"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, L.A.; FOX, M.V.

Effect of external quenching on the recombination interaction of centers of blue and breen luminescence in ZnS-Cu phosphors. Inzh.-fiz.zhur. no.2:58-63 F '58. (MIRA 13:1)

1. Fizicheskiy institut im. P.N.Lebedeva AN SSSR.
(Luminescence) (Phosphors)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, L. A.

51-4-1-24/26

AUTHORS: Vinokurov, L. A. and Fok, M. V.

TITLE: Effect of Temperature on Recombinational Interaction of the Blue and Green Luminescence Centres in ZnS-Cu Phosphor. (Vliyaniye temperatury na rekombinatsionnoye vzaimodeystviye tsentrov goluboy i zelenoy lyumines-tsentsii v fosfore ZnS-Cu.)

PERIODICAL: Optika i Spektroskopiya, 1958, Vol.IV, Nr.1, pp. 118-121. (USSR).

ABSTRACT: Fok showed that (Ref.1) interaction of the blue and green luminescent centre is due to exchange of holes between them on excitation of the phosphor. Fok also deduced formulae which give the steady-state brightness of blue and green luminescence as a function of the excitation intensity. These formulae were found for the case when the exciting light is absorbed by centres of one kind only. If the exciting light is absorbed by the blue centres, then at $C \ll 1$ the Fok formulae show

Card 1/4

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51-4-1-24/26

Effect of Temperature on Recombinational Interaction of the Blue and Green Luminescence Centres in ZnS-Cu Phosphor.

that in a wide range of excitation intensities brightness of the blue luminescence (I') increases superlinearly with the excitation intensity E (up to $I' \sim E^{3/2}$). At the same time the green luminescence brightness I'' increases either linearly or sublinearly with the excitation intensity. $C = \partial' w'' / \partial'' w'$, where ∂' and ∂'' are probabilities of capture of holes by the blue and green luminescent centres respectively, w' and w'' are the probabilities of liberation of holes by the same centres. From the Fok formulae it follows that on increase of temperature $I'(E)$ may become linear. To verify this the authors used ZnS-Cu phosphor with 10^{-7} g/g of the activator. The results of measurements of $I'(E)$ are given in Fig.2, a. This figure shows that the blue luminescence

Card 2/4

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51-4-1-24/26

Effect of Temperature on Recombinational Interaction of the Blue and Green Luminescence Centres in ZnS-Cu Phosphor.

does indeed approach a linear dependence on the excitation intensity with increase of temperature. This in fact cannot be regarded as sufficient support for Fok's theory. The green luminescent brightness becomes superlinear in its dependence on the excitation intensity, contradicting Fok's theory (see Fig.2, b and Fig.3). This latter effect is due to excitation with 366 mμ which is absorbed by both blue and green centres. The authors solve kinetic equations for the case of absorption of the exciting light by centres of two kinds. The formulae then obtained gave better agreement with experiment in respect of non-linearity of I''(E). The agreement between theory and experiment is still not completely satisfactory since the theory does

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

51-4-1-24/26

Effect of Temperature on Recombinational Interaction of the Blue and Green Luminescence Centres in ZnS-Cu Phosphor.

not predict the observed region of temperatures where the brightness of both the green and blue luminescence is a super-linear function of the excitation intensity. This behaviour is ascribed to external quenching which was not taken into account in calculations. There are 4 figures and 1 Russian reference.

ASSOCIATION: Physics Institute, Academy of Sciences of the USSR (Fizicheskiy institut, AN SSSR).

SUBMITTED: April 27, 1957.

AVAILABLE: Library of Congress.

1. Phosphors-Excitation-Luminescence-Theory

Card 4/4

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

SOV/51-5-2-12/26

AUTHORS: Bukke, Ye.Ye., Vinokurov, L.A. and Fok, M.V.

TITLE: The Effect of the Stored Light-Sum on the Brightness of Electro-Luminescence of the ZnS-Cu,Al Phosphor (Vliyaniye zapasennoy svetosummy na yarkost' elektrolyuminestsentsii fosfora ZnS-Cu,Al)

PERIODICAL: Optika i Spektroskopiya, 1958, Vol 5, Nr 2, pp 172-178 (USSR)

ABSTRACT: The paper gives new experimental data on dependence of the brightness of electroluminescence on the light-sum stored in the phosphor. The authors followed the technique developed at the Luminescence Laboratory of the Physics Institute of the Academy of Sciences of the U.S.S.R. by Z.A. Trapeznikova and R.M. Medvedeva, who prepared phosphors which store large light-sums when excited with electric fields. These phosphors were prepared in an atmosphere of H_2S and HCl. Electroluminescent capacitors were prepared from such phosphors by pouring out a layer of ZnS-Cu,Al mixed with melamideformaldehyde and alkyd "Rezyl" (trade name) resins onto conducting glass plates. Such a layer was dried and polymerized and a film of aluminium was deposited in vacuum to serve as the second electrode. Measurements were made from - 195°C to + 100°C using fields of 450 V and 3000 c/s. 366 mμ mercury line was used as a source of excitation in some of the experiments.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

SOV/51-5-2-12/26

The Effect of the Stored Light-Sum on the Brightness of Electroluminescence of the ZnS-Cu,Al Phosphor

The results obtained are shown schematically in Fig 1. At room temperature (the upper part of Fig 1) the electroluminescent brightness increases from the moment of switching on the field and in 6-8 min reaches a steady-state (Fig 1, 1a). If, with the field on, the phosphor is irradiated with infrared light, then the brightness falls (Fig 1, 1b). The increase of brightness is accompanied by an increase in the light-sum stored in the phosphor. This was checked by measurement of flash brightness under the action of infrared light (the thick vertical lines in Fig 1 are proportional to such flash brightness). If, with the field on, the phosphor is irradiated with ultraviolet light (366 mμ), then a rise of brightness above the previous steady-state value is obtained (Fig 1, 1v). If, after this new steady state is reached the ultraviolet irradiation ceases, then the brightness falls very slowly to the steady-state value obtained with the field alone (Fig 1, 1g). Decay of phosphorescence (Fig 1, 1e) excited by ultraviolet light without the field (Fig 1, 1d) proceeds faster than the decay of brightness

Card 2/4

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

SOV/51-5-2-12/26

The Effect of the Stored Light-Sum on the Brightness of Electroluminescence of the ZnS-Cu,Al Phosphor

produced by the simultaneous action of ultraviolet light and the field. This means that the increase of electroluminescent brightness by the action of ultraviolet light cannot be explained by the additional effect of phosphorescence. The light-sum raches its maximum value under the action of the field and ultraviolet light. At room temperature, the presence of a stored light-sum increases the electroluminescent brightness irrespective of whether this light sum was stored by means of the field or ultraviolet light. At low temperatures the behaviour of the phosphor is the converse of that observed at room temperature (Fig 1, 2a-e), i.e. the presence of a light-sum in the phosphor lowers the electroluminescent brightness irrespective of whether this light-sum was stored by the action of the electric field of ultraviolet light. The authors discuss the following possible explanation (due to V.V. Antonov-Romanovskiy) for the anomalous behaviour of the ZnS-Cu,Al phosphor at low temperatures. At such temperatures the localized electrons increase the scattering and absorb the energy of free electrons which are moved by the electric field. The mean free path of the free electrons is shortened and

Card 3/4

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

SOV/51-5-2-12/26

The Effect of the Stored Light-Sum on the Brightness of Electroluminescence of the ZnS-Cu,Al Phosphor

their energy decreases. This means that the probability of ionization of luminescence centres by the free electrons decreases. As a result the electroluminescent brightness decreases without any marked decrease in the amount of energy absorbed. There are 4 figures and 4 references, 3 of which are Soviet and 1 French.

ASSOCIATION: Fizicheskiy institut im. P.N. Lebedeva, AN SSSR (Physics Institute imeni P.N. Lebedev, Academy of Sciences of the U.S.S.R.)

SUBMITTED: September 26, 1957

Card 4/4 1. Phosphors--Excitation 2. Electromagnetic fields--Applications 3. Phosphors--Luminescence

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

L 29664-65 EWT(1) IJP(c)

ACCESSION NR: AP5001291 P/0045/64/026/03-/0521/0529

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B

AUTHOR: Antonov-Romanovsky, V.V.; Vinokurov, L. A.; Fok, M. V.

TITLE: Luminescence of inorganic materials: the role of the stimulating action of the exciting light in phosphorescence phenomena

SOURCE: Acta physica polonica, v. 26, no. 3-4, 1964, 521-529

TOPIC TAGS: luminescence, luminescence phenomenon, crystalline phosphor, exciting light, light sum accumulation

ABSTRACT: This paper presents data on exciting light and its stimulating action in phosphorescence phenomena in crystalline phosphors. The stimulating action of exciting light is used to explain 1) the limitation of light sum accumulation at unlimited increase in excitation intensity, 2) the dependence of the accumulated light sum limit on the wavelength of exciting light, 3) the decrease of electron accumulation in deep traps with cooling or with increasing excitation, and 4) the decrease in luminous efficiency with increase in excitation intensity. It is shown that the intersection of decay curves of some phosphors excited by light of different intensities can also be explained by the stimulating action of the light.

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L 29664-65

ACCESSION NR: AP5001291

The intersection indicates that in later stages of decay the light sum accumulation in phosphors following weaker excitation is larger than after stronger excitation. The experimental data on light sum accumulation in a single phosphor are given and the explanation is accomplished with the aid of a phosphor model containing two kinds of electron traps and one kind of light center. Orig. art. has: [illegible] formulas and 4 figures.

ASSOCIATION: P.N. Lebedev Physical Institute of the Academy of Sciences of the USSR, Moscow

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

NO REF SOV: 009 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

BUKKE, Ye.Ye.; VINOKUROV, L.A.; FOK, M.V.

Effect of total accumulated light on the brightness relaxation of electroluminescence. Inzh.-fiz.zhur. no.7:113-116 Jl '58. (MIRA 11:8)

1.Fizicheskiy institut im. P.N. Lebedeva AN SSSR, Moskva.
(Luminescence)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

SOV/51-7-2-15/34

AUTHORS: Vinokurov, L.A. and Fok, M.V.

TITLE: On the Simultaneous Action of Photo- and Electro-Excitation on Electrophosphors. (Ob odnovremennom deystvii foto- i elektrovozbuzhdeniya na elektrolyuminofory)

PERIODICAL: Optika i spektroskopiya, 1959, Vol 7, Nr 2, pp 241-243 (USSR)

ABSTRACT: The authors found that photo- and electro-excitation are not additive: in some cases the luminescence brightness due to simultaneous excitation was higher and in other cases it was lower than the sum of the brightnesses of both types of luminescence. The former situation was called the positive non-additivity, the latter - the negative non-additivity. By altering the conditions of excitation one could alter the positive non-additivity into the negative non-additivity and conversely. At a certain ratio of the photo- and electro-excitation intensities exact additivity could be obtained: this is shown by the straight line in Figs 1 and 2. In two ZnS-Cu,Al phosphors the maximum observed non-additivity amounted to ~10%. Phosphor Nr 1 (cf Fig 1) stores a small light-sum at room temperature. Its photoluminescence brightness depends non-linearly on the intensity E of the exciting light: the brightness is proportional to $E^{3/2}$ which indicates strong external quenching. The phosphor Nr 2

Card 1/2

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(cf Fig 2) stored a considerable light-sum and its photoluminescence brightness was almost exactly proportional to the excited light-intensity indicating that in this case external quenching was small. Figs 1 and 2 show clearly that the ratios of the electrical field and the light intensity required to achieve exact additivity are quite different in the case of the two phosphors. The causes of the observed behaviour are discussed and it is shown that the condition of the exact additivity is given by

$$\alpha_e/\alpha_l = \text{const.},$$

where α_e and α_l are the number of acts of ionization of luminescence centres per unit volume and per unit time due to the electric field and the light respectively. There are 2 figures and 5 Soviet references.

SUBMITTED: October 13, 1958

Card 2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, L. A. and FOK, M. V.

On the Role of a Stimulating Action of Exciting Light in the Luminescence Kinetics of the Crystalline Phosphor ZnS-Cu

L. A. Vinokurov and M. V. Fock, P. N. Lebedev Physical Institute, Academy of Sciences of the U.S.S.R., Moscow, U.S.S.R.

It is shown that electrons' release from traps in ZnS-Cu phosphor by an exciting light leads to decrease of the electron concentration on deep traps with increase of excitation intensity. After removing the excitation, the distribution of electrons over traps gradually approaches equilibrium distribution. A flash under the action of an infrared light is determined mainly by release of electrons from deep levels. Therefore the above effects may be detected by measuring the value of the flash under different intensities of afterglow and at various stages of decay.

Report presented at the 117th Meeting of the Electrochemical Society, Chicago, 1-5 May 1960.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

excitation VINOKUROV, L. A., Cand Phys-Math Sci -- "Transformation of the energy of excitation in phorphorus crystals." Mos, 1961. (Min of Ed RSFSR. Mos State Ped Inst im V. I. Lenin) (KL, 8-61, 226)

crystal phosphors

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, L.A.; FOK, M.V.

Role of the stimulating action of excitation light in the kinetics of the luminescence of the crystal phosphor ZnS-Cu. Opt. i spektr. 10 no.2:225-231 F '61. (MIRA 14:2)
(Phosphors) (Luminescence)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, L.A.; FOK, M.V.

Determining the depth of electron traps in ZnS phosphors by the flash occurring under the action of infrared light. Opt.i spektr. 10 no.3:374-378 Mr '61. (MIRA 14:8)
(Electrons—Capture) (Infrared rays) (Zinc sulfide)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

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AUTHORS: Vinokurov, L.A., Fok, M.V.

TITLE: The final stages of the build-up of the blue and green luminescence bands of ZnS-Cu, Cl phosphor

PERIODICAL: Optika i spektroskopiya, v.13, no.1, 1962, 118-123

TEXT: Kinetic equations for the build up of the blue and green luminescence bands in ZnS-Cu are set up and a theory developed on the basis of recombination interactions in luminescence centres. Experiments were performed on the phosphors: ZnS-Cu (10^{-6} g/g eq), NaCl, ZnS-Cu (10^{-6} g/g eq), Co (10^{-6} g/g eq) and four samples of so-called self-activated ZnS phosphors; these rely on a very small amount of Cu impurity for their luminescence. All the data presented refers to measurements at room temperature. Curves are plotted for log $(1 - I/I_{\infty})$ against time for the blue and green bands; the distance between them is equal to log $\bar{S}$, i.e. if $\bar{S}$ is constant the curves are parallel. When the excitation proceeds in the presence of infrared light the build up

Card 1/2

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is faster. This is due to the increased probability of freeing electrons. ξ in three cases has values between 2 and 3.5 which compares with the predicted value. In the case of self activated ZnS the blue and green bands build up at the same rate. It is suggested that this is caused by a weakening of recombination interaction at luminescence centres. Variations in the values of ξ obtained experimentally are thought to be due to non-uniformity of the phosphors. In general, the build-up of intensity of the blue and green bands follow different laws only in the initial and middle stages, and follow the same law as they approach equilibrium. Further experiments are required using samples prepared under different conditions in order to check the extent of the validity of the calculations for self activated ZnS. There are 4 figures.

SUBMITTED: June 7, 1961

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

ACC NR: AP6033437 SOURCE CODE: UR/0051/66/021/004/0449/0455

AUTHOR: Bukke, Ye. Ye.; Vinokurov, L. A.; Fok, M. V.

ORG: none

TITLE: Band scheme describing the kinetics of photoluminescence of SiC

SOURCE: Optika i spektroskopiya, v. 21, no. 4, 1966, 449-455

TOPIC TAGS: photoluminescence, silicon carbide, exciton absorption, recombination luminescence, radiative recombination, light excitation, temperature dependence, semiconductor band structure

ABSTRACT: The purpose of the investigation was to ascertain the degree to which SiC doped with nitrogen is governed by the exciton mechanism and what the contribution of the recombination luminescence is, and if the luminescence has a recombination character, to identify the centers in which the radiative recombination takes place. Several crystals of n-type SiC were investigated, containing nitrogen and unknown acceptor impurities. When excited with 3.4-ev quanta (365 nm), these crystals had weak orange luminescence at room temperature, which became stronger at 77K, when an additional blue band appeared. The effect of excitation with infrared light ($h\nu = 1$ ev), and the dependence of the brightness on the temperature and on the nitrogen concentration were also investigated. The observed small luminescence yield and most of the observed phenomena can be explained if it is assumed that the recombination is by two different centers, both of which are acceptors but have different chemical nature.

Card 1/2 UDC: 535.37: 548.0

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

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ACC NR: AP6033437

The fraction of the exciton luminescence in the blue band is estimated at 10 - 50%, and it is concluded that there is no excited luminescence in the orange band. The data do not exclude the possibility that all of the luminescence is produced by the recombination mechanism. There is no evidence in favor of assuming that the recombination centers are dononrs, and that nonradiative recombination of free holes with electrons occurs. The authors thank M. B. Reyfman for supplying the crystals. Orig. art. has: 4 figures and 1 formula.

SUB CODE: 20/ SUBM DATE: 06Apr65/ ORIG REF: 002/ OTH REF: 002

Card 2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

ACC NR: AP7000029 SOURCE CODE: UR/0051/66/021/005/0588/0591

AUTHOR: Vinokurov, L. A.; Fok, M. V.

ORG: none

TITLE: Effect of infrared light on the photoluminescence of SiC-N

SOURCE: Optika i spektroskopiya, v. 21, no. 5, 1966, 588-591

TOPIC TAGS: silicon carbide, ir absorption, photoluminescence, luminescence spectrum, impurity level, polaron

ABSTRACT: This is a continuation of earlier work (Opt. i spektr. v. 21, 449, 1966) where a band scheme was proposed to describe the photoluminescence of SiC crystals doped with nitrogen. The authors state that if the scheme proposed in the earlier paper is valid, then when the sample is exposed to infrared, there should be observed, during the afterglow time, a flash whose spectrum contains the two blue bands observed in ordinary light. Experiments have indeed shown that the application of infrared light eliminates the structure in the spectrum of the blue band. To check the extent to which the sensitivity of the investigated crystals to infrared extends toward longer wavelengths, the authors measured the intensity of the flash as a function of the quantum energies of the infrared light incident on the same crystal whose luminescence spectrum was investigated earlier. The results show that the sensitivity to infrared has a complicated structure, with a maximum in the vicinity of 0.34 ev. Curves corresponding to turning on the infrared light 7 and 30 seconds

Card 1/2 UDC: 535.37

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ACC NR: AP7000029

after the cessation of the excitation are practically parallel, but the 30-second curve drops off more rapidly and has a smaller peak. Dips observed at 0.34 and 0.28 ev correspond to acceptor levels due to boron and aluminum. This agrees with earlier calculations of the depths of the impurity levels. Comparison with ZnS shows that the polaron energy in SiC is much lower than ZnS. The authors thank Ye. Ye. Bukka for help with the work. Orig. art. has: 4 figures.

SUB CODE: 20/ SUBM DATE: 16Jun65/ ORIG REF: 002

Card 2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

ANTONOV-ROMANOVSKIY, V.V.; VINOKUROV, L.A.; FOK, M.V.

Anomalous storage of light sums in phosphors. Opt. i spektr. 16 no.2:279-284 F '64. (MIRA 17:4)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

ACCESSION NR: AP4020962 S/0051/64/016/003/0491/0495

AUTHOR: Bukke, Ye.Ye.; Vinokurov, L.A.; Fok, M.V.

TITLE: Role of holes in the kinetics of electroluminescence of ZnS-Cu,Al,Cl phosphors

SOURCE: Optika i spektroskopiya, v.16, no.3, 1964, 491-495

TOPIC TAGS: electroluminescence, light sum storage, hole trap, zinc sulfide phosphor, hole migration, infrared stimulation, luminescence decay

ABSTRACT: It was demonstrated in an earlier investigation by one of the authors (M.V.Fok, Opt.i spektr.11,98,1961) that in the process of electroluminescence of phosphors the electric field releases, with high probability, holes from ionized luminescence centers located in high field concentration regions, and that the holes move towards the surface of the crystal. Accordingly, the present study was undertaken to determine whether holes that have emerged to the surface participate in the radiative recombination. The procedure was based on comparing the decay curves and the flare-up (stimulation) of emission by infrared after photo and electric excitation. The values of the electric field and exciting ultraviolet were selected so

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ACCESSION NR: AP4020962

that the mean brightness in the steady state would be the same. The chosen excitation wavelength was 365 mμ to insure uniform excitation throughout the volume of the crystal. The experiments were performed mainly with a ZnS:Cu:Al:Cl phosphor, which was capable of storing a large light sum and which was investigated earlier (V.V. Antonov-Romanovskiy, L.A. Vinokurov and M.V. Fok, Opt. i spektr. 16, 279, 1964). Some of the experimental data are presented in the form of curves. Analysis of the data indicates that under electric stimulation there forms a "reservoir" of holes, that is, that under the influence of the exciting electric field part of the holes emerge to the surface from the depth of the crystal, and then the holes migrate back into the volume of the crystal during the period of the afterglow. Also observed was an aging effect: the flare-up under infrared stimulation of a freshly prepared electroluminescent capacitor is weaker than that of a capacitor operated repeatedly for several hours; this is attributed to formation of additional hole traps. Orig.art.has: 4 figures.

ASSOCIATION: none

SUBMITTED: 12May63 DATE AC: 02Apr64 ENCL: 00

SUB CODE: PH NR REF SOV: 002 OTHER: 000

Card 2/2

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

L 19485-63 EWT(1)/EWP(q)/EWT(m)/EWP(B)/BDS AFFTC/ASD/IJP(C)/SSD JD
ACCESSION NR: AT3002236 S/2941/63/001/000/0285/0289

AUTHORS: Vinokurov, L. A. ; Fok, M. V.

TITLE: Initial stages of luminescence rise in ZnS-Cu, Co phosphors

SOURCE: Optika i spektroskopiya; sbornik statey. v. 1: Lyuminestsentsiya. Moscow, Izd-vo AN SSSR, 1963, 285-289

TOPIC TAGS: luminescence, inflection point, infrared, excitation

ABSTRACT: A study has been made to determine the causes leading to the disappearance of the inflection point on the luminescence rise curve of ZnS-Cu, Co under high intensity excitation. The effect of infrared excitation at energy levels of 0.35, 2.2, 210, and 770 ev on the S-shaped curve of luminescence growth was studied in detail. It is shown that at low excitation levels the inflection point disappears. But it is further emphasized at higher levels. A schematic of electronic transitions is proposed (see enclosure) and a necessary and sufficient condition for the existence of an inflection point is derived:

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ACCESSION NR: AT3002236

$$\frac{\alpha\beta}{\delta_1 \omega_1} < \frac{2}{3}$$

where α is proportional to excitation intensity; ω_1 = probability of releasing holes; (see Enclosure 1 for remaining terms). The authors contend that the S-shape could be explained on the basis of the proposed band-schematic of one electronic and one p-type (hole) level. Orig. art. has: 11 formulas and 3 figures.

ASSOCIATION: none

SUBMITTED: 19Feb62 DATE ACQ: 19May63 ENCL: 01

SUB CODE: PH NO REF SOV: 001 OTHER: 000

Card 2/3

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

L 12482-63 EWT(1)/EWP(q)/EWT(m)/EWP(B)/BDS AFFTC/ASD/IJP(C)/SSD JD

ACCESSION NR: AT3002232 S/2941/63/001/000/0263/0267

AUTHORS: Vinokurov, L. A. ; Fok, M. V.

TITLE: Dependence of luminescence brightness in ZnS-Cu, Co phosphors on Cu and Co concentration

SOURCE: Optika i spektroskopiya; sbornik statey. v. 1: Lyuminestsentsiya. Moscow, Izd-vo AN SSSR, 1963, 263-267

TOPIC TAGS: luminescence, brightness, excitation, activator

ABSTRACT: A study has been made to determine the experimental verification of a theoretical prediction in which luminescence brightness is considered proportional to the excitation intensity. The luminescence brightness of several thin layers of luminophors with Cu concentrations of 10^{-6} to 10^{-5} gm/gm and Co concentration of 0.3×10^{-7} to 10^{-5} gm/gm were measured in a region where the theoretical assumptions were considered valid. The ZnS samples contained NaCl melt and were 40μ thick. The test was carried at 140C. The average standard deviation of the measured brightness from the calculated values was less than 13%. Orig. art. has: 11 formulas, 1 figure, and 1 table.

Card 1/2

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

L 19482-63

ACCESSION NR: AT3002232

ASSOCIATION: none

SUBMITTED: 12Oct61 DATE ACQ: 19May63 ENCL: 00

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

Card 2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

ACC NR: AP6026778 SOURCE CODE: UR/0077/66/011/003/0201/0210

AUTHOR: Vinokurov, L. G.; Islyamov, V. A.; Podvigalkin, P. M.

ORG: State Optical Institute im. S. I. Vavilov (Gosudarstvennyy opticheskiy institut)

TITLE: Investigation of the parameters of selenium electrophotographic layers

SOURCE: Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, v. 11, no. 3, 1966, 201-210

TOPIC TAGS: electrophotography, selenium layer property, selenium layer, photosensitivity, photoelectromotive force

ABSTRACT: Layers of amorphous selenium used in electrophotography are obtained, as a rule, by evaporation in vacuum of an arbitrary selenium modification, followed by vapor condensation on a suitable substrate. Electrophotographic properties of selenium layers depend upon many parameters of the process. The present work is a description of research on the influence of residual atmosphere pressure and of the thermal treatment of the deposited Se layers at various pressures, upon their electrophotographic parameters. The initial selenium had an amorphous glassy structure; its purity was controlled by spectral analysis. A conventional vacuum evaporation system was used as the apparatus; a detailed description of the experimental parameters and their ranges is given. Selenium was evaporated at .7 - .9 μ/min., from a heated porcelain crucible upon glass substrate covered with a conductive transparent layer of SnO_2. The amount of Se was regu-

UDC 772.93

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ACC NR: AP6026778

lated to give layers 20 μ thick, controlled by a MIS-11 microscope. The surface structure was studied under the MIM-7 metallographic microscope. Measurements of the Se layer properties were made after a 2-3 months aging. Higher pressures (vacuum deterioration) lead to a lower deposit density and a porous layer structrure composed of longer and coarser needles. Detailed results of the dependence of limiting potentials, potential decay time constants and spectral sensitivity upon deposition vacuum pressure and temperature of thermal treatment are given. It is concluded that the basic parameters of selenium layers can be influenced over fairly wide limits by the pressure of the residual gases during deposition and by a subsequent thermal treatment of the deposited layers.

SUB CODE: 14, 20/ SUBM DATE: 16Jan65/ ORIG REF: 018/ OTH REF: 009

Card 2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

FRISHMAN, M.A., doktor tekhn. nauk (Dnepropetrovsk); BELYAVSKIY, V.L. (Dnepropetrovsk); VINOKUROV, L.I. (Dnepropetrovsk)

Maintenance of tracks with a slab substructure. Put' i put. khoz. 9 no.9:11-12 '65. (MIRA 18:9)

1. Nachal'nik distantsii pути Pridneprovskoy dorogi (for Belyavskiy).

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

report presented at the 1st All-Union Congress of Theoretical and Applied Mechanics, Moscow, 27 Jan - 3 Feb '60.

35. S. M. Bergmayer (Khiberbar): On the solution of the dynamic contact problem for a half-space under conditions of axial symmetry.

36. J. Brilla (Bratislava). Anisotropic plates with discontinuous supports.

37. B. M. Bryuk (Moscow): On the essential non-linearity of certain problems on column stability.

38. P. S. Bugley (Kiev), B. V. Gnedenko (Moscow): On the determination of safety factors under alternating random loads.

39. A. V. Burlakov (Kharkov): An experimental investigation of creep of turbine diaphragm models.

40. E. P. Bursitsky (Saratov): On the stability of constructionally anisotropic circular ring plates.

41. St. Balan, I. Patru, S. Sautu (Bucharest): The field of application of chromoplasticity.

42. D. B. Bukhara (---): The state of stress of lamellar systems of r-- dar configuration.

43. V. V. Bolshakov (Moscow): Thixotropic properties of lubricants as basis of their rheological characteristics.

44. G. A. Van-Fo-Fi, G. N. Sa--- (Kiev): Application of Mathieu functions to the investigation of shells.

45. P. M. Varvak (Kiev): Determination of stresses and deformations in massive bodies.

46. B. V. Vedeneev (Gorkii): The flow of bitumens and filled bitumens in pipes.

47. I. I. Vekua, V. I. Mushkelishvili (Tbilisi): Applications of analytic functions in the theory of elasticity.

48. I. Ia. Vlasov (Tbilisi), V. I. Piskunov (Novosibirsk): Experimental investigation of the behavior of eccentrically compressed short columns for long loading times.

49. G. V. Vinogradov (Moscow), A. A. Manabov (Kazan), V. P. Parlov (Moscow): Investigation of soft plastic bodies under stabilized states of stress.

50. G. V. Vinogradov, V. P. Parlov (Moscow): Basic peculiarities of the mechanical properties of plastic lubricants.

51. G. I. Vinokur (Leningrad): Fundamentals of the linear theory of visco-elastic impact.

52. I. I. Vinokurov (Kharkov): The solution of dynamic contact problems for foundations using a simplified model.

53. K. F. Vlasov (Moscow): On the equilibrium equations of thick elastic plates.

54. E. F. Volkovskii (Samara): The creep of ice and frozen soils under combined stresses.

55. M. F. Valarevich, G. L. Varamiev, E. F. Egorlevskii, G. I. Shakhmaev (Moscow): Studies of viscoelastic properties of porous bodies (e.g. peat) by the ultrasonic pulse method.

56. M. F. Valarevich (Moscow), A. Sh. Ziz (Minsk): The plane flow of a visco-plastic medium between two planes forming an acute angle.

57. M. F. Valarevich, E. N. Opokin (Moscow): Kinematics and dynamics of the flow of visco-plastic dispersed media past bodies of different shapes.

58. A. N. Valbot (Moscow): On the analysis of a short closed cylindrical shell.

59. S. D. Valov, E. A. Kliashtin (Sverdlovsk): On the distribution of elastic constants in quasi-isotropic polycrystalline media.

60. I. I. Varovich (Rostov-na-Donu): A statistical method in the stability theory of shells.

61. I. I. Varovich (Rostov-na-Donu), A. S. Kosmodamianskii (Saratov): On stress concentration in a plane with an infinite number of holes.

62. S. P. Timoshenko (Leningrad): Foundations of the general engineering theory of elastic beams.

63. S. S. Vialov (Moscow): The laws of deformation of ice.

64. S. S. Vialov (Moscow): The laws of motion of ice crusts and the theory of visco-plastic flow based on research in the Antarctic.

65. M. B. Galilov (Leningrad): A method of obtaining polynomial stress and displacement functions.

66. K. Z. Galimov (Kazan): A contribution to the theory of the finite deformations of thin shells.

67. M. P. Galin (Moscow): The propagation of elastic-plastic bending and shear waves in the axisymmetrical deformations of shells.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, I. V.

37287. Raschet balok na uprugom polyprostranstve i uprugoy polyploskosti. Trudy kahr'k. inzh.- stroit. in-ta, vyp. 2 , 1949, s. 5 - 46.- Bibliogr: 9 Nazv.

SO: Letopis' Zhurnal'nykh Statey, Vol. 7, 1949

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, L. P.

37175. Priblizhennyy Metod Resheniya Ploskikh zadach teorii upru gosti. Trudy khar'k. Insh-stroit. In-ta, Vyp. 2, 1949, s. 47-123.

SO: Letopis' Zhurnal'nykh Statey, Vol 7, 1949

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, L. P.

"Integral and Discrete Methods for Solving Problems of the Applied Theory of Elasticity." Sub 6 Mar 51, Central Sci Res Inst of Industrial Structures (TsNIPS)

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

124-57-1-1095

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 1, p 152 (USSR)

AUTHOR: Vinokurov, L. P.

TITLE: Stability of a Three-dimensional System of Columns, the Tops of Which are Connected by a Rigid Body (Ustoychivost' prostranstvennoy sistemy kolonn, vershiny kotorykh svyazany zhestkim telom)

PERIODICAL: Tr. Khar'kovsk. inzh.-stroit. in-ta, 1955, Nr 4, pp 147-154

ABSTRACT: The author examines the flexural-torsional loss of stability of a bar system consisting of a three-dimensional arrangement of parallel studs of equal height, the bases of which are rigidly fixed in a foundation, and the tops of which are hinge-connected to a rigid body (a plane disk). The equation for the determination of the critical loading is adduced.

1. Structures--Stability--Mathematical analysis
2. Beams--Stresses--Mathematical analysis

I. G. Popov

Card 1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, [illegible].P., Doc Tech Sci—(diss) " Direct methods of solving space and contact problems for ~~solid masses~~ massive and foundations." [illegible], 195[illegible]. 1[illegible] pp (Min of Higher Education USSR. Mos Order of Labor Red Banner Construction Engineering Inst im V.V.Kuybyshev), 150 copies (KL,47-[illegible],132)

-30-

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, L.P., kand. tekhn. nauk (Khar'kov)

Solution of statically indeterminate complex problems for rod systems using differential equations. Issl. po teor. sooruzh. no.8: 241-243 '59. (MIRA 12:12)
(Structures, Theory of)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

L 40790-66 EWT(d)/EWT(m)/EWP(w) IJP(c) EM

ACC NR: AP6018600 SOURCE CODE: UR/0420/66/000/004/0023/0028

33
B

AUTHOR: Vinokurov, L. P.

ORG: Kharkov Civil Engineering Institute (Khar'kovskiy inzhenerno-stroitel'nyy institut)

TITLE: Separation of discrete method differential equations by combining this method with other methods of solving problems in elasticity theory 26

SOURCE: Samoletostroyeniye i tekhnika vozdushnogo flota, no. 4, 1966, 23-28

TOPIC TAGS: finite difference, elasticity theory, second order differential equation, boundary value problem

ABSTRACT: The discrete method is defined as a method for solving differential equations with partial derivatives in finite-difference form with respect to all variables except one, the solution with respect to this single variable being analytic with the use of an ordinary differential equation. In its most general form, the discrete method for multidimensional problems is not very effective for a large system of differential equations. It is shown that this disadvantage can be eliminated by combining the discrete method with other methods for solving problems in the theory of elasticity: the Galerkin-Bubnov and finite-difference methods. The combination may then be used to separate a complex system of discrete method differential equations without dis-

Card 1/2

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L 40790-66
ACC NR: AP6018600

carding the advantages of this method: the possibility for satisfying complex boundary conditions and strict equations in the theory of elasticity for individual lines where the unknown function is determined most precisely and in a general analytic form. The results of computations may be refined by the use of successive approximations when the discrete method is combined with the Galerkin-Bubnov method. The combination of the discrete method with the finite-difference method is applicable to multidimensional problems in mechanics where computers must be used. The potential applications of these combinations to various types of boundary value problems are discussed. Orig. art. has: 2 figures, 11 formulas.

SUB CODE: 12/ SUBM DATE: none/ ORIG REF: 002

Card 2/2 MLP

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

L 40791-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/EWP(k) IJP(c) EM/WW

ACC NR: AP6018601 SOURCE CODE: UR/0420/66/000/004/0029/0038

AUTHOR: Vinokurov, L. P.; Voblykh, V. A.

ORG: Kharkov Civil Engineering Institute (Khar'kovskiy inzhenerno-storitel'nyy institut)

TITLE: Stability of closed circular cylindrical shells under axial compression with internal overpressure

SOURCE: Samoletostroyeniye i tekhnika vozdushnogo flota, no. 4, 1966, 29-38

TOPIC TAGS: shell structure stability, compressive stress, cylindric shell structure, critical pressure

The authors consider the stability of closed circular cylindrical shells subjected to axial compression with regard to the effect of deviations from the ideal shape on shell stability. A general solution for the problem is given assuming excessive internal pressure. Particular solutions are given for various special cases of deviations from the ideal shape. It is shown that the linear theory of gently tepered shells may be used to account for deviations from the ideal cylindrical shape, giving results which agree satisfactorily with experimental data. A closed shell with internal pressure subjected to axial compression shows a lower critical force than that given by the theoretical formula for an ideal shell. This is due to axisymmetric and nonaxisymmet-

Card 1/2

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

L 10791-66

ACC NR: AP6018601

ric deviations of the middle surface from the ideal cylindrical shape. When the internal pressure is high, nonaxisymmetric deviations from the ideal shape may cause an increase in the observed critical force in comparison with the theoretical value. The equations derived in this paper for the critical force under axial compression may be used for studying the effect which complex initial deviations have on shell stability by expansion in a trigonometric series. Orig. art. has: 3 figures, 15 formulas.

SUB CODE: 20, ~~12~~ 13 SUBM DATE: none/ ORIG REF: 005/ OTH REF: 002

Card 2/2 MLP

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

ACC NR: AP6035496 (A) SOURCE CODE: UR/0198/66/002/010/0083/0090

AUTHOR: Vinokurov, L. P. (Khar'kov); Ventsel', E. S. (Khar'kov)

ORG: Khar'kov Civil Engineering Institute (Khar'kovskiy inzhenerno-stroitel'nyy institut)

TITLE: Problem on contact of shallow cylindrical shells with plates

SOURCE: Prikladnaya mekhanika, v. 2, no. 10, 1966, 83-90

TOPIC TAGS: ~~cylindrical shell~~, shallow cylindric shell, plate stiffened shell, finned cylindric shell, cylindric shell structure, shell deformation, reinforced shell structure, contact stress

ABSTRACT: The deformation of shallow cylindrical shells stiffened along the generatrices on their outer surface by plates normal to the middle surface is investigated. The loading of the shell skin is considered as consisting of the given external loading of the shell and an additional loading due to the joints of the shell with plates. The displacements and moments in the shell along the line of contact are analyzed by using the equations of the V. Z. Vlasov engineering shell theory modified in accordance with the contact conditions. Using the conditions of the joint deformation of the shell-plate system, the displacements in the middle surface of the shell are expressed through the displacements along the contact edge of the plate, and the derivation and use of expressions for determining the reactive loading (the normal and longitudinal components of the plate resistance) are indicated, assuming that the reactive contact stresses are constant across the plate

Card 1/2

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

ACC NR: AP6035496

thickness. The method is illustrated by a sample analysis of a simply supported shallow cylindrical shell joined with a longitudinal plate. A uniform normal load is applied to the shell only. A discrete variational method combined with the Bubnov-Galerkin method is used in determining the displacements and bending moments in the plate-stiffened shell. The distribution of moments along the line of the plate-shell contact is given in diagrams and compared with the moments in a plain shell under identical conditions. Orig. art. has: 2 figures and 26 formulas.

SUB CODE: 20/ SUBM DATE: 20Jun66/ ORIG REF: 003/

Card 2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, Lev Pinkhusovich; ALEKSEYEV, Yu.N., prof.,doktor tekhn. nauk, otv. red.; DEREVYANCHENKO, R.M., red.

[Theory of elasticity and plasticity; theory of the deformation of a continuous solid and methods for calculating continuous systems based on this theory] Teoriia upruggosti i plastichnosti; teoriia deformirovaniia sploshnogo tverdogo tela i osnovannye na nei metody rascheta sploshnykh sistem. Khar'kov, Izd-vo Khar'kovskogo univ., 1965. 327 p. (MIRA 18.12)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

BLOKH, Veniamin Izrailevich, prof.; [illegible], L.P., doktor tekhn.nauk, otv. red.; DEYEV, V.M., kand. tekhn. nauk, otv. red.; [illegible], D.A., red.

[Theory of elasticity] Teoriia uprugosti. Khar'kov, Izd-vo Khar'kovskogo univ., 1964. 483 p. (MIRA 17:7)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, L.P. (Khar'kov)

"A non-linear formulation of the problem in structual mechanics of bar systems"

report presented at the 2nd All-Union Congress on Theoretical And Applied Mechanics, Moscow, 29 January - 5 February 1964

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, L.P.; ZHILYAKOV, Ya.G.

Calculations for rods fized in an elastic medium represented by a composite model. Izv. vy.uch.zav.; stroi. i arkhit. 5 no.4:18-23 '62. (MIRA 15:9)

1. Khar'kovskiy inzhenerno-stroitel'nyy institut.
(Elastic rods and wires)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

S/044/62/000/011/047/064
A066/A000

AUTHOR: Vinokurov, L. P.

TITLE: Method of approximate stability analysis of plates loaded by forces in the median plane

PERIODICAL: Referativnyy zhurnal, Matematika, no. 11, 1962, 34, abstract 11V153 (Tr. Khar'kovsk. aviats. in-ta, 1961, no. 18, 3 - 18)

TEXT: The author provides the equations of the method of straight lines (reduction to a system of ordinary differential equations) in rectangular, oblique, and polar coordinates, in the case when the distance d_n between neighboring lines with numbers n+1 and n is a function of the number n. Certain problems of stability of a plate (rectangular and trapezoidal) on an elastic bedding are considered. It is assumed that the force is proportional to the displacement at the given point of the elastic bedding. The results are compared with those found by other authors.

M. G. Slobodyanskiy

[Abstracter's note: Complete translation]

Card 1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, Lev Pinkhusovich; KOLESNIKOV, L.A., kand. tekhn. nauk, retsenzent; CHERKASOV, A.P., kand. tekhn. nauk, retsenzent; ALEKSEYEV, Yu.N., kand. tekhn. nauk, retsenzent; KAN. S.N., prof., doktor tekhn. nauk, otv. red.; KURILOVA, T.M., red.; SMILYANSKAYA, T.M., tekhn. red.

[Structural mechanics of rod systems; theory of the deformation of rod systems] Stroitel'naia mekhanika sterzhnevykh sistem; teoriia deformirovaniia sterzhnevykh sistem. Khar'kov, Izd-vo Khar'kovskogo gos. univ. im. A.M.Gor'kogo. Pts. 2-3. 1961. 198 p. (MIRA 14:11)
(Beams and girders)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

S/147/59/000/04/020/020
E031/E413

AUTHOR: Zolotukhin, V.K.

TITLE: The Scientific-Technical Conference at Khar'kov Aviation Institute

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Aviatsionnaya tekhnika, 1959, Nr 4, pp 161-165 (USSR)

ABSTRACT: In May 1959, the 16th Conference of Professorial and Teaching Staff took place.

Card 5/11

Strength of Aircraft Section.
"On the Theory of Bending of Thin-Walled Columns" by Docent, Candidate of Technical Sciences L.P.Vinogurov; "The Simulation of Static Experiments on Thin-Walled Structures" by Candidate of Technical Sciences L.A.Kolesnikov and Senior Instructor V.K.Zolotukhin; "The Bending of Beams Framing an Opening" by Candidate of Technical Sciences L.A.Kolesnikov; "The Influence of the Rigidity of Ribs and Beams on their Bending" by Assistant N.A.Shelomov; "The Calculation of the Bending of Rectangular Plates by the Discrete Method" by Assistant Yu.P.Petrov; "The Calculation of Cylindrical Shells by the Method of Discrete Variables" by Aspirant N.I.Gur'yev.

Card 6/11

Engine Construction Technology Section.
"The Choice of a Scheme for a Hydraulic Servo-System for the Automation of Welding Processes" by Assistant V.V.Balatskiy; "An Investigation of the Process of Polishing by an Abrasive Belt" by Senior Instructor, Candidate of Technical Sciences V.N.Verezub; "The Investigation of the Operation of a Pneumatic-Hydraulic Plant" by Assistant V.I.Bestayev;

Card 7/11

"A Static Analysis and Calculation of the Accuracy of the Technological Processes of Machining" by O.M.Perkhomenko; "The Automatic Welding of Long Panels" by Candidate of Technical Sciences L.F.Kamskov; "Prospects in the Use of Specialised Computers for the Determination of the Optimum Geometry of Cutting Tools" by Docent, Candidate of Technical Sciences V.P.Kosharnovskiy; "The Spreading of the Experience of Innovators and the Classification of Organizational-Technical Measures in Machine Construction" by Senior Instructor M.M.Apanovich; "Features of Measurable Abrasion of a Cutting Tool in Fine Sharpening" by Assistant V.N.Malikov; "An Investigation of the Process of Compression at High Velocities of Deformation" by Docent, Candidate of Technical Sciences A.K.Bayev; "The Standardization of Vibration Effects on the Human Organism in Aircraft Production" by Senior Instructor V.D.Ivanov.

Theory and Construction of Aircraft Engines and Propellor-Driven Machines Section. "The Investigation of the Flow Between the Inlet and Outlet Valves of a Turbine" by Instructor, Candidate of Technical Sciences V.N.Yershov; "The Variation in the Stage Parameters of an Axial Compressor in Accordance with the Size of the Radial Clearance" by Assistant A.N.Anyutin; "On the Problem of Non-Stationary Heat Transfer" by Assistant S.D.Prolov; "The Influence of an Electric Field on the Flame of a Burner" by Senior Engineer P.P.Kostenko; "Calculation of the Temperature Compensation of Capacitance Pressure Pick-Ups" by Assistant L.Ya.Astaf'yev.

Aerohydrodynamics Section.
"Ideal Hypersonic Flow Round a Body" by Assistant V.I.Kholyavko; "The Control of the Boundary Layer of a Wing by Perforation of the Leading Edge" by Assistant Ye.P.Vachasov; "The Gas-Hydraulic Analogy and its Application" by Senior Instructor D.A.Munshtukov; "The Aerodynamic Investigation of Wing Profiles for Small Reynolds Numbers" by Engineer Yu.F.Usik.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, Lev Pinkhusovich; KAN, S.N., prof., doktor tekhn.nauk, retsenzent; DEREKACH, V.F., dotsent, kand.tekhn.nauk, retsenzent; DAVIDOV, I.V., dotsent, kand.tekhn.nauk, otv.red.; KURILOVA, T.M., red.; TROFIMENKO, A.S., tekhn.red.

[Structural mechanics of rod systems; theory of the deformation of rod systems] Stroitel'naia mekhanika sterzhnevykh sistem; teoriia deformirovaniia sterzhnevykh sistem. Khar'kov, Izd-vo Khar'kovskogo gos.univ.im.A.M.Gor'kogo. Pt.1. [Statics] Statika. 1960. 387 p. (MIRA 13:10)
(Structural frames)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

POZDNYAKOV, A.V.; VINOKUROV, L.V.

Has gonadostimulin any effect? Veterinariia 42 no.7:77-78 Jl '65. (MIRA 18:9)

1. Glavnyy veterinarnyy vrach proizvodstvennogo upravleniya Dmitrovskogo rayona Moskovskoy oblasti (for Pozdnyakov).
2. Glavnyy veterinarnyy vrach stantsii po bor'be s boleznyami zhivotnykh Dmitrovskogo rayona Moskovskoy oblasti (for Vinokurov).

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, L. V. (Eng.)

"Vibration of Wire and Stranded Cable Transmission Lines and Control Measures," Operating Experience of the Mosenergo High-voltage Networks, Collection of Articles, Moscow, Gosenergoizdat, 1957, 79 p.

Abst.: The author explains the advantages of a new type of antivibration device, the so-called "vibration absorber", and compares it with the old types. The 7-year trial period of 90,000 vibration absorbers of the type described proved their superiority.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

BAYKONUROV, O.A., akademik, prof.; IBRAYEV, Sh.I., kand.tekhn.nauk; VINOKUROV, L.V., inzh.

Determining the mechanical constants of rocks in studying the seismic effect of blasting. Gor. zhur. no.8:28-29 Ag '63. (MIRA 16:9)

1. Kazakhskiy politekhnicheskiy institut, Alma-Ata.
(Rocks--Testing) (Blasting)

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

BAYKONUROV, O.A., akademik; IBRAYEV, Sh.I., dotsent; VINOKUROV, L.V., inzh.

Effect of the construction of the working face on the seismic action of a blast. Izv. vys. ucheb. zav.; gor. zhur. 6 no.3:22-26 '63.

1. Kazakhskiy politekhnicheskiy institut. Rekomendovana kafedroy podzemnoy razrabotki plastovykh mestorozhdeniy i otkrytykh gornykh rabot. 2. Akademiya nauk Kazakhskoy SSR (for Baykonurov).

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

ACC NR: AP7007210 (A) SOURCE CODE: UR/0031/66/000/012/0045/0048

AUTHOR: Baykonurov, O. A. Ibrayev, Sh. I.; Vinokurov, L. V.; Karazhanov, D.

ORG: none

TITLE: Method of determining the relative power of various explosives in simulating an explosion

SOURCE: AN KazSSR. Vestnik, no. 12, 1966, 45-48

TOPIC TAGS: chemical explosion, underground explosion, explosive charge

ABSTRACT: In present-day experimental studies on models made of synthetic material, efforts are made to determine the qualitative characteristics of the destruction of rocks by explosions. On the basis of the mechanical characteristics of the equivalent material employed, the explosive commonly used in laboratory explosions consists of 16% mercury fulminate, 55.5% potassium chlorate and 28.5% antimony. An attempt was made to determine the power of this explosive mixture relative to industrial explosives. This was done as follows: first, by measuring the seismic vibrations, a certain fraction of energy was determined for the explosive studied and for an industrial explosive (1 g Tetryl + 0.5 g mercury fulminate, a mixture used in the ED-8-56 electric detonator), whose energy was determined from existing formulas. The comparison method was then employed. This involved measuring the seismic vibrations from the explosive whose energy was known, then the vibrations from the explosive

Card 1/2

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ACC NR: AP7007210

whose energy was unknown. Finally, the energy of the seismic wave was calculated for maximum values (obtained from oscillograms) of both explosions, and the ratio of these energies was taken. It was found that the explosive composition used for laboratory tests is 20.5 times weaker than the mixture used in the ED-8-56 electric detonator, and 10-12 times weaker than ordinary underground ammonites (No. 6, 7, etc.). Orig. art. has: 2 figures, 1 table and 8 formulas.

SUB CODE: 19/ SUBM DATE: none

Card 2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, M.

Vagony (Railway Cars)

610 p. 3.00

SO: Four Continent Book List, April 1954

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, L. A., FOK, V. M.

"On the role of a stimulating action of exciting light in the luminescence kinetics of the crystalline phosphor ZnS-Cu."

report submitted to the Electrochemical Society, 117th Meeting - Chicago, Ill., 1-5 May 60, Symposium on Luminescence.

Physics Institute im. P. N. Lebedev, USSR Academy of Sciences.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, Markian (s. Maslovka, Starchenkovskiy rayon, Kiyevskoy ~~oblasti~~)

Finest job on the earth. Zemledelie 24 no.8:36-37 Ag '62. (MIRA 15:9)

(Kiev Province—Agriculture)

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

15

CA

The study of the dynamics of the absorbing complex of soils. M. A. Vinogurov. *Pochvovedenie* (Pedology) 23, No. 3-4, 46-92 (in English 93-3)(1928).—In a series of expts. on the A and B horizons of a chernozem soil the amt. of exchangeable Ca and Mg, exchange capacity and unsatn. were detd. during the vegetation period on different systems of cropping, and during the various seasons. It was noted that the Ca was higher in the fall and lower in the spring. The reverse is true for Mg. The total bases was lower in the spring. The base-exchange capacity as detd. by the $BaCl_2$ method showed some variations. During the first part of the growing season the total exchange capacity decreased slightly, whereas the Ca increased. In the spring the soil was found to be slightly unsatd. In the B horizon the unsatn. was greater in the spring, and in A it was greater in the fall. In some cases, especially on the soils in sod the total Ca and Mg absorbed was greater than the base-exchange capacity. The suggestion is made to consider the absorption capacity as detd. by the Ba method as the exchange or true absorption capacity. The increase in absorption capacity is also to be considered as absorption capacity, but the cations are not exchangeable. During the summer and winter seasons there is an increase in absorption capacity. Vinogurov ascribes this increase to the changes in p_H and perhaps mech. absorption. The quantity of highly dispersed particles of the absorption complex drops beginning with the spring season up toward the middle of summer. It is due to the state of satn. of the complex; it is more unsatd. in the spring. I. S. Joffe

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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15

CA

Causes of changes in the adsorptive capacity and dispersion of soils. M. A. Vino-kurov and V. I. Karabitzkaya. *Trans. Siberian Inst. Agr. Forestry* 13, No. 1, 27-51 (in English 52) (1930). cf. *C. A.* 25, 2504.—The adsorptive capacity of black earths, podsols and saline soils is not of const. magnitude. Variations are induced by soil reaction and other factors. In columnar saline soils the *p*H is influenced by the moisture content and the proportion of dispersible humate and zeolite in the adsorptive complex. In black earths and podsols the *p*H varies with the concn. of the soil soln. In cultivated black earths and possibly in all cultivated soils there is an inverse relationship between the *p*H of the soil soln. and the activity of the nitrification process. Dispersion varies throughout the vegetative season, being least in summer and greatest in spring and autumn. The degree of dispersion of soils is closely related to the moisture content, concn. of the soil soln., reaction and adsorptive capacity. H. C. A.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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15

The carbon-nitrogen ratio in the soils of Siberia. M. A. Vinokurov. *Pedology* (U. S. S. R.) 31, 074-94(1936).—Data on the C:N ratio of Siberian soils do not agree with Jenny's conclusion (cf. *C. A.* 25, 5233) that the ratio narrows from north to south. Neither does the C:N ratio of these soils follow Remesov's formula (cf. *C. A.* 28, 4812[8]). It is found to vary and not to have any definite regularity. J. S. Joffe

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CA

15

A method of separating the total exchange capacity of a soil into the exchange capacity of the organic and of the inorganic fractions of the soil-absorbing complex. M. A. Vinokurov. *Chemisation Socialistic Agr.* (U. S. S. R.) No. 6, 92-0(1937).—A 5-10 g. sample of soil is treated with NaCl until all the cations have been replaced. The soil is then washed with alc. to remove the excess NaCl and treated with H_2O, until all of the org. matter has been oxidized. The supernatant liquid from the weighed beaker is filtered through a 7 sigmoidy ultrafilter and the filtration is continued by decantation until the supernatant liquid is clear. The sediment on the ultrafilter is washed until the filtrate gives no turbidity with $BaCl_2$. The residue is returned to the inorg. fraction in the decantation beaker. The Na detn. in the filtrate gives the exchange capacity of the org. fraction. The exchange capacity of the inorg. fraction is detd. separately by replacement with $BaCl_2$ or any other method. J. S. Joffe

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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PROCESSES AND PROPERTIES INDEX

A method of separating the total exch[illegible] capacity of the soil into component parts M. A. Vinokurov Pedology (U. S. S. R.) 32, 351-8(1937). See C. A. 32, [illegible]

[illegible] Ioffe

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

Qa

1S

The sulfur content of the organic fraction of the soil and a method of extracting it. M. A. Vinokurov. *Pedology* (U. S. S. R.) 32, 493–503 (in English 504) (1937).—Detns. were made on the S content of a no. of soils. The lowest in org. S are the degraded chernozems. In the profile of soils in which the Al silicate nuclei are disrupted the org. S accumulates in the lower horizons. The method of treating the soil for detg. S is outlined in the preceding abstr.

J. S. Joffe

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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PROCESSES AND PROPERTIES INDEX

BC

B-3-1

[redacted]

S. and F. (m)

METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

15

CA

The content and composition of organo-mineral gels in soils. M. A. Vinokurov. *Pedology* (U. S. S. R.) 1942, No. 3-4, 73-88(in English, 88).—V. introduces a modification of the Tyulin method of sepg. the electronegative and electroneutral organo-mineral gels from the soil (cf. Tyulin, *C. A.* 33, 6499[1] and his monograph *The Soil Absorbing Complex and Problems of Agriculture* (1937)). The chief modification consists in taking a much smaller sample for detg. the electroneg. organo-mineral gels. The procedure of Tyulin and the modification are given in detail. Data are presented on the quantity of the 2 groups of organo-mineral gels in a no. of soils and the quantities of humus and N in the different fractions. J. S. Joffe

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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15

CA

The importance of stable manure and of the horizons below the plowed layer in creating a deep cultivated layer in the podzols. M. A. Vinokurov and A. V. Kokoshova. *Pedology* (U. S. S. R.) 1942, No. 5/6, 8-18(in English, 18).—Materials of various horizons were mixed, manure was added and incubated at 28-35° for 4 months. The data on C/N ratio, N and P content, absorbed bases, colloidal properties of different humus fractions, are tabulated and discussed. It is pointed out that mixing the horizons is advantageous. J. S. Joffe

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

CA

The composition of the humus of the soils in the Tartar Republic. M. A. Vinokurov and R. A. Alpatova. *Pedology (U.S.S.R.)* 1948, 380-91. Following the procedure developed by Tyurin and Gutkina (C.A. 35, 8179[9]), V. and A. analyzed a degraded chernozem, dark-gray, weakly podzolized, dark-gray meadow, brown-gray weakly podzolized, leached rendzina, gray weakly podzolized, and medium-podzolized soils. Humic acid decreases from leached chernozem to the medium-podzolized soil. The quantity of fulvic acid sol. upon decalcifying is small and does not show any relation to a specific type of soil formation. The fulvic acid in the acid filtrate decreases from the medium-podzolized to the chernozem soils. The C:N ratio is wider in the humic acid, the fulvic acids, and the humins than in the original soils. The C content in the insol. residues is 27-28% of the total in leached chernozem and dark-gray weakly podzolized soils; 42-43% in the gray weakly podzolized soils and leached rendzina. The other soils are in this respect intermediate between the two.

J. S. Joffe

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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15

CA

Influence of pasture-land crop rotation on humus composition in gray, weakly podzolic soil. M. A. Vinokurov and L. V. Cherkashina. *Doklady Akad. Nauk S.S.S.R.* 67, 361-3(1949).—The org. content (alc.-benzene soluble) in soils not fertilized by manure or lime does not differ from that of wasteland; addn. of manure and peat with lime sharply reduces it as a result of soil formation. The decrease continues with increased extent of cultivation and sod formation, while the content of humic acids rises.

Wasteland soil has the highest C content in nonhydrolyzable residue. The ratio of humic acids to "fulvic acids" rises with increased working and utilization of the soil. Planting of bean-type plants, which increases soil formation, also changes the humus content qualitatively in a manner analogous to that observed in other soils (V. and Alpatova, *Pochvovedenie*, 1948, No. 8). Permitting a worn-out soil to lie fallow with natural growth raises the humic fulvic acid ratio from 1.03 to 3.0 as a result of soil formation. A two-year planting of clover-timothy grass raises the ratio even more.

G. M. Kosolapoff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, M.A.

Colloidochemical composition of soils of the part of the Tatar A.S.S.R. to the right of the Volga and means for increasing their fertility. Izv.Kazan.fil.AN SSSR.Ser.biol.i sel'khoz. nauk no.3:49-95 '52. (MLRA 10:2)
(Tatar A.S.S.R.--Soils) (Fertilizers and manures)
(Soil colloids)

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VINOKUROV, M.A.

MADANOV, P.V.; MARTYNOV, D.Ya., otvetstvennyy redaktor; MARKOV, M.V., professor, redaktor; SHAFUGULLIN, A.G., professor, redaktor; ARBUZOV, B.A., akademik, redaktor; DYUKOV, I.A., professor, redaktor; NORDEN, A.P., professor, redaktor; PISAREV, V.I., professor, redaktor; TIKHVINSKAYA, Ye.I., professor, redaktor; ABDRAKHMANOV, M.I., dotsent, redaktor; MOROZOV, D.G., dotsent, redaktor; KHARITONOV, A.P., dotsent, redaktor; KOLOBOV, N.V., redaktor; KOLESNIKOVA, Ye.A., starshiy prepodavatel', redaktor; VINOKUROV, M.A., professor, redaktor.

[Biological accumulation of manganese in soils of the Volga-Kama forest-steppe and its availability to plants] Biologicheskaia akkumuliatsiia marganetsa v pochvakh Volzhsk-Kamskoi lesostepi i ego dostupnost' sel'skokhoziaistvennym rasteniiam. Kazan', 1953. 202 p. (Kazan. Universitet. Uchenye zapiski, vol.113, no.7) (MLRA 10:3)

1. Rektor universiteta (for Martynov). 2. Prorektor po nauchnoy rabote (for Markov). 3. Prorektor po uchebnoy rabote (for Shafugullin) 4. Sekretar' partbyuro universiteta (for Kolobov).
(Plants, Effect of manganese on)
(Volga Valley--Forest soils)

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, M.A., professor.

Effect of shelterbelts on soils. Uch.zap.Kaz.un.113 no.1:99-123 '53. (MLRA 10:3)

(Windbreaks, shelterbelts, etc.)
(Soil chemistry) (Forest influences)

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, M.A.; GRISHIN, P.V.

Effect of the replacement of linden-spruce stands by a succeeding linden-goutweed association on soil formation processes. Uch.zap. Kaz.un. 114 no.1:135-161 '54. (MLRA 10:3)

1. Kafedra pochvovedeniya.
(Forest influences)(Raifa region--Soil chemistry)
(Spruce) (Linden)

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, M.A.

Colloidochemical composition of some soils of Baraba. Uch.zap. Kaz.un. 114 no.1:163-176 '54. (MLRA 10:3)

1. Kafedra pochvovedeniya.
(Baraba Steppe--Soil colloids)

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

INOKUROV, M.A. (Kazan')

Grasses in the rotation of crops. Uch.zap.Kaz.un. 115 no.10:56-59 '55. (MLRA 10:5)

(Tatar A.S.S.R.--Grasses)
(Rotation of crops) (Tillage)

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, M.A.; IVANOVA, Ye.I.

Qualitative composition of water-stable aggregates in relation to their size. Nauch.dokl.vys.shkoly; biol.nauki no.3:230-232 '59. (MIRA 12:10)

1. Rekomendovana kafedroy pochvovedeniya Kazanskogo gosudarstvennogo universiteta im. V.I.Ul'yanova-Lenina.
(Soil structure)

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, M.A.; MIRONOV, N.A.; SHAKIROV, K.Sh..

Influence of different forest types on the composition of soil humus. Nauch. dokl. vys. shkoly; biol. nauki no.1:184-187 '60. (MIRA 13:2)

1.Rekomendovana kafedroy pochvovedeniya Kazanskogo gosudarstvennogo universiteta im. V.I. Ul'yanova-Lenina.
(Forest influences) (Humus)

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, M.A.; BUKHARAYEVA, L.G.

Primary stages of soil formation on massive-crystalline rocks of the undulating plains of North Kazakhstan. Pochvovedenie no.6:1-10 Je '61. (MIRA 14:6)

1. Kazanskiy gosudarstvennyy universitet imeni V.I. Ul'yanova-Lenina.
(North Kazakhstan Province--Soil formation)

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

SPERANSKAYA, G.I.; VINOKUROV, N.A., prof., rukovoditel' raboty

Group composition of the Chernozem humus in the Tatar A.S.S.R.
Nauch.dokl.vys.shkoly; biol.nauki no.4:201-204 '65. (MIRA 18:10)

1. Rekomendovana kafedroy pochvovedeniya Kazanskogo gosudarstvennogo universiteta im. V.I.Ul'yanova-Lenina.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001860010019-5

VINOKUROV, M.A.; MIRONOV, N.A.

Effect of different forest types on the heterogeneity of the soil cover. Nauch.dokl.vys.shkoly; b ol.nauki no.4:205-208 '65. (MIRA 18:10)

1. Rekomendovana kafedroy pochvovedeniya Kazanskogo gosudarstvennogo universiteta im. V.I.Ul'yanova-Lenina.

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

Trichloromethyl and alkyl arylurethans. I. N. N. MELNIKOV AND M. M. VINOKUROV. *J. Gen. Chem.* (*U. S. S. R.*) 2, 484-90(1932); *cf. C. A.* 24, 2720, 5723; 25, 4228; 26, 3234.—$Cl_3COCOCl$ (I) and the compds. contg. the $OCCl_3$ group react with amines in analogy with alcs. and phenols, giving the same end products as in the reaction with $COCl_2$: I + $8RNH_2$ ⟶ $2CO(NHR)_2$ + $4RNH_2.HCl$. The mechanism of the reaction without formation of intermediate products is not clear and was investigated. To 20 g. I in 150 cc. Et_2O was slowly added with cooling and shaking 27.5 g. p-$C_6H_4(NO_2)NH_2$ (II) in 150 cc. Et_2O, then filtered from the mixt. of II.HCl and sym. $CO(NHC_6H_4NO_2)_2$ (III), the Et_2O distd. off *in vacuo*, dissolved in CCl_4 to remove insol. III, the CCl_4 distd. off *in vacuo*, giving 13 g. of unstable *trichloromethyl p-nitrophenylurethan*, $Cl_3COCONHC_6H_4NO_2$ (IV): I + 2II ⟶ IV + $Ph_2NH.HCl$. By boiling with H_2O or on standing in moist air IV is decompd. into III and p-$C_6H_4(NO_2)NH_2$: IV + $2H_2O$ ⟶ $2CO_2$ + 3HCl + $C_6H_4(NO_2)NH_2$. IV (14 g.), heated 3 hrs. at 150-60° with 12 g. anhyd. AcONa and then digested with H_2O, gave 6 g. of ppt. of p-$C_6H_4(NO_2)NHAc$, m. 207°. IV *per se* or in CCl_4, heated 4 hrs., gave p-nitrophenylisocyanate, p-$O_2NC_6H_4NCO$, crystals from CCl_4, m. 57°: IV ⟶ $COCl_2$ + HCl + $C_6H_4(NO_2)NCO$. IV produced with alcs. alkyl derivs. and dialkyl carbonates: $CO(OMe)NHC_6H_4NO_2$, m. 180°, and $CO(OMe)_2$, b. 90°, d_4^{20} 1.069, n^{20} 1.3684; $CO(OEt)NHC_6H_4NO_2$, m. 139°, $CO(OEt)_2$, b. 124°, d_4^{20} 1.069, n^{20} 1.3684; $CO(OPr)NHC_6H_4NO_2$, m. 116°, $CO(OPr)_2$, b. 167°, d_4^{20} 0.9414, n^{20} 1.4016; $CO(OBu\text{-iso})NHC_6H_4NO_2$, m. 81°, $CO(OBu\text{-iso})_2$, b. 186°, d_4^{20} 0.9130, n^{20} 1.4076; $CO(OAm\text{-iso})NHC_6H_4NO_2$, m. 98°, $CO(OAm\text{-iso})_2$, b. 228° (uncor.), d_4^{20} 0.907, n^{20} 1.4173. To 20 g. I in 25 cc. Et_2O was added with cooling and shaking 33.8 g. Ph_2NH in 120 cc. Et_2O, the soln. filtered from the mixt. of $Ph_2NH.HCl$ and $CO(NPh_2)_2$, the Et_2O distd. off and the residue recrystd. from Et_2O, giving *trichloro-*

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methyl diphenylurethan. $CO(OCCl_3)NPh_2$ (V), m. 61°. V heated 4 hrs. at 200-50° is decompd. into $COCl_2$ and diphenylcarbamyl chloride, $CO(Cl)NPh_2$, crystals from CH_2Cl_2, m. 84°. V boiled 4 hrs. with H_2O gave Ph_2NH, m. 53°. V produced with alcs. alkyl diphenylurethans and dialkyl carbonates: $CO(OMe)NPh_2$, m. 85°; $CO(OEt)NPh_2$, m. 84°; $CO(OPr)NPh_2$, m. 85°; $CO(OBu\text{-iso})NPh_2$, m. 87°; $CO(OAm\text{-iso})NPh_2$, m. 84°. V heated 2 hrs. at 145-50° with anhyd. AcONa gave Ph_2NAc and Ac_2O.

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

BC

1-3

Trichloromethyl alkyl urethanes. N. N. Melnikov and [illegible] Vinogradov [illegible] Gen. Chem. Russ. 1932, 2, [illegible] Chloroformate (I) with [illegible] (II) in Et_2O yields [illegible] carbamide (III) and CCl_3 N-p-nitrophenylurethane (IV), yellow crystals evolving $COCl_2$ and rapidly decomposing in moist air or with boiling H_2O giving (III) and a little (II). (IV) with NaOAc at [illegible] gives p-nitrophenylcarbamide, whilst when heated alone or in CCl_4 on the water-bath it forms p-nitrophenylcarbamide, $COCl_2$ and HCl. With MeOH and EtOH it gives the corresponding alkyl urethanes. Pr, Bu, and isoamyl N-p-nitrophenylurethanes have m.p. 116°, 81°, and [illegible]; the corresponding dialkyl carbonates were also obtained, b.p. [illegible], 100°, and 228°.

$NHPh_2$ and (I) in Et_2O furnish CCl_3 N-diphenylurethane (V), m.p. 61°. This on boiling with H_2O gives [illegible] on heating alone $COCl_2$ and [illegible] and with NaOAc, [illegible] With [illegible] the following alkyl N-diphenylurethanes have been obtained: Me, m.p. 85°, Et, m.p. [illegible], Pr, m.p. [illegible], Bu, m.p. 87°, and isoamyl, m.p. [illegible], together with the corresponding alkyl carbonates.

G. A. R. K.

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VINOKUROV, Mitrofan Mikhaylovich; ITUNINA, R.G., red.; BERNGARDT, N.Ye., tekhn. red.

[Make way for monospermous sugar beets] Dorogu odnosemiannoi! Voronezh, Voronezhskoe knizhnoe izd-vo, 1961. 18 p. (MIRA 15:1)
(Sugar beets)

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VINOKUROV, Mitrofan Mikhaylovich; ITUNINA, R.G., red.; BERNGARDT, N.Ye., tekhn.red.

[Make way for monospermous sugar beets!] Dorogu odnosemiannoi! Voronezh, Voronezhskoe knizhnoe izd-vo, 1961. 18 p. (MIRA 14:4)
(Sugar beets)

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VINOKUROV, M.V., professor

Development of railroad cars used on U.S.S.R. railroads during the last 30 years. Tekh.zhel.dor.6 no.11:22-25 N'47. (MLRA 8:12)
(Railroads--Cars)

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VINOKUROV, M. V.

Vinokurov, M. V. and Skorbyashchenskiy, A. A. - "The results of testing various types of deflectors", Tekhnika zhel. dorog., 1948, No. 12, p. 27-28.

So: U-3042, 11 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 7, 1949).

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VINOKUROV, M V ED.

Vagony. Railroad cars, ...uchecnik, ... Moskva, transzheldorizdat, 1949.
610 p. illus., Tables. Diagrs.

Book discusses the Development, classification, construction, basic dynamics and modern methods of USSR railroad cars calculations, as well as the selection of their types and basic parameters. A manual for institutes of railroad transportation, approved by the ministry of higher education.

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VINOKUROV, M.V.

BARANOV, A.F., redaktor; RUDOY, E.F., redaktor; SOLOGUBOV, V.N., kandidat tekhnicheskikh nauk, otvetstvennyy redaktor toma; ALBEGOV, N.A., kandidat tekhnicheskikh nauk; VASIL'YEV, B.K., inzhener; VERSHINSKIY, S.V., kandidat tekhnicheskikh nauk; VINOGRADOV, G.P., kandidat tekhnicheskikh nauk; VINOKUROV, M.V., professor, doktor tekhnicheskikh nauk; GOLOVANOV, V.G., kandidat tekhnicheskikh nauk; GORDEYEV, A.S., dotsent, kandidat tekhnicheskikh nauk; GURSKIY, P.A., dotsent, kandidat tekhnicheskikh nauk; GUREVICH, A.N., kandidat tekhnicheskikh nauk; DOMBROVSKIY, A.B., dotsent; YEGORCHENKO, V.F., professor, doktor tekhnicheskikh nauk: IVANOV, V.N., professor, doktor tekhnicheskikh nauk; KARVATSKIY, B.L., professor, doktor tekhnicheskikh nauk; KOROLEV, K.P. professor, doktor tekhnicheskikh nauk; MUCHKIN, I.N., kandidat tekhnicheskikh nauk; POPOV, G.V., inzhener; PROSKURNEV, P.G. inzhener; SAFON-TSEV, K.A., izhener: SEMICHASTNOV, I.F. dotsent, kandidat tekhnicheskikh nauk; SLOMYANSKIY, A.V., dotsent, kandidat tekhnicheskikh nauk; STEPANOV, A.D., dotsent, kandidat tekhnicheskikh nauk; SYROMYATNIKOV, S.P., akademik[deceased]; TERNOVSKIY, V.A., dotsent; kandidat tekhnicheskikh nauk; TRUBETSKOY, V.A., kandidat tekhnicheskikh nauk, KHOKHLOV, N.F., kandidat tekhnicheskikh nauk; SHARONIN, V.S., kandidat tekhnicheskikh nauk; SHLYKOV, Yu.P., dotsent, kandidat tekhnicheskikh nauk; YEVTUSHENKO, A.M. kandidat tekhnicheskikh nauk, retsenzent; IVANOV, V.N., professor, doktor tekhnicheskikh nauk, retsenzent; PANOV, N.I., dotsent, kandidat tekhnicheskikh nauk, retsenzent; SLOMYANSKIY, A.V., dotsent, kandidat tekhnicheskikh nauk, retsenzent; UTYANSKIY, L.I., inzhener, retsenzent; NETYKSA, V.M., professor, doktor tekhnicheskikh nauk, retsenzent;

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BARANOV, A.F., -- (Continued) Card 2.
TOPORNIN, G.S., inzhener, retsenzent; DOMBROVSKIY, A.B., dotsent; retsenzent; POYDO, A.A., kandidat tekhnicheskikh nauk, retsenzent; YAKOBSON, P.Ye., laureat Stalinskoy premii; dotsent; kandidat tekhnicheskikh nauk, retsenzent; POPOV. A.A., professor, doktor tekhnicheskikh nauk, retsenzent; PROSKURNEV, P.G., inzhener, retsenzent; SAFONTSEV, K.A , inzhener, retsenzent; SERAFIMOVICH, V.S., kandidat tekhnicheskikh nauk; retsenzent; TRAVIN, P.I., inzhener, retsenzent; FOKIN, K.F., kandidat tekhnicheskikh nauk, retsenzent; SHCHERBAKOV, V.P., inzhener, retsenzent; SHADUR, L.A., dotsent; kandidat tekhnicheskikh nauk, retsenzent; TIKHONOV, P.S., inzhener retsenzent; TKACHENKO, F.D., inzhener; retsenzent; BABICHKOV, A.M. professor, doktor tekhnicheskikh nauk, retsenzent; KOROSTYLEV, A.I. inzhener, retsenzent; LEVITSKIY, V.S., dotsent; kandidat tekhnicheskikh nauk, retsenzent; KLYKOV, A.F., inzhener, retsenzent; SOLOGUBOV, V.N. redaktor; SHISHKIN, K.A., redaktor; SLOMYANSKIY, A.V. redaktor; SALENKO, S.V., redaktor; YUDZON, D.M. tekhnicheskiy redaktor.

[Technical reference book for railroad men] Tekhnicheskii spravochnik zheleznodorozhnika. Redaktsionnaia kollegiia: A. F. Baranov, i dr. Glav.redaktor. E. F. Rudoi. Moskva, Gos.transp.zhel-dor.izd-vo. Vol. 6 [Rolling stock] Podvizhnoi sostav. 1952. 955 p. (MLRA 8:9)
(Railroads--Rolling-stock)

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VINOKUROV, M.V., redaktor

[Railroad cars] Vagony. 2. ispr. i dop. izd. Moskva, Gos. transp. zhel-dor. izd-vo, 1953. 704 p. (MLRA 7:6)
(Railroads--Cars)

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VINOKUROV, M.V., doktor tekhnicheskikh nauk

Problems of safe speeds and smooth running of freight cars. Sbor. trud. Akad. zhel. transp. no.2:50-67 '53. (MLRA 8:9)
(Railroads--Safety measures)

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VINOKUROV, M.V., doktor tekhnicheskikh nauk, professor [deceased]; KOROLEV, K.P., doktor tekhnicheskikh nauk, professor.

Effect of the mobility of the side sills of tender and car bogil trucks on wear of rims and rails. Sbor.trud.Akad.zhel.transp. no.4: 67-99 '56. (MLRA 10:2)
(Railroads--Rails) (Car wheels)

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