"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

AUTHORS: Barshcheva, A.S. and Gnuchev, V. S., Engineers 129-7-12/16

TITLE: High speed thin layer cyaniding during high frequency heating. (Skorostnoye tonkosloynoye tsianirovaniye pri nagreve tokami vysokoy chastoty).

PERIODICAL: "Metallovedenie i Obrabotka Metallov" (Metallurgy and Metal Treatment), 1957, No.7, pp.48-50 (U.S.S.R.)

ABSTRACT: The current type cyaniding in baths consisting of molten cyanide salts enables the saturation of the surface of components with carbon and nitrogen to depths of 0.1 to 0.6 mm and such components can then be hardened to $R_c = 60$. This process is impracticable for small components used in the instrument industry and the aim of the authors was to develop a process which permits obtaining a cyanide layer of a depth less than 0.1 mm with hardnesses of $R_c = 60$ and more. In this paper the results are described which were obtained by cyaniding by means of high frequency heating; two variants of this process were tried, namely, applying a paste prior to heating and cyaniding in molten potassium ferrocyanide. After degreasing the component with benzene a 3 to 4 mm thick layer of the paste was applied, on the top of which potassium ferrocyanide powder was sprayed and, following that, the components were dried

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High speed thin layer cyaniding during high frequency heating. (Cont.)

129-7-12/16

for 40 to 60 minutes at 60 to 70 C. The heating was effected by a current of 200 kc/s, 160 kW. The thickness of the saturated layers varied between 0.023 and 0.07 mm. In the other variant potassium ferrocyanide (90%), barium chloride (10%), were placed in a crucible and molten by placing it into the first position of the inductor, then the components were immersed into the melt and heated in the second position of the inductor to 840-880 C. In both variants diffusion layer thicknesses of 0.04 to 0.06 mm were obtained and the hardness at the surface varied between R_c = 59 and 62. Using for such components medium carbon steels ensures obtaining a strong base and eliminates the possibility of squeezing through the thin diffusion layer during normal operation. The first variant requires a number of preparatory operations concerned with the manufacture of the paste and with drying of the paste coated components and, therefore, it is not recommended for series production. In the case of cyaniding in molten salts it is possible to obtain a given layer thickness with an accuracy up to 0.01 mm and the process can be fitted into an automatic

Card 2/3

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BARSHCHEVA, A.S., inzh.

Annealing complicated machine parts with high-frequency currents. Izobr. i rats. 3 no.5:9-12 My '58. (MIRA 11:9)
(Induction heating) (Metals--Heat treatment)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

ZAZUBIN, A.I.; BARSHCHEVSKAYA, A.N.

Studying the distribution of gallium during the processing of high-silicon bauxites by the hydrochemical alkali method. Trudy Inst. met. i obog. AN Kazakh. SSR 9:103-105 '64. (MIRA 17:9)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

ZAZUBIN, A.I.; BARSHCHEVSKAYA, A.N.

Investigating the distribution of gallium in the process according to the flow sheet of the Bayer-sintering processing of high-silicon bauxites. Trudy Inst.met.i obog. AN Kazakh.SSR 11:22-23 '64.
(MIRA 18:4)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

TARA[illegible], [illegible]; [illegible], A.[illegible]: [illegible]

[illegible] by the Bayes [illegible]

(MIRA 18:10)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHCHEVSKIY, S.

"On the Importance of the Thickness of the Layer in the Inner Photoeffect," Zhur. Eksper. i Teoret. Fiz., 12, Nos. 5-6, 1942

Inst. Physics, Odessa State U.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

CA

Inner photoelectric effect in thin and extremely thin layers of silver halides. B. Bar'lichevskii (Odessa State Univ., Novosibirsk State Pedagog. Inst.). *J. Exptl. Theoret. Phys.* (U.S.S.R.) 16, 815-22(1946). Silver halide films 10^{-3} to 10^{-4} cm. thick were prepd. by fusion and flow between quartz plates. AgCl and AgBr films prepd. appear monocryst.; AgI has a polycryst. structure due to transition at 145°. Thinnest films, obtained by halogenation of sputtered Ag layers, 10^{-4} to 10^{-5} cm., are polycryst. Inner photoelec. currents were detd. per unit incident radiant energy in the spectral interval 250 to 700 mμ. On AgBr films 3.5×10^{-4} to $[illegible] \times 10^{-4}$ cm. thick, the effect has a max. at about 315 mμ, incomparably sharper and some 40 times higher than the effect at the flat max. in the visible at 565 mμ corresponding to the max. at the latent image; the max. at 450 mμ is altogether absent; the position of the 315 mμ max. remains const. on the 20-fold variation in thickness within the given limits. On thicker AgBr films, 2×10^{-4} to $[illegible] \times 10^{-4}$ cm., the ultraviolet max., at about 365 mμ, is considerably higher, and about 300-1000 times the visible max. at [illegible] mμ; a sharp secondary max. appears at the long-wave edge of the absorption band at 450 mμ, not observed on thinnest films. With the thickness increasing within the given limits, the height of the 365 mμ max. decreases, that of the 450 mμ max. increases; their heights become approx. equal to 4.6×10^{-4} cm., while the 575 mμ max. still remains insignificant. Illumination at these thickness [illegible] of the photoelec. effect and a shift of the visible 575 mμ max. to longer waves, while the positions of the 365 and the 450 mμ max. remain unchanged. As compared with the thinnest polycryst. layers, the effect in thin monocryst. films is about 80-100 times greater in the ultraviolet band, only 4-6 times in the visible. On polycryst. AgCl of the order of thickness 10^{-4} cm., only a sharp ultraviolet max. appears at 313 mμ. This max. is again shifted to 365 mμ in monocryst. AgCl, 2×10^{-4} to $[illegible] \times 10^{-4}$ cm. thick; this max. is about 300-1000 times higher than that in the visible part of the spectrum; only the latter undergoes a shift to longer wave lengths on illumination. Likewise, the position of the visible max. varies with thickness, while the 365 mμ remains unchanged despite a 25-fold variation in the thickness. Increased thickness results in decreased photocurrent. Polycryst. AgI, $[illegible] \times 10^{-4}$ cm., has a max. at 365 mμ and another sharp max. of about equal height at about 420 mμ, both positions being stable. In the region 450-700 mμ, the effect is observable only at greater thicknesses, 2.5×10^{-4} cm. and more; a flat max. appears at about [illegible] mμ, insignificant as compared with 365 and 420 mμ. The strong dependence of the photocurrent intensity on thickness, at the 313 and 365 ultraviolet peaks, is linked with capture, increasing with depth of penetration, of the photoelectrons set free in the thin surface layer in which absorption is completed; hence, the photocurrent decreases throughout with increasing thickness. At the long-wave wing of the ultra-

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State Pedagogical Inst., Novosibirsk — Odessa State U.

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violet absorption band, the absorption coeff. is much less than in its middle, electrons are set free also at some distance from the surface, and diffusion and capture play a relatively smaller role, hence the observed growth with increasing thickness of the violet max. at the edge of the ultraviolet absorption band. In thinner, polycryst. films, the photocurrent drops as a result of illumination, owing to decomposition of Ag halide and curtailment of sources of photoelectrons; this effect loses its significance in thicker films where illumination gives rise to enhanced photocurrents. Formation of colloidal Ag particles on illumination very likely underlies the observed increase and spectral shift to longer waves of the photocurrent max. in the yellow green region. N. Thon

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BORSHCHEVSKIY, B.

USSR/Chemistry - Photoelectric Effect Sep 1947
Chemistry - Cells, Photoelectric

"Abnormal Inner Photoelectric Effect," B. Borshchevskiy, 3 pp

"Zhur Fiziches Khim" Vol XXI, No 9 1004-1012

An abnormal (negative) inner photo effect results in lessening the electric conductivity of photo-semi-conductors under the influence of light. The author observed this negative photo effect to study some photoelectric properties of silver halide salts, in poly-crystalline as well as mono-crystalline layers. The author, in experiments conducted at the Research and Investigation Cine-photo Institute, Laboratory of Photo Processing, Moscow, determined that the

24T6

negative inner photo effect is a result of secondary polarization processes.

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USSR/Physics Sep 48
Spectra, Ultraviolet
Photoelectric Cells

"Spectral Distribution of the Photoeffect in an Antimony-Cesium Photoelement in the 2,483-5,790 Å Region," B. A. Barshchevskiy, Sci Res Kino-Photo Inst Moscow, 1½ pp

"Zhur Tekh Fiz" Vol XVIII, No 9

Antimony-cesium photoelements sensitive to ultraviolet light have been made in USSR for some time, although

32/49T102

USSR/Physics (Contd) Sep 48

output is insufficient. Sensitivity to ultraviolet light is obtained by using photosensitive antimony-cesium layer, and also by using very thin special uviol glass. Describes experiment to determine spectrum characteristic of cell. Plots and discusses results. Submitted 11 Mar 48.

32/49T102

BARSHCHEVSKIY, B. A.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

USSR/Physics Mar 49

Light - Absorption
Films - Reflectivity

"The Absorption of Light in Dense Layers of Silver Halides," B. Barshchevskiy, Sci Res "Kinophoto" Inst, 4 pp

"Dok Ak Nauk SSSR" Vol LXV, No 1

Finds peculiarities in light absorption by thin silver-halide films which serve to clarify phenomena of the formation of a hidden photographic image, mainly on the surface of silver-bromide microcrystals in photographic emulsions, and also fact that the quantum yield determined by the photoelectric method is considerably less than unity (in AgBr, μ equals 0.17 for λ equal to 254 mμ). Submitted by Acad S. I. Vavilov, 14 Dec 48.

[redacted] 29/49T103

BARSHCHEVSKIY, B.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

CA

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Absorption of light by silver halides. B. A. Barshchevskii (All-Union Kinophoto-Inst.). *Zhur. Eksptl. Teoret. Fiz.* 20: 117-26(1950).—Absorption of light by thin layers of AgBr and AgI does not follow Lambert's law $I = I_0 e^{-kd}$, the coeff. k varying with the thickness d. With a given sample, e.g. polycryst. AgBr 1.4 × 10⁻⁶ cm. thick, the absorption $1 - T$, where T = transmission, becomes greater over the whole range of wave lengths when, after a series of measurements from 578 to 254 mμ it is remeasured in the reverse order of wave lengths; the effect, which is more pronounced in longer waves, but also distinct in the near ultraviolet, is due to the formation of colloidal Ag during the 1st series of illuminations. The reflectance of polycryst. AgI layers was found to vary from 10% in 578 to 14% in 254 mμ; for polycryst. AgBr it was found to be 15.5% in 578 mμ, 16.5% in 435, and 14% in 254. For monocryst. AgBr (produced between 2 quartz plates), the reflectance varied from 10% in 578 to 14% in 254, and for monocryst. AgCl it was on the av. 10% over the whole range. T, calcd. with the reflected light deducted, varies surprisingly little with the thickness of the layer, 2.2 – 42 × 10⁻⁶ cm. for polycryst. AgBr, 3.2 – 53 × 10⁻⁶ cm. for polycryst. AgI, and 2.45 – 30.8 × 10⁻⁶ for monocryst. AgBr. Thus, in 365 mμ, a 2.2 × 10⁻⁶ cm. layer of AgBr absorbs 81%, a 3.2 layer of AgI, 70% of the unreflected light; with 20 times thicker layers the absorption increased only 9 and 20%, resp. Thinnest layers show a strikingly strong absorption. The sp. effect of the structure of a particular layer, grain size and nature of the contact between the grains, on the absorption is illustrated by the difference between a 15 × 10⁻⁶ and a 20.3 × 10⁻⁶ cm. film of AgBr; the 1st absorbs strongly over the whole spectrum, the 2nd is transparent as far as the ultraviolet. In the range 578-546 mμ fluctuations of the absorption from one layer to another are greater than in the absorption band; in this range, evidently, absorption is dead, mainly by the granular structure, and is markedly weaker in a monocryst. film. In the range 435-405 mμ, polycryst. and monocryst. AgBr absorb approx. to the same degree, but in the ultraviolet monocryst. AgBr absorbs much more strongly. In AgCl absorption in 405 mμ is about the same as in 435-578, and much weaker than in the same range in AgBr; in 365 mμ AgCl, 6.8 × 10⁻⁶ cm., transmits 47.2%, as against only 4%, for AgBr 7.62 × 10⁻⁶ cm. The Lambert-law coeff. k vary strongly with the thickness and are consequently meaningless. This inapplicability of the law is clearly due to the strong absorption which takes place in the very thin surface layer. An absorption coeff. can be conveniently defined by $k = .1 - I/I_0$ and detd. by extrapolation to a thin layer of the order of 10⁻⁶ cm. The conclusion that Ag halides absorb light primarily in the outer surface layer is in accord with the decrease of the photocond. with increasing thickness. The strong surface absorption is due to an internal photoelectric [illegible] whereby the absorbing electron is removed from the lattice point. These particularities of the absorption account for the known preferential formation of the latent photographic image at the surface of the AgBr grains, and for the fact that the quantum efficiency is substantially less than unity.

N. Thon

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168T97

USSR/Physics - Photoeffect, Internal Absorption, Light Sep 50

"Relation Between the Internal Photoeffect and the Absorption of Light in Silver Halide Salts," B. Barshchevskiy, All-Union Sci Res Kinophoto Inst

"Zhur Eksper i Teoret Fiz" Vol XX, No 9, pp 795-806

Studies spectral distribution of internal photoeffect for equal absorption of energy in AgBr and AgCl. Shows there are regions of selectivity of internal photoeffect. Increase of photoeffect in

[redacted]

168T97

USSR/Physics - Photoeffect, Internal (Contd) Sep 50

monocrystallic salts is much greater, as result of instantaneous illumination, than corresponding increase of absorption in them. Submitted 25 Feb 50.

168T97

BARSHCHEVSKIY, [redacted]

"Absorption of Light, Internal Photoeffect, and Photographic Sensitivity in AgI," B. Barshchevskiy, All-Union Sci Res Kinophoto Inst

"Zhur Eksper i Teoret Fiz" Vol XX, No 9, pp 862

...absorption A of light in

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHCHEVSKIY, B.

168T104

USSR/Physics - Photoeffect, Internal Sensitivity, Photographic Sep 50

"Absorption of Light, Internal Photoeffect, and Photographic Sensitivity in AgI," B. Barshchevskiy, All-Union Sci Res Kinophoto Inst

"Zhur Eksper i Teoret Fiz" Vol XX, No 9, pp 862

Letter to editor considers absorption A of light in AgI layer $2/10^5$ cm thick as function of wave length L (A varies roughly from 100 to 20% as L goes from 250 to 650 millimicrons); also photoeffect vs wave length according to incident and absorbed energies. Submitted 25 Mar 50.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

SA A 53
m

537.221

7829. Image formation by electrographic means. B. Barshchevskii and V. Lavrenchik. Letter in J. Tech. Phys., USSR. 20, 1273-4 (Oct., 1950) In Russian.

A latent image of a conductor may be formed on an insulator such as S or Perspex (not glass or ebonite) if they are placed in contact and the conductor is charged to $\leq$ 5 kV. The image may be made visible by dusting with powdered resin or lycopodium powder; if resin is used, the image may be "fixed" by gentle warming. J. C. E. Jennings

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

MARSHCHENSKIY, N.

"Internal Photo-Effect and Light Absorption by Silver Halides," Usp. nauch. fot., No.1, 1961

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHCHEVSKIY, B.

3

Energy Spectrum of the Electrons in Silver Bromide Crystals. B. BARSHCHEVSKIY. *Zh. Eksper. Teor. Fiz.*, 1952, 22, 511-512.—The photoelectrons required for the formation of the latent image are torn from the halide ions of the crystal lattice of the silver halide by light radiation of a wavelength inside the characteristic absorption band. If an electric field is applied to the crystal during the latent image formation, a photocurrent is set up, *i.e.*, the photoelectrons, before being deposited at the centres of adhesion, are transferred to conductivity levels of the crystal. During the photoconductive process the electrons may reach the positive electrode or be captured, thus eventually forming centres or sub-centres of the latent image. Using experimental data on the spectral distribution of the [illegible] photo-effect, the author presents a schematical diagram of the electron[illegible] silver bromide crystals. *Phys. Abs.*

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHEVSKIY, B.N.

Modulus of deformation and the Poisson coefficient for an incoherent soil. Trudy LIEI no.57:42-49 '65.

Determining stresses in soil with variable characteristics of deformability. Ibid.:50-68

Contact stresses along a foundation base supported by soil with varying depth deformability characteristics. Ibid.:69-88

Strength calcualtion of rigid retaining works erected on an incoherent soil. Ibid.:89-97 (MIRA 18:8)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHCHEVSKIY, B.U., dotsent, kand. fiziko-matem. nauk; KUROVA, A.V., red.; KLEYMAN, L.G., tekhn. red.

[Physics; dispersion of light] Fizika; dispersiia sveta. Konspekt lektsii dlia studentov II kursa vsekh spetsial'nostei. Moskva, Vses. zaochnyi institut inzhenerov zhel-dor. transp., 1960. 13 p. (MIRA 14:7)

(Refraction)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHCHEVSKIY, B.U., dotsent, kand. fiz.-mat. nauk; KHONDKARYAN, N.G., red.; KLEYMAN, L.G., tekhn. red.

[Electrostatics; abstract of lectures of the second course of all faculties] Elektrostatika; konspekt lektsii dlia studentov II kursa vsekh spetsial'nostei. Moskva, Vses. zaochnyi in-t inzhenerov zheldor. transp., 1960. 31 p. (MIRA 14:7)
(Electrostatics)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

Br. Abs BARSHCHEVSKIY, F. A.

BI - 1. Chemical Engineering, Plant, Machinery.

Improving the efficiency of tunnel dryers. F. A. Barshchevski (*Stek. Keram. Prom.*, 1947, No. 6, 14; *Brit. Ceram. Abs.*, 1948, 218A).—Two methods are proposed. One consists of linen baffles hung from the roof across the tunnel between every other wagon; these are pushed up and fall into place again as the wagons pass. The other consists of metal dampers which are raised and lowered as required from outside. The purpose of both devices is to force the gases along the tunnel in zigzag manner from top to bottom of the tunnel instead of travelling in a straight line along the top.

R. H. Crabbs

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

CA BARSHCHEVSKIY, F.A.

2c

Bonding material. F. A. Barshchevskii. U.S.S.R. 68,451, May 31, 1947. To improve the quality of Roman cement, to it is added (a) a mixt. of $NaCl$ 2, $CaSO_4 \cdot 2H_2O$ 2, and liquid glass 1.5%; or (b) a mixt. of Na_2SO_4 2, liquid glass 2.5, and slaked lime 3%. M. Hosch

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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BARSHCHEVSKIY, F. A.

CA

20

Concrete and cement mixes F. A. Barshchevskii. U.S.S.R. 68,450, May 31, 1947. To increase the strength of concrete made of MgO Roman cement, the cement mix is made with a soln. of $MgCl_2$. M. Hosch

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

15-57-3-3391

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 3, p 135 (USSR)

AUTHOR: Barshchevskiy, F.

TITLE: The Classification of Brick and Tile Clays by the Composition of Their Grains (Klassifikatsiya kirpichno-cherepichnykh glin po zernovomu sostavu)

PERIODICAL: Stroit. materialy, izdeliya i konstruktsii, 1956, Nr 7, p 30

ABSTRACT: The author recommends a new classification of brick and tile clays by the composition of their grains. The clays are divided into three subgroups: sandy, clay proper, and powdery. The content of the three principal fractions for each subgroup is given in the table.

Card 1/2

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The Classification of Brick and Tile Clays (Cont.) 15-57-3-3391

Name of clay according to new classification	Content of fraction, percent		
	sand	clay	powder
Sandy clay	40-70	30-60	30-60
Clay	20-10	30-60	30-60
Powdery clay	0-20	30-60	40-70

Card 2/2

S. P. Sh.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHCHEVSKIY, F., kandidat tekhnicheskikh nauk.

Determining the amount of water to be used in normal slaking of clay materials. Stroi. mat., izdel. i konstr. 2 no.8:27 Ag '56. (MLRA 9:10)

(Clay)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHCHEVSKIY, F., kand.tekhn.nauk (Kiyev)

Determining the suitability of clayey deposits for use in brickmaking. Stroi.mat. 3 no.11:30-31 N '57. (MIRA 10:12)
(Clay--Testing)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHCHEVSKIY, F. [Barshchevs'kyi, F.], kand.tekhn.nauk

Making Parker's cement in brick factories. Sil'. bud. 7 no.4: 11-12 Ap '57. (MIRA 12:11)
(Ukraine--Cement)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHCHEVSKIY, F. [Barshchevs'kyi, F.], kand.tekhn.nauk

Classifying raw materials and batching in making bricks. Sil'.bud. 8 no.2:12-13 F '58. (MIRA 13:7)
(Brickmaking)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

LYSIN, B.S., akademik; BARSHCHEVSKIY, F.A. [Barshchevs'kyi, F.A.]

Studying the physical and chemical properties of Dnieper marl as a raw material for the production of local adhesives. Dop.AN URSR no.9:1258-1262 '60. (MIRA 13:10)

1. Kiyevskiy politekhnicheskiy institut. 2. AN USSR (for Lysin).
(Marl) (Cement)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHCHEVSKIY, G., kand. tekhn. nauk

Performance of synchronous generators without excitation in electric ship systems. Mor. flot 23 no.8:22-25 Ag '63. (MIRA 16:11)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BANSHCHEVSKIY, G.G., kand. tekhn. nauk, dotsent (Pushkin)

Electromagnetic moment of a reactive machine. Elektrichestvo no.3:74-78 Mr '65. (MIRA 18:6)

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BARSHCH [illegible], [illegible]

"Concerning the Nature of Activ Centers in Photocatalytic Reactions." Cand Chem Sci, Moscow Order of Lenin State U imeni M. V. Lomonosov, 17 Dec 54. (VM, 7 Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

Barshchevskiy, I.N.

USSR/ Chemistry - Physical chemistry

Card 1/1 Pub. 147 - 11/27

Authors : Nikolayev, L.A., and Barshchevskiy, I.N.

Title : Photocatalytic properties of ZnO in methylene blue reduction reactions. I.

Periodical : Zhur. fiz. khim. 28/2, 265-270, Feb 1954

Abstract : It was established experimentally that ZnO in the role of a catalyst strongly accelerates the reduction of methylene blue with formaldehyde under the effect of light. Pure ZnO was found to be less active than ordinary commercial compounds. An active photocatalyst was obtained by adding Mn and Cu compounds to the pure oxide. Cu appears to be a stronger activating agent than Mn. The Cu-ions by themselves showed no catalytic effect on the reaction between methylene blue and formaldehyde. The basic kinetic laws, governing the reaction of photo-reduction of dyes in the presence of ZnO as catalyst, are presented. Six references : 4-USSR; 1-USA and 1-German (1926-1948). Table; graphs.

Institution : The I.V. Stalin Institute of Transportation Engineers, Moscow

Submitted : April 21, 1953

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

Barshchevskiy, I. N.

USSR/Chemistry - Physical chemistry

Card 1/1 Pub. 147 - 12/27

Authors : Nikolayev, L.A.; and Barshchevskiy, I.N.

Title : Photocatalytic properties of ZnO in methylene blue reduction reaction. II.

Periodical : Zhur. fiz. khim. 28/2, 271-274, Feb 1954

Abstract : The effect of Cu-ion concentrations in ZnO on the photocatalytic activity of the latter in the reaction between formaldehyde and methylene blue was investigated. It was found that the catalytic activity, relative to 1% of Cu (specific activity), increases sharply in ratio to the decrease of the total Cu concentration in ZnO. A direct proportionality between the amount of Cu introduced and the photocatalytic activity was observed at greater Cu concentrations. A sharp increase in specific activity was seen in the zone of Cu concentration in which the luminescence nature changes considerably. Pb-ions appeared to be much stronger activators of the photocatalytic activity of ZnO. The luminescence of ZnO samples containing Pb changes with the reduction in Pb content. Two USSR references (1952 and 1954). Tables; graphs.

Institution : The I.V. Stalin Institute of Transportation Engineers, Moscow

Submitted : April 21, 1953

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHCHEVSKIY, I.N.

USSR/Chemistry - Photocatalysts

Card 1/1 : Pub. 147 - 17/27

Authors : Nikolaev, L. A., and Barshchevskiy, I. N.

Title : Photocatalytic properties of ZnO in the reduction reaction of methylene blue. Part 3. Poisoning of photocatalysts

Periodical : Zhur. fiz. khim. 28/12, 2211-2214, Dec 1954

Abstract : Experiments showed that the ions of heavy metals poison the ZnO photocatalyst but do not affect its luminescence, whereas nitrate and nitrite ions poison the photocatalyst and extinguish its luminescence. Substances which extinguish the luminescence of a photocatalyst must, of course, also be catalytic poisons since they distort one of the component parts of the active center. It is assumed that the active center of a photocatalyst has a double (polar) structure. One of the component parts of the catalyst center is the luminescent center the other is probably the distorted part of the lattice of the basic substance (ZnO) oriented in close vicinity to the luminescence center. Three USSR references (1950 and 1954). Tables; graphs.

Institution : Institute of Transportation Engineers, Moscow

Submitted : May 3, 1954

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

AF701597 TREASURE ISLAND BOOK REVIEW AID 798 - S

BARSHCHEVSKIY, I. N. and L. A. NIKOLAYEV. (Moscow Institute of Railroad Engineers).
OSOBENNOSTI STROYENIYA AKTIVNYKH TSENTROV V FOTOKATALIZE (Characteristics of formation of active centers in photocatalysis). In Problemy kinetiki i kataliza (Problems of Kinetics and Catalysis), vol. 8. Izdatel'stvo Akademii Nauk SSSR, 1955. Section I: Effect of light on the adsorbability of solids. p. 61-67.

The activity of photocatalysts depends greatly on the presence of foreign agents. Bi^{+++}, Pb^{++}, Tl^{+++}, Ag^{+}, Cu^{+} and Mn^{++} introduced into the lattice of ZnO greatly increase the photocatalytical activity of the latter. A catalyst containing Pb-ions is 5 times as active as a catalyst containing Cu-ions. Ions of Ba, Ca, Cu and Pb, gaseous H_2S as well as nitrite and nitrate ions, poison photocatalysts.

To establish the dependence of the catalytic activity on luminescence, the effects of a decrease in the concentration of the activator (Cu and Pb) on the luminescence has been studied and data presented in tables. Since positive and negative ions may serve as catalyst poisons, and some substances

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may inhibit catalysis without affecting luminescence, it is assumed that the active center has a bipolar structure. Luminescence centers are a part of active catalytic centers, for example, ions of copper or lead are centers of luminescence and at the same time parts of bipolar catalytic centers. Substance-inhibiting catalysis may not quench the luminescence. Substances which quench the luminescence are catalytic poisons.

ZnO activated by ions of heavy metals (Bi, Pb, Tl, Ag, Cu, and Mn) shows high photocatalytic activity. These ions are a part of the active center which are assumed to be bipolar. The active centers of photocatalysts have some characteristics which active catalytic centers do not possess. Calcination of ZnO (activated by Pb) over a period of 2 hours at 600°C decreases the activity by 50% at 800°C - by 90%. Compression at 4000 kg/cm^2 decreases the activity by 50%, at 10,000 kg/cm^2 by 80%.

Various methods of activating zinc oxide are discussed. Other semiconductors, such as titanium dioxide, cadmium oxide, lead oxide and cupric oxide, were also investigated. Introduction of ions which activate zinc oxide did not affect the above-mentioned semiconductors.

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PARSHCHEVSKIY, I. M. and L. A. [illegible] Chsobennosti ... AID 798 - S

The systems: formaldehyde-thionine, glycerin-methylene blue, glycern-thionine in the presence of ZnO have been investigated. ZnO proved to be an active catalyst.

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BARSHCHEVSKIY, I.N.

5

The nature of the composition of active centers in photocatalysis. I. N. Barshchevskii and L. A. Nikolaev (Inst. Railroad Transport. Eng., Moscow). *Problemy Kinetiki i Kataliza, Akad. Nauk S.S.S.R.* 8, 61-7(9155).—ZnO, after activation by ions of heavy metals, appears to be a specific photocatalyst for reduction of methylene blue (I) and of thionine by CH_3O, glycerides, or succinic acid. Ions of such heavy metals as Cu^{++}, Pb^{++}, Bi^{+++}, Tl^{+++}, Ag^{+}, and Mn^{++}, enter the photocatalyst in the state of active centers and generate a specific distribution of energy levels, which favors photocatalysis. The active centers are labile formations with irregular structures that are not in equil. with their surroundings. They have a double structure: one portion serves for light absorption, the other for catalysis. The surface of such a photocatalyst has 3 zones: one where the ZnO shows the regular lattice, one where the ions of the activator are located, and one that surrounds these defects. The concn. of the heavy metals is crit.; thus, changing the amt. of Cu from 0.0255% to 0.00087% in slow steps changes the color of the luminescence from green to weak green to yellowish green to yellowish brown to yellow-orange to red-orange, and similarly changing the amt. of Pb from 0.0626 to 0.00187% changes the luminescence from yellow-brown to red. The following materials have an extinguishing effect on the luminescence: KI, KBr, KCNS, K_2CO_3, $K_2S_2O_8$, $KClO_3$, $KBrO_3$, KIO_3, $KMnO_4$, AcONa, Na_2HPO_4, Na_2SO_4, Na_2F_2, $Na_2S.9H_2O$, HCO_2Na, NaCl, La acetate, $BaCl_2.2H_2O$, $CaCl_2.6H_2O$, $Pb(OAc)_2$, $CoCl_2$, $MnSO_4$, $ClCH_2CO_2H$, BzOH, pyrogallol, rosolic, oxalic, sulfanilic, formic, adipic, and oleic acids, phenol, water, I, the leucobase of I in the presence of other reduction products of I, CH_2O, methyl violet, hydrazine, hydroquinone, EtOH, and diphenylamine. Werner Jacobson

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BARSHCHEVSKIY, I.N.

USSR/ Chemistry - Photo-catalysts

Card 1/2 Pub. 22 - 31/50

Authors : Nikolayev, L. A., and Barshchevskiy, I. N.

Title : Catalytic properties of sensitizers

Periodical : Dok. AN SSSR 100/1, 119-122, Jan. 1, 1955

Abstract : The nature of active centers on the surface of ZnO is explained from the view point of photo-catalysis. The question on whether electron levels of admixtures are of importance for the photo-catalytic effect and whether catalysis centers are in approximate ratio to luminescence centers is debated. It was found that pure ZnO free of heavy metal admixtures is not a photo-catalyst and does not accelerate the dye reduction process when exposed

Institution : The I. V. Stalin Institute of Railroad Engineers, Moscow

Presented by : Academician A. N. Terenin, June 26, 1954

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

Periodical : Dok. AN SSSR 100/1, 119-122, Jan. 1, 1955

Card 2/2 : Pub. 22 - 31/50

Abstract : to light. ZnO containing an admixture of heavy metal ions was found to be a highly active photo-catalyst. H_2S was established to be a catalytic poison for photo-catalysts containing Pb and Cu. The effect of poisoning of photo-catalysts with Ca. and Ba ions does not result in a change in the luminescence. Ten USSR references (1940-1954). Graphs.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

5(4)

SOV/63-4-3-28/31

AUTHOR: Barshchevskiy, I.N.

TITLE: The Poisoning of Photo-Catalysts by Copper and Lead Ions

PERIODICAL: Khimicheskaya nauka i promyshlennost', 1959, Vol 4, Nr 3, pp 412-413 (USSR)

ABSTRACT: Zinc oxide which is used as photo-catalyst in the preparation of leuco-methylene blue and leucothionine is poisoned due to active centers on its surface. The structure and the properties of these centers are studied here. Formaldehyde is used as electron donor and sulfate of bivalent copper and acetate of bivalent lead as poisons. The reaction is carried out in a calibrated glass photoreactor. The activity of the reactor depends on the equilibrium concentration of the poison ions. The ions block the active centers. Lead ions show a stronger effect than copper ions. Kobozev's conception of the latent parameters of catalytic processes may be applied to the poisoning of photocatalysts [Ref 6]. There are: 1 graph and 6 Soviet references.

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On Poisoning of Photo-Catalysts by Copper and Lead Ions SOV/63-4-3-28/31

ASSOCIATION: Moskovskiy institut inzhenerov zheleznodorozhnogo transporta, kafedra khimii (Moscow Institute of Railroad Transportation Engineers, Chair of Chemistry)

SUBMITTED: January 14, 1959

Card 2/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

5 (4)

AUTHOR: Barshchevskiy, I. N. (Moscow) SOV/20-33-5-19/33

TITLE: The Photocatalytic Properties of Zinc Oxide in the Reaction of the Reduction of Methylene Blue (Fotokataliticheskiye svoystva okisi tsinka v reaktsii vosstanovleniya metilenovoy sini). 4. The Poisoning of Photocatalysts by Nitro Compounds (4. Otravleniye fotokatalizatorov nitrosoyedineniyami)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 5, pp 1071-1079 (USSR)

ABSTRACT: The relation between the molecular structure of the poisons and their toxic effect as well as the structure of the active centers of the photocatalyst were investigated. The methods used were already described in previous papers (Refs 1-3). Zinc oxide activated by lead ($\alpha = 3.754 \cdot 10^{-3}$ % Pb^{2+}) was investigated. The toxic effect of sodium nitrate, sodium nitrite, o-, m-, and p-nitrophenol was examined; moreover, the effect of dinitrophenols, thiopheneless benzene, phenol, and pyridine was investigated. Figures 1-4 show that the apparent activity initially decreases rapidly with increasing concentration of the poison but then approaches the axis of abscissas as a flat asymptote. By apparent activity, the

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The Photocatalytic Properties of Zinc Oxide in the Reaction of the Reduction of Methylene Blue. 4. The Poisoning of Photocatalysts by Nitro Compounds

author understands the photocatalytic activity which is not reduced to the unit of the concentration of the poison. Toxicity increases in the order $NaNO_3 < NaNO_2 < m\text{-}NO_2C_6H_4OH < p\text{-}NO_2C_6H_4OH$. o-Nitrophenol and the other compounds mentioned showed no toxic effect. The strong toxicity of p-nitrophenol corresponds to its high dipole moment whereas the ineffectiveness of o-nitrophenol might be caused by its considerably lower dipole moment. The anion being formed in a molecule with OH group probably is bound more or less tightly to the cation of the lattice of the photocatalyst. In order to achieve toxic effect, however, the NO_2 group and a sufficiently high dipole moment have to be present in addition to the OH group. According to the author, this dependence on the dipole moment proves that a great shift of the active center towards the periphery takes place. In addition, the poisoning hyperbolas, the form of which is similar to that of the poisoning of metallic catalysts in

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The Photocatalytic Properties of Zinc Oxide in the Reaction of the Reduction of Methylene Blue. 4. The Poisoning of Photocatalysts by Nitro Compounds SOV/76-33-5-18/33

"dark" catalysis, were calculated. Figures 5, 6, and 8 show the dependence of activity on the logarithm of the equilibrium concentration of the anion of the poison. The ratio between the inclination angle of the steep branch of the hyperbola and the inclination angle of the asymptotically flattened branch of the hyperbola are compared with the dipole moments. Gratitude is expressed to Z. M. Finogenova and G. A. Pevtsov for supplying the pure preparations and to A. M. Dlin for recommending the method and equations for the determination of the results by means of the methods of mathematical statistics. There are 8 figures and 14 references, 12 of which are Soviet.

ASSOCIATION: Institut inzhenerov zheleznodorozhnogo transporta im. I. V. Stalina, Moskva (Institute of Railroad Engineers imeni I. V. Stalin, Moscow)

SUBMITTED: October 21, 1957

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

S/076/62/036/002/001/009
B101/B102

AUTHOR: Barshchevskiy, I. N.

TITLE: Photocatalytic properties of zinc oxide in the reduction of methylene blue. V. Poisoning by metallic ions and some causes of poisoning and activity of photocatalysts

PERIODICAL: Zhurnal fizicheskoy khimii, v. 36, no. 2, 1962, 249 - 259

TEXT: ZnO, activated by Pb ions ($\alpha = 3.574 \cdot 10^{-3}$% Pb^{2+}) was subjected to the action of formaldehyde (donor) and methylene blue (acceptor) in oxygen-free N_2 in the presence of metallic ions. The rate $1/\tau_{1/2}$ of the change in the color was measured with an ФК-51 (FK-51) photocolorimeter. The concentration c_p of the poisoning ions was between 0 and 24 10^{-6} g-ion/liter. The results are: Li^{+}, Sr^{2+}, Ca^{2+}, Pb^{2+}, Co^{2+}, Ni^{2+}, Cu^{2+}, Al^{3+} have a poisoning effect. Zn^{2+}, Cd^{2+}, Ga^{3+}, In^{3+}, NH_4^{+}, SO_4^{2-} and CH_3COO^{-} have no effect. At the beginning the poisoning curve is a hyperbola which then passes into a straight line (Fig. 7). The poisoning is caused by non-

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screened structure of the poisoning ions, and if poisoning is due to the screening effect also by the high dipole moments of the poison molecules the acidity constants and the presence of OH Zn^{2+}, probably also Pb^{2+} pass into solution from which poison ions or dye ions and formaldehyde molecules are absorbed. The adsorption - desorption equilibrium is the main reason of the activity and the poisoning of photocatalysts. Coordinate bonds are formed between the poison ions and the active bipolar centers. The energy level (local impurity levels) of the activator ions in the ZnO lattice differs from that of the Zn ions or molecules in solution. The active bipolar centers of the ZnO activated by Cu^{2+} or Pb^{2+} (according to A. N. Terenin: Fotokhimiya krasiteley (Photochemistry of Dyes) Izd-vo AN SSSR, M.-L., 1947) are poisoned by the same ions. Photocatalysis and photosynthesis are inhibited by Cu^{2+} and Co^{2+}. A similar course can be expected for the transmission of light energy in the active centers of photocatalysis and photosynthesis. The poisoning of ZnO consists of true transitional and latent poisoning. In the latter, bipolar centers produce no effects. The sections of the curve depicting the pH dependence of the

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equilibrium concentration of Cu^{2+} in solution after adsorption on ZnO correspond to the branches of the poisoning curve. The maximum of this curve approximately corresponds to the concentration of the poison ions in solution at which true poisoning takes place. Beside bipolar centers also stable active centers caused by Frenkel' defects are present on the ZnO surface: the interstitial spaces contain superstoichiometric Zn-ions (or molecules) and the vacancies are located at the nodes. The activator and Zn ions (or molecules) in the interstices facilitate the formation of stable centers without taking part therein. These centers are not poisoned by metallic ions but are relatively stable against thermal and mechanical treatment. Both types of centers take part in photocatalysis. N. I. Kobozev (Zh. fiz. khimii, 33, 1002, 1959) is mentioned. There are 7 figures and 31 references: 25 Soviet-bloc and 6 non-Soviet-bloc.

ASSOCIATION: Moskovskiy institut inzhenerov transporta (Moscow Institute of Transportation Engineers)

SUBMITTED: March 17, 1960

Card 3/3

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

S/076/62/036/[illegible]/006/009
B152/B110

AUTHOR: Barshchevskiy, I. N.

TITLE: Photocatalytic properties of zinc oxide in the reduction of methylene blue. VI. The dependence of the activity of the photocatalyst on the ionization potentials of atoms

PERIODICAL: Zhurnal fizicheskoy khimii, v. 36, no. 2, 1962, 369 - 372

TEXT: The dependence of the activity of zinc oxide activated by lead ions in its lattice ($\alpha = 3.754 \cdot 10^{-3}\%$ Pb^{2+}) on the ionization potential of poisoning metal ions has been investigated. For this purpose, specific activities, i. e., activity per g-ion/ml of poison in the solution were calculated. As an ion adsorbed on the surface of a semiconductor is coordinately bound to the electrons of activated zinc oxide, the activities were related to 1 ev of the first, second, or third ionization energy. The dependence of the specific activity of the poisoned photocatalyst on the ionization potential of the poisoning ions is approximately a hyperbola (Fig. 1):

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$a_i^* = k/I + b$ min^{-1}/g-ion/ml/ev (1), where $k = 2.83 \cdot 10^5$ and $b = 0.06 \cdot 10^5$. The specific activity of the photocatalyst poisoned by metal ions may be expressed by the sequence

$$a^*_{Cs^+} > a^*_{Rb^+} > a^*_{K^+} > a^*_{Na^+} > a^*_{Li^+} > a^*_{Tl^+} > a^*_{Ag^+} > a^*_{Ba^{++}} > a^*_{Sr^{++}} > a^*_{Ca^{++}} > a^*_{Pb^{++}} > a^*_{Mg^{++}} > a^*_{Co^{++}} > a^*_{Ni^{++}} > a^*_{Cu^{++}} > a^*_{Al^{+++}}. \quad (3)$$

These and previous results suggest that if in a monomolecular layer at the surface of zinc oxide there are ions of metals, nitro compounds, or methylene blue, the electrons of the active bipolar center of the photocatalyst will be blocked in the Coulomb field of adsorbed ions. It is assumed that the poisoning of the active center is the stronger, the greater is the dipole moment or the ionization potential of the metal atom. In the limiting case, the electrons may emerge from the surface of the semiconductor, the adsorbed ion becomes an atom and remains in the monomolecular layer at the surface of the positively charged zinc oxide. The toxication of the metal ions and the activity of the zinc oxide are periodic functions of the atomic number of the elements (Fig. 2). By comparing the values of enthalpies ΔH_h, entropies ΔS_h, and free energies

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ΔG_h of hydration of metal ions in infinitely diluted solutions at 25°C with the sequence of activities, it is found that the blocking energy is the smaller and activity the greater, the smaller are the thermodynamic data. There are 2 figures and 15 references: 14 Soviet and 1 non-Soviet. The reference to the English-language publication reads as follows: Handb. of chem. a. phys., 37-th Ed. Chem. Rub. Publ. Co., Cleveland, Ohio, 1955-56, 2341.

ASSOCIATION: Moskovskiy institut inzhenerov transporta (Moscow Institute of Transportation Engineers)

SUBMITTED: December 21, 1960

Fig. 1. Specific activity a_i^* of the photocatalyst as a function of the ionization potential I of the atoms. (1) experimental values; (2) calculated values.
Legend: (a) $min^{-1}/g\text{-}ion \cdot ml^{-1} \cdot ev^{-1}$.

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BARSHCHEVSKIY, I.N., dots.

[Physicochemical properties of semiconductors] Fiziko-khimicheskie svoistva poluprovodnikov; uchebnoe posobie dlia studentov starshikh kursov MIIT-a. Moskva, Mosk. in-t inzhenerov transporta, 1962. 60 p. (MIRA 16:4)
(Semiconductors--Handbooks, manuals, etc.)
(Transistors--Handbooks, manuals, etc.)

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BARSKOVSKIY, I.N.

Photocatalytic properties of antimony trioxide in the reduction of methylene blue. Part 1. Zhur. fiz. khim. 36 no.11:2515-2517 N'62. (MIRA 17:5)

1. Moskovskiy institut inzhenerov zheleznodorozhnogo transporta.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

MITYUREV, A.K.; BARSHCHEVSKIY, M.M.

Effect of shale coarseness on operation indexes and lining wear of compartment kilns in the Kohtla-Jarve shale reprocessing combine. Trudy VNIIPS no.3:183-190 '55. (MLRA 8:12)
(Baltic Sea region--Oil shales) (Hydrocarbons)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

MITYUREV, A.K.; BARSHCHEVSKIY, M.M.

Lowering the dust content of producer tar. Trudy VNIIPS no.4: 190-198 '55. (MIRA 13:4)
(Slantsy--Gas producers) (Dust--Removal) (Tar)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHCHEVSKIY, M.M.; MITYUREV, A.K.

Care of refractory material and major repairs in industrial compartment kilns. Trudy VNIIPS no.5:154-171 '56. (MLRA 10:5)
(Oil shales--Refining)

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11(6)

PHASE I BOOK EXPLOITATION SOV/1868

Rozvitiye gazovoy promyshlennosti SSSR; materialy Vsesoyuznogo soveshchaniya (Trends in the Development of the Gas Industry in the USSR; Materials Presented at the All-Union Conference) Moscow, Gostoptekhizdat, 1958. 432 p. 3,000 copies printed.

Eds: A.B. Resnto, B.S. Tkachenko, P.G. Kuzmenkov, Yu.A. Kvasov, V.I. Popov, V.E. Ekshen, N.I. Ryabtsev, P.A. Tkacher, A.E. Bal'kovich; Exec. Eds.: N.I. Sheyanshenko and M.M. Novikova; Tech. Ed.: E.A. Mikhina; Editorial Board: M.V. Nikovenko (Chief Ed.), K.S. Karenko, Yu.A. Kvasov, V.E. Ekshen, and N.I. Ryabtsev.

PURPOSE: The book is intended for specialists engaged in the production and gathering of natural gas, the extraction of gas from coal and shale, the construction and operation of trunk gas pipelines, gas supply to cities, and the processing of gas.

COVERAGE: The authors review the basic trends in the development of the USSR gas industry, the prospecting and exploration of new gas deposits, the gasification of solid fuels, the gathering and utilization of natural gas, the extraction of gas field operations, the exploitation of gas wells, and ways to increase output. They further discuss the processing of natural gas with application of refrigeration, the experience gained in the laying and operating of trunk gas pipelines, the automation of gas pipeline operation, and underground gas storage facilities. There are no references.

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APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHCHEVSKIY, M.M.; BEZMOZGIN, E.S.; ZAGLODIN, L.S.; SINEL'NIKOV, A.S.

Problem of efficient processing organization for shale retorts. Trudy VNIIPS no.6:39-50 '58. (MIRA 11:8)
(Gas retorts) (Oil shales--Refining)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHCHEVSKIY, M.M.; BEZMOZGIN, E.S.; ZAGLODIN, L.Z.; SINEL'NIKOV, A.S.; SHUVALOV, V.I.

High production oil-shale retorts. Gaz. prom. no. 7:7-11 Jl '58. (MIRA 11:7)

(Oil shales)
(Gas retorts)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

11(2,4) PHASE I BOOK EXPLOITATION SOV/2-

Vsesoyuznyy nauchno issledovatel'skiy institut pererabotki i ispol'zovaniya topliva

Khimiya i tekhnologiya topliva i produktov yego pererabotki, vyp. 8 (Chemistry and Technology of Fuel and Products of Refining, No. 8) Leningrad, Gostoptekhizdat Otd, 1959. 247 p. (Series: Its: Trudy) Errata slip inserted. 2,500 copies printed.

Sponsoring Agency: R.S.F.S.R. Leningradskiy ekonomicheskiy administrativnyy rayon. Sovet narodnogo khozyaystva.

Ed.: V.N. Krikh; Exec. Ed.: A.A. Chirkov; Tech. Ed.: A.B. Yashchurzhinskaya; Editorial Board of series: E.S. Bespolygin, A.Ye. Drabkin, D.K. Kollerov, S.S. Sezenov, A.S. Sinel'nikov, and A.S. Poteyev.

PURPOSE: This collection of articles is intended for scientific, engineering and technical personnel in plants of the fuel and gas industry.

COVERAGE: The results of research and experimental work carried out in 1957 and 1958 by the All-Union Scientific Research Institute for Shale Processing are summarized in this collection. [illegible] components of oil shale from various regions, their [illegible] position, and physical and chemical properties are [illegible] with the production of gas from oil shale. Also [illegible] semicoking of oil shale, analysis of oil shale and [illegible] tionation of tar obtained in oil shale semicoking, [illegible] fan and the equipment used, hydrogenation of [illegible] from oil shale, extraction of phenol, and purification of [illegible] waters by anionite and formaldehyde. Most articles [illegible] by references. In addition, the book contains [illegible] raphy of 126 Soviet and non-Soviet [illegible]

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BARSHCHEVSKIY, M.M.; BEZMOZGIN, E.S.; SINEL'NIKOV, A.S.; SHUVALOV, V.I.

Shale-gas producers with a central feed for the heat-carrying agent. Trudy VNIIPS no.7:120-146 '59. (MIRA 12:9)
(Gas retorts)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BEZMOZGIN, E.S.; BARSHCHEVSKIY, M.M.; VASIL'YEVA, M.M.

Prospects for the use of oxygen in the shale-gas industry. Trudy VNIIT no.8:66-74 '59. (MIRA 13:4)
(Oil shales) (Oxygen)

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BEZMOZGIN, E.S.; BARSHCHEVSKIY, M.M.; SINEL'NIKOV, A.S.; ZAGLODIN, L.S.

Increasing the capacity of pinch-type shale gas producers used at the combine in Kohtla-Jarve. Trudy VNIIT no.9:27-30 '60. (MIRA 13:11)

(Kohtla-Jarve—Gas producers)

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BARSHCHEVSKIY, M.M.; BEZMOZGIN, E.S.; VASIL'YEVA, M.M.; ZAGLODIN, L.S.; SINEL'NIKOV, A.S.

Efficient system of processing Baltic oil shales. Trudy VNIIT no.9: 4-9 '60. (MIRA 13:11)

(Oil shales)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BEZMOZGIN, E.S., BARSHCHEVSKIY, M.M., SINEL'NIKOV, A.S., ZAGLODIN, L.S.

Industrial experience in increasing the capacity of oil shale gas producers. Gaz.prom. 5 no.2:17-19 F '60. (MIRA 13:6)
(Gas producers) (Oil shales)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHCHEVSKIY, M.M.; BEZMOZGIN, E.S.; NEMCHENKO, A.G.; SINEL'NIKOV, A.S.

Experimental-plant testing of a newly designed reactor for the continuous thermal-contact gasification of liquid fuel. Gaz.prom. 5 no.10:12-16 O '60. (MIRA 13:10)

(Liquid fuels) (Gas manufacture and works)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHCHEVSKIY, M.M.; BEZMOZGIN, E.S.; SHAPIRO, P.N.

Investigating the segregation of fuel and the distribution of gas flows on a cold model of a highly productive shale ga generator. Trudy VNIIT no. 11:63-72 '62. (MIRA 17:5)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BABIN, I. N.; BARSHCHEVSKIY, M. M.; BEZMOZGIN, B. S.; PETROV, V. N.

Converting natural and mixed gas for special heating installations. Trudy VNIIT no. 11:245-253 '62. (MIRA 17:5)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHCHEVSKIY, Mark Moiseyevich; BEZMOZGIN, Emmanuil Samuilovich; SHAPIRO, Roal'd Natanovich; SINEL'NIKOV, A.S., nauchnyy red.; SEGAL', Z.G., ved. red.; YASHCHURZHINSKAYA, A.B., tekhn. red.

[Handbook on refining oil shales]Spravochnik po pererabotke goriuchikh slantsev. [By]M.M.Barshchevskii, E.S.Bezmozgin, R.N. Shapiro, Leningrad, Gostoptekhizdat, 1963. 238 p. (MIRA 16:3)

(Oil shales)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

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YUDKEVICH, Yu.D.; [illegible]

Investigating the thermal [illegible]
Trudy VNIIK no.13:[illegible]

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ACCESSION NR: AP5007147 S/0286/65/000/003/0012/0012

AUTHOR: Barabchevskiy, M. N.; Bezmozgin, E. S.; Kurdyukov, O. I.; Nemchenko, A. G.; Yudkevich, Yu. D.

TITLE: A method for thermal dissociation of fuel. Class 10, No. 167812

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 3, 1965, 12

TOPIC TAGS: fuel thermal decomposition, infrared radiation

ABSTRACT: This Author's Certificate introduces a method for thermal decomposition of fuel. In order to intensify the process, the dissociation is done under infrared radiation.

ASSOCIATION: none

SUBMITTED: 04Dec63 ENCL: 00 SUB CODE: FP

NO REF SOV: 000 OTHER: 000

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BARSHCHEVSKIY, S.V., inzhener; KUZNETSOV, R.M., inzhener.

Mechanical fixing of cable shoes and connecting sleeves. Vest.elektroprom. 18 no.6:20-23 Je '47. (MLRA 6:12)

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

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHCHEVSKIY, S.V.

KITAYENKO, G.I., laureat Stalinskoy premii; BARSHCHEVSKIY, S.V., retsenzent; POL'SKAYA, R.G., tekhnicheskiy redaktor; ~~DLUGOKANSKAYA, E.A., tekhnicheskiy redaktor.~~

[Electrician's handbook] Spravochnik elektromontazhnika. Leningrad, Gos. soiuznoe nauchno-tekhn. izd-vo sudostroit. promyshl. Vol.3. 1954. 639 p. (MIRA 8:5)
(Electric engineering)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHCHEVSKIY, V.

Glider-gyroplane. Voen.znan. 25 no.9:24 S '49.
(MIRA 12:12)

(Helicopters)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHCHEVSKIY, YU, A.

BARSHCHEVSKIY, YU, A. --"Construction Solutions of High Strenth Based on Ground Unslaked Lime." Min. Higher Education USSR, Kiev, 1955. (Dissertation for the Degree of Candidate in Technical Sciences)

SO: Knizhnaya Letopis', No.35, 1955

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

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PHASE I BOOK EXPLOITATION 904

Barshchevskiy, Yuriy Averkiyevich, Candidate of Technical Sciences

Bystrotverdeyushchiye rastvory; informatsionnoye soobshcheniye (Quick-Setting Solutions; Information Bulletin) Kiyev, 1957. 20 p. No. of copies printed not given.

Sponsoring Agencies: Ukrainian SSR. Ministerstvo stroitel'stva. Tekhnicheskoye upravleniye. Otdel tekhnicheskoy informatsii and Vsesoyuznyy nauchno-issledovatel'skiy institut organizatsii i mekhanizatsii promyshlenno-zhilishchnogo stroitel'stva.

Resp. Ed.: Orlovskaya, S.Ya.

PURPOSE: This information bulletin gives the results of work by the sponsoring agency in finding materials for quick-setting concrete solutions in an effort to decrease the working cycle and the area required for mass production of large cinder blocks.

COVERAGE: The bulletin covers the investigation of clinker (portland) and other types of cement. A time-material index and applicable formulae for the preparation of quick-setting solutions are given.

Card 1/3

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHCHEVSKIY, Yu. A., kand.tekhn. nauk (Kiyev).

Mortars for laying brick blocks. Stroi. mat. 4 no.8:35 Ag '58. (MIRA 11:9)

(Mortar) (Building blocks)

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[illegible]

"Influence of the Temperature on the Spectral Distribution of the Sensitivity of the Photographic Layers," Zhur.Tek Fiz., 14, Nos. 4-5, 1944.

Leningrad Photography, State Optical Inst.,

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

Barshev, V. N.

PA 18/49T21

USSR/Engineering Jun 48
Lifting, Mechanisms
Fork Lifts

"Fork Lifts and Their Use in Loading and Unloading Operations," V. N. Barshev, Engr, 5 pp

"Mekh Trud i Tyazh Rabot" No 6

Describes various types of fork lifts, with ten illustrations. Mass production of light, medium and heavy models will start in 1949.

[redacted] 18/49T21

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

1. BARSHAV, V. N.

2. USSR (600)

4. Technology

7. Automatic loaders, tractor loaders and their use. Moskva, Izd-vo Min rechnogo flota SSSR, 1951.

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

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

SESLAVIN, A. A.; BARCHEV, V. N.; Engs.

Coal-Handling Machinery

Using automatic loaders for boiler room coal stocks. Mekh. trud. rab. 7, No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

1. BARSHEV, V. N.; KHINICH, G. V.

2. USSR (600)

4. Loading and Unloading

7. Book about automatic loaders. "Automatic loaders, traction loaders and their operation." V. N. Barshev, G. V. Khinich. Reviewed by Eng. A. A. Seslavin. Mekh. trud. rab., 7, no. 4, 1953.

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

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

DRANNIKOV, A.B.; BARSHEV, V.N., inzhener, retsenzent; KRIMERMAN, M.N., inzhener, redaktor; MATVEYEVA, Ye.N., tekhnicheskiy redaktor.

[Fork lift trucks] Avtopogruzchiki. Moskva, Gos.nauchno-tekhn. izd-vo mashinostroitel'noi lit-ry, 1955. 306 p. (MLRA 9:1)
(Fork lift trucks)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHEV, V.N.

BAZANOV, A.F., laureat Stalinskoy premii, kandidat tekhnicheskikh nauk; KASSATSIYER, M.S., inzhener, redaktor; VOSKRESSENSKIY, N.N. redaktor; BARSHEV, V.N., inzhener, retsenzent; PETROV, G.I., inzhener, ~~redaktor;~~ POPOVA, S.M., tekhnicheskiy redaktor.

[Self-propelled loaders; design and principles of operation] Samokhodnye pogruzchiki; konstruktsiia i osnovy ekspluatatsii. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroitel'noi lit-ry, 1955. 423 p. (MLRA 8:10)

(Industrial power trucks)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHEV, V.N., inzhener

Eliminate the lag in production of automatic loaders and self-propelled utility trucks. Mekh.trud.rab. 9 no.5:10-11 My '55. (MLRA 8:7)
(Loading and unloading) (Fork-lift trucks)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARSHEV, V.N., inzhener.

Fork lift trucks used abroad. Mekh trud.rab. 10 no.1:42-45 Ja '56. (MLRA 9:5)

(United States--Fork lift trucks)

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000203710015-2

BARAT, Iosif Yefimovich, kandidat tekhnicheskikh nauk; BARSHEV, Vladimir Nikolayevich, inzhener; BOGUSLAVSKIY, Vladimir Konstantinovich, kandidat tekhnicheskikh nauk; D'YACHKOV, Vladimir Konstantinovich, kandidat tekhnicheskikh nauk; KORNEYEV, Grigoriy Kuz'mich, kandidat tekhnicheskikh nauk; KUZNETSOV, Leonid Vasil'yevich, inzhener; MEKLER, Abram Grigor'yevich, kandidat tekhnicheskikh nauk; NIKOLAYEVSKIY, Georgiy Matveyevich, kandidat tekhnicheskikh nauk; NIKONOV, German Pavlovich, inzhener; OLEKHNOVICH, Angelina Iosifovna, inzhener; SEGAL', Il'ya Samoylovich, kandidat tekhnicheskikh nauk; SPITSINA, Irina Osipovna, kandidat tekhnicheskikh nauk; GORA, V.Ye., inzhener, retsenzent; SPIVAKOVSKIY, A.O., professor, redaktor; BURMISTROV, P.I., kandidat tekhnicheskikh nauk, redaktor; MARTENS, S.L., inzhener, redaktor; MATVEYEVA, Ye.N., tekhnicheskiy redaktor; TIKHANOV, A.Ya., tekhnicheskiy redaktor

[Present-day hoisting and conveying technology in foreign countries; a survey of the literature] Sovremennaia pod"emno-transportnaia tekhnika za rubezhom; obzor literatury. Pod red. A.O.Spivakovskogo i dr. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1957. 306 p. (MLRA 10:6)

1. Chlen-korrespondent Akademii nauk SSSR (for Spivakovskii)
(Hoisting machinery)

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VAGNER, Ye.N.; PODOLYAK, Z.Ya.; SOTNIKOVA, R.D.; BARSHEVA, A.I., nauchnyy red.; GOFMAN, M.S., red.

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AUTHOR: Barshevskiy, B. N.

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