77.

S/049/60/000/006/001/002
E090/E544

AUTHORS: Boushka, Ya., Bukha, V. and Kochi, A.

TITLE: Geomagnetic Charts for Czechoslovakia for the Epoch
1958.0 ✓

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya,
1960, No.6, pp.798-808

TEXT: The first measurements of the Earth's magnetic field were commenced last century and by 1890 the first data on geomagnetic elements for Czechoslovakia were published. Between the two World Wars, the State Institute of Geophysics in Prague organized magnetic surveys and published, jointly with the Military Geophysical Institute, isogonic charts. A basic geomagnetic grid of 161 first-order stations was established between 1946 and 1953. Measurements have been "tied in" to international stations and a geomagnetic map of Central Europe envisaged. Continuously recording apparatus has been established at observatories at Pruhonice^{III} and Hurbanovo^{III}. Nine stations are measuring secular variations in the geomagnetic field. The mean annual variation in magnetic declination varies from 7° in the west to 5° in the east. ✓

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S/049/60/000/006/001/002
E090/E544

Geomagnetic Charts for Czechoslovakia for the Epoch 1958.0

Small annual variations in the horizontal and vertical components have been established. Geomagnetic maps of Czechoslovakia on a cylindrical Mercator projection on a scale 1:1 250 000 have been completed for the epoch 1958.0, they were based on measurements at 294 stations. The various data will be used as the basis of an aeromagnetic survey of the country. The paper includes 5 maps of the various geomagnetic elements in Czechoslovakia together with a representative list of publications summarizing the historical sequence of measurements of these elements. There are 6 figures and 30 references: 23 Czech, 1 Hungarian, 6 German.

ASSOCIATION: Chekhoslovatskaya akademiya nauk
(Czechoslovak Academy of Sciences)

SUBMITTED: November 3, 1959

Card 2/2

ANIREYEVA, O.L.; BUKHA, V.V.; PETROVA, G.N.

Laboratory estimate of the magnetic stability of rocks of the
Czech massif. Izv. AN SSSR. Fiz. zem. no.2:54-64 '65.
(MIRA 18:6)

1. Institut fiziki Zemli AN SSSR.

ANDRIANOV, G.; BUKHACHARSKIY, P.

Application of mathematical methods and electronic calculating
machines to machinery manufacturing planning. Vop. ekon. no.6:
114-120 Je '63. (MIRA 16:6)

(Machinery industry--Management)

(Electronic data processing)

(Economics, Mathematical)

BUKHACHARSKIY, P.M.

Second Scientific Conference on the Use of Mathematical Methods
and Modern Computing Equipment for the Planning in the Machinery
Industry. Vest. mashinost. 43 no.6:80-82 Je '63.

(MIRA 16:7)

(Machinery industry—Management)

BUKHALEV, A.

BUKHALEV, A., dotsent, inzhener-polkovnik, kandidat tekhnicheskikh nauk.

Changes in elements of bomb trajectory due to changes of flight
altitude and speed. Vest.Vozd.Fl. 34 no.12:33-41 D '51.
(Bombing, Aerial) (MLRA 8:3)

FUKHALEV, A. V.

Khlopkopryadeniye. (Cotton Spinning) V Dvukh Chastyakh. Moskva,
Gizlegprom, 1946.

v. Illus., Tables, Diags.

At Head of v. 1: A. P. Rakov, N. N. Milovidov, A. V. Fukhalev.

At Head of v. 2: A. P. Rakov, N. N. Milovidov, I. I. Tarasov.

Lib. Has:

So: N/5
746.5
.P1

BUKHALEV, A.V.

RAKOV, Aleksandr Pavlovich; MILOVIDOV, N.N.; BUKHALEV, A.V.; TARASOV, I.I.

[Cotton spinning] Priadenie khlopka. Moskva, Gos. nauchno-tekhn.
izd-vo Ministerstva promyshlennykh tovarov shirokogo potrebleniia
SSSR, 1953. 486 p.

(MLRA 7:3)

(Cotton spinning)

BUKHALEV, A.V., inzhener.

Single thread fillings. Log.prom.16 no.12:20-22 D '56. (MLRA 10:2)
(Knit goods industry)

BUNHALEV, ALEKSANDR VASIL'VEVICH

RAKOV, Aleksandr Pavlovich, professor; MILOVIDOV, Nikolay Nikolayevich, inzhener; BUNHALEV, Aleksandr Vasil'vovich, inzhener; TARASOV, Ivan Ivanovich, inzhener; STASHEV, A.G., retsenzent; KAPELEVICH, Ye.I., redaktor; MEHOVEDEV, L.Ya., tekhnicheskiiy redaktor

[Cotton spinning] Prisdienie khlopka. Izd. 2-oe, ispr. i dop.
Moskva, Gos.nauchno-tekhn.izd-vo M-va legkoi promyshl. SSSR,
1957. 518 p. (MLLA 10:10)
(Cotton spinning)

L 08971-67 EWT(d)/EWP(c)/EWP(v)/EWP(k)/EWP(h)/EWP(l) IJP(c)

ACC NR: AP6029792

SOURCE CODE: UR/0119/66/000/008/0022/0023

AUTHOR: Bukhalev, V. A. (Engineer); Yeremin, G. V. (Engineer); 33
Yefimov, Yu. A. (Engineer)

ORG: none

TITLE: Digital-code tolerance control 14

SOURCE: Priborostroyeniye, no. 8, 1966, 22-23

TOPIC TAGS: quality control, digital system, ^{measuring} ~~digital~~ instrument

ABSTRACT: A digital scheme of tolerance (product quality) control is considered. 14
The measured parameter value is compared with preset values in two steps:
(1) Each measured digit is separately compared with the corresponding preset limits for each digit and (2) On the basis of this comparison, signals "pass" or "reject" are shaped. Boolean formulas for the "pass" signal are set up, and

Card 1/2

UDC: 681.142.621

L 08971-67

ACC NR: AP6029792

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logic diagrams are drawn. The final diagram contains 10 OR-gates, 7 AND-gates, 6 NOT-gates, and 2 emitter followers (before the last AND-gate). The claimed advantages of the digital quality-control scheme are: (1) The error of the preset tolerance is one in the lowest digit place; (2) Parameters having the sign + or - are tolerance-controllable; (3) The tolerance is checked practically instantaneously; (4) The scheme can work in conjunction with any digital measuring instrument. Orig. art. has: 4 figures and 11 formulas.

SUB CODE: 13, 09 / SUBM DATE: none

Coro 2/2 nst

BUKHALKIN, Yu.M., inzh.

Results of testing engines manufactured by Doxford [from "The
Motor Ship, no. 1. 1961]. Sudostroenie 28 no.9:70-71 S '62.
(MIRA 15:10)
(Great Britain—Marine diesel engines—Testing)

LANDA, L.Ye., inzh.; BUKHALKIN, Yu.M., inzh.

Characteristics of the power plant on the tank vessel "Dzhuzeppe Garibaldi."
Sudostroenie 29 no.1:30-38 Ja '63. (MIRA 16:3)
(Tank vessels) (Marine gas turbines) (Boilers, Marine)

BUKHALO, A.S.

New habitat of the gasteromycete *Mutinus caninus* (Huds. et Pers.) Fr.
in the Ukraine. Ukr.bot.zhur. 17 no.1:89-90 '60. (MIRA 13:6)

1. Institut botaniki AN USSR, otdel mikologii.
(Ukraine--Gasteromycetes)

BUKHALO, A.S.

New and rare fungus species of the Ukrainian flora from the
left-bank forest steppe area. Ukr. bot. zhur. 17 no.6:94-99 '60.
(MIRA 14:3)

1. Institut botaniki AN USSR, otdel mikologii.
(Vorskla Valley--Fungi, Phytopathogenic)

BUKHALO, A.S.

Mycological research in forests of the middle Vorskla Valley.
Ukr. bot. zhur. 18 no.1:104-113 '61. (MIRA 14:3)

1. Institut botaniki AN USSR, otdel mikologii.
(Vorskla Valley—Fungi)

BUKHALO, A.S.

Mycological characteristics of forests in the middle Vorskla Valley.
Ukr.bot.zhur. 18 no.4:113-120 '61. (MIRA 14:8)

1. Institut botaniki AN USSR, otdel mikologii.
(Vorskla Valley--Fungi, Phytopathogenic) (Forest ecology)

BUKHALO, A.S.

New species of Fungi imperfecti from the left-bank area of the
Ukrainian forest steppe. Ukr.bot.zhur. 18 no.6:99-101 '61.
(MIRA 15:3)

1. Institut botaniki AN USSR, otdel mikologii.
(Ukraine--Fungi)

BUKHALO, A.S.

The new species *Cercospora ficariae* Buchalo sp. nova on *Ficaria verna* Huds. Ukr. bot. zhur. 20 no.3:106-107 '63.

(MIRA 17:9)

1. Laboratoria mikologii Instituta botaniki AN UkrSSR.

BILAY, V.I.; PIDOPLICHKO, N.N. [Pidoplichko, M.M.]; GUTYRYA, V.S. [Hutyria, V.S.];
BUKHALO, A.S.; V'YUN, A.A. [V'iun, H.A.]; GALICH, P.N. [Halych, P.M.];
KOVAL', E.Z.; MASUMYAN, V.Ya.; MIL'KO, A.A. [Mil'ko, O.O.]

Petroleum hydrocarbons as a source of carbon for microscopic
mycelial soil fungi. Mikrobiol. zhur. 27 no.2:3-10 '65.

(MIRA 18:5)

1. Institut mikrobiologii i virusologii AN UkrSSR i Institut
khimii vysokomolekulyarnykh soyedineniy AN UkrSSR.

SEMENTIN, N.; TEREENT'YEVA, T., doverenny vrach; GONTAR', I., pomoshchnik stalevara; BUKHALO, I., slesar', strakhovoy delegat; KOVALEVSKAYA, Z., portnikha po remontu spetsodezhdy, strakhovoy delegat; SHITUNOV, I., kontroler; CHAYKA, M., inzh., strakhovoy delegat; KOZHEMYAKIN, P., normirovshchik; ALAKOZOVA, L., fel'dsher; TSOLOLO, F., slesar'

Let's have more of active initiative and interest. Okhr. truda i sots. strakh. no.2:9-10 Ag '58. (MIRA 12:1)

- 1.Strakhovoy aktiv Zhdanovskogo metallurgicheskogo zavoda "Azovstal'" (for all).
- 2.Predsedatel' zavkoma profsoyuza zavoda "Azovstal'" (for Sementin).
3. Chlen komiteta martenovskogo tsekha zavoda "Azovstal'" (for Gontar').
- 4.Mekhanicheskyy tsekh zavoda "Azovstal'" (for Bukhalo).
- 5.Predsedatel' mestnogo komiteta medsanchasti zavoda "Azovstal'" (for Kovalevskaya).
- 6.Rel'so-balochnyy tsekh zavoda "Azovstal'" (for Kutsevale).
- 7.Utdel tekhnicheskogo kontrolya liteynogo tsekha i chlen komissii zavkoma pe sotsial'nomu strakhovaniyu zavoda "Azovstal'" (for Shitunov)
- 8.Domennyy tsekh zavoda "Azovstal'" (for Chayka).
- 9.Zamestitel' predsedatelya tsekhovogo komiteta mekhanicheskogo tsekha No.1 zavoda "Azovstal'" (for Kozhemyakin).
- 10.Medsanchast' zavoda "Azovstal'" i chlen komiteta zavodskoy organizatsii Krasnogo Kresta (for Alakozova).
- 11.Predsedatel' komissii pe sotsial'nomu strakhovaniyu tsekha blyuming zavoda "Azovstal'" (for TSOLOLO).

(INDUSTRIAL HYGIENE)

BUKHALO, M.A.

Aquatic and swamp vegetation of the lakes of Zabolot'ye District,
Volyn' Province. Dop. ta pov. L'viv. un. no. 5 pt. 2:4-7 '55.
(MLRA 9:10)

(Zabolot'ye District--Aquatic plants)

BUKHALO, M.A.

Plant associations of Pesochnoye and Domashneye Lakes in
Zabolot'ye District in Volhynia. Dop. ta pov. L'viv. un.
no.5 pt.2:7-9 '55. (MLRA 9:10)

(Zabolot'ye District--Aquatic plants)

BUKHALO, M.A.

Macrophytes of certain lakes of the Shatsk group in the Volyn'
Province. Dop. ta pov. L'viv. un. no.7 pt.3:49-53 '57. (MIRA 11:2)
(Volyn' Province--Algae)

BUKHALO, M.A. [Bukhalo, M.O.]

Aquatic and swamp vegetation of Lake Tur in Zabolot'ye District,
Volyn Province, and its utilization. Biol.zbir. no.8:109-121
'58. (MIRA 12:7)
(Tur, Lake--Fresh-water flora) (Fish culture)

BUKHALO, S.M., kandidat tekhnicheskikh nauk.

Operations of cutter-loader worked longwalls and work organization
for loading and transporting coal from the sector. Trudy Inst. gor.
dela AN USSR no.1:72-84 '51. (MLRA 10:8)
(Coal mining machinery) (Coal handling) (Mine railroads)

BUKHALO, S.M.

USSR/ Scientists

Card 1/1 Pub. 138 - 5/12

Authors : Bukhalo, S.M.

Title : The creative friendship between Russian and Ukrainian scientists

Periodical : Visnik AN URSR 3, 40-51, Mar 1954

Abstract : The close friendship, existing between the Russian and Ukrainian scientists, since the establishment of the All-Russian Academy of Science by Peter the Great (18-th century) is described. The contributions of Russian scientists to the development of Ukrainian industrial science and culture and vice versa are listed.

Institution:

Submitted:

BUKHALO, Sargey Maksimovich; GERCHIKOV, S.S., otvetstvennyy redaktor;
SUROVA, V.A., redaktor izdatel'stva; IGMAT'YEVA, L.I., redaktor
izdatel'stva; ALADOVA, Ye.I., tekhnicheskiy redaktor

[Organization and planning of production in coal mines] Organiza-
tsiia i planirovanie proizvodstva na ugol'nykh shakhtekh. Moskva,
Ugletekhizdat, 1957. 355 p. (MLRA 10:8)
(Coal mines and mining)

BUKHALO, Sergey Maksimovich; D'YACHENKO, I., red.; SHAFETA, S.,
tekhn.red.

[Organization and planning of the production in coal mining
enterprises] Organizatsiia i planirovanie proizvodstva na
ugol'nykh predpriatiakh. Kiev, Gos.izd-vo tekhn.lit-ry
USSR, 1959. 374 p. (MIRA 13:2)
(Mine management)

BUKHALO, Sergey Maksimovich; NAUMENKO, K.D., doktor ekonom. nauk,
retsentsent; BOYKO, A.A., inzh., otv. red.; SUROVA, V.A.,
red.izd-va; PROZOROVSKAYA, V.L., tekhn. red.

[Production organization and planning in coal mines] Organiza-
tsia proizvodstva i planirovanie na ugol'nykh shakhtakh.
Izd.2., perer. i dop. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry
po gornomu delu, 1961. 413 p. (MIRA 15:1)
(Coal mines and mining)

BUKHALO, S. M.

"Ukrainian economic experience in development of productive forces and its possible application in less developed areas"

report to be submitted for the United Nations Conference on the Application of Science and Technology for the Benefit of the Less Developed Areas - Geneva, Switzerland, 4-20 Feb 63.

BUKHALO, S.M., doktor ekonom. nauk; GENSIRUK, S.A., kand. sel'skokhoz.
nauk; KRAVCHENKO, A.N., gornyy inzh.

Reduce the consumption of wood materials in the coal industry
of the Ukraine. Ugol' Ukr. 7 no.7:31-33 J1 '63. (MIRA 16:8)

(Ukraine--Wood)

BUKHALO, S.M., doktor ekon. nauk, otv. red.; SHEVCHENKO, Ya.A., doktor ekon.nauk, red.; YAKUSHA, G.B., kand. tekhn. nauk, red.; SKLYAR, V.T., kand. khim. nauk, red.; RESHETNYAK, A.A., inzh., red.; PILYUKHANOV, L.S., inzh., red.; METLINA, T.I., inzh., red.; VELIKOKHAT'KO, A.T., red.

[Problems of effective use of fuel and power resources (Donets and Dnieper Economic Regions); materials] Voprosy ratsional'nogo ispol'zovaniia toplivno-energeticheskikh resursov (Donetsko-Pridneprovskii ekonomicheskii raion); materialy. Kiev, Naukova dumka, 1964. 200 p. (MIRA 17:12)

1. Nauchno-tekhnicheskaya konferentsiya po voprosam ratsional'nogo ispol'zovaniya toplivno-energeticheskikh resursov. Donetsk, 1962. 2. Institut ekonomiki Gosplana Ukr.SSR (for Shevchenko).

YEGOROV, Nikolay Aleksandrovich; KOVSHULYA, Afanasiy Andreyevich;
PECHKOVSKIY, Vsevolod Ivanovich; BUKHALO, S.M., doktor
ekon. nauk, otv. red.; BORYAKIN, V.N., red.

[Ore resources of the Ukraine] Rudnye resursy Ukrainy. Kiev,
Naukova dumka, 1964. 188 p. (MIRA 17:10)

YEMEL'YANOV, A.S.; Pilyukhanov, L.S.; Zvyagil, P.Z., doktor
tekhn. nauk, retsenzent; Kuz'mich, A.S., doktor tekhn.
nauk, retsenzent; Bukhalo, S.M., doktor tekhn. nauk,
otv. red.; Golub'yatnikova, G.S., ved. red.

[Potentialities for improving the economics of coal mines]
Rezervy uluchsheniia ekonomiki ugol'nykh shakht. Moskva,
Nedra, 1964. 255 p. (MIRA 18&P)

BUKHALO, S.M., doktor ekon. nauk, prof.; VOLOBOY, P.V., kand. ekon. nauk; KUCUKALO, I.A. [Kuhukalo, I.A.], kand. ekon. nauk; PALAMARCHUK, M.M., doktor ekon. nauk, prof.; SLYUSAR, V.D., kand. ekon. nauk; GLADYSHEV, I.S. [Hladyshev, I.S.], st. inzh.-ekonomist; TSYASHCHENKO, P.S., kand. ekon. nauk; PETRUNEVICH, F.G. [Petrunevych, IE.H.], st. inzh.-ekonomist; GRADOV, G.L. [Hradov, H.L.], kand. ekon. nauk; KHAZANET, S.M., red.

[The economic regions of the Ukrainian S.S.R.; a manual] Ekonomichni raiony URSR; dovidnyk. Kyiv, Naukova dumka, 1965. 190 p. (MIRA 18:5)

1. Sovet po izucheniyu produktivnykh sil Ukrainskoy RSR Gosudarstvennogo planovogo komiteta Ukr. RSR (for all except Khazanet).

BUKHALOV, M.

Great problems of small machinery. Na stroi. Ros. 4 no.4:32
Ap '63. (MIRA 16z4)

1. Zamestitel' glavnogo inzhenera Stroitel'nogo upravleniya
Saratovskoy gidroelektrostantsii.

(Construction equipment)

BUKHALOV, Yu.F., dotsent; PARTOLIN, M.P., dotsent; SLABKIY, O.S., dotsent;
KULIKOV, I.M., dotsent

A book about M.O. Maksimovich ("Philosophy of M.O. Maksimovich"
by D. Ostrianin. Reviewed by Yu.F. Bukhalov and others). Nauka
i zhyttia 11 no.1:60-61 Ja '61. (MIRA 14:3)

1. Kafedra filosofii Khar'kovskogo universiteta.
(Maksimovich, Mikhail Aleksandrovich, 1804-1873)
(Ostrianin, D.)

BUKHALOVA, A.A.

USSR/Physical Chemistry - Thermodynamics. Thermochemistry. B-8
Equilibrium. Physicochemical Analysis. Phase Transitions

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 3723

Author : Bergman A.G. , Bukhalova A.A.

Inst : Institute of General and Inorganic Chemistry, Academy
of Sciences USSR

Title : Topology of Mutual Quaternary Complex-Forming Systems

Orig Pub : Izv. Sektora. fiz.-khim. analiza ~~VOEN~~ ~~OF~~ USSR; 1956,
27, 35-49

Abstract : Presented are the results of geometric analysis of crys-
tallization trees and stable elements of quaternary mu-
tual systems with a compound the figurative point of the
composition of which can be located on the edge, face,
or within of the composition prism of the system. Consi-
dered are 17 forms of tetrahedration of composition prism
of mutual quaternary system.

Card 1/1

- 68 -

Bukhalova, A. V.

7751. 500 tsentnerov kormovoy svекly s гektara. [Rasskaz even'yevoy kolkhoza im. stalina, b-murashkin. rayona. lit. obrabotka g. n. lysikhina]. gor'kiy. kn. izd., 20s. 14sm. (UPR. s.-kh. propagandy I nauki. Peredoviki Zhivotnovodstva o svoem opyte). 2.000 ekz. Bespl.-vlozhena s 9-yu drugimi knigami etoy serii v futlyar s zagl. serii.- (55-3953)p
633.416st(47.37)

SO. Knizhnaya Letopis', Vol. 7, 1955

CA

Topology of reciprocal complex formation in ternary
and quaternary systems. A. O. Bergman and G. A.
Bukhalova (Inst. of Gen. and Inorg. Chem., Acad. Sci.
U.S.S.R.): *Invest. Sektora Fiz.-Khim. Anal. Inst. Ob-
shch. i Neorg. Khim., Akad. Nauk S.S.S.R.* 10, 33-40
(1949).—A brief summary of results of topochem. studies
on a number of salts. The numerous types of possible equil.
-diagrams are presented graphically. . . M. Houch

BUKHALOVA, G. A.

USSR/Chemistry - Decomposition
Solutions, Solids

Apr 49

"Double Decomposition in the Absence of a Solvent:
The Formation of Complexes, Solid Solutions, and
Double Decomposition in Fusions of the Fluorides,
and Chlorides of Strontium and Barium," A. G. Berg,
G. A. Bukhalova, 8 3/4 pp

"Zhur Obshch Khim" Vol XIX, No 4, pp 603-11.
Determines by visual-polythermic analysis that
between fluorides and chlorides of strontium and
barium are formed stable anionic complexes of
SrCl₂ · SrF₂ and BaCl₂ · BaF₂, which melt at 960°

65/49215

USSR/Chemistry - Decomposition (Contd) Apr 49

and 1008° and undergo homomorphous transformation
at 890° and 950°. Submitted 4 Jan 48.

65/49215

BUKHALOVA, G.A.

May 49

USSR Chemistry - Systems, Ternary

"Ternary Reciprocal Systems of Fluorides and Chloride of Lithium and Calcium," G.A. Bukhalova, A.G. Bergman, Inst Gen and Inorg Chem imeni N. S. Kurnakov, Acad Sci USSR, 3 1/3 pp

"Dok ak Nauk SSSR" Vol LXIV, No 1, pp67-70/

This is a study of a particular case with regard to the nature of the appearance of binary compounds in reciprocal systems when a secondary incongruent compound emerges in a non-reactive system. Submitted by Acad G. G. Urazov, 5 Mar 49.

PA 50/49T22

CA

6

Effect of complex formation on the exchange in ternary reciprocal systems. A. G. Bergman and G. A. Bukhalova. *Zhur. Obshchei Khim.* 20, 234-9(1949); *J. Gen. Chem. U.S.S.R.* 20, 245-9(1950) (Engl. translation); *cf. C.A.* 24, 2367.-(1) In the case of formation of only one binary compd. in the reciprocal system $AX + BY \rightleftharpoons AY + BX$, the representative square is triangulated by secants drawn between the representative point of the compd. and the opposite corners of the square; such systems, illustrated by Li, Sr || F, Cl, are termed "adiagonal." At points of intersection between secants and diagonals the reactions $2AY + BX \rightarrow AY.BY + AX$ and $2BY + AX \rightarrow AY.BY + BX$, by the criterion of heats of formation proceed from left to right. By the same criterion, if one of the 2 secants starts at the representative point of the complex, and the other coincides with a diagonal, the reactions are $AY.BY + AX \rightarrow BX + 2AY$ and $2BY + AX \rightarrow AY.BY + BX$; in such systems, illustrated by Na, Sr || F, Cl, the triangulating stable sections are the diagonal $BX - AY$ and the secant $BX - AY.BY$. Two possible variants of this case are detd. by whether the diagonal section is the predominating one and the adialogal subordinate, as in K, Na || F, B, O₂, or vice versa, as in Li, K || Cl, SO₂. The latter case is termed "adiagonal with subordinate diagonal section." (2) In the case of 2 compds. lying on opposite sides of the square, if the exchange decompn. reaction predominates, as in Ag, Te || Cl, SO₂, the square is triangulated in the 1st place, by a diagonal, and each resulting triangle by a secant. In the presence of predominating complex formation, the basic square is primarily divided into 2 rectangles, each of which can be viewed as a new reciprocal system, subject to further triangulation; an example is

Li, K || SO₂, WO₃. If one of the 2 compds. is predominating the square is primarily divided adialogally, and the inner triangle subsequently split in two by the line connecting the 2 complexes. If, in addn. to complex formation, there is a continuous series of solid solns. both between pairs of components and between the complexes, the representative square is simply divided into 2 rectangles, as in Sr, Ba || F, Cl. A particular type, illustrated by Ca, Ba || F, Cl, arises when only one adialogal section is significant, the remaining secants having no binary-system character. Systems in which the line connecting the representative points of the complexes on 2 opposite sides of the square is a triangulating section are termed "belt-type reciprocal systems," and are characterized by the feature that the crystn. fields of pairs of diagonally opposed components are sepd. by contiguous crystn. fields of the 2 components. N. Thon

CA

Effect of complex formation on the exchange in ternary
reciprocal systems. A. G. Bergman and G. A. Bukhalova,
J. Gen. Chem. U.S.S.R. 20, 245-46 (1950) (Engl. translation).
—See *C.I.* 44, 10560f. R. M. S.

1957

CA BUKHALOVA, G.A.

Complex formation and exchange decomposition in the ternary reciprocal system of lithium and potassium sulfates and nitrates. G. A. Bukhalova, M. L. Sholokovich, and A. G. Bergman. *Doklady Akad. Nauk S.S.S.R.* 71, 287-90(1980).—The ternary system was investigated by the visual polythermal method. The 4 binary systems were investigated previously by other authors. The ternary diagram has 5 regions where the solid phases and the percent-

age of the total area are, resp.: K_2SO_4 , 43.2; Li_2SO_4 , 42.7; $Li_2SO_4 \cdot K_2SO_4$, 12; KNO_3 , 0.8; $LiNO_3$, 1.3. There are 3 invariant points: a transition point at 440°, contg. 51.5 (equiv.) % SO_4 , 58% Li; a transition point at 133°, contg. 1.0% SO_4 , 41.5% Li; and a eutectic at 403°, contg. 1.0% SO_4 , 43.5% Li. There is a thermodynamic discussion of the heat of reaction involved in the formation of the complex $Li_2SO_4 \cdot K_2SO_4$.
Arild J. Miller

BUKHALOVA, G. A.

191T35

USSR/Chemistry - Fluorine Compounds Sep 51

"A Diagonal Combined Interacting System of Fluorides and Chlorides of Calcium and Barium." G. A. Bukhalova, A. G. Bergman, Inst Gen and Inorg Chem imeni N. S. Kurnakov, Acad Sci USSR

"Zhur Obshch Khim" Vol XXI, No 9, pp 1570-1579

From temp and compn observations for interacting system Ca-Ba:F-Cl constructed 3-dimensional phase diagram. Discussed interaction of, ion exchange between, and formation of double salts by different components on basis of diagram.

191T35 ✓

Nov . 51

G. A. BUKHALOVA

USSR/Chemistry - Lithium and Fluorine
Compounds

"Heat of Formation of Double Salts $\text{Li}_2\text{SO}_4 \cdot \text{K}_2\text{SO}_4$, $\text{BaF}_2 \cdot \text{BaCl}_2$, and $\text{SrF}_2 \cdot \text{SrCl}_2$, "
N. K. Voskreseskaya, G.A. Bukhalova, Inst of Gen and Inorg Chem imeni N. S. Kurnakov,
Acad Sci USSR

"Zhur Obshch Khim" Vol XXI, No 11, pp 1957-1961

Detd by expt heat of interaction of salts which form subject double salts. Calcd heat
of formation of these double salts from elements.

PA 194T44

Thermochemical Interrelation in ternary reciprocal systems forming complexes. A. G. Bergman and G. A. Butchikova (N. S. Kurnakov Inst. Gen. Inorg. Chem. Acad. Sci. U.S.S.R., Moscow). Izvest. Sektora Fiz.-Khim. Anal., Inst. Obshchei Neorg. Khim., Akad. Nauk S.S.S.R. 21, 228-49 (1952).—The connection between the direction of a metathetic reaction in a reciprocal system $AX + BY \rightleftharpoons AY + BX$ and the assumed thermal effect of the reaction is analyzed. The reactions actually considered take place at fusion temp. of alk. and alk. earth salts (chlorides, fluorides, and sulfates) or at higher temps., but the thermal effect is calcd. at 18-25° from the heats of formation and is therefore referred to as "assumed." The analysis is made on the basis of phase diagrams and calcd. data on the thermal effect. In irreversible reciprocal systems where no complexes are formed, the direction of the reaction and the topology of its space diagram are detd. by the assumed thermochem. effect. Thermodynamically it follows $\Delta F = \Delta H - T\Delta S$. When the thermochem. effect is small, not over 2-3 Cal. per equiv. $T\Delta S$ can become commensurate with ΔH and even change the sign of ΔF , i.e. the reaction will proceed contrary to the direction indicated by the assumed thermochem. effect of the reaction. Such is the case in the system Li, Ba||Cl, SO₄. Where complexes are formed by one of the component binary systems, the square representing the entire system is triangulated by secants which represent the max. thermal effect, except in the systems Li, Ba||F, Cl and Li, K||SO₄, NO₃. In systems where complexes are formed on opposite sides of the square, e.g., Sr, Ba||F, Cl, triangulation secants indicating the direction of the reaction correspond to the max. thermal effect. The several possible types of diagrams and their relation to the thermal effect of the metathetic reaction and the at. no. is presented graphically for mono- and bivalent metal fluorides and chlorides.

M. Hosh

BUKHALOVA, G. A.

USSR/Chemistry - Fluorine and Chlorine Compounds Jan 52

"Double Decomposition in the Absence of a Solvent. Complex Formation, Solid Solutions, and Double Decomposition in Melts of Calcium and Strontium Fluorides and Chlorides," G. A. Bukhalova, A. G. Bergman "Zhur Obshch Khim" Vol XXII, No 1, pp 23-31

Constructed and investigated phase diagram of Ca, Sr-F, Cl system, consisting of 3 planes of crystals of solid solns: Ca and Sr fluorides; Ca and Sr chlorides; and both complexes (incongruently melting $CaF_2 \cdot CaCl_2$ and congruently melting $SrF_2 \cdot SrCl_2$).

USSR/Chemistry - Fluorine and Chlorine Compounds (Contd) Jan 52

Comparison of results of this and former investigations showed general relationships between complex formation and double decomposition for 3 mutual systems formed by fluorides and chlorides of Ca, Sr, and Ba.

207711

BUKHALOVA, G.A.; ALESHKINA, N.N.

The reaction of vanadinite in fusions of orthovanadates and chlorides of lithium and lead. Doklady Akad. Nauk S.S.S.R. 88, 819-20 '53. (MLRA 6:2) (GA 47 no.22:12138 '53)

1. Rostov State Univ.

BUKHALOVA, G.A.

✓ Complex formation and solid solutions in the adlogonal
 reciprocal system of the molybdates and chlorides of sodium
 and potassium. G. A. Bukhalova and Z. A. Matelko
 (Eng.-Construction Inst., Rostov-on-Don). Zhur. Ob-
 zhet Khim. 25, 887-85(1955).—The system: NaCl-
 KCl-Na₂MoO₄-K₂MoO₄ was investigated by a visual poly-
 thermal method on a Pt plate by means of a Pt-Pt,Pd,Au
 thermocouple. Two complexes that decomp. on melting,
 Na₂MoO₄·K₂MoO₄ (I) and Na₂MoO₄·2K₂MoO₄ (II), NaCl-
 Na₂MoO₄ (III), m. 644° without decompn., and the follow-
 ing invariant points are reported (type, temp., % NaCl,
 % K₂MoO₄, % Na₂MoO₄, and phases in equil., resp.):
 transition, 527°, 41, 53.5, 5.5, KCl, K₂MoO₄, II; eutectic,
 507°, 43, 47, 11, KCl, II, III; transition, 543°, 30, 35, 35,
 I, II, III; transition, 560°, 19, 24, 57, Na₂MoO₄, I, III;
 transition, 524°, 49.5, 41.5, 9, NaCl, KCl, III. Phase dia-
 grams of both the complete system and numerous sections
 are given.

John Howe Scott

MA
① MST

Bukhalova, G.A.

The ternary reciprocal system of molybdates and fluorides
of sodium and potassium. Z. A. Matejko and G. A. Bukhalova. *J. Gen. Chem. U.S.S.R.* 25, 1631-1635 (1955)
(Engl. translation).—See C.A. 50, 5386c. B. M. R.

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PM

MATEYKO, Z.A.; BUKHALOVA, G.A.

Ternary reciprocal system of sodium and potassium molybdates and
fluorides. Zhur.ob.khim. 25 no.9:1673-1680 S '55. (MLRA 9:2)

1. Restevskiy inzhenerne-stroitel'nyy institut.
(Sodium salts) (Potassium salts)

BUKHALOVA, G.A.

Ternary reciprocal system of sodium and strontium fluorides and chlorides.
Izv.Sekt.fiz.-khim.anal. 26:138-146 '55. (MIRA 8:9)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova AN
SSSR. (Sodium salts) (Strontium salts) (Systems (Chemistry))

metal Quaternary mutual systems of chlorides and fluorides of sodium, potassium, calcium and barium, as the basis of fluxes for smelting secondary light alloys. G. A. Bukhalova and A. G. Bergman (*Zh. Prikl. Khim.*, 1955, 28, 1268-1274). Fusion diagrams are given for the systems 2NaCl-2KCl-CaF₂ and 2NaCl-2KCl-BaF₂, from which, together with other published data, a topological analysis is made of the quaternary systems Na, K, Ca || F, Cl and Na, K, Ba || F, Cl. These data allow of the rational selection of flux compositions for remelting Al scrap. R. TRUSCOE. *2*

of LFH

BUKHALOVA, G. A.

USSR/Chemistry - Alkali metals

Card 1/1 Pub. 22 - 24/45

Authors : Sholokhovich, M. L.; Lesnykh, D. S.; Bukhalova, G. A.; and Bergman, A. G.

Title : Stratification in fusions of mutual systems with participation of salts of first and second groups

Periodical : Dok. AN SSSR 103/2, 261-263, Jul 11, 1955

Abstract : Experiments conducted with Na, Cs, Li and other metal systems showed that one of the conditions leading to stratification during the fusion of these elements is the greater difference in the polarizability of the cations and anions of the components. The most vivid difference in the polarizability was established among ions with 8 or 2 external electron layers and ions with external electron structure consisting of 18 or 18 plus 2 electrons. The effect of fluorides on the prevention of stratification in liquid phases is explained. Nine USSR references (1929-1946). Graphs.

Institution : Rostov/Don State University im. V. M. Molotov

Presented by : Academician I. I. Chernyayev, May 13, 1955

BUKHALOVA, S.A.

Category: USSR / Physical Chemistry
 Thermodynamics. Thermochemistry. Equilibrium. Physico-
 chemical analysis. Phase transitions.

B-8

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 29945

Author : Bukhalova G., Mateyko Z.

Inst : not given

Title : Adiaagonal Mutual System of Chlorides and Tungstates of Sodium and Potassium.

Orig Pub: Zh. obshch. khimii, 1956, 26, No 8, 2119-2124

Abstract: Liquidus diagram of adiaagonal mutual system Na^+ , $\text{K}^+ // \text{Cl}^-$, WO_4^{2-} , investigated by the visual-polythermal method, is represented by seven fields of crystallization, converging at five non-variant points; three of these are eutectic. Interaction of the components of the system can be expressed by the equations: $3\text{Na}_2\text{Cl}_2 + 2\text{K}_2\text{WO}_4 = 2\text{Na}_2\text{WO}_4 \cdot \text{Na}_2\text{Cl}_2 + 2\text{K}_2\text{Cl}_2$; $3\text{Na}_2\text{WO}_4 + \text{K}_2\text{Cl}_2 = 2\text{Na}_2\text{WO}_4 \cdot \text{Na}_2\text{Cl}_2 + \text{K}_2\text{WO}_4$; $4\text{Na}_2\text{WO}_4 + \text{K}_2\text{Cl}_2 = 2\text{Na}_2\text{WO}_4 \cdot \text{Na}_2\text{Cl}_2 + \text{Na}_2\text{WO}_4 \cdot \text{K}_2\text{WO}_4$; $5\text{Na}_2\text{WO}_4 + \text{K}_2\text{Cl}_2 = 2\text{Na}_2\text{WO}_4 \cdot \text{Na}_2\text{Cl}_2 + 2\text{Na}_2\text{WO}_4 \cdot \text{K}_2\text{WO}_4$.

Card : 1/2

-61-

Eng.- Construction Inst., Rostov-on-Don).

Category: USSR / Physical Chemistry
Thermodynamics. Thermochemistry. Equilibrium. Physico-
chemical analysis. Phase transitions.

B-8

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 29945

The compound $\text{Na}_2\text{WO}_4 \cdot \text{K}_2\text{WO}_4$ melts incongruently in the binary system, and congruently in the ternary. The point of composition of the compound: $2\text{Na}_2\text{WO}_4 \cdot \text{Na}_2\text{Cl}_2$ constitutes the pole of a four-ray triangulating star. The compositions and temperatures of the non-variant points are given.

Card : 2/2

-62-

The adiabatic reciprocal system of the chlorides and
perchlorates of sodium and potassium. U. A. Bukhalova
and Z. A. Mal'KO, *J. Gen. Chem. U.S.S.R.* 28, 2355-70
(1956) (English translation).—See C.A. 51, 8315f.
H. M. R.

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117

Bukhalova, G. A.

Topology of quadruple reciprocal systems with the formation of complexes. A. G. Bergman and G. A. Bukhalova. *Izv. Akad. Nauk S.S.S.R., Inst. Khim. Akad. Nauk S.S.S.R.* 27, 36-49 (1958).—The equil. conditions of quadruple reciprocal systems composed of 6 salts (5 ions) A, B, X, Y, Z or A, B, C, X, Y were investigated geometrically, by the Jänecke method (C.A. 7, 1649) to express compns. by use of a 3-sided rectangular prism. The interaction possibilities are very complex, and a notation system is described to permit a condensed expression of the mutual relationships. W. M. Sternberg

Wm

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~~BOBNA, G.A.~~

BUKHALOVA, G.A.

27 27

Nature of melts of the molybdates and tungstates of sodium and potassium. G. A. Bukhalova and G. A. Brikhlova (Eng. Contr. Inst. Moscow on Genl. Zhur. Khim. 2, 201-5 (1957). -- The fusion diagram of the K, Na|| MoO₄, W/O system was detd. by the visual, polythermal method. It consisted of 4 principal fields of crystals of continuous solid solns.: Na₂WO₄, Na₂MoO₄, K₂WO₄, K₂MoO₄ and 3 fields of solid solns. of the cationic complexes. J. Rovnar, Leach.

E2C

MT

Dukhalova, G. A.

Distr: [REDACTED]

Phase diagram for the ternary system of the fluorides of
 calcium, calcium and barium. G. A. Dukhalova and V. I.
 Perzhikova (Inst. Structural Mat., Moscow-65-106). *Zhur.*
Navy. Khim. Z. 1968-12(1087). The surface of crystals was
 etched for the ternary system CaF_2 - CaF_2 - BaF_2 by the visual
 polythermal method. It consists of 4 fields of crystals that
 meet at 2 ternary invariant points, a eutectic point at 710°
 (80.6% CaF_2 , 25.5% CaF_2 , and 54% BaF_2) and a transi-
 tion point at 768° (90% CaF_2 , 22.8% CaF_2 , and 87.3%
 BaF_2). The low-melting mixts. of this system are recom-
 mended as fluxes for soldering refractory metals.

J. Rutter Leach

ДУК ПЕРУМ, Г. А

AUTHORS: Mateyko, Z.A. and Bukhalova, G.A.

576

TITLE: Complex Formation and Exchange in the Reciprocal System of Sodium and Potassium Fluorides and Tungstates. (Kompleksoobrazovanie i Obmen vo Vzaimnoy Sisteme iz Ftoridov i Vol'framatov Natriya i Kaliya).

PERIODICAL: "Zhurnal Neorganicheskoy Khimii" (Journal of Inorganic Chemistry, Vol.11, No.2, pp.407-413. (U.S.S.R.)) 1957

ABSTRACT: The aim of this investigation of the system Na, K || F, WO₄ was to find the influence of replacing the molybdate ion by tungstate ion on the stability of the cation and the anion complexes of the system Na, K || F, MoO₄.

The visual-polythermal method was used in the investigation, temperatures being measured with a Pt-Pt, Pd, Au thermocouple. Eight crystallisation fields were found, meeting in six non-variant points, of which three are eutectic. Comparison of data for the system with those for the analogous molybdate system Na, K || F, MoO₄ showed that in the latter the cation complexes are more stable, whereas in the tungstate system the anion complexes are more stable than the cation ones.

There are five references, four of them Russian.

5 figures, 4 tables.

The work was carried out at the Engineering-Construction Institute, Rostov on Don.

Received 14 August 1957

BUKHALOVA, E. A.
SHUL'GA, N.A.; BUKHALOVA, G.A.

Fusibility in the systems $\text{Na}_2\text{F}_2 - \text{BaCl}_2 - \text{CaF}_2$ and $\text{K}_2\text{Cl}_2 - \text{BaCl}_2 -$
- CaF_2 . Zhur.neorg.khim. 2 no.9:2136-2144 S '57. (MIRA 10:12)
(Fusion) (Systems (Chemistry)) (Crystallization)

AUTHORS: Mateyko, Z. A., Bukhalova, G. A. SOV/ 78-3-8-26/48

TITLE: The Ternary Systems $\text{Na}\|\text{Cl}, \text{MoO}_4, \text{WO}_4$ and $\text{K}\|\text{Cl}, \text{MoO}_4, \text{WO}_4$
(Troynnye sistemy $\text{Na}\|\text{Cl}, \text{MoO}_4, \text{WO}_4$ i $\text{K}\|\text{Cl}, \text{MoO}_4, \text{WO}_4$)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol. 3, Nr 8, pp. 1883-1887 (USSR)

ABSTRACT: The systems $\text{Na}\|\text{Cl}, \text{MoO}_4, \text{WO}_4$ and $\text{K}\|\text{Cl}, \text{MoO}_4, \text{WO}_4$ were investigated, especially some solid solutions of these compounds. The melts were investigated by means of the visual-polythermal method. In the system $\text{Na}\|\text{Cl}, \text{MoO}_4, \text{WO}_4$ the fusion diagram consists of three crystallization ranges: NaCl , solid solutions of $2 \text{Na}_2\text{MoO}_4 \cdot \text{Na}_2\text{Cl}_2$ and $2 \text{Na}_2\text{WO}_4 \cdot \text{Na}_2\text{Cl}_2$, and solid solutions of sodium molybdate and sodium tungstate. The compound $2 \text{Na}_2\text{MoO}_4 \cdot \text{Na}_2\text{Cl}_2$ has its melting point at 650°C , and the compound $2 \text{Na}_2\text{WO}_4 \cdot \text{Na}_2\text{Cl}_2$ at 644°C . In the system $\text{K}\|\text{Cl}, \text{MoO}_4, \text{WO}_4$ only two crystallization ranges exist: KCl , as well as continuously solid solutions of potassium tungstate and potassium molybdate. The surface crystal-

Card 1/2

SOV/78-3-8-26/48
The Ternary Systems NaCl, MoO₄, WO₄ and KCl, MoO₄, WO₄
lization of the ternary systems investigated: NaCl, MoO₄, WO₄
and KCl, MoO₄, WO₄ is comparatively simple; this tends to show
the lack of a complex interaction between the components.
There are 6 figures, 1 table, and 10 references, 8 of which are
Soviet.

ASSOCIATION: Rostovskiy-na-Donu inzhenerno-stroitel'nyy institut (Rostov na Donu
Institute of Construction Engineering)

SUBMITTED: June 8, 1957

Card 2/2

5(4)

AUTHOR:

Bukhalova, G. A.

SOV/78-4-1-23/48

TITLE:

The Ternary Reciprocal System of Fluorides and Chlorides of Sodium and Calcium (Troynaya vzaimnaya sistema iz ftoridov i khloridov natriya i kal'tsiya)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 1, pp 117-122 (USSR)

ABSTRACT:

The melting process of fluorides and chlorides of sodium, with the complex $(CaF_2 \cdot CaCl_2)$ being present, was investigated by a visual-thermal method. The fluorides of calcium and sodium were produced by a solution of carbonates in fluoric acid. The binary systems $Na_2F_2-Na_2Cl_2$, $Na_2F_2-CaF_2$, $CaCl_2-CaF_2$, and $Na_2Cl_2-CaCl_2$ were investigated. In the reciprocal system Na, Ca // F, Cl two diagonal and 17 inner sections were investigated. The crystallization surface in the system consists of five ranges of crystallization; four ranges are initial salts and one range indicates the complex compound $CaF_2 \cdot CaCl_2$. The temperatures and compositions in the system

Card 1/2

The Ternary Reciprocal System of Fluorides and Chlorides of Sodium and Calcium SOV/78-4-1-23/48

which are corresponding to the nonvariant points were determined. The complex $\text{CaF}_2 \cdot \text{CaCl}_2$ does not change its incongruent melting character in the reciprocal system. In the system Na, Ca // F, Cl the exchange process is predominant. There are 4 figures, 4 tables, and 8 references, 4 of which are Soviet.

ASSOCIATION: Rostovskiy-na-Donu inzhenerno-stroitel'nyy institut (Rostov na Donu Institute for Construction Engineering)

SUBMITTED: August 6, 1957

Card 2/2

5(4)

AUTHORS:

Berezhnaya, V. T., Bukhalova, G. A.

SOV/78-4-4-32/44

TITLE:

The Melting Diagram of the Ternary System of Lithium, Magnesium and Calcium Fluorides (Diagramma plavkosti treynoy sistemy iz fluoridov litiya, magniya i kal'tsiya)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 4, pp 902-905 (USSR)

ABSTRACT:

The ternary system Li, Ca, Mg || F was investigated by a visual polythermal method. The corresponding fluorides were synthesized by treating calcium and magnesium carbonate with hydrofluoric acid. The melting points of these compounds are the following: MgF_2 : 1396°, CaF_2 : 1411° and Li_2F_2 : 848°. The binary systems Li_2F_2 - MgF_2 , Li_2F_2 - CaF_2 and MgF_2 - CaF_2 were checked and completed. The authors investigated eleven internal sections of the ternary system; the results are listed in figure 3. The solid solutions of magnesium and lithium fluorides decompose already after the addition of 10% CaF_2 at 676° with the formation of a ternary eutectic: 18% CaF_2 , 47% Li_2F_2 and

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The Melting Diagram of the Ternary System of Lithium, Magnesium and Calcium Fluorides SOV/78-4-4-32/44

35% MgF_2 . The low-melting point alloys of this system may be used as fluxes in the treatment of nonferrous metals. The characteristics of the melting diagrams of the three binary systems under investigation are listed in a table; another table contains the melting points along the six internal sections. There are 4 figures, 2 tables, and 5 references, 2 of which are Soviet.

ASSOCIATION: Rostovskiy-na-Don: nauchno-issledovatel'skiy institut (Rostov-na-Don: Institut of Construction Engineering)

SUBMITTED: December 4, 1957

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5(4).

AUTHORS:

Bukhalova, G. A., Sulaymankulov, K., SOV/78-4-5-31/46
Bostandzhiyan, A. K.

TITLE:

The Melting Diagram of the System Consisting of Fluorides
of Lithium, Sodium and Calcium (Diagramma plavkosti sistemy
iz ftoridov litiya, natriya i kal'tsiya)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 5,
pp 1138-1140 (USSR)

ABSTRACT:

For the purpose of determining the easily meltable mixtures
of alkali- and alkaline earth fluorides, the three-component
system Li, Na, Ca/F was investigated by means of the visual-
thermal method in a platinum crucible with a platinum stirrer.
First, the two-component systems were investigated, and the
following eutectics were found: Li_2F_2 - CaF_2 with 766° and
 $34\% \text{CaF}_2$, LiF_2 - Na_2F_2 with 652° and $39\% \text{Na}_2\text{F}_2$; Na_2F_2 - CaF_2
with 818° and $49\% \text{CaF}_2$. In the three-component system 8 sections
were investigated. There is no interaction among the com-
ponents of the system. The common crystallization line of
the components harmonizes with the triple eutectic point in
the case of a composition of $33.5\% \text{Na}_2\text{F}_2$, $46.5\% \text{Li}_2\text{F}_2$ and

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The Melting Diagram of the System Consisting of Fluorides of Lithium,
Sodium and Calcium

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20% CaF_2 with a melting temperature of 607°C . The low-melting eutectic mixture of the system Li, Na, Ca||F is recommended as a fluxing material for melting nonferrous metals. There are 3 figures and 5 references, 3 of which are Soviet.

ASSOCIATION: Rostovskiy-na-Donu inzhenerno-stroitel'nyy institut (Rostov na Donu Engineer-Building Institute).
Laboratoriya goryuchikh iskopyayemykh Akademii nauk Kirgizskoy SSR (Laboratory for Mineral Fuels of the Academy of Sciences of the Kirgiz SSR)

SUBMITTED: February 20, 1958

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5(4)

AUTHORS:

Bukhalova, G. A., Berezhnaya, V. T.

SOV/78-4-5-32/46

TITLE:

The Three-component System Consisting of Fluorides of Lithium, Magnesium, and Barium (Troynaya sistema iz ftoridov litiya, magniya i bariya)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 5, pp 1141-1145 (USSR)

ABSTRACT:

The three-component system consisting of fluorides of lithium, magnesium, and barium was investigated by means of the visual-thermal method. The fluorides were produced by treating chemically pure carbonates with hydrofluoric acid. The two-component systems Li_2F_2 - MgF_2 , Li_2F_2 - BaF_2 and MgF_2 - BaF_2 were checked and completed. For the purpose of determining the crystallization regions 15 sections were investigated (Figs 2, 3, Table 1). The course of the sections is shown by figure 2. The following crystallization regions were found: $2\text{MgF}_2 \cdot \text{BaF}_2$, $\text{Li}_2\text{F}_2 \cdot 2\text{BaF}_2$, BaF_2 and the continuous solutions Li_2F_2 and MgF_2 . The compound $2\text{MgF}_2 \cdot \text{BaF}_2$ melts incongruently in the two-component system MgF_2 - BaF_2 and congruently in the three-component system.

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The Three-component System Consisting of Fluorides of Lithium, Magnesium, and Barium

Three triple nonvariant points exist in the system, as well as one transition point (P_2) and two eutectic points (E_I, E_{III}).

The composition of these points and the temperature are shown by table 2. The sections of the system Li, Mg, Ba||F are shown by figure 3. The low-melting mixtures of the three-component system may be used as fluxing material for the melting of nonferrous metals. There are 4 figures, 2 tables, and 6 references, 5 of which are Soviet.

ASSOCIATION: Rostovskiy-na-Donu inzhenerno-stroitel'nyy institut
(Rostov na Donu Construction Engineering Institute)

SUBMITTED: February 8, 1958

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5(2)

AUTHORS:

Mateyko, Z. A.; Bukhalova, G. A.

SOV/78-4-7-31/44

TITLE:

The Ternary Systems of Fluorides, Molybdates, and Tungstates of Sodium and Potassium and the Binary System $\text{LiF} - \text{Li}_2\text{CrO}_4$
(Troynnye sistemy iz ftoridov, molibdatov i vol'framatov natriya i kaliya i dvoynnaya sistema $\text{LiF} - \text{Li}_2\text{CrO}_4$)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 7,
pp 1649-1652 (USSR)

ABSTRACT:

It follows from references 1 and 2 that alkali fluorides form eutectic systems with the corresponding tungstates and molybdates, which have the composition $\text{Me}_3[\text{EO}_4\text{F}]$ (Me = alkali metal, E = Mo or W). These complexes were also confirmed by X-ray examination. The salts are isomorphous. The following systems were investigated: 1) $\text{Na} : \text{F}, \text{MoO}_4, \text{WO}_4$ (Figs 1,2). The crystallization surface of the system consists of three fields: sodium fluoride, which occupies the largest portion of the surface, continuous solid solutions of the fluoromolybdate- and fluorotungstate complexes and continuous solid solutions of sodium molybdate and tungstate. 2) $\text{K} : \text{F}, \text{MoO}_4, \text{WO}_4$ (Fig 3) shows the same behavior

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The Ternary Systems of Fluorides, Molybdates, and Tungstates of Sodium and Potassium and the Binary System $\text{LiF} - \text{Li}_2\text{CrO}_4$

as system 1. 3) In the binary system $\text{Li}_2\text{CrO}_4 - \text{Li}_2\text{F}_2$ (Table 1) an eutecticum is formed at 460° and 14.5% Li_2F_2 . Table 2 gives all systems of alkali fluorides with alkali salts of the metals of the 6. group of the type H_2EO_4 (E = S, Cr, Mo, W). Lithium forms eutectic systems with all Li_2EO_4 -salts. All other alkali metals form the salts $\text{Me}_3[\text{EO}_4\text{F}]$. This deviating behavior of lithium is explained by its stronger polarizing effect, which prevents the formation of $\text{Li}_3[\text{EO}_4\text{F}]$. There are 3 figures, 2 tables, and 7 references, 5 of which are Soviet.

SUBMITTED: March 4, 1958

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SOV/78-4-10-25/40

5(2)
AUTHORS: Mateyko, Z. A., Bukhalova, G. A.

TITLE: Solid Solutions in the Systems 1. Na \parallel SO₄, CrO₄, MoO₄, 2. Na \parallel SO₄, CrO₄, WO₄, 3. Na \parallel SO₄, MoO₄, WO₄, 4. Na \parallel CrO₄, MoO₄, WO₄

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 10, pp 2329 - 2334 (USSR)

ABSTRACT: The phase diagrams of six binary systems consisting of the components mentioned in the title are given (Fig 1), as well as the phase diagrams of the ternary systems 1 (Fig 2, Table 1), 2 (Fig 3, Table 2), 3 (Fig 4, Table 3) and 4 (Fig 5, Table 4). The sulphates, chromates, molybdates and tungstates of sodium were found to form with one another a continuous series of solid solutions. This isomorphism and the capability of forming mixed crystals is confirmed by the comparable radii of the anions (Table 5). There are no data available on the polarization properties of the anions, it may, however, be assumed that they are little differing from one other. The intended investigation of the quaternary system Na \parallel SO₄, CrO₄, MoO₄, WO₄ is believed to explain the formation of quaternary solid solutions.

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Solid Solutions in the Systems 1. Na \parallel SO₄, CrO₄, MoO₄, SOV/78-4-10-25/40
2. Na \parallel SO₄, CrO₄, WO₄, 3. Na \parallel SO₄, MoO₄, WO₄, 4. Na \parallel CrO₄, MoO₄, WO₄

There are 5 figures, 5 tables, and 4 references, 2 of which are Soviet.

SUBMITTED: May 28, 1958

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05848

SOV/78-4-11-1/50

5(2), 5(4)

AUTHORS:

Bukhalova, G. A., Mateyko, Z. A.

TITLE:

Meltability in the Quaternary System of Sodium Sulphate, Sodium Chromate, Sodium Molybdate and Sodium Tungstate

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 11, pp 2417-2422 (USSR)

ABSTRACT:

The system under investigation offers the rare example of a quaternary salt system in which all components produce continuous, quaternary, solid solutions from the melt. This phenomenon is explained by the same structure of the anions and the almost equally long ionic radii. Such a system of anions is hardly found again in the periodic system. The presence of quaternary systems of cations with continuous, solid solutions among the salts of platinum metals, lanthanoids and actinides is more likely to be detected. Figure 1 demonstrates the unfolded tetrahedron of the quaternary system with the six edges of the binary systems and the four surfaces of the ternary systems dealt with in reference 2. The authors investigated four sections of the quaternary system whose position is shown in figure 2. The course of the isothermal lines of meltability was

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SOV/78-4-11-1/50

Meltability in the Quaternary System of Sodium Sulphate, Sodium Chromate,
Sodium Molybdate and Sodium Tungstate

measured (Tables 1,2, Figs 3-6). Experimental data clearly indicate that ever-continuous quaternary, solid solutions crystallize out of all melts (Fig 7). There are 7 figures, 2 tables, and 2 Soviet references.

ASSOCIATION: Rostovskiy-na-Donu inzhenerno-stroitel'nyy institut
(Rostov-na-Donu Institute for Construction Engineers)

SUBMITTED: June 21, 1958

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05877

SOV/78-4-11-30/50

5(2)

AUTHORS: Mateyko, Z. A., Bukhalova, G. A.

TITLE: Systems of Potassium Sulphate, ~~Chromate~~, ~~Molybdate~~ and of Potassium Sulphate, ~~Molybdate~~, ~~Tungstate~~

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 11, pp 2567 - 2570 (USSR)

ABSTRACT: A previous paper dealt with the ternary system of sodium salts of acids of the elements of the 6th group. They formed continuous solid solutions (Ref 1). The potassium salts were now investigated for comparison. Figure 1 shows the corresponding binary systems all of which form continuous solid solutions. Figure 2 and table 1 show that the ternary system K_2SO_4, MoO_4, WO_4 has a symmetric structure with a straight course of isothermals, and also forms continuous solid solutions. The system K_2SO_4, MoO_4, CrO_4 (Fig 2, Table 2) also consists of continuous solid solutions. There are 3 figures, 2 tables, and 7 references, 5 of which are Soviet.

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Systems of Potassium Sulphate, -Chromate, -Molybdate
and of Potassium Sulphate, -Molybdate, -Tungstate

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ASSOCIATION: Rostovskiy-na-Donu inzhenerno-stroitel'nyy institut (Rostov-
na-Donu Institute of Civil Engineers)

SUBMITTED: July 20, 1958

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05882

SOV/78-4-11-35/50

5(2)

AUTHORS: Bukhalova, G. A., Berezhnaya, V. T.

TITLE: The Melting Diagram in the Ternary System of Sodium-, Potassium- and Calcium Fluorides

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 11, pp 2596 - 2599 (USSR)

ABSTRACT: In the system Na, K, Ca || F, a complex formation can only be observed between KF and CaF₂. The congruently melting compound KCaF₃ considerably influences the character of the ternary system. The system was investigated in 11 sections (Figs 2,3). The crystallization surface is represented in figure 1 as a projection on the composition triangle. The compound KCaF₃ maintains its congruent character, also within the ternary system. As this compound forms continuous solid solutions with KMgF₃ having perovskite structure (Fig 4), it may be assumed to have the same structure. The capability of NaF and KF of forming complexes with fluorides of the second group of the periodic system depends on the ionic radius of the bivalent metal (Tables 1,2). There are 4 figures, 2 tables, and 13 references, 9 of which are Soviet.

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