ACC NR: AP7005004 SOURCE CODE: UR/0048/66/030/009/1560/1562

AUTHOR: Tale,I.A.; Bogan,Ya.R.; Bomika,V.A.; Vitol, I.K.

ORG: none

TITLE: Concerning the mechanism of recombination processes in zinc sulfide /Report, Fourteenth All-Union Conference on Luminescence (Crystal Phosphors) held at Riga, 16-23 Sept. 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.30, no.9, 1966, 1560-1562

TOPIC TAGS: photoconductivity, zinc sulfide, irradiation, hole conduction, electron conduction

ABSTRACT: The authors have investigated the infrared-stimulated photoconductivity in different ZnS crystals, determining the sign of the carriers by means of Hall effect and photoelectric polarization measurements. The investigated specimens fell into two main groups: high-resistivity crystals, and low-resistivity ZnS crystals containing an excess of Zn, whose high equilibrium conductivity was due to the presence of a high concentration of lattice microdefects. None of the specimens exhibited thermal hysteresis of the electric conductivity, and their luminescence yields were very low. After excitation in the fundamental absorption band, photoconductivity could be stimulated in specimens of both types by irradiation in any of four bands peaking at 0.95, 1.6, 2.0, and 2.8 eV. In the low-resistivity specimens the photo-

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ACC NR: AP7005004

current was carried by electrons regardless of the wavelength of the stimulating photons; in the high-resistivity specimens the photocurrents stimulated in the 0.95 and 2.8 eV band were carried by electrons, and those stimulated in the 1.6 and 2.0 eV bands were carried by holes. Moreover, de-excitation of the high resistivity crystals in the 0.95 eV band reduced the photosensitivity in the 1.6 and 2.0 eV bands, de-excitation in the 1.6 or 2.0 eV bands reduced the photosensitivity in the 0.95 eV band, irradiation in the 2.8 eV band restored the photosensitivity in the other three bands. Cooling from room temperature to liquid nitrogen temperature destroyed the photosensitivity of the 1.6 and 2.0 eV bands; the photosensitivity could be restored only by further excitation in the fundamental absorption band. It is concluded that the 1.6 and 2.0 eV bands are not simple; stimulation in these bands excites trapping centers of several different kinds, of which some have excited states in the forbidden gap. Sensitivity in the 2.8 eV band appeared in specimens that exhibited a green luminescence; the authors accordingly associate this band with an activator. The photoconductivity stimulated in the 2.8 eV band at room temperature had both electron and hole components; the holes were not revealed by the Hall effect measurements because of their low mobility. Orig. art. has: 2 figures.

SUB CODE: 20 SUBM DATE: none ORIG. REF: 003

Card 2/2

ACC NR: AP7004966 SOURCE CODE: UR/0048/66/030/009/1441/1442

AUTHOR: Bogan, Ya.R.; Vitol,I.K.; Portnov,A.A.

ORG: none

TITLE: Use of the luminescent probe technique for investigating hole processes in crystal phosphors /Report, Fourteenth All-Union Conference on Luminescence (Crystal Phosphors) held at Riga, 16-23 Sept. 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 9, 1966, 1441-1442

TOPIC TAGS: luminescence, electron hole, exciton, F band, luminescence center, luminescent crystal, potassium bromide, thallium

ABSTRACT: The authors propose a technique, which they call "luminescent probing", for investigating hole (and other) processes in crystal phosphors whose electrical conductivities are too low to permit application of the more usual techniques involving conductivity, the Hall effect, photopolarization, etc. To employ this technique one induces in the specimen luminescence centers that radiate on interaction with only one type of mobile defect (e.g., only with holes, electrons, excitons, or the like) and investigates the luminescence and absorption in different bands. F centers radiate in the α band on interaction with V_k centers and are thus suitable centers for use in connection with luminescent probe investigations. This was confirmed by measurements of the temperature dependences of the α luminescence, the Tl

ACC NR: AP7004966

luminescence, and the F absorption of a KBr:Tl crystal phosphor. Strong α luminescence, weak Tl luminescence, and a rapidly decreasing F absorption was observed in the temperature range from 165 to 180 K in which the V_k centers decay. The advantage of the luminescent probe technique is its simplicity. It is not yet known whether suitable centers can be found for study of electron and exciton processes, and the use of F centers as luminescent probes is limited by our lack of knowledge of the conditions under which α luminescence can appear as a result of exciton reactions and resonance transfer of energy. Orig. art. has: 1 figure.

SUB CODE: 20 SUBM DATE: none ORIG. REF: 010 OTH REF: 004

Card 2/2

L 39076-66 EWT(m)/EWP(t)/ETI IJP(c) JD/WB

ACC NR: AP6021967 (N) SOURCE CODE: UR/0153/66/009/002/0195/0199

AUTHOR: Taushkanov, V. P.; Boganch, Ya.

ORG: Department of Technology of Rare and Trace Elements, Leningrad Technological Institute im. Lensovet (Kafedra tekhnologii redkikh i rasseyannykh elementov, Leningradskiy tekhnologicheskiy institut)

TITLE: Separation of cobalt from nickel on activated SKT carbon

SOURCE: IVUZ. Khimiya i khimicheskaya tekhnologiya, v. 9, no. 2, 1966, 195-199

TOPIC TAGS: cobalt, nickel, manganese, adsorption, activated carbon / SKT activated carbon

ABSTRACT: The article presents data on the separation of manganese (II) and nickel from cobalt (II) on activated SKT carbon in a medium of ammonium thiocyanate and acetone. A study of the adsorption of these metals from 0.001-5.0 M ammonium thiocyanate showed that the adsorptive capacity of SKT carbon for nickel and cobalt is greatest at an ammonium thiocyanate concentration of 0.2 and 0.7 mole/l respectively. It is shown that during adsorption on SKT carbon from 15% acetone solutions with 0.7 mole ammonium thiocyanate per liter and 0.1 mole HCl per liter, cobalt separates quantitatively from nickel and manganese with purification coefficients in excess of 1030-3300. The proposed method of separation of cobalt from nickel on SKT carbon is

Card 1/2 UDC: 661.183.2+541.183+546.73.74

L 39076-66

ACC NR: AP6021967

simpler than the methods involving anion exchange resins, since it does not require the use of concentrated HCl solutions. In addition to manganese and nickel, alkali, alkaline earth, and rare earth elements which are not adsorbed from 0.7 M ammonium thiocyanate solutions can be separated from cobalt on SKT carbon. Orig. art. has: 4 figures and 1 table.

SUB CODE: 07/ SUBM DATE: 27May64/ ORIG REF: 013/ OTH REF: 001

Card 2/2 MCP

L 40004-66 EWT(m)/EWP(t)/ETI IJP(c) JD/WW/RM/JG

ACC NR: AP6008272 (N) SOURCE CODE: UR/0080/66/039/002/0359/0362

AUTHOR: Kuzin, I. A.; Taushkanov, V. P.; Leonov, B. M.; Boganch, Ya.

ORG: none

TITLE: Sorption of metals from an acetate solution by SKT activated charcoal

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 2, 1966, 359-362

TOPIC TAGS: sorption, chemisorption, acetic acid, ammonium compound, URANIUM

ABSTRACT: The sorption of zirconium, chromium, cadmium, zinc, lead, manganese, nickel, cobalt, uranium, barium, and cesium by activated SKT charcoal from solutions of acetic acid and ammonium acetate was studied. It was found that uranium is more readily sorbed by the charcoal than any of the other metals. The optimum mixture of acetic acid and ammonium acetate for the sorption of uranium is 0.45 mol acetic acid and 0.05 mol ammonium acetate. Addition of the latter to the acetic acid solution immediately increased the sorption by the charcoal; however, continued increase in the concentration of ammonium acetate beyond 0.05 mol reduced the sorptive capacity of the charcoal exponentially. It was found that NH_4NO_3 in a pH solution of 2.4-3.0 slightly increased the sorptive capacity of charcoal above a salt concentration of 1 mol/dm^3. Experimental data was obtained on a bed of charcoal 60 mm high. Passage of the acetate so-

UDC: 661.183.2+547.292

Card 1/2

L 40004-66

ACC NR: AP6008272

lution through the bed occurred at a rate of 1 $cm^3/cm^2 \cdot min$. Orig. art. has: 2 tables, 2 figures.

SUB CODE: 07, 11/ SUBM DATE: 19Apr65/ ORIG REF: 006/ OTH REF: 002

Card 2/2 11b

YEGOROV, A.P., shofer; VOYTANIK, N.M., shofer; KOZINTSEV, D.K., shofer; POLULYAKH, V.Ya., shofer; KAMATSKIY, V.N., shofer; VARSHAVSKAYA, A.A., shofer; VATULIN, G.N., shofer; SHANDURSKIY, P.T., shofer; YEMEL'YANOV, G.A., shofer; VERBOV, A.G., shofer; DANILETS, P.P., shofer; BOGANCHENKO, V.A., shofer; PRUDNIKOV, A.F., shofer; V'YUNIKOV, S.I., shofer; SOLOVEY, I.N., shofer; MURASHKO, D.F., shofer

We prize our workers' honor. Avt. transp. 40 no.12:3-4 D '62.
(MIRA 15:12)

1. Simferopol'skiy avtobusnyy park (for Yegorov, Voytanik). 2. Simferepol'skiy taksomotornyy park (for Murashko, Kozintsev). 2. Kerchenskiy avtobusno-taksomotornyy park (for Polulyakh). 4. Yevpatoriyskiy avtobusno-taksomotornyy park (for Kamatskiy). 5. Yaltinskiy taksomotornyy park (for Varshavskaya). 6. Feodosiyskiy taksomotornyy park (for Varshavskaya). 7. Sevastopol'skiy avtobusno-taksomotornyy park (for Yemel'yanov). 8. Simferopol'skiy gruzovoy avtopark (for Verbov). 9. 2-y Simferopol'skiy gruzovoy avtopark (for Verbov). 9. 2-y Simferopol'skiy gruzovoy avtopark (for Danilets). 10. Bakhchisaraykiy avtopark (for Boganchenko). 11. Sevastopol'skiy avtopark (for Prudnikov). 12. 1-y Simferopol'skiy gruzovoy avtopark (for V8Yunikov, Solovey).

BOGANES, M.; STRNAD, A.

Neurological manifestations of ornithosis. Zhur. nevr.i psikh. 60 no.10:1297-1299 '60. (MIRA 14:1)

1. Nevrologicheskoye otdeleniye (zav. A. Strnad) instituta zdravookhraneniya g. Ugerske Gradishte, Chekhoslovakiya.
(ORNITHOSIS)

BOGANIK, G.N.

Determining efficient speeds from single hodographs when processing reflected wave observations on digital computers. Geofiz. razved. no.16:24-40 '64.

Estimating error in the determination of efficient speeds from reflected wave data. Ibid.:40-54

(MIRA 18:2)

USSR/Geophysics - Geologic Age by Radio- Jul/Aug 51
active Methods

"Radioactive Decay and Radioactive Method for Determining the Absolute Geological Age of Minerals and Ores," N. S. Boganik

"Iz Ak Nauk SSSR, Ser Geol" No 4, pp 57-75

188T45

Present widely held concept suggesting radioactive process as process that proceeds with constant speed of decay independent of external conditions is, in Boganik's opinion, idealistic. He gives certain crit remarks on this problem. He hopes this article will initiate extensive discussions on: present state of the problem; formulation of concept

188T45

IC

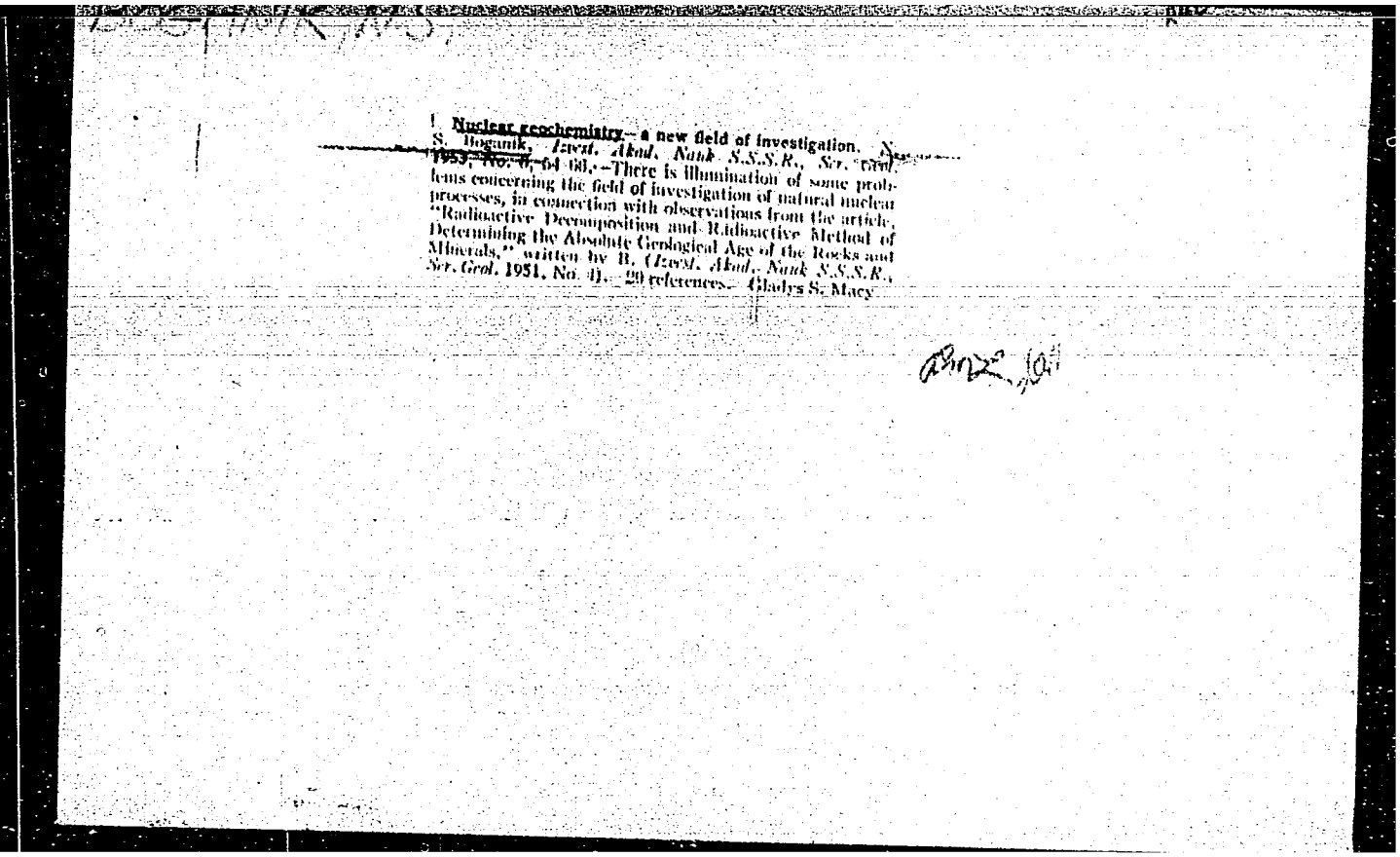
USSR/Geophysics - Geologic Age by Radio- Jul/Aug 51
active Methods (Contd)

concerning the constancy of the radioactive process; scientific inconsistency of the principle of constancy and independence of radioactive decay; geological data; philosophical remarks on the problem of radioactive decay; certain conclusions. At the end of the article are discussions by the editors of this periodical and 3 Corr Members of the Acad Sci USSR: A. P. Vinogradov, I. M. Frank, and I. Ye. Starik. They comment on the timeliness of Boganik's ideas, although they point out certain erroneous notions.

188T45

IC

BOGANIK, N. S.



Nuclear geochemistry—a new field of investigation. S. Bogatik. *Izvest. Akad. Nauk S.S.S.R., Ser. Geol.* 1953, No. 6, 64–68.—There is illumination of some problems concerning the field of investigation of natural nuclear processes, in connection with observations from the article, "Radioactive Decomposition and Radioactive Method of Determining the Absolute Geological Age of the Rocks and Minerals," written by B. *Izvest. Akad. Nauk S.S.S.R., Ser. Geol.* 1951, No. 4).—20 references.—Gladys S. Macy

BOGANIK, V.N., PLYUSNIN, M.I.

Calculation of standardized circuits for the apparatus of induction logging. Izv. vys. ucheb. zav.; geol. i razv. 8 no.9:124-134 S '65. (MIRA 18:9)

1. Moskovskiy geologorazvedochnyy institut imeni S. Ordzhonikidze.

BOGANIN, V. S.

Boganin, V. S. - "The struggle to prevent the drying up of the steppe lakes of north Kazekhstan for the purpose of utilizing them for water supply," Trudy (Vsesoyuz. nauch.-issled. in-t gidrotekhniki i melioratsii), Vol. XXV, Issue 2, 1948, p. 57-99

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949)

BOGANOV, A., inzh. (Leningrad)

Boat made with paper floats. Tekh.mol. 28 no.8:25 '60.
(MIRA 13:9)
(Boatbuilding)

L 28463-66 EWP(e)/EWT(m) WW/GD/WH

ACC NR: AT5027958 SOURCE CODE: UR/0000/65/000/000/0226/0232

AUTHOR: Boganov, A. G.; Pirogov, Yu. A.; Makarov, L. P.

ORG: none

TITLE: Effective heat conductivity and thermal radiation capacity of gas-flame ceramic coatings

SOURCE: Seminar po zharostoykim pokrytiyam. Leningrad, 1964. Zharostoykiye pokrytiya (Heat-resistant coatings); trudy seminara. Leningrad, Izd-vo Nauka, 1965, 22-232

TOPIC TAGS: ceramic coating, heat conductivity, aluminum compound, zirconium compound, magnesium compound, titanium compound, steel, ceramic coating, thermal radiation/ St. 3 steel

ABSTRACT: A study was made of the effective heat conductivity and integral thermal radiation of Al_2O_3, ZrO_2, $Al_2O_3 \cdot MgO$, TiO_2, and $ZrSiO_4$ coatings applied on plate and cylindrical steel St. 3 samples by gas-flame spraying. The thickness, taken as an average of 15-20 measurements made in various parts of the samples, was determined for coatings consisting of 0.6 mm Al_2O_3, 0.07 mm ZrO_2, 0.65 mm

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ACC NR: AT5027958

$ZrSiO_4$, 0.55 mm TiO_2, 0.55 mm $Al_2O_3 \cdot MgO$, and 0.55 mm Cr_2O_3, respectively. The effective heat conductivity of the coatings was measured in a vacuum of 10^{-5} mm Hg and in an Ar atmosphere (the heat conductivity of Ar is similar to that of air) at 300-900C and at a pressure of 100 and 300 mm Hg. The values of the heat conductivity coefficient (λ) were plotted in the graphs in λ vs temperature coordinates. The values obtained for λ were, on the average, 5-10 times smaller than those obtained for the same materials tested in the form of massive samples having a porosity of 20-30%. This was caused by the coating structure which formed under specific conditions of the gas-flame method: the layer of sprayed particles was not a homogeneous one, but consisted of irregularly superimposed particles containing numerous pores. A sharp decrease in effective heat conductivity was observed under decreased pressure because of the greater effect of the pores. The radiation heat exchange was predominant in the gas-flame oxide coatings at moderately high temperature ($\sim$1000C). Because the thermal contact resistances between the individual grains of the coating controlled the total heat transfer, the values of a specific thermal conductivity of the grains which was different in various materials, had little effect on the thermal conductivity of the samples. This was indicated by the fact that the curves of conductivity changes, plotted from coatings made of Al_2O_3, ZrO_2, $Al_2O_3 \cdot MgO$, TiO_2, and

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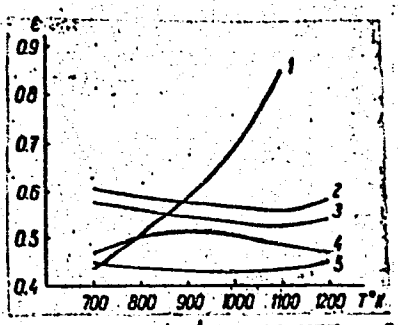
ACC NR: AT5027958

$ZrSiO_4$, had, during measuring in a high vacuum, a heat transfer of the same character and of about the same values inspite of the large differences in the thermal conductivity of these materials. The results of the determination of the integral conductivity of the coatings made from Cr_2O_3 (curve 1), $Al_2O_3 \cdot MgO$ (curve 2), TiO_2 (curve 3), $ZrSiO_4$ (curve 4), and ZrO_2 (curve 5) are given in the attached figure. Orig. art. has: 5 fig. and 1 table.



SUB CODE: 11, 20/SUBM DATE: 20Jul65/ ORIG REF: 002/ OTH REF: 006

Card 3/3

BOGANOV, A.G.

SUBJECT: USSR/Luminescence

48-3-21/26

AUTHORS: Boganov A.G. and Khomutetskaya R.A.

TITLE: Additional Data on the System of Solid Solutions $PbTiO_3$ - $SrTiO_3$ (Dopolnitel'nyye svedeniya o sisteme tverdykh rastvorov $PbTiO_3$ - $SrTiO_3$)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya fizicheskaya, 1957, Vol 21, #3, pp 433-438 (USSR)

ABSTRACT: The system of solid solutions of ferroelectrics $PbTiO_3$ - $SrTiO_3$ was investigated in respect to the temperature-dependence of the following properties: dielectric permittivity, $tg\delta$, coefficient of linear dilatation, piezomodulus, and also dielectric hysteresis loops and values of full polarization and coercive force.

The measurements of dielectric permittivity ε and tangent of the angle of electric losses $tg\delta$ were carried out in a special vacuum installation at a frequency of 5 kilocycles/s. It was found out that compounds containing 65, 70 and 80 % of $SrTiO_3$ have very high values of ε, of the order of 20×10^3.

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TITLE: Additional Data on the System of Solid Solutions $PbTiO_3$ - $SrTiO_3$ (Dopolnitel'nyye svedeniya o sisteme tverdykh rastvorov $PbTiO_3$ - $SrTiO_3$)

The curves $tg\delta(t)$ show a characteristic increase of losses before the Curie point.

Measurements of the relative dilatation of samples were carried out with a mechano-optical dilatometer with the value of its constant equal to 4,600. All samples showed positive spontaneous electrostriction, increasing with the increase of lead titanate content. The value of linear dilatation coefficient for the tetragonal region decreases with increase of lead titanate content from 9×10^{-6} to 1×10^{-6} and is confined in the limits from 7×10^{-6} to 1×10^{-6} for the cubic region.

The rigidity of ferroelectricity rises with the increase of $PbTiO_3$ concentration in solid solutions. The curve of the full polarization has a distinctly defined maximum which corresponds to compounds with 70 % to $SrTiO_3$. Its value is equal to 12×10^{-6} CGSU.

The value of piezomodulus decreases from 1×10^{-6} to 0.5×10^{-6} CGSU with the increase of the $PbTiO_3$ content.

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TITLE: Additional Data on the System of Solid Solutions $PbTiO_3$ - $SrTiO_3$ (Dopolnitel'nyye svedeniya o sisteme tverdykh rastvorov $PbTiO_3$ - $SrTiO_3$)

The compounds containing 60 to 70 % of $SrTiO_3$ and possessing high values of dielectric permittivity may be of a considerable interest for application as sensitive elements of radiometeric indicators in servomechanisms based on the infra-red techniques. The sensitivity of a sample with 60 to 70 % of $SrTiO_3$ can attain 10^{-10} to $5x10^{-10}$ w.

Advantages of the proposed radiometric indicators will be:

1. High sensitivity,
2. High specific resistance (10^{11} to 10^{12} ohm.cm) and very low losses at high frequencies;
3. Simplicity and reliability of the synthesis of the sensitive element material.

The article contains 7 figures and 1 table. The bibliography lists 6 references, of which 3 are Slavic (Russian).

Card 3/4

TITLE: Additional Data on the System of Solid Solutions $PbTiO_3$ - $SrTiO_3$ (Dopolnitel'nyye svedeniya o sisteme tverdykh rastvorov $PbTiO_3$ - $SrTiO_3$) 48-3-21/26

INSTITUTION: Institute for Chemistry of Silicates of the USSR Academy of Sciences

PRESENTED BY:

SUBMITTED: No date indicated

AVAILABLE: At the Library of Congress.

Card 4/4

L 32852-65 EWP(e)/EWT(1)/EWT(m)/EPA(s)-2/EPF(c)/... Pab-10/Pe-5/Pr-4/Pt-4/Ps-4/Pt-10/Pu-4
T/EPA(w)-2/EPR/EPA(bb)-2/EWP(b)/EWA(1) IJP(c) JD/HM/WW/JG/WB/AT/AH

ACCESSION NR: AP5006470 S/0294/65/003/001/0064/0069

AUTHOR: Bogano..., A. ...; Pirogov, Yu. A.; Makar...

TITLE: Effective heat conductivity and emissivity of flame-sprayed refractory oxide coatings

SOURCE: ... fizika vysokikh temperatur, v. ...

TOPIC TAGS: refractory coating, cermet ..., sprayed coating, coating heat conductivity, coating ... coating, ... dioxide coating, chromium oxide ...

ABSTRACT: An investigation has been made of the effective heat conductivity and total emissivity of several refractory oxide coatings 0.55—0.7 mm thick. Aluminum oxide, stabilized zirconium oxide, zircon, titanium dioxide, alumino-magnesia spinel, and chromium oxide were flame sprayed on steel substrates. ... was measured ... of 1 $10^{-?}$ mm Hg or ... argon at ... range. ... increased with increasing ... conductivity was, on the average, ... times lower ... porosity. This is explained by the fact that ...

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ACCESSION NR: AP5006470

there is no continuous contact between the coating and the substrate and between individual particles of the coating. This, and the low heat conductivity of the gas layer in the coating pores, are the two main causes of the low effective heat conductivity. The total heat emissivity was measured on coatings 0.1--0.2 mm thick, flame sprayed on a thin-walled stainless steel cylinder [illegible] mm in diameter and 100 mm long. Results of measurements made at temperatures up to [illegible] dioxide has the highest and chromium oxide the lowest [illegible] art. has: 8 figures and 1 table.

[illegible] Institute of the Chemistry of Silicates, Academy of Sciences [illegible]

Card 2/2

L 46185-65 EWG(j)/EWT(m)/EPF(c)/EPF(n)-2/EPR/T/EWP(t)/EWP(b)/EWA(c) Pr-4/
Pe-4/Pu-4 IJP(c) JD/WW/JG

ACCESSION NR: AP5007561 S/0020/65/160/005/1065/1068

AUTHOR: Bloganov, A. G.; Rudenko, V. S.; Makarov, L. P.

TITLE: X-ray diffraction study of zirconium dioxide and hafnium dioxide at temperatures up to 2750°C

SOURCE: AN SSSR. Doklady, v. 160, no. 5, 1965, 1065-1068

TOPIC TAGS: zirconium dioxide structure, hafnium dioxide structure, x ray diffraction analysis, polymorphism

ABSTRACT: X-ray diffraction studies of the polymorphism of ZrO_2 and HfO_2 were made by using a high-temperature x-ray camera which the authors designed and which was mounted on a URS-50-IM ionization diffractometer. During heating of anhydrous ZrO_2, a reversible monoclinic ⇄ tetragonal polymorphic transformation was observed in the 1100-1200°C range. Subsequent heating to about 2300° revealed a second, tetragonal ⇄ cubic transformation. The stabilized high-temperature cubic form of ZrO_2 at 2330° has a fluorite-type lattice with parameter $a = 5.256 \pm 0.003$ Å. In the case of HfO_2, the presence of a reversible monoclinic ⇄ tetragonal polymorphic transformation was established at 1900-2000°. A second transformation similar to

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L 46135-65
ACCESSION NR: AP5007561

the tetragonal ⇄ cubic transformation of ZrO_2 could be recorded only at very high temperatures close to the melting point of HfO_2 (the melting point was estimated to be 2700-2750° from the power dissipated in the sample by the electron beam used to produce these high temperatures). This transformation is also reversible in HfO_2. The lattice parameter of the cubic modification at 2750° is ~5.300 ± 0.010 Å. It is concluded that for pure ZrO_2 and HfO_2, the following crystalline modifications are stable: monoclinic from room temperature to 1150° for ZrO_2 and 1950° for HfO_2; tetragonal from 1150 and 1950° to 2300 and 2700° respectively, and face-centered cubic from 2300 for ZrO_2 and 2700 for HfO_2 up to the melting points. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Institut khimii silikatov im. I. V. Grebenshchikova Akademii nauk SSSR (Institute of Silicate Chemistry, Academy of Sciences SSSR)

SUBMITTED: 08Aug64 ENCL: 00 SUB CODE: IC, OP

NO REF SOV: 004 OTHER: 002

Card 2/2

L 45190-65 EWT(l)/EWP(e)/EWT(m)/EPF(c)/EPF(n)-2/EWG(m)/EPR/T/EWP(t)/EWP(b)/EWA(c)
Pr-4/Ps-4/Pu-4 IJP(c) JD/WW/JG/AT/WH

ACCESSION NR: AP5010160 UR/0020/65/161/002/0332/0335

AUTHOR: Boganov, A. G.; Makarov, L. P.; Rudenko, V. S.

TITLE: X-ray camera to operate at temperatures up to 2500° for diffractometers with ionization registration

SOURCE: AN SSSR. Doklady, v. 161, no. 2, 1965, 332-335

TOPIC TAGS: x ray camera, x ray diffraction, high temperature research

ABSTRACT: The article describes a high temperature vacuum x-ray camera, developed and constructed by the authors at Institut khimii silikatov AN SSSR (Institute of Chemistry of Silicates, AN SSSR). The camera and its vacuum system are shown in Figs. 1 and 2 of the Enclosure. The camera is intended to operate at high temperatures, using a tungsten radiation heater for temperatures up to 2000° and electron bombardment for higher temperatures. At maximum temperature the anode voltage is usually not more than 3.5--4 KV, and the emission current is smaller than 1000 mA. The camera and its operation are described in detail. It was used for high temperature research on high melting point oxides of group III and IV elements. Typ-

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L 45190-65

ACCESSION NR: AP5010160

ical x-ray patterns of ZrO_2 and HfO_2 obtained at 2300 and 2400, using CuKα radiation (40 kV, 10 mA) through a nickel filter are presented by way of an example. The equipment can be modified to operate at 3000°. This report was presented by V. A. Kirillin. Orig. art. has: 3 figures.

ASSOCIATION: Institut khimii silikatov im. I. V. Grebenshchikova Akademii nauk SSSR (Institute of Chemistry of Silicates, Academy of Sciences, SSSR)

SUBMITTED: 08Aug64 ENCL: 02 SUB CODE: OP

NR REF SOV: 000 OTHER: 010

Card 2/4

L 53916-65 EWG(j)/EWT(m)/EPF(c)/EPR/I/EWP(t)/EWP(b)/EWA(c) Pr-4/Pu-4 IJP(c)
ACCESSION NR: AP5010580 JD/JG UR/0020/65/161/003/0590/0593

AUTHOR: Boganov, A. G., Rudenko, V. S.

TITLE: Nature of the irreversible polymorphic transformations of rare earth oxides

SOURCE: AN SSSR. Doklady, v. 161, no. 3, 1965, 590-593

TOPIC TAGS: rare earth oxide, oxide polymorphic transformation, oxide crystal structure, x-ray diffraction, high temperature transition, sesquioxide reduction

ABSTRACT: To determine the existence of high-temperature polymorphic transformations in the oxides of Pr, Nd, Sm, Gd, Tb, and Dy, the authors carried out x-ray diffraction studies with a special vacuum x-ray camera at 2200-2300C. In addition, the weight loss in the region of the transition point was measured, the influence of the gas medium (oxidizing, reducing, vacuum) and its pressure on the transition temperature was studied, and chemical analysis for "excess" oxygen (above the sesquioxide ratio 2:3) was performed iodometrically. The temperature of the C → A transition for Pr_2O_3 varies between 700 and 1350C as a function of the medium and in such a way that the structural change for compositions of this oxide which are close to the sesquioxide value is directly related not only to the thermodynamic conditions, but to the change in the composition of the compound; in this sense, the C → A transformation in Pr_2O_3 cannot be considered a

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L 53916-65

ACCESSION NR: AP5010680

true polymorphic transformation. In Nd_2O_3, Sm_3O_3, and Gd_2O_3, the transformations from C to A and B forms are related to their partial reduction to a composition with an oxygen content lower than the sesquioxide value. The distinctly reversible nature of the transformations in Tb_2O_3 and Dy_2O_3 and their irreversible character in Pr_2O_3, Nd_2O_3, Sm_2O_3, and Gd_2O_3 are thought to have the same fundamental cause associated with slight changes in composition occurring in rare earth oxides in the transition range during heating. Orig. art. has: 3 figures.

ASSOCIATION: Institut khimii silikatov im. I. V. Grebenshchikova Akademii nauk SSSR (Institute of Silicate Chemistry, Academy of Sciences SSSR)

SUBMITTED: 01Oct64 ENCL: 00 SUB CODE: IC

NO REF SOV: 001 OTHER: 006

Cord 2/2

L 64185-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/WG

ACCESSION NR: AP5019775 UR/0062/65/000/007/1131/1138

546.65 + 548.33

AUTHOR: Glushkova, V. B.; Boganov, A. G.

TITLE: Polymorphism of rare earth sesquioxides

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 7, 1965, 1131-1138

TOPIC TAGS: rare earth oxide, polymorphism

ABSTRACT: The polymorphism of rare earth sesquioxides was studied in the following three aspects: (1) effect of conditions of preparation of the oxides on their phase state and determination of the lowest temperatures at which the pure oxides can be obtained from various compounds; (2) study of the presence of reversible polymorphic transformations in the sesquioxides; (3) study of irreversible or slow polymorphic transformations. High-temperature x-ray and thermal analysis established the absence of polymorphic transformations in the 50-1500° range in the following oxides: Y_2O_3, La_2O_3, Nd_2O_3, Sm_2O_3, Eu_2O_3, Gd_2O_3, Dy_2O_3, Ho_2O_3, Er_2O_3, Tm_2O_3, and Yb_2O_3. X-ray diffraction analysis confirmed the presence of irreversible transitions in Nd_2O_3, Sm_2O_3, Eu_2O_3, Gd_2O_3, and their absence at 100-1500° in Y_2O_3, Dy_2O_3, Ho_2O_3, Er_2O_3, Tb_2O_3, and Tm_2O_3. It was shown that the low-temperature C-form of lanthanum

Card 1/2

L 64185-65

ACCESSION NR: AP5019775

oxide cannot be obtained by decomposing oxygen salts or the hydroxide while heating in air at pressure from 1 to 760 mm Hg. The C-form of neodymium oxide was obtained by decomposing neodymium nitrate, carbonate, oxalate, and hydroxide. The irreversible transitions C → A Nd_2O_3 and C → B Sm_2O_3 are associated with a considerable evolution of gas (1.5-2 wt. %). It is postulated that the low-temperature forms of oxides of neodymium, samarium, gadolinium, and europium are metastable modifications which are thermodynamically stable in their temperature range of existence only because of the presence of foreign ions in the oxide lattice. Orig. art. has: 4 figures, 4 tables.

ASSOCIATION: Institut khimii silikatov im. I. V. Grebenshchikova Akademii nauk SSSR (Institute of Silicate Chemistry, Academy of Sciences SSSR)

SUBMITTED: 10Jun63 ENCL: 00 SUB CODE: IC

NO REF SOV: 004 OTHER: 023

Card 2/2 mlb

L 23791-66 EWP(e)/EWT(m) WH

ACC NR: AP6007260 (A) UR/0363/66/002/002/0363/0375

AUTHOR: Boganov, A.G.; Rudenko, V.S.; Bashnina, G.L.

ORG: Institute of Silicate Chemistry im. I.V. Grebenshchikov, AN SSSR (Institut khimii silikatov AN SSSR)

TITLE: The laws governing the crystallization and nature of quartz glass

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v.2, no.2, 1966, 363-375

TOPIC TAGS: glass property, crystallization, quartz glass, glass crystallization

ABSTRACT: A study was made of the process of crystallization of industrial domestic quartz glass. The crystallization took place at a temperature of 1300°C in an air atmosphere. The heating time usually did not exceed 10 to 15 hours. It was established that the crystallization takes place from the surface. Microphotos of various samples are given. Crystallization in a vacuum not only slows down the process, but takes place with a holding time of 30 to 50 hours and a temperature of 1300°C. Analysis of the experimental data, as well as later foreign experimental results, leads to the conclusion that quartz glass is always a non-stoichiometric product. This fact, plus the strictly covalent nature of the bonds explains the nature of the glassy state of silicon dioxide. Orig.

Card 1/2 UDC: 666.1:542.65

L 23791-66

ACC NR: AP6007260 O

art. has: 7 figures and 1 table.

SUB CODE: 11/ SUBM DATE: 01Jul65/ ORIG REF: 002/ OTH REF: 020

Card 2/2 FW

L 38852-66 EWT(l)/EWT(m)/T/EWT(o)/EWP(t)/ETI IJP(c) AT/WH/JD/JG

ACC NR: AP6018560 SOURCE CODE: UR/0181/66/008/006/1910/1918

AUTHOR: Boganov, A. G.; Cheremisin, I. I.; Rudenko, V. S. 58 B

ORG: Institute of Chemistry of Silicates im. I. V. Grebenshchikov, Leningrad (Institut khimii silikatov)

TITLE: Development of a direct method for calculating the electrostatic energy of ionic lattices

SOURCE: Fizika tverdogo tela, v. 8, no. 6, 1966, 1910-1918

TOPIC TAGS: crystal lattice structure, ionic crystal, crystal unit cell, ion energy

ABSTRACT: In view of a new interpretation offered by the authors earlier (DAN SSSR v. 161, 590, 1965) for the mechanism and nature of irreversible polymorphic transformations of oxides, they calculate here the energies of cubic (C-PrO_3, C-Pr_2O_3) and hexagonal (A-Pr_2O_3, α-Al_2O_3) lattices of such oxides, using the direct summation method proposed by H. M. Evjen (Phys. Rev. v. 39, 675, 1932). Inasmuch as the Madelung constants for these lattices have not been published in the past, they had to be calculated in this work. In addition to giving the different values of the ion energies, the authors present lattice plans and unit-cell diagrams of the crystals, and a tentative scheme for the coordination environment of the oxygen ions in the A-Pr_2O_3 lattice. In all cases, the summation method employed gave good convergence of the potential in the center of the cell (with increasing cell) and the accuracy was adequate for practical purposes. Orig. art. has: 6 figures, 4 formulas, and 1 table.

SUB CODE: 20/ SUBM DATE: 12Jul65/ ORIG REF: 003/ OTH REF: 007

Card 1/1

BOGANOV, A. I. (DECEASED) 1963/2

c' 1962

MECHANICS

see ILC

4733. Changes in the haemogram during treatment [illegible]
diseases with preparations of [illegible]

BOGANOV, V. (gor. Yushno-Sakhalinsk).

Warming up of engines in radio stations. Grazhd. av. 14 no.3:19 Mr '57. (MIRA 10:6)

(Diesel engines)

BOGANOVA, A.S., kand.med.nauk

Antibiotics in the compound treatment of complications following antirabies inoculations. Lech. infekts. bol'. no.4:271-278 '60. (MIRA 14:5)

(RABIES) (ANTIBIOTICS)

KURDYUMOV, O.I., inzh.; CHOPOROVA, R.I.; Prinimali uchastiye: AZRILYANT, Ye.A.; BOGANSKIY, G.I.; SMIRNOV, L.F.; PRAVDA, A.I.; LIVENTSEV, A.V.

Design and use of vibration-proof foundations for forging hammers. [Nauch. trudy] ENIKMASha 11:63-77 '65.

(MIRA 18:6)

ANDOR, Jozsef, fomernok; BOGAR, Istvan; CORNIDES, Gyorgy; HERPAY, Imre, adjunktus; MAGYAR, Janos, dr., egyetemi tanar

Silviculture and exploration in the highly productive beech-woods of the state forest farms in Southern Zala County. Erdo 12 no.8:352-362 Ag '63.

1. Delzalai Allami Erdogazdasag, Nagykanizsa (for Andor). 2. Orszagos Erdeszeti Foigazgatosag muszaki fejlesztesi osztalya epitesi csoportjanak vezetoje (for Bogar). 3. Erdeszeti es Faipari Tervezo Iroda erdofeltarasi osztalyanak vezetoje (for Cornides). 4. Erdeszeti es Faipari Egyetem (for Herpay).

BOGAR, J.

Practical application of the Feidmana-spior theory of lumbering.

p. 15 (FAIPAR) Vol. 7, No. 1, Apr., 1957

SO: Monthly Index of East European Acessions (AEEI) Vol. 6, No. 11 November 1957

BOGAR, J.

Measuring timber varieties in forests. P.2, p. 218.

AZ ERDO. Budapest, Hungary. Vol. 7, no. 6, June 1958.

Monthly List of East European Accessions (EEAI), LC. Vol. 8, No. 9, September 1959
Uncl.

BOGAR, Jozsef

On the new budgeting experiences of the Baranya County Council of Trade unions. Munka 11 no.9:7-8 S '61.

1. Szakszervezetek Baranya megyei Tanacsa vezeto titkara.

(Hungary—Trade unions)
(Hungary—Budget)

BOGAR, Jozsef

Thus we started; the solution of the new tasks of the Trade Union County Councils. Munka 10 no.1:8 Ja '60.

1. Szakszervezetek Baranya megyei Tanacsanak elnoke.

BOGARADA, N.

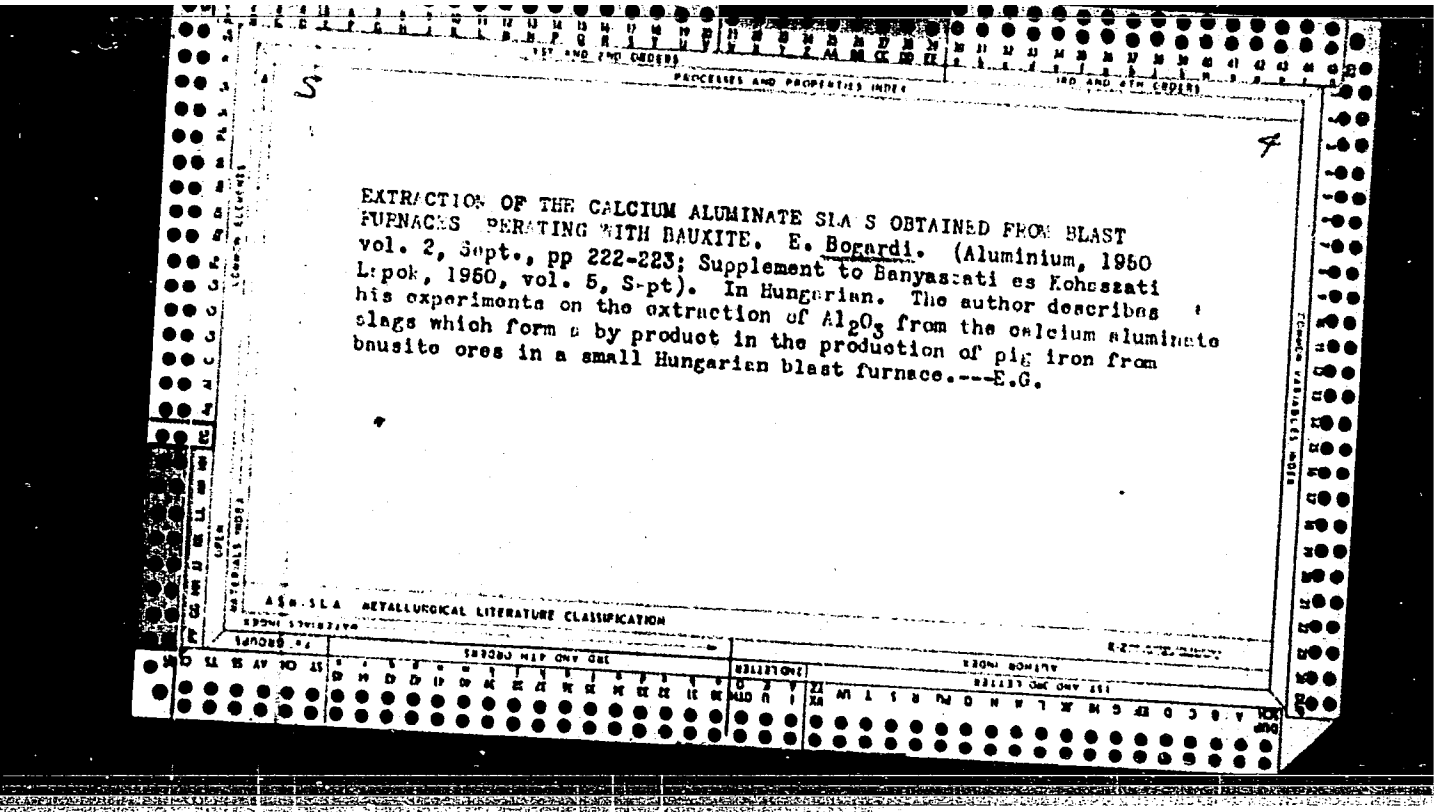
We are creating a school state farm. Prof.-tekh. obr. 19 no.5:10 My '62. (MIRA 15:5)

1. Direktor Temirskogo uchilishcha mekhanizatsii sel'skogo khozyaystva No.6, Aktyubinskaya oblast'.
(Agriculture—Study and teaching)

BOGARADA, N.; USPENSKIY, B.

On a large school farm. Prof.-tekh. obr. 19 no.9 16-18 S '62.
(MIRA 15:10)

(Agriculture—Study and teaching)



EXTRACTION OF THE CALCIUM ALUMINATE SLAGS OBTAINED FROM BLAST FURNACES OPERATING WITH BAUXITE. E. Bogardi. (Aluminium, 1950 vol. 2, Sept., pp 222-223; Supplement to Banyaszati es Kohaszati Lapok, 1950, vol. 5, S-pt). In Hungarian. The author describes his experiments on the extraction of Al_2O_3 from the calcium aluminate slags which form a by product in the production of pig iron from bauxite ores in a small Hungarian blast furnace.---E.G.

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

H

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ALUMINIUM Vol. II. — 1950
No. 9, Sept.

E. Bogardi. 669.713
Leaching the calcium aluminate slag obtained by the metallurgical processing of bauxite. pp. 224–228

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

H

15

ALUMINIUM
VOL. III. 1950
No. 4, April

E. Bogárdi:
Precise determination of the sodium carbonate content of aluminate lyes, soondic salts and of various soda containing substances 78 79

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

minutes and the results are accurate within ± 0.1 per cent. The method is therefore will suited for application in the laboratories of alumina factories.

72. Precise determination of small quantities of CO_2 contained in air for determining the possible alkali carbonatization due to the application of the air-mixing process. — *Kismennyiségü CO_2 pontos meghatározása levegőből, légkeverés alkalmazása folytán lehetséges lúgszódaadás megállapításához.* — E. Bogárdi. (Hungarian Journal of Metallurgy. — *Kohászati Lapok.* Vol. 9 (87), 1954, No. 3, pp. 130—132, 3 figs.)

In the course of investigating the air-mixing process introduced in alumina plants in Hungary tests on the possible carbonalization of alkali due to air mixing have been carried out. The CO_2 quantity absorbed in the alkali was determined from the difference of the quantity of CO_2 contained in the air bubbled through the alkali with the aid of a highly accurate and sensitive process. Approx 2 l samples of air were taken from the air-lift pipe of the air mixers by means of a specially designed, funnel-shaped sampling apparatus. The CO_2 content of the air was measured by Pettenkofer's barium hydroxide method. The employed apparatus was designed for this special purpose, differences in the order of tenths of mg/l in the CO_2 content were accurately measurable. The results of the measurements showed that the air forced in by the compressors contained 0.80 to 0.90 mg/l of CO_2 while the CO_2 content of the air passing through the air-lift pipe was 0.25 to 0.30 mg/l. Consequently the possible quantity of the formed soda could be computed from the known quantity of air. The tests were effected in 32 m high air mixer tanks.

BOGARDI, E.

HUNG

77. On the technology of improving the sedimentation of red mud. E. Bogárdi. (*Kohászati Lapok* — Vol. 9, (87) 1954, No. 4, pp. 172 - 177, 9 figs., 9 tabs.)

The following plant experiences served as an incentive for the experiments: The solution of rye flour admixed every 24 hours to the water used in the process and kept at a boiling temperature was not always sufficiently effective to improve sedimentation. A browning of the flour solution was also noticeable at the same time. The results of sedimentation tests conducted in series with flour solutions prepared under different circumstances in the laboratory are given below. To obtain the optimum effect of the flour solution added to the red mud-aluminate liquor slurry in alumina plants operated by the Bayer process, the starch in the added flour must be present in the form of dissolved starch paste. Due to the effect of thin alkalis and that of boiling, the dissolved starch paste is partly decomposed with a simultaneous discolouration of the solution as a result of which the improving

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E. Bognadi

effect of sedimentation is reduced. This effect practically disappears in water containing 1 g of Na_2O per liter after boiling for 8 hours. In order to obtain the optimum effect with the minimum amount of flour in the preparation and in the addition of the flour solutions, the experiments established that (1) to avoid eventual decomposition it is advisable that a fresh flour solution be prepared every 8 hours for improving sedimentation, (2) to induce the process of gelatinization and to prevent a reduction in efficiency, the flour solution of an adequate 8—10 kg per m^3 concentration should be boiled for a short time, later it is sufficient to keep the solution at 60—70° C. (3) In preparing the flour solution special care must be taken to use pure well water instead of the ordinary alumina plant water since the alkali content of the latter has a detrimental influence on the effectiveness of the flour solution. The total Na_2O content of the water used for the solution should not exceed 0.2 g per liter.

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BOGÁNDI, L. VÖRÖ

HUNG

5520* Manufacturing Experience of Production of Vanadium. With Respect to the Problems of Producing High-Purity V2O5. Timföldgyári vanádiumfeldolgozóüzem gyártási tapasztalatai, különös tekintettel a nagytisztaságú V2O5-előállítás problémáira. (Hungarian) Ferenc Bogándi, Károly Vörös. Kohászati Lapok, v. 9, no. 6, June 1954, p. [illegible]

Plant operations and manufacturing technology; conditions for large-scale production; possibilities for processing strongly contaminated V2O5 muds. Tables; photographs.

BOGARDI, E.

BOGARDI, E. Research on the reduction of bauxite from Halimba; determination of a balanced molecular ration. p. 407. KOHASZATI LAPOK. (Magyar Banyaszati es Kohaszati Egyesulet) Budapest. Vol. 9, no. 9, Sept. 1954.

SOURCE: East European Accessions List (EEAL) LC Vol. 5, No. 6, June, 1956.

Sedimentation of red mud. B. Bogárdi. *Kohász. Lapok* 9, 172-7(1954); *Hung. Tech. Abstr.* (1955).—The following plant experience ... for the expts. ... A browning of the flour soln. ... able at the same time ... in series ... effect of the flour soln. ... liquor in alumina plant ... the starch in the added flour ... of dissolved starch paste ... alkalies and that of boiling the ... decreased with a ... reduced. This effect ... contg. 1 g. of Na_2O/l. after boiling ... obtain the optimum effect ... that a fresh flour soln. be ... to induce the ... prevent a reduction in efficiency. The flour soln. ... quate 3-10 kg./cu. m. concn. should be ... time; later it is sufficient to keep the soln. at ... prepg. the flour soln. special care must be taken to use ... well water instead of the ordinary alumina-plant water, since the alkali content of the latter has a detrimental influence on the effectiveness of the flour soln. The total Na_2O content of the water used for the soln. should not exceed 0.2 g./l.

K. L. ...

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19660

solution A, it is diluted to about 50 ml, 0.02 n. $KMnO_4$ are added drop by drop (until a slightly rose coloration appears), 5 ml of 10% KSCN are added, all is diluted to 100 ml and photometered with a filter S 50. For the determination of P_2O_5, a solution of NH_4OH (1:1) is added drop by drop to 25 ml of the solution A until $Al(OH)_3$ is dissolved, the solution is neutralized with NH_4OH 1:3 or H_2SO_4 1:3 (while cooling) using Kongo, 4 ml of molybdenum reagent and water are added, the volume is brought up to 100 ml with 6 drops of the hydrochloric solution of $SnCl_2$ and 10 min. later it is photometered. Calibration curves are used for computations. For the determination of

HUNGARY/Analysis of Inorganic Substances G-2

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19660

TiO_2, 5 g of I are dissolved while heated in 20 ml of NaOH (1:3) with the addition of Fe-alum, all is boiled with 3 ml of 3% H_2O_2 until the brown coloration disappears, filtered and washed with hot water. V_2O_5 is determined in the filtrate. The precipitate is dissolved in 80 ml of hot 5% H_2SO_4, 1 ml of concentrated H_3PO_4 and 5 ml of 3% H_2O_2 are added, all is diluted to 100 ml and 10 min. later it is photometered with a filter S 42. 2.5 g of aluminum oxide are fused with 3 g of Na_2CO_3 mixed with $Na_2B_4O_7$ (1:0.85) at 1000 to 1100°, it is dissolved in about 100 ml of water while being heated, 25 ml of H_2SO_4 (1:1) are added, all is filtered, washed with hot water, the

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Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19660

filtrate is diluted to 200 ml (solution B). Fe_2O_3 is determined in 0 ml of the solution B, and P_2O_5 is determined in 20 ml of that solution. 50 ml of the solution B are filtered adding 1 ml of concentrated H_3PO_4 and 5 ml of 3% H_2O_2 simultaneously, all is washed and diluted to 100 ml, and 10 min later it is photometered with filters s 43 and S 53. The TiO_2 content (in %) = $0.09348D_{43} - 0.1014D_{53}$. If $D_{43} < 0.500$, $V_2O_5\% = 0.355D_{53}$, if $D_{43} > 0.500$, $V_2O_5\% = 0.355D_{53} - 0.000D_{43}$. If the V_2O_5 content $< 0.010\%$, 14 ml of concentrated HCl and 5 ml of 0.2 n. diphenylamine solution are added to 50 ml of the solution B, all is heated to 50°,

BOGARDI, E.

Determination of losses caused by SiO_2 in the exploitation of bauxite by the Bayer process. p. 38. KOHASZATI LAPOK. (Magyar Banyaszati es Kohaszati Egyesulet) Budapest. Vol. 10, no. 1, Jan. 1955.

SOURCE: East European Accessions List (EEAL), Library of Congress Vol. 5, no. 6, June 1956

BOGARDI, ENDRE

HUNGARY/Chemical Technology - Chemical Products and Their Application, Part 2. - Elements, Oxides, Mineral Acids, Bases, Salts. - Other Elements, Oxides, Mineral Acids, Bases, Salts. H-8d

Abs Jour : Ref Zhur - Khimiya, No 7, 1958, 21995

Author : Endre Bogardi.
Inst :
Title : Research with a View to Determine the Temperatures Necessary for the Disintegration of Halimbai Bauxites, in Particular to Find the Optimun Treatment Regime for the So-Called "Difficultly Disintegrating" Hungarian Bauxites.

Orig Pub : Kohasz. lapok, 1956, 11, No 5, 225-232

Abstract : A progressive decline of the decomposability of Halimbai bauxites, as well as of other Hungarian bauxites (e.g. of Niirad bauxites) has been observed since recently. In view of the above, an investigation was started in order to determine the optimum temperatures of the autoclave process

Card 1/2

BOGARDI, E.

Solubility and precipitation of the silica content of bauxite in caustic solutions. p. 485.

KOHASZATI LAPIK. Budapest, Hungary Vol. 14, no. 11, Nov. 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. [illegible]
Uncl. 9, no. 2, Feb. 1960

BOGARDI, E.

On testing the basic solubility of some accessory constituents of bauxites. p. 488.

KOHASZATI LAPOK. Budapest, Hungary. Vol. 14, no. 11, Nov. 1959.

Monthly List of East European Accessions (EEAI), LC, Vol [illegible]
Uncl. (9, no. 2, Feb. 1960)

BOGARDI, Endre

Accurate determination of CO_2 from the air in order to determine the possible caustic soda formation. Koh lap 9 no. 3: 130-132 Mr '54.

BOGARDI, Endre

Data on the technology of the alumina factory mealy red mud sedimentation-improvement. Koh lap 9 no. 4: 172-177 Ap '54.

BOGARDI, Endre

Analysis of alumina hydrate and alumina by the Pulfrich photometer. Koh lap 9 no. 11: 517-520 N '54.

BOGARDI, Endre

Certain problems relating to caustification technology of alumina factory red mud. Koh lap 12 no. 4/5 194-199 Ap-My '57.

BOGARDI, Istvan

Rapid method for determining seepage factors. Vizugyi kozl no.2: 232-236 '63.

BOGARDI, Istvan, okleveles mernok, tudomanyos munkatars; PERENYI, Karoly, okleveles mernok, tudomanyos munkatars

Using plastic hose in irrigation. Vizugyi kozl no.4:417-440 '63.

1. Scientific Research Institute of Water Resources Development, Budapest.

BOGARDI, Istvan, okleveles mernok, tudomanyos munkatars

Some data on water distribution in sprinkler irrigation. Vizugyi kozl no.4:506-510 '63.

1. Scientific Research Institute of Water Resources Development, Budapest.

BOGARDI, Istvan

Some characteristic types of hydraulic pumped storage. Vizugyi kozl no.2:336-341 '64.

BOGARDI, Istvan, mernok, tudomanyos munkatars

Hydraulic examination of pipelines equipped with equi-distantly placed water discharge nozzles. Vizugyi kozl no.3:432-443 '64.

1. Scientific Research Institute of Water Resources Development, Budapest.

BOGARDI, Istvan

Hydraulic problems relating to the irrigation using plastic hoses. Hidrologiai kozlony 44 no.1:1-8 Ja'64.

1. Vizgazdalkodasi Tudomanyos Kutato Intezet, Budapest.

BOGARDI, Istvan, mernok-doktor

Friction losses in plastic hoses with allowance for flattening. Hidrologiai kozlony 44 no.12:562-568 D '64.

1. Scientific Research Institute of Water Resources Development, Budapest.

HUNG.

BOGARDI, T.

55. Methodical problems of examining variations of ground-water level in the Great Hungarian Plain (In English) — I. Bogárdi. (Acta Technica Academiae Scientiarum Hungaricae — Vol. 8, 1954, No. 3—4, pp. 257—275, 5 figs., 1 tab.)

The qualitative effect of factors influencing the variations of ground-water level is already known but quantitative data are still very deficient. In the investigations conducted for the purpose of determining the variations of water level, up to the present time, almost exclusively only the factors changing according to time were taken into consideration. However, results proved that the ground-water table does not only depend on time but also on location. In dealing with variations in ground-water level investigations in respect to time and location are dealt with separately. If the differences apparent in the factors varying according to time can be brought into correlation with one or more fac-

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tors varying according to location, the connection between investigations in reference to time and location is accomplished. When observing the effect of precipitation upon the fluctuation of the ground-water level, the volume of water running off the ground surface may be taken into account. That means in brief that the total amount of precipitation must be diminished in accordance with the proportion of the runoff coefficients. The referring examples have proved that results in this field could be achieved only by taking the actual runoff coefficients into account. The hydrogeological factors *i. e.* the strata and perviousness of the soil, the depth of the ground water beneath the soil surface, etc. are also subject to changes according to location. Of the investigations conducted so far the study utilizes the changes according to location of the effects of precipitation and air temperature. From the application of these it becomes apparent that the variations in ground water level depend largely upon the depth of the ground water beneath the soil surface as well as upon the coefficient of the perviousness of the soil. The results of the investigations signify an encouraging beginning in the linking up of research in respect to both location and time.

P/r2

BOGARDI, JANOS.

Bogardi, Janos, Korrelacioszamitas es alkalmazasa a hidrologiaban. Budapest, akademiai Kiado, 1952. 254 p. (The calculation of correlation and its application to hydrology)

SO: Monthly list of European Accessions, LC, Vol. 3, No. 1, Jan. 1954, Uncl.

63. Forecast of the probable vernal maximum monthly mean ground water levels on the Great Hungarian Plain — *A várható tavaszi maximális havi közepes talajvíziszintek előrejelzése az Alföldön* — J. Bogárdi. (Journal of Hydrology — *Hidrológiai Közlöny*, Budapest, 33. 1953, No. 11—12, pp. 414—422, 2 figs., 7 tabs.)

The forecast of ground water levels should be calculated by mean values. For this reason in forecasting the maximum vernal ground water levels the probable value of the maximum mean water level is determined. The anticipated maximum vernal monthly mean water level ($Y0$) can be forecast on the basis of the minimum monthly mean water level of the preceding autumn (X_1), the total rainfall of October, November, March (X_2), the total rainfall of December, January, February (X_3), and the mean value of the of the average temperatures of December, January, February (X_4). The correlations were established by the multiple linear method. The general form of the equation expressing the relation is $Y0 = a + b_1X_1 + + b_2X_2 + b_3X_3 + b_4X_4$. The coefficients a, b_1, b_2, b_3, b_4 as well as the factors of partial and total correlation and the total hypothetical dispersion have been determined for 28 ground water wells situated in the Great Hungarian Plain. The actual and forecast vernal maximum monthly mean water levels of the 28 wells for 1952 are in full conformity thus proving the reliability of the correlations used in forecasting.

HUNG.

72. Sediment measurements in Hungary — J. Bogárdi. (*Vízügyi Közlemények* — 1954, No. 2, pp. 133—146, 4 figs., 1 tab.)

Suspended matter was first measured in 1871—72 at the Budapest reach of the *Danube* river, but the systematic measurements of sediments started only in 1942. Sediment measurements cover the determination of the quantity of suspended matter and of the bed load and the investigation of the bed material. Because of the shortcomings of the bed load traps, data on bed load movement may be considered only as a beginning and the results approximate. At every measurement the transported bed load is weighed, a water sample and material samples are taken from the bed. Besides measurement of the water stage, velocity is also measured. In the course of the evaluation of the results of measurements the water discharge, the mean concentration characteristic of the entire cross section, and the suspended aggregate and bed load are computed. Analysis is also made of the sediment and bed material samples according to grain size. Concentration and weight of the sediments are generally expressed in terms of the water stages, however, in many cases they are expressed as functions of velocities and of discharges. With the aid of these correlations and by taking into consideration the water stage frequencies the mean concentrations and mean sediment loads are computed. The Scientific Research Institute for Water Economy is conducting sediment measurements on ten rivers at 32 ganging stations. Besides the *Danube* and the *Tisza* rivers the conditions of sediment transportation can already be characterized for four smaller rivers.

DOGARDI. J.

Claims in the field of scientific research; also, remarks by D. Ihrig and others. p. 517. KOZLEMENYEI. Budapest. Vol. 14, No. 4, 1954

SOURCE: East European Accessions List. (EEAL) Library of Congress
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The amount of suspended load [illegible] may be expressed by [illegible]

[illegible]

and observed [illegible] that the [illegible] introduction of approximate [illegible] of the [illegible] as a [illegible] suspended load were executed between [illegible] and 1952

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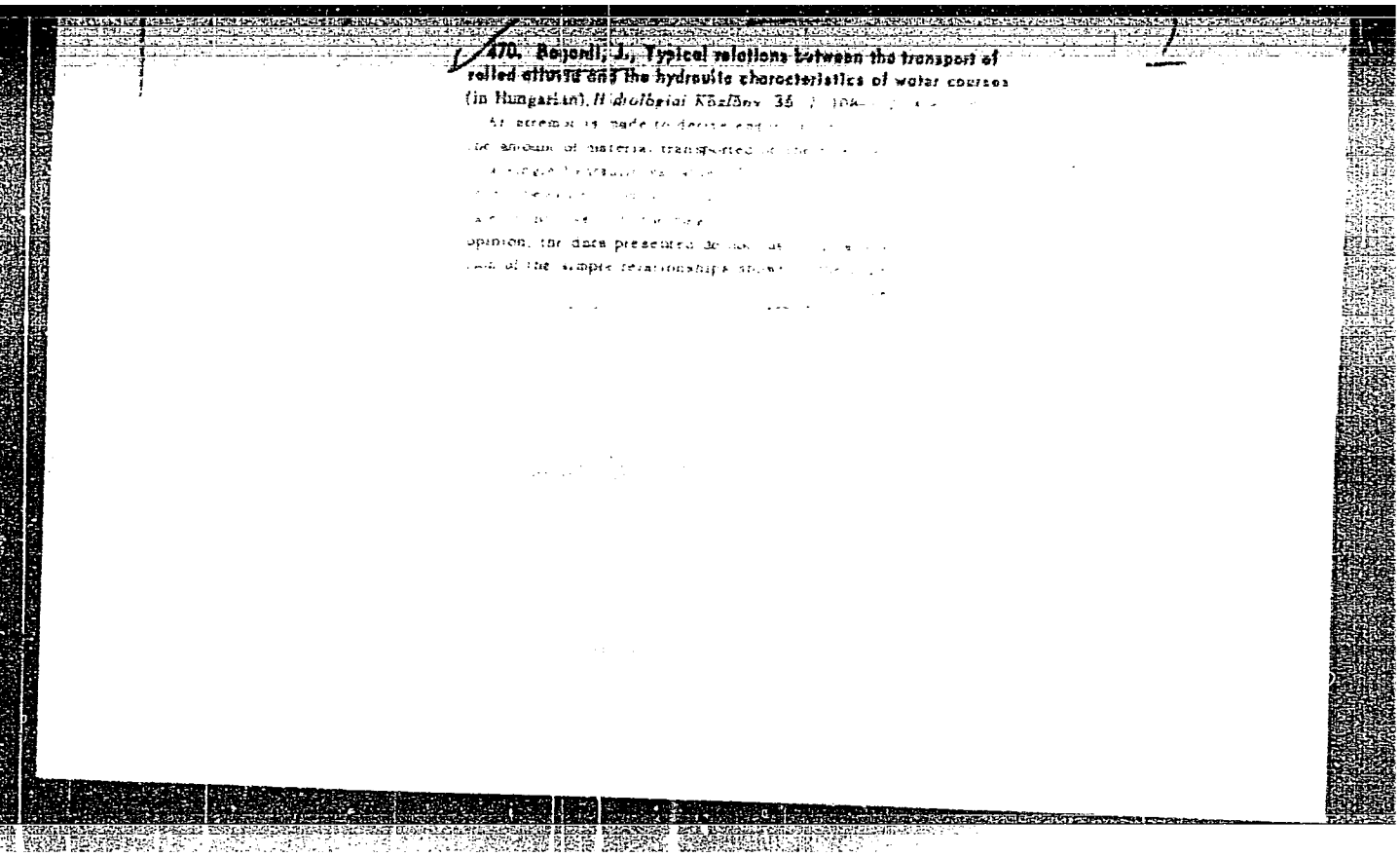

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ORG: none

TITLE: Some concepts in the study of water courses transporting sediments with the aid of model experiments

SOURCE: Academia scientiarum hungaricae. Acta technica, v. 50, 1965, 11-24

TOPIC TAGS: fluid dynamics, fluid property, dimension analysis, hydraulic engineering

ABSTRACT: The basic considerations in the study of waterways transporting sediments with the aid of model experiments were discussed mainly on the basis of references published in the literature. The following subjects were covered: the acting forces and the properties of the moving fluid, special forms of the dimensionless values characterizing the properties of the fluid, simulation of watercourses transporting sediments by models, dimensional analysis to determine similarity criteria, and designing calculations for the model. Orig. art. has: 32 formulas. [Orig. art. in Eng.] [JPRS]

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