APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

L 44174-65 EWT(1) Pi-4 IJP(c)

ACCESSION NR: AP5009010 S/0048/65/029/003/0387/0390

AUTHOR: Belyy, M.U.; Kushnirenko, I.Ya.

TITLE: Spectroscopic properties of vitreous halide solutions activated by ions of different valence /Report, 17th Conference on Luminescence held in L'vov, 26 Jan-5 Feb 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 3, 1965, 387-390

TOPIC TAGS: luminescence, halide, vitreous material, recomination luminescence

ABSTRACT: Vitreous halide phosphors activated with mercury-like ions of high valence have been investigated because analogous crystal phosphors are difficult or impossible to synthesize. The use of vitreous solution phosphors makes it possible to investigate activation by ions with electron configurations nd^{10} and $nd^{10}(n+1)s^2$, and different charges. Absorption and emission spectra are presented for $HCl:As^{3+}$, $HCl:Se^{4+}$, $HCl:Te^{4+}$, $HBr:As^{3+}$, $HBr:Se^{4+}$, and $HBr:Te^{4+}$ at -143°C and for $HCl:Ce^{4+}$, $HCl:As^{5+}$, $HBr:Ce^{4+}$, and $HBr:As^{5+}$ at -150°C. These data and others are discussed. Features of the excitation spectra can be associated with the three ^3P states and the ^1P state of the activator ion. These states are split by

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BELYY, M.U. [Bilyi, M.U.]; KRIVENKO, P.I. [Kryvenko, P.I.]

Effect of the temperature on the luminescence and absorption spectra of solutions of heavy metal salts. Part 7. Solutions of copper salts. Ukr. fiz. zhur. 10 no.4:420-426 Ap '65.
(MIRA 18:5)

1. Kiyevskiy gosudarstvennyy universitet im. Shevchenko.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

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L 23911-65

ACCESSION NR: AP5001011

bands belong to a triplet system. They are assigned to the transitions of the $^3S_0 \rightarrow {}^3P_{0,1,2}$ type of the free ion Se^{4+}. The intensive short-wavelengths absorption bands are assigned to the $^1S_0 \rightarrow {}^1P_1$ transitions. Orig. art. has: 3 figures.

ASSOCIATION: Kyivskyy derzhuniversytet im. T. G. Shevchenka (Kiev State University)

SUBMITTED: 08May64 ENCL: 00 SUB CODE: GP, GC, OP

NR REF SOV: 022 OTHER: 014

Card 2/3

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

L 23911-65 EWT(1)/EWT(m)/EWP(t)/EEC(b)-2/EWP(b) IJP(c) RDW/JD

ACCESSION NR: AP5001551 S/0185/64/009/012/1306/1311

AUTHOR: Bilyy, M. U.; Belyy, M. U.; Kushnirenko, I. Ye.

TITLE: Effect of temperature on the luminescence and absorption spectra of heavy metal salt solutions

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 9, no. 12, 1964, 1306-1311

TOPIC TAGS: absorption spectrum, heavy metal salt solution, hydrochloride selenium solution, lithium bromide selenium solution, luminescence spectrum

ABSTRACT: The absorption, emission, and excitation functions of vitreous alkaline-haloid solutions of HCl-Se and LiBr-Se were investigated. It was found that the absorption spectrum changes little with the decrease of temperature. The bands become narrower and are somewhat shifted toward the shorter wavelengths. The luminescence spectra change considerably: they are greatly shifted toward the violet when the temperature is changed from -123 to 176C. The structure of the luminescence spectra and the long-wavelength group of the absorption

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L 22133-65

ACCESSION NR: AP5000610

of both types of solutions have a complex structure. Each luminescence band of chloride solutions has its own excitation function: the longer wavelength luminescence bands correspond to longer wavelength excitation. All absorption, emission and excitation bands are correlated with transitions of the type $^1S_0 \rightleftarrows {}^1P_1$ and $^1S_0 \rightleftarrows {}^3P_{0,1,2}$ within the free Te^{+4} ion. However, the number of maxima in the excitation spectrum of KCl-Te is significantly greater than the number of maxima in the absorption spectrum. In addition, several luminescence bands are excited simultaneously in the single long-wavelength absorption band of HCl-Te solutions. An analysis of these results shows that some energy terms of the free Te^{+4} ion, $^3P_{0,1}$ and $^1P_1$ terms in particular, split in the area of a vitreous solution with respect to the quantum number J. The magnitude of splitting is a function of the charge on the activating ion. Lowering of temperature from room temperature to -183C has no significant effect on the absorption spectra of HCl-Te solutions, their bands are somewhat narrowed and remain almost without change on the wavelength scale. The emission spectra in this case, however, are shifted toward the red spectral region. Some conclusions are drawn regarding the shifts. Orig. art. has: 4 figures.

ASSOCIATION: Kyivs'kyy derzhuniversytet im. T. G. Shevchenka (Kiev State Univ.)

SUBMITTED: 08May64 ENCL: 00 SUB CODE: SS, OP

NO REF SOV: 013 OTHER: 011

Card 2/2

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

L 22933-65 EWG(b)-2/EWT(1)/EWT(m)/EWP(b)/EWP(t) IJP(c) RDW/JD

ACCESSION NR: AP5000653 S/0185/64/009/011/1248/1255

AUTHOR: Bilyy, M. O.; Belyy, K. O.; Kuchnirenko, I. Ya.

TITLE: Effect of temperature on the luminescence and absorption spectra of heavy-metal salt solutions. IV. Studies on solutions of tellurium

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 9, no. 11, 1964, 1248-1255

TOPIC TAGS: luminescence spectrum, absorption spectrum, emission spectrum, tellurium salt, tellurium halide crystal

ABSTRACT: Many studies have been made of the optical properties of alkali halide crystals, as well as the corresponding solutions, activated with Tl^{+}, Ga^{+}, In^{+}, Sn^{+2}, Pb^{+2}, Bi^{+3}, Se^{+4}, Te^{+4} and other ions. Among the solutions of inorganic salts, detailed investigations have been made only of aqueous solutions of alkali halides with additions of Tl^{+}, In^{+2}, Pb^{+2}, since they luminesce even at room temperature. Upon cooling of these solutions to -183C the luminescence intensity increases by a factor of 10 - 12. This article presents experimental data on the spectroscopic properties of vitreous Hal-Te^{+4} solutions. It was established that tellurium chloride solutions begin to luminesce at -62C and HBr (LiBr) — Te solutions begin to luminesce at -150C. The luminescence spectra

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

L 41498-65
ACCESSION NR: AP4048862

Orig. art. has: 5 equations and 11 figures.

ASSOCIATION: Ky*yivs'ky*y derzhuniversy*tet im. T. G. Shevchenka (Kiev State University)

SUBMITTED: 30Sep63 ENCL: 00

SUB CODE: GP, IC NO REF SOV: 008 OTHER: 008

Card 3/3

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

L-41498-63

ACCESSION NR: AP4048682

tions consist of several overlapping simple bands, with the overlapping so great that its occurrence could not be established by spectral measurements. Still greater overlapping apparently occurred in HCl-Tl^{+} and HBr-Tl^{+} solutions, but the complexity of these bands could not be determined experimentally. The absorption and luminescence spectra and excitation functions of HCl-Sn^{2+}, HBr-Sn^{2+} and H_2SO_4-Sn^{2+} solutions were found to follow the same rules as the lead containing solutions. The structural characteristics of the bands were most distinct in the HCl-Sn^{2+} solution at -180C; the luminescence spectrum consisted of 2 bands--green (λ=440nm) and red (λ=600 nm), the latter consisting of three overlapping bands with the maxima at 585, 605 and 625 nm. The spectra and excitation functions of HCl-Sn^{4+} and HBr-Sn^{4+} solutions were also investigated. A number of the peculiarities in these spectral characteristics were explained by the assumption that the luminescence of these solutions is of a recombination nature: $Hal^{0} + h\nu \longrightarrow Hal^{0} + e^{-}$, $Sn^{4+} + e^{-} \longrightarrow Sn^{3+*}$, $Sn^{3+*} \longrightarrow Sn^{3+} + h\nu$, $Sn^{3+} + Hal^{0} \longrightarrow Sn^{4+} + Hal^{-}$. The excitation functions were calculated on the basis of this proposed mechanism and were in satisfactory agreement with the experimental excitation functions, corroborating the proposed mechanism.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

L 41498-65 EWT(1)/EWT(m)/EWP(e)/EPF(n)-2/EWP(t)/EWP(b) Pr-4/Pi-4/Pu-4
IJP(c) 30

ACCESSION NR: AP4043862 S/0185/64/009/010/1059/1067

AUTHOR: Bilyay, M. V.; Belyay, M. U.; Okhrimenko, B. A.

TITLE: Effect of temperature on the luminescence and absorption spectra of heavy metal salt solutions. II. Investigation of tin salt solutions

SOURCE: Ukrayins'kyy fizycheskyy zhurnal, v. 9, no. 10, 1964, 1059-1067

TOPIC TAGS: heavy metal salt, thallium halide, stannous halide, stannic halide, lead halide, luminescence spectrum, absorption spectrum, luminescence excitation function

ABSTRACT: The spectral characteristics of $H_2O + HaL^- + Me^{n+}$ type solutions ($HaL^- = Cl^-$, Br^-, $Me^{n+} = Sn^{2+}$, Sn^{4+}, Pb^{2+}, Tl^+) were investigated in the temperature range from 20C to -183C. The luminescence excitation functions of HCl-Tl, HBr-Tl, HCl-Pb, HBr-Pb solutions were investigated. The excitation spectra of the latter two solutions have a distinct structure, differing in the short-wave and the long-wave part of the luminescence spectrum in each solution. It was concluded that the absorption and luminescence bands of these solu-

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BELYY, M.U.; OKHRIMENKO, B.A.

Structural characteristics of the spectra of luminescent electrolyte solutions. Izv. AN SSSR Ser. fiz. 27 no.5:666-669 My '63. (MIRA 16:6)

1. Kafedra optiki Kiyevskogo gosudarstvennogo universiteta imeni T.G. Shevchenko.
(Electrolyte solutions—Spectra)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BELYY, M.U.; KUSHNIRENKO, I.Ya.

Luminescence of solutions of arsenic, gallium, and selenium halides. Izv. AN SSSR Ser. fiz. 27 no.5:661-665 My '63. (MIRA 16:6)

1. Kafedra optiki Kiyevskogo gosudarstvennogo universiteta imeni T.G. Shevchenko.

(Halides--Spectra)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

ACCESSION NR: AR4032173

ing concentration, and the appearance of three clearly pronounced absorption maxima at large Cl^- concentration at room temperature is established. At liquid-oxygen temperature (104°K) the maxima are more pronounced. The solutions do not luminesce at room temperature. At 104°, following excitation with a SVDSH-1000 lamp through a UFS-1 filter, a bright yellow-red glow is observed. The spectrum has four bands, the relative intensities of which depend on the wavelengths of the exciting light. Analysis shows that each absorption maximum corresponds to its own emission band, and the absorption maximum with the longest wavelength corresponds to two bands. The absorption and luminescence bands are related with the transitions between the Te^{4+} levels, deformed by the influence of the environment.

DATE ACQ: 31Mar64 SUB CODE: PH ENCL: 00

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

ACCESSION NR: AR4032173 S/0058/64/000/002/D049/D049

SOURCE: Ref. zh. Fiz., Abs. 2D392

AUTHOR: Bely*y, M. U.; Kushnirenko, I. Ya.

TITLE: Luminescence and absorption of tellurium salts in concentrated aqueous solutions of HCl and LiCl

CITED SOURCE: Sb. Fiz. shchelochnogaloidn. kristallov. Riga, 1962, 164-167

TOPIC TAGS: tellurium, tellurium chloride solution, absorption spectrum, spectrum long wave displacement, luminescence, absorption maximum, luminescence band, level transition

TRANSLATION: The absorption spectrum of solutions of $TeCl_4$ + + HCl(LiCl) was investigated as a function of the concentration of the Cl^- ions. A long-wave displacement of the spectrum with increas-

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33434

Photoluminescence of heavy-metal... S/048/62/026/001/010/018
B117/B102

temperatures and on sufficiently large crystals. Based on the properties of the longwave edge fine structure, a classification and a description of the character of optical transitions are possible. The energy distribution in the emission spectrum and its dependence on the wavelength of excitation are strongly influenced by the character of natural energy states of crystals, and especially by the exciton processes taking place in the latter. There are 7 figures, 3 tables, and 22 references: 16 Soviet and 6 non-Soviet. The four most recent references to English-language publications read as follows: P. W. Baumeister, Phys. Rev., 121, 2, (1961); G. G. Macfarlane a. oth., J. Chem. Phys. Solids, 9, 388 (1959). Phys. Rev., 108, 6 (1957); C. D. Clarc, J. Chem. Phys. Solids, 9, 481 (1959).

ASSOCIATION: Kiyevskiy gos. universitet im. T. G. Shevchenko (Kiyev State University imeni T. G. Shevchenko)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

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S/048/62/026/001/010/018
B117/B102

Photoluminescence of heavy-metal...

between their absorption and luminescence centers. 2. Photoluminescence of semiconductors. The authors' investigation chiefly yielded quantitative data regarding the absolute values of the absorption coefficients and the relative energy distribution in the emission spectra, thus permitting the interpretation of the latter. Cu_2O, PbI_2, SiC, and HgI_2 crystals were examined. It has been found that the character of photoluminescence in semiconductors is determined by the characteristics of optical transitions related to light absorption. The particular character of the structure of natural energy states in crystals manifests itself in that the energy distribution in the photoluminescence spectrum in straight forbidden and oblique transitions is determined by local centers. In the case of a longwave edge structure due to straight allowed transitions, a natural radiation of crystals is observable besides the luminescence of local centers. Intense natural radiation occurs only if exciton transitions are of high probability and the local centers are not too concentrated. A study of optical properties of some semiconductors showed that the exciton structure of the absorption spectrum can be observed under certain conditions, namely, at low

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33434

S/048/62/026/001/010/018

Photoluminescence of heavy-metal... B117/B102

complex, and this points to one and the same absorption center, namely, the heavy-metal cation. With the exception of the thallium ion, heavy-metal cations are not luminescent in the hydrated state. However, if halogen ions are introduced into the aqueous solution, a luminescence characteristic of the metal salt concerned is brought forth. Complexes of differing compositions have the same luminescence spectrum in the heavy metal concerned. Their absorption spectra, however, differ noticeably as to wavelength. Unlike the luminescence spectra they are hardly affected by temperature. On a drop of temperature, the luminescence spectrum first shifts toward the longwave, and then sharply toward the shortwave range. The change of direction coincides with vitrification. The luminescence yield of the solutions examined grows sharply with a drop of temperature, and on the passage from one halogen to another it decreases in the following sequence: Cl^-, Br^-, I^-. In acid media it is noticeably decreased by shortwave-ultraviolet irradiation. It has been found that luminescence is caused by s-electrons. As for thallium and lead halide solutions, also d-electrons are probably involved. A comparison between absorption and luminescence spectra of liquid solutions and between alkali halide crystal phosphors similar in composition revealed great similarity

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33434

S/048/62/026/001/010/018
B117/B102

24.3500 (1137,1138,1144)

AUTHORS: Belyy, M. U., Gorban', I. S., and Shishlovskiy, A. A.

TITLE: Photoluminescence of heavy-metal halides and semiconductor crystals

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 1, 1962, 103 - 112

TEXT: 1. Photoluminescence of heavy-metal halides. It has been found at the Kiyevskiy gos. universitet im. T. G. Shevchenko (Kiyev State University imeni T. G. Shevchenko) that luminescence in alkali halide crystal luminophores takes place even without any ion association. Unlike Tl, Pb, and Sn the discovered luminescence of tellurium, antimony, and bismuth halides is observable at low temperatures only. An optical method developed by the authors themselves [Abstracter's note: details not given] was applied to determine the composition of the complexes forming in thallium and lead halide solutions, and the respective absorption spectra were calculated. Each type of complex is shown to have its own absorption spectrum. The shape of the absorption band is equal for each

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BELYY, M.U.

STRUCTURE AND PHYSICAL PROPERTIES OF MATTER IN A LIQUID STATE
reports read at the 4th Conference convened in KIYEV from 1 to 5 June 1959, published by the publishein House of KIYEV University, KIYEV, USSR, 1962

A.Z. GOLIK and P.F. CHOLPAN, Molecular Structure, Compressibility, Surface Tension and Viscosity of Some Polysiloxanes 57

N.M. GERASIMOV, Problem of Viscosity of Compressed Gases and Liquids 65

O.YA. SAMOYLOV, Connection Between the Coordination Number and the Thermal Motion of Aqueous Solution Particles of Electrolytes 71

I.G. MIKHAYLOV and YU.P. SYRNIKOV, Thermal Dependency of the Adiabatic Compressibility of the Aqueous Solutions of Salts at Low Concentrations 74

M.U. BELYY and R.F. RUDNKO, The Effect of Solvents and Temperature on the Luminescent Capacity of Tin Salt Solutions 79

YU.YA. GOTLIB, K.N. SALIKHOV and V.A. SOLOV'YEV, Theory of Ultrasound Absorption in Polymer Solutions 85

G.M. MARTYNKEVICH, Connection Between the Structural Units of Gases and Structural Units of Liquids 92

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BELYY, M.U. [Bilyi, M.U.]; OKHRIMENKO, B.A.

Adsorption and luminescence of haloid solutions of thallium and lead ions of different valence. Ukr.fiz.zhur. 6 no.6:730-734 N-D '61. (MIRA 16:5)

1. Kiyevskiy gosudarstvennyy universitet im. Shevchenko.
(Thallium--Spectra) (Lead--Spectra) (Halides)

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since they also give a red luminescent band of the Sn^{4+} ion. This interpretation is confirmed by the agreement of maxima of the excitation spectrum calculated from formula

$$I_{\text{люм}} = I_0 \frac{\alpha C_0 C_x K_x}{K_x C_x + K_0 C_0} [1 - e^{-(K_x C_x + K_0 C_0) d}], \quad (1)$$

with the ones found experimentally. Here, $I_{\text{люм}}$ and I_0 are the intensity of luminescence and the intensity of the exciting light, α is the probability of a recombination of an electron and of an Sn^{4+} ion, K_x, K_0, C_x, and C_0 are absorption coefficients and concentrations of the Cl^- and Sn^{4+} ions, and d is the thickness of the absorbing layer. It was shown that $I_{\text{люм}}$ reached a maximum at $K_0/K_x = C_x^2/C_0^2$. In a subsequent discussion, Ch. B. Lushchik dealt with electron transitions causing absorption in activated crystals. There are 1 figure and 2 Soviet-bloc references.

ASSOCIATION: Kafedra optiki Kiyevskogo Gos. universiteta im. T. G. Shevchenko (Department of Optics of the Kiyev State University imeni T. G. Shevchenko)

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and a red band (Curve 3 of the figure). The present paper deals with the origin of this band. It was found to have three maxima: 585 mμ, 605 mμ, and 635 mμ. Further, it was stated that these two bands were excited in different parts of the absorption spectrum: the blue one at the absorption maximum of 226 mμ, and the red one in the region of two distinct maxima at 262 mμ and 276 mμ. Fig. 1 shows the absorption and luminescence spectra of two solutions. It was found that the absorption spectra of these solutions did not shift on reduction of temperature, only undergoing a slight contraction and elevation of the bands. It was further shown that the absorption spectra of the two solutions had a distinct maximum at 226 mμ, and two less distinct maxima at 260 mμ and 276 mμ. The luminescence spectrum of the solution Sn^{4+} + LiCl(HCl) had only a red band. It is assumed that the longwave absorption maximum of the solution Sn^{++} + LiCl(HCl) is caused by the transitions $^1S_0 \longrightarrow {}^3P_{0,1,2}$. This, however, also clarifies the triplet structure of the red luminescent band of Sn^{++}. The similar structure of the red luminescent band of Sn^{4+} solutions is explained by the same transitions in the Sn^{4+} ion as above,

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S/048/61/025/003/043/047
B104/B203

AUTHORS: Belyy, M. U., Okhrimenko, B. A., and Rud'ko, B. F.

TITLE: Recombination luminescence of Sn^{4+} in aqueous solution of LiCl and HCl at low temperatures

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 3, 1961, 426-428

TEXT: This paper was read at the 9th Conference on Luminescence (Crystal Phosphors) in Kiyev, June 20-25, 1960. It is known that the optical characteristics of alkali-halide crystal phosphors and certain concentrated solutions have much in common: the absorption spectra are in practical agreement, and the luminescence spectra have also certain correspondences. Hence, the authors conclude that a study of concentrated halide solutions containing heavy metal ions might help to clarify absorption and luminescence mechanisms. It has been found earlier that a red luminescent band could be observed in a solution of Sn^{++} in LiCl(HCl) on reduction of temperature. The luminescence spectrum of this solution at the temperature of liquid oxygen consists of a blue band (λ_{max} = 440 mμ)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BELYY, M.U.; RUD'KO, B.F.

Temperature studies of the luminescence of halide solutions of heavy metals. Izv.AN SSSR.Ser.fiz. 24 no.5:582-586 My '60. (MIRA 13:5)

1. Kiyevskiy gosudarstvennyy universitet im. T.G.Shevchenko.
(Halides--Optical properties)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BELYY, M.U.[Bilyi,M.U.]; RUD'KO, B.F. [Rud'ko, B.F.]

Effect of temperature on the luminescence and absorption spectra of solutions of heavy metal salts. Part 1: Study of solutions of lead and thallium salts. Ukr. fiz. zhur. 5 no.6:799-808 N-D '60. (MIRA 14:3)

1. Kiyevskiy gosudarstvennyy universitet im. T. G. Shevchenko.
(Lead salts--Spectra) (Thallium salts--Spectra)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

Determination of the Composition of Polymers in Solutions SOV/48-23-1-14/36
of Coloring Agents by Means of Absorption and Luminescence Spectra

follows from this that in concentrated solutions only dimers are present. Even if an extinction or formation of luminescence is observed, the composition and concentration of the polymers produced in the solution can be determined according to the luminescence intensity and a modification of the concentration. The latter method, however, can be applied only if the extinction of luminescence is not caused by migration.

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$\frac{(c-mx)^m}{x} = K$ (1), $D = \varepsilon x l + \varepsilon_0 (c-mx) l$ (2), where c denotes the concentration of the substances, x the concentration of polymers, ε_0 and ε the absorption coefficients of the components A and A_m, D the optical density and l the thickness of the absorbent layer. ε and m are obtained by substituting the quantity x for three different concentrations (c_1, c_2, c_3) from (2) into (1). m is obtained from the equilibrium reaction provided the solutions are selected in such a way that $(D_1 - D_1')(D_3 - D_3') = (D_2 - D_2')^2$. For checking the method applied, the rhodamine solutions 6Zh-extra in water were used which already have been defined well (Fig 1). The measurements were carried out by F. Ya. Boroda, Diploma Candidate. The absorption curve of dimers was calculated and compared to the absorption curves of various concentrations (Fig 2). The theoretical curve is virtually identical with that of the concentrated solution. It

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24(7) SOV/48-23-1-14/36

AUTHOR: Belyy, M. U.

TITLE: Determination of the Composition of Polymers in Solutions of Coloring Agents by Means of Absorption and Luminescence Spectra (Opredeleniye sostava polimerov v rastvorakh krasiteley po spektram pogloshcheniya i lyuminestsentsii)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 1, pp 70 - 73 (USSR)

ABSTRACT: In many solutions, especially in solutions of coloring agents new bands appear with increasing concentration of the substances. This is ascribed to the formation of associates with a certain composition in the solutions. In the present paper a method is devised which permits the determination of the concentration and composition of the above associates as well as the calculation of the absorption spectra of certain associates. For the equilibrium reaction applies: $mA \rightleftarrows A_m$. On the basis of the Lambert-Beer Law and the Law of Mass Action

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authors tabulated the distance $\Delta\nu$ of the bands of the absorption and luminescence spectrum. The distance is almost equal for Tl^+ and TlCl and differs little for TlBr. According to these results the authors assume that the luminescence spectrum of haloid solutions of thallium is determined by the nature of the complexes TlCl and TlBr. There are 3 figures, 1 table, and 7 references, 5 of which are Soviet.

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the authors used aqueous thallium chloride solution ($c-2.10^{-4}$ mol/l + 3.06 mol/l $NaClO_4$) and thallium bromide ($c-1.3.10^{-4}$ mol/l + 2.7 mol/l $NaClO_4$) as initial substances. The absorption spectra of various additions of LiCl and NaBr are illustrated in figures. In the spectra a marked shift of the maximum is visible on the addition of LiCl ($c > 1.088$ mol/l). The spectral curves possess intersections through which the curves of the complex Tl_mCl_n pass. These curves correspond to those calculated for the TlCl and $TlCl_4^{3-}$ complexes. In the case of thallium bromide the investigation was complicated by strong absorption of bromine, but the complexes TlBr and $TlBr_3^{2-}$ could be determined also here. All complexes contain two bands which correspond to the transitions of the cation thallium, the level of which was deformed due to affiliation of the halogen ion. In the luminescence spectrum the band of the hydrogenated thallium is shifted in the case of the complexes. The shift is equal for both complexes TlCl and $TlCl_4^{3-}$. Furthermore, the

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24(7) SOV/48-23-1-13/36

AUTHORS: Avramenko, V. G., Belyy, M. U.

TITLE: Investigation of the Absorption and Luminescence of Thallium Solutions (Issledovaniye tsentrov pogloshcheniya i lyuminestsentsii rastvorov talliya)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 1, pp 66 - 69 (USSR)

ABSTRACT: Shishlovskiy, Kondilenko (Refs 1,2), Pringsheim (Prinsgeym) and Vogels (Fogel's) (Ref 3) studied the luminescence of thallium ions in solution and found the principal maximum at 370 mμ. In the case of chlorine excess this maximum was shifted toward the light blue and on the addition of bromine toward the green. These phenomena were explained by the production of complexes in the solution. In the present paper the authors intended to give a comprehensive enumeration of the complexes formed in haloid solutions of thallium as well as an explanation of the spectral characteristics of the individual complexes. The method of investigation was devised by one of the authors (Ref 6). It requires constant ionic concentrations of the solutions. For that reason,

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BELYY, M.U. [Bilyi, M.U.]

Conditions for the appearance of luminescence in solutions of inorganic salts. Visnyk Kyiv.un.no.2.Ser.fiz.ta khim. no.1:49-52 '59. (MIRA 14:8)

(Luminescence)

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24(8) PHASE I BOOK EXPLOITATION SOV/2809

Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk

Termodinamika i stroyeniye rastvorov; trudy soveshchaniya... (Thermodynamics and Structure of Solutions; Transactions of the Conference Held January 27-30, 1958) Moscow, Izd-vo AN SSSR, 1959. 295 p. 3,000 copies printed.

Ed.: M. I. Shakhparonov, Doctor of Chemical Sciences; Ed. of Publishing House: N. G. Yegorov; Tech. Ed.: T. V. Polyakova.

PURPOSE: This book is intended for physicists, chemists, and chemical engineers.

COVERAGE: This collection of papers was originally presented at the Conference on Thermodynamics and Structure of Solutions sponsored by the Section of Chemical Sciences of the Academy of Sciences, USSR, and the Department of Chemistry of Moscow State University, and held in Moscow on January 27-30, 1958. Officers of the conference are listed in the Foreword. A list of other reports also read at the conference, but not included in this book, are given. Among the problems treated in this work are: electrolytic solutions, ultrasonic measurement, dielectric and thermodynamic properties of various mixtures, spectroscopic analysis, etc. References accompany individual articles.

Roshchina, G. F. Molecular Dispersion of Light in Solutions of Nonelectrolytes 233

Shlenkina, N. G., and M. I. Shakhparonov. Verification of the Theory of Molecular Dispersion of Light by Means of Binary Solutions 239

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Mishchenko, K. P., and A. M. Ponomareva. Partial Molal Entropies in Systems Acetic Acid - Water and Formic Acid - Water and the Structure of These Solutions 246

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Zelinskiy, V. V., V. P. Kolobkov, and I. I. Reznikova. Relationship Between Electronic Absorption Spectra and Radiation of Solutions of Organic Compounds and the Chemical Nature of Solvents 262

Vaynshteyn, E. Ye., and I. I. Antipova-Karatayeva. Study of Solvation of Ions in Solutions with the Aid of Optical Absorption Spectra 266

Antipova-Karatayeva, I. I. Study of the Effect of the Surrounding Medium on the State of the Chrome Ion by Means of Absorption Spectra of Solutions and Alum Crystals 270

Vasenko, Ye. N., A. P. Chernyavskaya, and N. V. Chernaya. Infrared Spectra of Electrolytic Solutions in Formamide 273

Levshin, V. L., Ye. G. Baranova, L. D. Derkacheva, and L. V. Levshin. Study of Association in Concentrated Solutions of Dyes by Means of Absorption and Luminescence Spectra 275

Levshin, L. V. Effect of Ionization and Association on Optical Properties of Complex Organic Molecules 285

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The Luminescence Method for the Checking of Alkaline Baths for Tinning SOV/32-24-9-11/53

given. There are 2 figures and 2 references, which are Soviet.

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet im. T. G. Shevchenko (Kiyev State University imeni T. G. Shevchenko)

Card 2/2

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SOV/32-24-9-11/53

AUTHORS: Gudymenko, K. F., Belyy, M. U., Skachko, M. A.

TITLE: The Luminescence Method for the Checking of Alkaline Baths for Tinning (Lyuminestsentnyy metod kontrolya shchelochnykh vann luzheniya)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 9, pp 1066-1067 (USSR)

ABSTRACT: The reduction of tin from the tetravalent to the divalent state constitutes one of the main disadvantages of the baths mentioned in the title. Therefore, a speedy, sensitive method for the determination of minimum quantities of divalent tin is of particular importance. Sn^{2+}-ions can luminesce in some solvents, whereas Sn^{4+}-ions do not possess this property. On the basis of this fact, the present method has been evolved. Baths of the following composition were investigated: 10 g/l free base, 6,8 g/l sodium acetate, and 90 g/l sodium stannate. The luminescence was produced by means of ultraviolet light of 200-250 mμ wave length, directed through a quartz lens onto the cuvette containing the solution to be tested. Prior to determination, the test samples taken were diluted with sulfuric acid. A diagram for the automatic control of the checking process is

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BELYY, M.U.

PRIKHOT'KO, A.F.

24(7) p3 PHASE I BOOK EXPLOITATION SOV/1365

L'vov. Universytet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii. t. 1: Molekulyarnaya spektroskopiya (Papers of the 10th All-Union Conference on Spectroscopy. Vol. 1: Molecular Spectroscopy) [L'vov] Izd-vo L'vovskogo univ-ta, 1957. 499 p. 4,000 copies printed. (Series: Its: Fizychnyy zbirnyk, vyp. 3/8/)

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii. Ed.: Gazer, S.L.; Tech. Ed.: Saranyuk, T.V.; Editorial Board: Landsberg, G.S., Academician (Resp. Ed., Deceased), Neporent, B.S., Doctor of Physical and Mathematical Sciences, Fabelinskiy, I.L., Doctor of Physical and Mathematical Sciences, Fabrikant, V.A., Doctor of Physical and Mathematical Sciences, Kornitskiy, V.G., Candidate of Technical Sciences, Rayskiy, S.M., Candidate of Physical and Mathematical Sciences, Klimovskiy, L.K., Candidate of Physical and Mathematical Sciences, Milyanchuk, V.S., Candidate of Physical and Mathematical Sciences, and Glauberman, A. Ye., Candidate of Physical and Mathematical Sciences.

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Savinov, B.G. Use of Infrared Absorption Spectra in Determining the Characteristics of the Products of Vitamin E Synthesis 265

Belyy, M.U. Optical Method for the Determination of the Composition of Complexes in Solutions 267

Bogomolov, S.G., M.P. Grebenshchikova, and I. Ya. Liplavk. Analysis of Phenol-naphthalene Mixtures by Means of Ultraviolet Absorption Spectra 270

Zimina, K.I., and A.G. Siryuk. Group Determination of the Naphthalene Hydrocarbons by Means of Ultraviolet Absorption Spectra 272

Shabadash, A.N., V.P. Pshenitsyna, and V.M. Khisheva. Spectrophotometric Methods of Phase Control in Processing Acetic Anhydride 275

Neporent, B.S., K.P. Vasilevskiy, and N.A. Lapina. Qualitative Absorption by Means of Water Vapor in Near Infrared Region

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

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

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 10872

tin salts is caused by divalent tin cathion, the excitated state of which is that of a triplet (^3P). It is assumed that luminescence of solutions of divalent tin salts is associated with the presence of two external s-electrons.

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BELYY, M. U.

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

Abs Jour : Refetat Zhur - Khimiya, No 4, 1957, 10872

Author : Belyy M.U., Gudymenko K.F.
Inst : Academy of Sciences USSR — Kiev State U im. T. G. Shevchenko, Gor'kiy Pedagog. Inst, Kiev

Title : Luminescence and Absorption of Solutions of Tin Salts

Orig Pub : Izv. AN SSSR, ser. fiz., 1956, 20, No 5, 579-582

Abstract : Investigation of luminescence and absorption of solutions of tin salts depending on concentration of Sn^{2+} and of the acid (Hcl, H_2SO_4). Luminescence spectrum of solutions of tin salts in HCl of different concentration consists of two bands with λ (maximum) = 470 and 495 mμ, in H_2SO_4 with λ (maximum) = 550 and 615 mμ. Solutions of $SnSO_4$ in concentrated H_2SO_4 show brilliant luminescence which persists in air and on prolonged exposure to light. Solutions on dilute H_2SO_4 retain the capacity to glow only in a closed cell, undergoing oxidation in the air, to $Sn(SO_4)_2$, more rapidly with decreasing concentration of H_2SO_4. Solutions of the salts of divalent tin in HCl are also rapidly oxidized in the air to salts of tetravalent tin. If the solution in HCl is placed in a hermetically sealed cell the luminescence persists for a long time. The authors consider that luminescence of

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BELYY, M.U. [BILYI, M.U.]

Polarimetric analysis of the G component in penicillin. Nauk povid. KDU no.1:18-19 '56. (MIRA 11:4)
(Penicillin--Optical properties)

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BELYY, M.U. [BILYI, M.U.]

Determining the composition of A_m^- and A_mB_n type complex compounds. Nauk povid. KDU no.1:17-18 '56. (MIRA 11:4)
(Complex compounds)

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USSR/Optics K

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10430

imum of absorption upon change of solvent is explained by the electrostatic action of the molecules of the solvent on the Pb^{2+} ion. From the data of the temperature measurements it is concluded that the weak associates of Pb^{2+} with the anions Cl , Br , and OH are not strong, and a role is played in their formation by the ions of the nearest order and partially of the farther order around the ion Pb^{2+}. It is concluded that the change in the absorption with changing temperature is not the result of the smearing of the energy levels, but of the weakening of the bond between the ions of the associates. The strongest associates are formed in alkali solutions, next in low-concentrated solutions, and then in strongly concentrated halide solutions of lead. This is confirmed by the presence of luminescence in chlorine solutions of lead.

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USSR/Optics K

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10430

log k changes from 3.98 to 3.88 (k is the absorption coefficient). When the solvent is diluted with water, the band changes gradually into the absorption spectrum of the hydrated Pb^{2+} ion. The absorption band of the alkali associate of Pb^{2+} in a glycerine solution and of the chlorine and bromine associates in 50% aqueous solution of glycerine shifts towards the longer waves and broadens. The absorption spectra of chlorine, bromine, and alkali solutions of lead were investigated at temperature from 20 to 98° and from -2.5 to -14°. For chlorine and bromine solutions of lead, there is a lowering and broadening of the band with increasing temperature, and a narrowing and rising of the band with decreasing temperature. The spectra of the alkali solutions change little with changing temperature. It is concluded that aqueous solutions of the salts $Pb(ClO_4)_2$ contain hydrated ions ClO_4 and Pb^+. The formations of the associates (Terenin A.N., Uspekhi fiz. nauk, 1937, 17, No 1) and transfer of energy does not take place. The shift of the max-

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Belyy, M.Yu.

K

USSR/Optics

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10430

Author : Belyy, M.U., Shishlovskiy, A.A.
Inst : Not Given
Title : Effect of Solvent in Temperature on the Absorption of Solutions of Lead Salts.

Orig Pub: Nauk. zap. kiivsk. un-t, 1955, 14, No 8, 127-136

Abstract: An investigation was made of the absorption spectra of ions of Pb in solutions of water, ethyl alcohol, methyl alcohol, isopropyl alcohol, glycerine, acetonitryl, ethyl ether (each containing 1 -- 5% water) in the region from 200 to 300 millimicrons. The salt $Pb(ClO_4)_2$ was used. The maximum absorption of the Pb^{2+} ions in the transition from water to any other solvent shifts towards the longer waves (208 - 220 millimicrons). The maximum shift is observed in glycerine and methyl alcohol. The shape of the absorption band of the Pb^{2+} ion is retained for all solvents, and the value of

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

USSR/ Chemistry - Spectral analysis

Card 1/1 Pub. 43 - 95/97

Authors : Belyy, M. U., and Shishlovskiy, A. A.

Title : Absorption spectra of alkaline solutions of Tl and Pb salts

Periodical : Izv. AN SSSR. Ser. fiz. 18/2. 298-299, Mar-Apr 1954

Abstract : Data are presented regarding the absorption spectra, ion bonds, covalence and chemical associates of alkaline solutions of thallium and lead salts as established through spectral analysis.

Institution : The T. G. Shevchenko State University, Kiev

Submitted : .....

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BELYY, M. U.

USSR/Physics
Spectra, Absorption
Chlorides

Sep/Oct 48

"Absorption Spectra for Aqueous Solutions of Chloride Salts of Thallium and Lead," A. A. Shishlovskiy, I. I. Kondilenko, M. U. Belyy, Kiev State U, 6½ pp

"Iz Ak Nauk SSSR, Ser Fiz" Vol XII, No 5

PA 19/49T90

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55157-65

ACCESSION NR: AP500456 S/0196/64/000/011/A007/A007
538.26

SOURCE: Ref. zh. Elektrotekhnika i energetika, Abs. 11A71

AUTHOR: Belyy, N. I.

TITLE: Calculation of linear magnetic circuits with uniformly distributed parameters

CITED SOURCE: Uch. zap. Ul'yanovskiy gos. ped. in-t, v.18, no. 1, 1963, 3-10

TOPIC TAGS: magnetic circuit, magnetic circuit design, ferrodynamic instrument

TRANSLATION: A method is considered for calculating straight-line variable-flux magnetic circuits having a fixed airgap. The method can be used for designing ferrodynamic recorders with linear travel of their movable unit. Two illustrations. Bibliography: 5 titles.

SUB CODE: EE, P, 4 ENCL: 00

Card 1/1

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BELYY, Mikhail Izrailevich, kand.tekhn.nauk, dotsent; GORDEYEV, Nikolay Grigor'yevich, student IV kursa

Study of nonuniform magnetic circuits with distributed parameters. Izv.vys.ucheb.zav.; elektronekh. 8 no.7:748-755 '65. (MIRA 18:8)

1. Fiziko-matematicheskiy fakul'tet Ul'yanovskogo pedagogicheskogo instituta.

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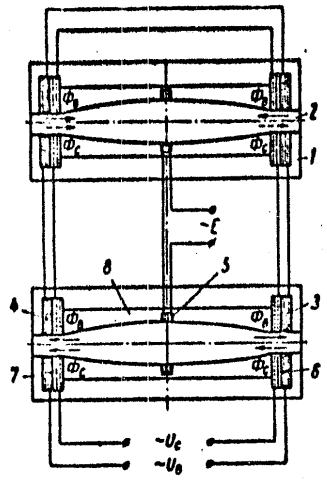
ACCESSION NR: AP4045920

ENCLOSURE: 01



A computer without moving elements

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ACCESSION NR: AP4045920

shifted fluxes and appropriate connection of coils are used. By selecting the configuration of the airgap, the desirable law of the emf in coil 5 can be obtained. Orig. art. has: 1 figure and 6 formulas.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 01

SUB CODE: DP NO REF SOV: 005 OTHER: 000

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

ACCESSION NR: AP4045920 S/0119/64/000/009/0021/0022

AUTHOR: Bely*y, M. I. (Candidate of technical sciences)

TITLE: Computer without moving elements

SOURCE: Priborostroyeniye, no. 9, 1964, 21-22

TOPIC TAGS: magnetic computer, no moving element computer

ABSTRACT: The instrument consists of two identical magnets (see Enclosure 1). Hollow split ferromagnetic cylinder 1 includes shaped bar 2. Coils 3 and 4 are excited by a commercial-supply or higher frequency. The coils are so connected that their magnetic fluxes cancel each other; coil 5 is not excited under no-signal conditions. Signal coils 6 and 7 strengthen the flux of one and weaken the flux of the other exciting coil. The emf in coil 5 is proportional to the voltage applied to the signal coils; its phase also depends on the signal-voltage phase. To eliminate distortion of the signal due to the excitation flux, two identical magnets with 180°-

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BELYY, M.I.

Noncontact ferromagnetic track switch. Stan. i instr. 34 no.8:31 Ag '63. (MIRA 16:10)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BELYY, M.I., kand. tekhn. nauk

Noncontact ferrodynamic end switch. Mekh. i avtom. proizv. 17 no.4:46-47 Ap '63. (MIRA 17:9)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

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BELYY, M.I.

Noncontact transformer end switch. Priborostroenie no.22:26 D'63. (MIRA 17:5)

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HELYY, M.I.

Magnetoelectric recording instrument with a forward frame shift.
Izm.tekh. no.5:36-37 My '63. (MIRA 16:10)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BELYY, M.I.

Electric compensation device for remote measurements of displacements. Izm.tekh. no.8:17-19 Ag '62. (MIRA 16:4)
(Electric instruments)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BELYY, M.I.; MAKAROV, N.P.

Ferrodynamic rectangular coordinate vector-measuring device.
Izm.tekh. no.11:43-44 N '61. (MIRA 14:11)
(Magnetic instruments)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BELYY, M.I.; MAKAROV, N.P.

Electric device for automatic recording of functional relationship curves. Priborostroenie no.11:9-11 N '61. (MIRA 14:10)
(Magnetic recorders and recording)

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BELYY, M. I., CAND TECH SCI, "~~INVESTIGATION~~ Study OF ELECTRICAL MEASURING INSTRUMENTS WITH RECTILINEAR TRANSPOSITION OF THE MOBILE SYSTEM." BAKU, 1961. (COM ~~FOR~~ Committee of HIGHER AND SEC SPEC ED OF THE COUNCIL OF MINISTERS AZSSR. AZERBAYDZHAN INST OF PETROLEUM AND CHEM IMENI M. AZIZBEKOV). (KL-DV, 11-61, 217).

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BELYY, M.

Meter of the time of equipment operation. Mashinostroitel' no.11:11 N '63. (MIRA 16:11)

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BELYY, M.; PIGULEVSKIY, L.

Pushing barges on the Dnieper-Bug Canal and on the Pripet River. Rech. transp. 22 no.5:45-46 My '63. (MIRA 16:8)

1. Starshiy dispetcher Pinskogo uchastka Verkhne-Dneprovskogo parokhodstva (for Belyy). 2. Nachal'nik tekhnicheskogo otdela Pinskogo sudostroitel'nogo i sudoremontnogo zavoda (for Pigulevskiy).

(Dnieper-Bug Canal--Towing)
(Pripet River--Towing)

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KAZANSKIY, V.M.; BELYY, L.N.

Automatic recording of the drying rate curves for dispersed bodies. Inzh.-fiz. zhur. 7 no.12:66-70 D '64 (MIRA 18:2)

1. Tekhnologicheskiy institut pishchevoy promyshlennosti, Kiyev.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

L 05424-67

ACC NR: AP6024638

present method of mechanical drag generation requires more data on thermodynamics and heat transfer of such systems. Orig. art. has: 4 formulas and 4 figures.

SUB CODE: 07,20/ SUBM DATE: 08Feb66/ ORIG REF: 003

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

L 05424-67 EWT(m)

ACC NR: AP6024638 SOURCE CODE: UR/0170/66/011/001/0048/0053

AUTHOR: Gorois, Z. R.; Belyy, L. M.; Shumakov, I. K.

ORG: Institute of Technology im. M. V. Lomonosov, Odessa (Tekhnologicheskiy institut)

TITLE: Study by radioactive methods (tracer particles) of the particle residence time in countercurrent gas suspensions

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 11, no. 1, 1966, 48-53

TOPIC TAGS: heat exchange, gas flow, drag coefficient, trace analysis

ABSTRACT: The size of various devices which use the principle of dragged gas suspension depends to a significant degree on the residence time of solid particles (reacting, exchanging heat, etc.) in the operating zone of the instrument. Consequently, the authors used the tracer method for a very precise and simple estimate of the particle residence time in a free or dragged gas suspension. Helical screen inserts within the suspension extend by as much as one order of magnitude the particle residence time in a counterflow gas suspension and allow control of various possible types of solid particle motion (rolling, rolling-falling, fluidization with and without falling, etc.). A complete evaluation of the efficiency of the

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BELYY, Leonid Dmitriyevich; POPOV, I.V., prof., retsenzent; SERGEYEV, Ye.M., prof., retsenzent; ZNAMENSKIY, N.V., red.izd-va; UL'YANOVA, O.G., tekhn. red.

[Theoretical fundamentals of mapping for purposes of engineering geology] Teoreticheskie osnovy inzhenerno-geologicheskogo kartirovaniia. Moskva, Izd-vo "Nauka," 1964. 166 p. (MIRA 17:1)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

KONYAROVA, L.P.; NEYSHTADT, L.I.; LYKOSHIN, A.G.; KARPYSHEV, Ye.S.; BOROVOY, A.A., red.; BELYY, L.D., doktor geol.-miner. nau, red.; BUL'DYAYEV, N.A., tekhn. red.

[Geology and dams] Geologiia i plotiny. Pod obshchei red. A.A.Borovogo. Moskva, Gosenergoizdat, Vol.3. 1963. 175 p. (MIRA 17:3)

1. Moscow. Vsesoyuznyy proyektno-izyskatel'nyy i nauchno-issledovatel'skiy institut "Gidroproyekt" im. S.IA.Zhuka.
2. Vsesoyuznyy proyektno-izyskatel'nyy i nauchno-issledovatel'skiy institut, Moscow (for Konyarova, Neyshtadt, Lykoshin, Karpyshev).

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

NOVIKOV, I.T.; NEPOROZHNIY, P.S.; GINZBURG, S.Z.; BELYAKOV, A.A.; ERISTOV, V.S.; VOZNESENSKIY, A.N.; IVANTSOV, N.M.; BOROVOY, A.A.; TERMAN, I.A.; ALEKSANDROV, B.K.; YURINOV, D.M.; NOSOV, R.P.; MIKHAYLOV, A.V.; NICHIPOROVICH, A.A.; ABELEV, A.S.; PROSKURYAKOV, B.V.; MENKEL', M.F.; KRITSKIY, S.N.; BELYY, L.D.

Mikhail Evgen'evich Knorre. Gidr. stroi. 32 no.5: My '62. (MIRA 15:5)

(Knorre, Mikhail Evgen'evich, 1876-1962)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

KOTLOV, F.V., kand. geol.-min. nauk, otv. red.; BEZRUK, V.M., doktor geol.-miner. nauk, red.; BELYY, L.D., doktor geol.-miner. nauk, red.; BYKOVA, V.S., kand. geol.-miner. nauk, red.; GOR'KOVA, I.M., doktor geol.-miner. nauk, red.; GUREYEV, A.M., red.; YEMEL'YANOVA, Ye.P., kand. geol.-miner. nauk, red.; KOLOMENSKIY, N.V., doktor geol.-miner. nauk, prof., red.; MAKEYEV, Z.A., doktor geol.-miner. nauk, red.; POL'SHIN, D.Ye., kand. tekhn. nauk, red.; POPOV, I.V., doktor geol.-miner.-nauk, prof., red.; PRIKLONSKIY, V.A., prof., red. [deceased]; RUBINSHTEYN, A.L., doktor geol.-miner. nauk, prof., red.; SERGEYEV, Ye.M., doktor geol.-miner. nauk, prof., red.; FADEYEV, P.I., kand. geol.-miner. nauk, red.; ZOLOTOV, P.F., red. izd-va; ASTAF'YEVA, G.A., tekhn. red.

[Materials on the engineering and geological properties of rocks and methods for their study] Inzhenerno-geologicheskie svoistva gornykh porod i metody ikh izucheniia; materialy. Moskva, Izd-vo Akad. nauk SSSR, 1962. 362 p. (MIRA 15:5)

1. Soveshchaniye po inzhenerno-geologicheskim svoistvam gornykh porod i metodam ikh izucheniya, Moscow, 1957. 2. Chlen-korrespondent Akademii nauk SSSR (for Priklonskiy). 3. Moskovskiy gosudarstvennyy universitet (for Sergeyev). 4. Laboratoriya gidrogeologicheskikh problem Akademii nauk SSSR (for Kotlov). 5. Kafedra "Osnovaniya i fundamenty" Moskovskogo instituta inzhenerov vodnogo khozyaystva (Rubinshteyn).

(Rocks) (Engineering geology)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

TIZDEL', R.R.; KARPYSHEV, Ye.S.; MOLOKOV, L.A.; KONYAROVA, L.P.; PESTOVSKIY, K.N.; ZENKOV, M.V.; KIRICHENKO, N.I.; NEYSHTADT, L.I.; MALYAROVA, I.Ye.; PIRTSKHALAYSHVILI, G.P.; KALMYKOVA, N.I.; BELYY, L.D., doktor geol.-miner. nauk; BOROVOY, A.A., red.; GOTMAN, T.P., red.; LARIONOV, G.Ye., tekhn. red.

[Geology and dams]Geologiia i plotiny. Pod obshchei red. A.A. Borovogo. Moskva, Gosenergoizdat,(Its Materialy po proektirovaniiu gidroenergeticheskikh uzlov. Seriia 2: Izyskaniia) Vol.2. 1962. 151 p. (MIRA 15:9)

1. Moscow. Vsesoyuznyy gosudarstvennyy proyektnyy institut "Gidroenergoproekt." 2. Vsesoyuznyy gosudarstvennyy proyektnyy institut , Moscow (for all except Borovoy, Gotman, Larionov).

(Geology) (Dams)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

SERGEYEV, Ye.M.; BELYY, L.D.

Basic problems of engineering geology and means for solving them. Vest.Mosk.un. Ser.4:Geol. 16 no.5:37-45 S-O '61. (MIRA 14:9)
(Engineering geology)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BELYY, L.D., doktor geol.-miner.nauk; VERIGIN, N.N., doktor tekhn. nauk, prof., ABRAMOV, S.K., kand.tekhn.nauk; LYKOSHIN, A.G., inzh.-gidrogeolog

Valuable generalization of experience ("Trudy" of the State Institute for the Design and Planning of Hydraulic Structures. No.3. Reviewed by L.D. Belyi and others). Gidr. stroi. 30 no.6:63-64 Je '60. (MIRA 13:7)
(Hydraulic engineering--Research)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BELYY, L.D., doktor geol.-miner.nauk

Some results of introducing new techniques in research work.
Gidr.stroi. 29 no.3:24-28 Mr '60. (MIRA 13:6)
(Hydraulic engineering--Research)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

(2)

32. GROUNDWATER HYDROGEOLOGICAL INVESTIGATION METHODS EMPLOYED IN CONNEXION WITH WATER SUPPLY, DEWATERING AND DRAINAGE PROBLEMS IN THE NATIONAL ECONOMY AND CONSTRUCTION OF THE USSR

by

L. D. Soly and I. V. Zenkov

(Abstract)

The paper gives details of investigations conducted in the USSR in connexion with regional studies of groundwater for purposes of water supply, and in connexion with the construction of various structures. The problem is highlighted by reference to the influence of such structures on the groundwater regime, and *vice versa*. The importance of investigations of artificial dewatering, reclamation, drainage, etc. is noted.

Methods of drilling and testing operations are described, as well as the method for studying the groundwater regime. Information is given on dewatering and drainage in connexion with construction of hydro power structures.

The results of work carried out by Gidroenergo project on selecting the best types of filters to increase the efficiency of dewatering, drainage and water supply are given.

REPORT PRESENTED AT THE Fourth Regional Technical Conference on Water Resources Development in Asia and the Far East, Colombo, Ceylon, 5-13 Dec 1960

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BELYY, L.D., doktor geologo-mineral.nauk; LYKOSHIN, A.G., inzh.-geolog; MOLOKOV, L.A., inzh.-geolog; KONYAROVA, L.P., inzh.-geolog; NEYSHTADT, L.I., kand.geologo-mineral.nauk; VASIL'YEVA, L.R., inzh.-geolog; ZENKOV, N.A., inzh.-geolog; VOZNESENSKIY, A.N., prof., obshchiy red.; ASANOV, A.M., tekhn.red.

[Geology and dams] Geologiia i plotiny. Pod obshchei red. A.N.Voznesenskogo. Moskva, Gos.energ.izd-vo. (Materialy po proektirovaniiu gidroenergeticheskikh uzlov. Ser.2. Izyskaniia). Vol.1. 1959. 182 p. (MIRA 13:2)

1. Moscow. Vsesoyuznyy gosudarstvennyy proyektnyy institut "Gidroenergoproyekt." 2. Glavnyy inzhener otdela izyskaniy instituta "Gidroenergoproyekt" (for Belyy).
(Dams) (Engineering geology)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

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BELYY, LEONID DMITRIYEVICH

BLIZNYAK, Yevgeniy Varfolomeyevich, prof., doktor tekhn.nauk; BELIKOV, Yevgeniy Fedorovich, dotsent; BELYY, Leonid Dmitriyevich, dotsent, kand. geologo-mineral.nauk; DUBROVSKIY, V.V., red.; VORONIN, K.P., tekhn.red.

[Surveying for water power] Vodnoenergeticheskie izyskaniia. Pod red.E.V.Blizniaka. Moskva, Gos.energ.izd-vo, 1957. 319 p. (MIRA 10:12)

(Water power)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BELYY, L.D., kandidat geologo-mineralogicheskikh nauk; AL'TOVSKIY, M.Ye., professor, redaktor; LARIONOV, G.Ye., tekhnicheskiy redaktor

[Basic problems in the theory and practice of engineering geology for hydroelectric power construction] Osnovnye voprosy teorii i praktiki inzhenernoi geologii v gidroenergostroitel'stve. Pod obshchei red. M.E.Al'tovskogo. Moskva, Gos.energ.izd-vo, 1957. 175 p. (MLRA 10:8)

(Engineering geology) (Hydroelectric power stations)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BELYY, L.D., kandidat geologo-mineralogicheskikh nauk.

Conference on the unification of laboratory investigations on the physical and mechanical properties of soils. Gidr.stroi. 25 no.2: 62-63 '56. (MLRA 9:8)

1. Glavnyy inzhener OIZ GIDEH.
(Soil mechanics--Congresses)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

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15-57-7-10026D

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 7, p 188 (USSR)

AUTHOR: ~~Belyy, L.~~ D.

TITLE: Main Problems in Theory and Practice of Engineering and Geology in Water-Power Structures (Osnovnyye voprosy teorii i praktiki inzhenernoy geologii v gidroenergostroitel'stve)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of Doctor of Geological and Mineralogical Sciences, presented to the Moscow State University (MGU), Moscow, 1956

ASSOCIATION: MGU (Moscow State University)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BELYY, L.D., laureat Stalinskoy premii; NEYSHTADT, L.I.; KONYAROVA, L.P.; POPOV, I.V., professor, doktor geologo-mineralogicheskikh nauk, redaktor; LARIONOV, G.Ye., tekhnicheskiy redaktor

[Engineering geology research in designing and constructing hydroelectric power structures; a practical manual for technicians and geologists] Inzhenerno-geologicheskie issledovaniia pri proektirovanii i stroitel'stve gidroenergeticheskikh sooruzhenii; metodicheskoe posobie dlia tekhnikov-geologov. Izd. 2-oe, ispr. Moskva, Gos. energ. izd-vo, 1954. 408 p. (MLRA 9:12)

1. Russia (1923- U.S.S.R.) Ministerstvo elektrostantsii. Upravlenie kapital'nogo stroitel'stva. 2. Institut "Gidroenergoproyekt." (for Belyy, Neyshtadt, Konyarova)
(Soil mechanics) (Hydraulic engineering)

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BELYY, L.D., laureat Stalinskoy premii; NEYSHTADT, L.I.; KONYAROVA, L.P.; POPOV, I.V., professor, doktor geologo-mineralogicheskikh nauk, redaktor; SKVORTSOV, I.M., tekhnicheskiy redaktor

[Engineering and geological research in the planning and construction of hydroelectric structures; a manual of methods for engineering geologists] Inzhenerno-geologicheskie issledovaniia pri proektirovanii i stroitel'stve gidroenergeticheskikh sooruzhenii; metodicheskoe posobie dlia tekhnikov-geologov. Moskva, Gos. energ. izd-vo, 195[illegible]. 408 p. (MRLA 9:[illegible])

1. Russia (1923- U.S.S.R.) Ministerstvo elektrostantsiy i elektropromyshlennosti. Upravleniye kapital'nogo stroitel'stva.
(Hydroelectric power stations)
(Engineering geology)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BELYY, L. D.

Geology and the construction of hydroelectric stations Moskva, Gos. energ. izd-vo, 1952. 111 p. (V pomoshch' gidroenergeticheskim stroikam, vyp. 7) (53-15273)

TK1081.B44

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

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BELYY, I.D.

Geologicheskie osnovy klassifikatsii gruntov pri izyskaniiakh i proektirovanii gidroenergeticheskikh sooruzhenii MES (Geological principles for classifying soils in the research and planning of hydroelectric power installations of the ministry of Electric Power Plants.)
Moskva, Gosenergoizdat, 1951. 92 p.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BELYY, K.A., gornyy inzh.

Improving the technology of silting operations in strip mines. Vop. bezop. v ugol'. shakh. 1:30-39 '59.

(MIRA 17:12)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

PRYAZHENNIKOV, M.S.; BELYY, K.D.; AGADZHANOV, G.S.

"In favor of a radical change in the system of coal quality grading." F.D.Avramenko (From: "Ugol' no.2, 1955). Ugol' 30 no.11:41 N '55. (MLRA 9:2)

1.Kiselevskaya rayonnaya inspektsiya Kuzbassinskoksugol' (for Pryazhennikov, Belyy).2.Nachal'nik Otdela tekhnicheskogo kontrolya shakhty no.5. kombinata Vorkutugol' (for Agadzhanov).
(Coal--Grading) (Avramenko, F.D.)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BELYY, K.A.

ZAKHAROV, A.B.; MILLER, Yu.A.; BELYY, K.A.

Improving measures of fire prevention in Kuznetsk Basin mines.
Ugol' 33 no.2:11-16 F '58. (MIRA 11:2)

1. Vostochnyy nauchno-issledovatel'skiy institut.
(Kuznetsk Basin--Coal mines and mining--Fire and fire prevention)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

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BELYY, K. (Kislovodsk)

From TSiolkovskii to TSander. Nauka i zhizn' 29 no.10:20-21 O '62. (MIRA 15:12)

1. Chlen Vsesoyuznogo obshchestva po rasprostraneniyu politicheskikh i nauchnykh znaniy.
(TSander, Fridrikh Arturovich, 1887-1933)
(TSiolkovskii, Konstantin Eduardovich, 1857-1935)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

FERTIK, S.M., kand. tekhn. nauk; BELYY, I.V., inzh.

Magnetic-pulse forming of metals. Energ. i elektrotekh. prom. [illegible]
30-32 Ap-Je '64. (MIRA 17:10)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BELYY, I.V.

STUPEL', F.A., kandidat tekhnicheskikh nauk; BELYY, I.V., inzhener.

Superfast acting protection devices. Vest. elektroprom. 28 no.3:14-17 Mr '57. (MLRA 10:4)

1. Khar'kovskiy politekhnicheskiy institut.
(Electric relays)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BEL'TS, Ye.A.; BELYY, I.P.

Treatment of deep forms of trichophytosis with peloidin. Vest. derm. i ven. 38 no.4:88-89 Ap '64. (MIRA 18:4)

1. Mikologicheskoye otdeleniye (zav. Ye.A.Bel'ts) Vinnitskoy zheleznodorozhnoy bol'nitsy (nachal'nik I.P.Belyy)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BELYY, G.V.

Bridge testing units should be given greated mobility. Put' i put. khoz. 4 no.11:26 N '60. (MIRA 13:12)

1. Nachal'nik mostoispytatel'noy stantsii, g. Kishinev.
(Railroad bridges--Maintenance and repair)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

SERYY, N.I.; BELYY, G.V.; BOYPRAV, M.V.

Better organization of roadbed maintenance. Put' i put.khoz. 4 no. 5:7-9 My '60. (MIRA 13:11)

1. Zamestitel' nachal'nika sluzhby puti, g.Kishinev (for Seryy). 2. Nachal'nik mostoispytatel'noy stantsii, g.Kishinev (for Belyy). 3. Starshiy inzhener sluzhby puti, g.Kishinev (for Boyprav).

(Railroads--Maintenance and repair)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BELYY, D.I.; GERASIMOV, Yu.A.

Effect of alloying elements on the density of dislocations.
Fiz.-khim. mekh. mat. 1 no.1:78-81 '65. (MIRA 19:1)

1. Mashinostroitel'nyy institut im. V.Ya. Chubarya, Zaporozh'ye.
Submitted September 30, 1964.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BELYY, B.N.

Aleksandr Matveevich Astriab; obituary. Mat. v shkole no.2:85-86 Mr-Ap '63. (MIRA 16:4)

(Astriab, Aleksandr Matveevich, 1879-1962)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204600009-6

BELYY, B.N. (Vinnitsa)

Methodology of mathematics in the work of the Kiev Physics and Mathematics Society; 1890-1917. Mat.v shkole no.4:84-88 Jl-Ag '62. (MIRA 15:11)

(Kiev--Mathematical societies)

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