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L 26491-66

ACC NR: AP6013070

is exposed to oxygen, even at low pressure, during heating a second glow-curve peak appears and this is accompanied by change in the polarity of the photocurrent carriers (from n to p). Various experiments were carried out with pure, self-activated and impurity-activated ZnS and ZnO (including surface oxidized specimens) and several series of glow curves are reproduced. Data on the polarity of the current carriers in photoconductivity are also adduced. The curves and data demonstrate the effects of the synthesis conditions. A series of phosphors was prepared by heating different mixtures of ZnS with Cu_2S without flux at 1000°C, followed by reheating with quartz powder (to prevent caking) in sealed tubes at 1050°. These ZnS:Cu phosphors were studied immediately after preparation, after various heat treatments and after storage for some months at 20°. Their attributes differed considerably, again indicating the importance of synthesis and other conditions. It is pointed out that understanding of the peculiarities of the complicated chemical system constituted by copper-activated zinc sulfide luminophors requires further thorough investigation of the $ZnS-Cu_2S-Cu$ system. Orig. art. has: 1 formula and 6 figures.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 008/ OTH REF: 008

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GURETSKAYA Z.I.

48-5-11/56

SUBJECT: USSR/Luminescence

AUTHORS: Bundel' AA. and Guretskaya Z.I.

TITLE: Some Peculiarities in Luminescence Spectra of Sulfide-Selenide Luminophores (Nekotoryye osobennosti spektrov lyuminestsentsii sul'fid-selenidnykh lyuminoforov)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1957, Vol 21, #5, pp 667-668 (USSR)

ABSTRACT: Spectra of luminophores ZnS.ZnSe-Ag and ZnS.ZnSe-Mn were investigated. The stability of the Se-band was higher than the stability of the Zn-band with respect to the same activator in a sulfide luminophore, and increased with the increase in the concentration of selenide in the compound.

The Mn-band, unlike the bands of other activators (Zn,Ag,Cu, Se), did not shift towards longer wavelengths, when the content of ZnSe in a luminophore was increased.

It was discovered that ZnS.ZnSe can be activated also by the metalloid-phosphorus. The independent existence of the P-band in ZnS.ZnSe was proved by the behavior of this substance during

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48-5-11/56

TITLE: Some Peculiarities in Luminescence Spectra of Sulfide-Selenide Luminophores (Nekotoryye osobennosti spektrov lyuminestsentsii sul'fid-selenidnykh lyuminoforov)

a calcination in the air and H_2; the Se-band was quenched by calcination in H_2, whereas the P-band was manifested under these conditions; on the contrary, calcination in the air caused the quenching of the P-band and restoration of the Se-band with the initial intensity.

The report was followed by a short discussion.

One Russian reference is cited.

INSTITUTION: Chemico-Technological Institute im. Mendeleyev

PRESENTED BY:

SUBMITTED: No date indicated

AVAILABLE: At the Library of Congress

Card 2/2

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

25970

S/539/60/000/031/003/014
E036/E135

5.4500

AUTHORS: Bundel', A.A., Guretskaya, Z.I., and Bykovskiy, Ye.S.

TITLE: The use of fluidized bed method for an interaction of sulphide-selenide luminophors with gaseous substances

PERIODICAL: Moscow. Khimiko-tekhnologicheskiy institut. Trudy, No.31, 1960. Issledovaniya v oblasti khimii i tekhnologii elektrovakuumnykh materialov. pp. 20-28

TEXT: In the majority of cases luminescence of zinc sulphide and zinc sulphide-selenide luminophors is caused by some form of disturbance in the stoichiometry in the main substance of the luminophor - an excess of one of the components of the main substance or incorporation of a foreign element. The character and the degree of disturbance of the stoichiometry depend on the composition of the gaseous phase in contact with the substance during its ignition. In order to provide a good contact between the solid charge and the gaseous phase of a given composition, the authors applied the above method of heat treatment to an investigation of self-activated zincsulphide and zincsulphideselenide luminophors. The experimental procedure consisted of igniting

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10-15 g of an appropriate compound in a silica tube fluidized by a gas of the required composition. The losses of the material with the fluidizing gas were minimised by the self granulation of the charge. In the absence of melting, the granulation was done by charging somewhat wet material and fluidizing it before ignition. On drying, the charge forms granules from a few tenths to 1-2 mm in diameter. In the presence of a flux, the granulation takes place during the process of ignition. The composition and intensity of luminescent light of variously treated specimens (ZnO in H_2S; ZnS + 2% NaCl in argon; ZnS·Ag $1 \cdot 10^{-4}$ + 2% NaCl in argon; ZnS · ZnSe in argon and hydrogen and the same substances in air) was recorded. The extinction of luminescence of self-activated luminophors after their ignition in a stream of an inert gas indicated that their luminescence was caused by volatile activators - zinc and selenium and that the process of extinction is due to the extraction of the activator from the luminophor's crystals. An ignition in a stream of hydrogen also leads to extinction, but in this case it is caused by an increase in the concentration of the activators. The reversibility of the process

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The use of fluidized bed method for... S/539/60/000/031/003/014
E036/E135

of extinction, shown by the restoration of the output and spectral composition of the luminescence after ignition of an extinct specimen in air, indicates the ease of the exchange of the overstoichiometric zinc and selenium between solid and gaseous phases, as well as the existence of equilibrium ratios between the concentrations of zinc and selenium atoms in the solid and gaseous phases. A non-uniform velocity of extinction of zinc and selenium bands on ignition in argon and in hydrogen proves that the spectral curves of luminophors ZnS·ZnSe and ZnS·ZnSe·Ag which possess one maximum and no inflection points on the side branches, in fact represent a super-imposition of two bands - of zinc (respectively silver) and selenium. A.D. Pogorelyy and A.I. Rusanova are mentioned for their contribution in the field. There are 12 figures and 12 references: 8 Soviet, 2 German, 1 French and 1 English. The English language reference reads: Ref.11: H.A. Klassens, J. Electrochem. Soc., V.100, 72 (1953).

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

S/078/60/005/010/018/021
B004/B067

AUTHOR: Guretskaya, Z. I.

TITLE: Composition and Spectral Properties of Sulfide - Selenide Luminophores

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 10, pp. 2346-2349

TEXT: The author produced nonactivated sulfide - selenide luminophores from ZnS and SeO_2. Chemically pure ZnS was added to the calculated amount of SeO_2 dissolved in water. The ZnS had been supplied by the zavod imeni Semashko (Works imeni Semashko). After evaporation the mixture was annealed at 800°C for 15 min while 2% NaCl was added as a flux. The analytical data given in Tables 1,2 show that in all preparations the ratio Zn : (Se + S) is higher than one. Besides ZnS and ZnSe, the preparations contained also ZnO, partly in free state, partly as a solid solution in ZnS. Annealing in hydrogen or washing with acetic acid reduced the excess weight. The X-ray structural analysis of the

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Composition and Spectral Properties of Sulfide - Selenide Luminophores

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B004/B067

preparations showed cubic structure. The solubility of ZnO in cubic ZnS.ZnSe is lower than in hexagonal ZnS. As is shown in Table 3, the selenium content found in the preparations does not correspond to the reaction equation $ZnS + SeO_2 \longrightarrow ZnSe + SO_2$, but is lower. This is explained by the side reaction described by L. Ya. Markovskiy and R. I. Smirnova (Ref. 5), in which selenium evaporates:

$$2ZnS + 3SeO_2 \longrightarrow 2ZnSeO_3 + 2S + Se;\ 2ZnSeO_3 + 3S \longrightarrow 2ZnSe + 3SO_2;$$

$$ZnSeO_3 + S \longrightarrow ZnSO_3 + Se;\ ZnSeO_3 \longrightarrow ZnO + SeO_2;\ SeO_2 + S \longrightarrow SO_2 + Se.$$

There are 3 tables and 6 references: 3 Soviet and 3 US.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva (Moscow Institute of Chemical Technology imeni D. I. Mendeleyev)

SUBMITTED: July 9, 1959

Card 2/2

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

30210
S/081/61/000/019/043/085
B110/B101

24.3500

AUTHORS: Bundel', A. A., Guretskaya, Z. I., Bykovskiy, Ye. S.

TITLE: Application of the pseudoliquid layer to the reaction of sulfide-selenide luminophors with gaseous substances

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 19, 1961, 289, abstract 19K92 (Tr. Mosk. khim.-tekhnol. in-ta im. D. I. Mendeleyeva, no. 31, 1960, 20 - 28)

TEXT: The pseudoliquid layer was used for studying the self-activated ZnS and ZnS, Se luminescent compositions. The quenching of the luminescence after calcining the compositions in an inert gas current shows that their luminescence is caused by volatile activators, i. e., zinc and selenium. This quenching is due to extraction of the activators from the crystals of the luminescent composition. Calcination in a H_2 current also leads to quenching of the luminescence of self-activated compositions. In this case, however, the cause is an increase of activator concentration. The complete reversibility of the quenching process as evidenced by the restoration of the yield and spectral distribution of the luminescence

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Application of the pseudoliquid layer...

after calcining the quenched samples in air indicates the readiness with which an exchange of Zn and Se exceeding the stoichiometric amount takes place between the solid and gaseous phases and also the existence of an equilibrium ratio between the concentrations of Zn and Se in the solid and gaseous phases. The nonuniform quenching rate of the Zn and Se bands during calcination in Ar or H_2 enables the following conclusion: The spectral curves of the compositions ZnS, Se and ZnS, Se:Ag, which exhibit a peak in the absence of inflection points on the side branches are, in fact, the superposition of two bands, that of zinc (or silver) and that of selenium. 6 references. [Abstracter's note: Complete translation.]

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

32052

S/051/61/011/005/012/018
E202/E192

24.3500 (1137,1138)

AUTHORS: Bundel', A.A., Guretskaya, Z.I., and Noskova, M.N.

TITLE: Isolation of the selenium band in the spectra of the sulphide-selenide luminophors

PERIODICAL: Optika i spektroskopiya, v.11, no.5, 1961, 656-660

TEXT: The study of luminophors of the ZnS-ZnSe type, at -196, +20 and +120 °C, with the 30-fold variations of the intensity of excitation, by analysing their afterglow (decay) spectra, showed that the spectra of these luminophors contain two bands. One of these is due to zinc and the other to the introduction of the selenide. It was found that at room temperature and with the increased ZnSe content up to 10 wt.%, there was a steady suppression of the zinc band by the selenium band. When the ZnSe content exceeded 10 wt.% there was smooth displacement of the selenium band only, towards the longer wavelengths. The spectra at -196 °C showed that the centres of luminescence of the blue band of Zn are present up to the ZnSe content of 75 wt.%. The selenium band was isolated and clearly visible in high temperature

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Isolation of the selenium band ... S/051/61/011/005/012/018
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spectra (+120 °C), when the zinc band suffered temperature quenching. The spectra were obtained with the help of monochromator mark УМ-2 (UM-2) and a photomultiplier ФЭУ-19 (FEU-19).

There are 5 figures and 6 references: 2 Soviet-bloc and 4 non-Soviet-bloc. The English language references read as follows:

Ref.3: H.W. Leverenz. An Introduction to Luminescence of Solids, N.Y., 1950.
Ref.4: H.A. Klasens, J. Electrochem. Soc., v.100, 72, 1953.
Ref.5: G.R. Fonda. J.Opt.Soc.Amer., v.12, 917, 1952.

SUBMITTED: December 15, 1960

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

20848

S/048/61/025/003/037/047
B104/B202

24,3500 1155, 1160, 1138

AUTHORS: Pundel', A. A., Giaroleva, A. A., Guretskaya, Z. I., Danilevskaya, O. A., Tounai-Hua, and Sokolova, L. N.

TITLE: Effect of the chemical nature of the fluxes on the luminescence properties of zinc sulfide and zinc cadmium sulfide phosphors

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 3, 1961, 408-410

TEXT: This paper was presented at the 9th conference on luminescence (crystal phosphors) Kiyev, June 20 to 25, 1960. The authors attempted to check the hypothesis made by F. A. Kröger (Ref. 2: Kröger F. A., Hellingman J., Smit N., Physica, 15, 990 (1949)) in which he states that in the synthesis of sulfide luminophors a chlorine ion and the ions of trivalent metals act as coactivators. The authors quantitatively determined the Na^+ ion (by means of uranyl acetate), Li^+ ion (in form of a sulfate after separation of zinc with barium carbonate) and of the Cl^- ion (nephelometrically in form of AgCl) in the luminophors ZnS-Zn; ZnS-$5\cdot10^{-4}$Cu

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Effect of the chemical nature...

and ZnS-5·10^{-5}Cu. The luminophors had been tempered on air with 5 % NaCl at 950°C. The results of the analyses shown in Table 1 indicate that in the luminophors not only one chlorine ion but also an equivalent amount of a monovalent cation of the flux are fixed. This proves that the chlorine ion does not act as coactivator with respect to the activator introduced. Studies of the luminescence spectrum of the luminophor ZnS-Ag,Al which had been produced in exact accordance with the data by Kröger did not confirm the assumptions made by Kröger: the zinc band is depressed in the presence of Al on calcining in H_2S at exactly the same concentration of Ag+ (1·10^{-4} g/g ZnS) as on calcining with NaCl on air without addition of Al. The authors were able to prove only one effect which Kröger had described in his paper: in the presence of aluminum the zinc band does not suffer extinction when the luminophor had been calcined in H_2S. The mechanism of the effect of the Al flux suggested by Kröger has been studied in detail. The authors arrived at the conclusion that in ZnS luminophors Al^{+++} cannot function as coactivator since Al_2S_3 is not formed and Al_2O_3 is not soluble in ZnS. The authors also point to the strong effect of aluminum oxide on

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Effect of the chemical nature...

the crystallization of the fundamental substance: the grain size in the presence of Al_2O_3 is considerably smaller. In the following discussion A. M. Gurvich deals with the effect of the Cl^- ions on the formation of the luminescence centers and the effect of Al^{+++} and Ga^{+++} ions as coactivators. E. Ya. Aranova is mentioned. There are 2 tables and 3 non-Soviet-bloc references.

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22153
S/048/61/025/004/002/048
B104/B201

24.3500

AUTHORS: Bundel', A. A., Guretskaya, Z. I., and Taushkanova, L. B.

TITLE: Thermodynamic bases of the activation mechanism of sulfide- and sulfide-selenide luminophores

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 4, 1961, 445-449

TEXT: This paper has been read at the 9th Conference on Luminescence (Crystal Phosphors), Kiyev, June 20-25, 1960. It offers a comparison between experimental data, with conclusions being drawn from a sufficiently general thermodynamic viewpoint. The authors have proved earlier that the introduction of neutral activator atoms into the crystal is necessary for the formation of luminescence centers. The results obtained on that occasion, however, are not suited for a thermodynamic study of the consequences of temperature- and concentration gradients in the system. The greatest importance is attached to clarifying the self-activation mechanism of (Zn, Cd) (S, Se) luminophores. The authors have earlier been able to show that it is sufficient for the self-activation of a ZnS crystal in a

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Thermodynamic bases of...

sealed space to attain a temperature at which diffusion processes take a sufficiently rapid course. The following processes take place in this connection: (1) passage of a part of sulfide into the vapor phase to attain the saturation pressure of ZnS molecules in the system; (2) dissociation of sulfides in the gaseous phase. S_2 is formed, among others; (3) the neutral dissociation products are divided between gaseous phase and the crystal. For every annealing temperature there is a certain concentration of neutral zinc and sulfur atoms. Special investigations, in which it has been attempted to find the causes for the absence of sulfur bands in the spectrum of self-activated zinc sulfide, have confirmed these views. Zn(S, Se) luminophores constitute a better suited object for checking the above conception. The authors examined the spectra of different compositions of these luminophores at different excitation intensities in the temperature range of from -196°C to +120°C. Moreover, also the spectra of the afterglow have been examined. Some of the results are graphically illustrated in Fig. 1. In the behavior of the zinc band the authors note a proof of the dissociation mechanism of self-activation. Fig. 2 presents the concentration of selenium in the luminophore as a function of the selenium pressure in the gaseous phase. A different mechanism of selenium

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Thermodynamic bases of...

introduction may be observed from this diagram. Selenium adds to the anion - lattice sites, and forms positive holes and cation sites. The correctness of this assumption has been proved by a method, suggested by Ryvkin, for determining the sign of the carrier in photoexcitation. The authors conclude from the results that the penetration of selenium into the ZnS lattice at low pressures is a pure dissolution process. A chemical interaction of atomic selenium with S^{2-} ions begins only at high pressures and concentrations. Sulfur is ejected from the lattice, Se atoms are inactivated and pass over to the basic substance. In the final discussion, A. M. Gurvich acknowledges the benefits derived from the authors' examinations, but, at the same time, points out some serious drawbacks: (1) the authors consider the system as consisting of sulfides and dissociation products only; (2) the property of luminescence as a consequence of the appearance of neutral atoms does not follow from the thermodynamic considerations. N. I. Ivanova and M. A. Konstantinova-Shlezinger are mentioned. There are 3 figures and 5 Soviet-bloc references.

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L 41506-65 EWT(1)/EWT(m)/EWG(m)/EWP(t)/EWP(b) IJP(c) RDW/JD

ACCESSION NR: AR3010273 S/0081/63/000/012/0014/0014

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SOURCE: RZh. Khimiya, Abs. 12B55

AUTHOR: Guretskaya, Z. I.; Zhukov, G. V.; Bundel', A. A.

TITLE: Dependence of certain properties of luminophors of the ZnS-ZnSe series on the composition of the basic substance

CITED SOURCE: Tr. Mosk. khim.-tekhnol. in-ta im. D. I. Mendeleyeva, v. 39, 1962, 13-18

TOPIC TAGS: luminescence property, zinc compound, crystal lattice parameter

TRANSLATION: It is shown that Vegard's Law of additivity of lattice parameters is observed for mixed crystals of the ZnS-ZnSe series. The position of the maximum of the Se band and of the long wave boundary of the basic absorption band for zinc sulfide selenide luminophors is a linear function of the lattice parameters. With an identical initial intensity of the Se band for preparations with a selenide content from 10 to 100 mol %, the luminescence extinction temperature

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does not depend on the composition of the basic substance. With a constant intensity of excitation, the temperature stability of luminescence in the Se band decreases sharply from 250 to 75° with increased selenide content from 10 to 100 mol % at the excitation intensity selected in the work.

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

L 19654-63 EWT(1)/EWP(q)/EWT(m)/EWP(B)/BDS AFFTC/ASD RDW/JD

ACCESSION NR: AR3006973 S/0058/63/000/008/D054/D055

SOURCE: RZh. Fizika, Abs. 8D399 61

AUTHOR: Guretskaya, Z. I.; Bundel', A. A.

TITLE: Sulfide-selenide luminophors activated with manganese

CITED SOURCE: Tr. Mosk. khim.-tekhnol. in-ta im. D.I. Mendeleyeva, v. 39, 1962, 33-40

TOPIC TAGS: sulphide-selenide luminophor , manganese activated sulphide-selenide luminophor, manganese concentration effect

TRANSLATION: It is established that in sulfide-selenide luminophors the glow brightness of manganese decreases with increasing selenide content in the main substance, dropping to zero in the case of pure zinc selenide. The position and form of the emission band of the Mn remain unchanged, regardless of the composition of the base. A

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study of the influence of the manganese concentration on the spectra of luminophors with constant base composition has disclosed the presence of a threshold manganese concentration (1×10^{-3} g/g), below which the manganese band does not appear and the spectra of the self-activated luminophors remain constant. The authors propose that the glow centers in the activated Mn-sulfide and sulfide luminophors are the ions Mn^{2+} located near the defects due to the intrusion of Mn^{0} atoms in the lattice; the latter are the result of thermal dissociation of the chalcogenite during the heat treatment of the luminophor. A. Laysaar.

DATE ACQ: 06Sep63 SUB CODE: PH ENCL: 00

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APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GURETSKIY, A. [Huretski, A.] (Brestskiy rayon)

If you are a physician. Rab.i sial. 34 no.11:20 N '58. (MIRA 11:12)

(Women as physicians)

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GURETSKIY, A.A.; POLOTOVSKIY, G.M.

Using high-frequency currents in heating dirty wool. Tekst. prom. 18 no. 7:58-60 Jl '58. (MIRA 11:7)

(Woolen and worsted manufacture)
(Electric heating)

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GURETSKIY, A. [Huretski, A.] (Brest)

A "manager" of our roads of steel. Rab.i sial. 36 no.8:15-16 Ag '60. (MIRA 13:10)

(Railroads--Employees)

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GURETSKIY, I. Ya.

"Microchemical Analysis of Silicon-Organic Compounds." Sub 28 Nov 51, Moscow Order of the Lenin Chemicotechnological Inst imeni D. I. Mendeleyev.

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

SO: Sum. No. 480, 9 May 55

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

Guretskiy, I. Ya

AUTHORS: Kreshkov, A. P. ; Guretskiy, I. Ya. , Andreyev, P. A. 79-1-40/63

TITLE: The Conversion of Some Organosilicon Compounds With Cellulose-Nitrates (Vzaimodeystviye nekotorykh kremniyorganicheskikh soyedineniy s nitratami tsellyulozy)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol.28, Nr 1, pp.187-193 (USSR)

ABSTRACT: The authors had already earlier shown that certain organosilicon compounds enter into reaction with different anorganic and organic compounds which have active atoms or functional groups (H, Cl, OH, OR, NH_2 and others) and yield valuable products. But the conversion processes of the organosilicon compounds with cellulose nitrates had hitherto not been investigated. The present paper proves that, according to the prevailing conditions, the reaction of organosilicon compounds with non-etherified hydroxyl groups of cellulose takes place at the oxygen under the joining of the macromolecules of nitrocellulose by the silicon atoms (see formulae). The authors investigated the conversion of tetramethoxy-, tetraethoxy-, tetra-n-butoxy-, tetra-iso-amyloxy-, trimethylmethoxy-, diethyl-

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The Conversion of Some Organosilicon Compounds With Cellulose Nitrates

diethoxy- and diethyldiethoxy-silane with cellulose nitrates. They investigated the infrared spectra and the swelling heat of the reaction products of organosilicon compounds with the above-mentioned nitrates. It was found that in this process a reduction of the hydroxyl groups belonging to the elementary member of the cellulose molecule and a separation of alcohol takes place. These processes prove that the conversion of alkoxysilanes and alkylalkoxysilanes with cellulose nitrates mainly takes place at the expense of the conversion with non-etherified hydroxyl groups. Under certain conditions a decrease in nitrogen occurs in the reaction products, compared to the initial nitrate of cellulose, as well as a liberation of nitrogen oxides in the reaction process. All this indicates that this conversion probably also takes place at the expense of the superetherified nitrate groups of cellulose. There are 1 figure, 4 tables, and 26 references, 22 of which are Slavic.

ASSOCIATION: Moscow Chemical-Technological Institute (Moskovskiy khimiko tekhnologicheskiy institut)

SUBMITTED: November 27, 1956

AVAILABLE: Library of Congress

Card 2/2 1. Chemistry 2. Organic compounds-Infrared spectra

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

ANDREYEV, P.A.; KRESHKOV, A.P.; GURETSKIY, I.Ya.; MALAKHOV, R.A.

Certain properties of lacquer films based on cellulose nitrates modified by organosilicon compounds. Lakokras.mat. i ikh prim. no.1:13-17 '60. (MIRA 14:4)

(Films (Chemistry)) (Nitrocellulose)
(Silicon organic compounds)

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

S/661/61/000/006/053/081
D239/D302

AUTHORS: Guretskiy, I. Ya., Kreshkov, A. P. and Andreyev, P. A.

TITLE: Reaction of organo-silicon compounds with cellulose nitrates

SOURCE: Khimiya i prakticheskoye primeneniye kremneorganicheskikh soyedineniy; trudy konferentsii, no. 6: Doklady, diskussii, resheniye. II Vses. konfer. po khimii i prakt. prim. kremneorg. soyed., Len. 1958. Leningrad, Izd-vo AN SSSR, 1961, 226-227

TEXT: This is a discussion of the above paper (this publication, no. 2, p. 133) between I. Ya. Guretskiy, P. A. Andreyev, V. I. Pakhomov (NIIPM, Moscow) and M. V. Sobolevskiy (Moscow). The following topics are discussed: The difference in the properties of silicon nitrocellulose compounds and nitrocellulose; the quality of the films; the silicon content of the films. Modified organo-silicon compounds containing cellulose nitrates give films with lower inflammability and a higher temperature of combustion. Compounds

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with methoxy groups react more readily with cellulose nitrates. The films were tested with respect to the standard for lacquer films and results showed that the hardness was 5 - 8% lower than for nitrocellulose films but the adhesion to glass, brass and steel, elasticity, and impact strength were higher. The silicon content depends on the conditions of combination of the original compounds. Thus combination of cellulose with chemically pure organo-silicon compounds led to a product with a silicon content of 0.15 - 1.0%, combination in the presence of 0.01% $SiCl_4$ to a content of 0.3 - 7.0% and combination in a heterogeneous medium with 0.01% $SiCl_4$ to a small fraction containing around 20% silicon.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D.I. Mendeleyeva (Moscow Institute of Chemical Technology im. D. I. Mendeleyev)

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GURETSKIY, L.Z.

Rack pushers on electric carriages. Stroi.mat. 5 no.9:30 S '59. (MIRA 12:12)
(Brick industry--Equipment and supplies)

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GURETSKIY, N. Ya.

N. Ya. Guretskiy, A. P. Kreshkov and P. A. Andreyev, "The Methods of Combining Silicon-Organic Polymers with High-molecular Organic Substances."

Report presented at the Second All-Union Conference on the Chemistry and Practical Application of Silicon-Organic Compounds held in Leningrad from 25-27 September 1958.
Zhurnal prikladnoy khimii, 1959, Nr 1, pp 238-240 (USSR)

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

KONYUKHOV, B.P.; GURETSKIY, S.A.

Business accounting in the locomotive shed. Elek. i tepl. tiaga no.2:31-32 F '57. (MLRA 10:5)

1. Nachal'nik depo Chusovskaya Sverdlovskoy dorogi (for Konyukhov)
2. Inzhener Glavnogo upravleniya lokomotivnogo khozyaystva Ministerstva putey soobshcheniya (for Guretskiy).
(Railroads--Accounts, bookkeeping, etc.)

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GURETSKIY, S.A.; MIRONOV, K.A.; SHIRYAYEV, A.P., red., inzh.; BOBROVA, Ye.N., tekhn.red.

[Operating electric locomotives with interchangeable crews] Obsluzhivanie elektrovozov smennymi brigadami. Moskva, Gos. transp.zhel-dor.izd-vo, 1958. 66 p. (MIRA 11:12)
(Railroads--Management)

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

YEVDOKIMOV, I.I.; ALEKSEYEV, V.D.; ASNIKHMIN, A.K.; BAYEV, N.V.; BEGLAR'YAN, P.A.; BYCHKOV, I.A.; VESLOVA, Ye.T.; VYZHEKHOVSKAYA, M.P.; GURETSKIY, S.A.; DEMIDOV, I.M.; YESIPOV, Ye.P.; ZHUKOV, V.D.; ZELINSKIY, M.G.; ZOL'NIKOV, F.T.; ZOLOTOVA, L.I.; KIVIN, A.N.; KOMARNITSKIY, Yu.A.; KONSTANTINOV, A.N.; KUL'CHITSKAYA, A.K.; MAKSIMENKO, I.I.; MELENT'YEV, A.A.; MOROZOV, I.G.; MURZINOV, M.I.; OZEMBLOVSKIY, Ch.S.; OSTRYAKOV, K.I.; PANINA, A.A.; PAVLOVSKIY, V.V.; PERMINOV, A.S.; PERSHIN, B.F.; PRONIN, S.F.; PSHENNYY, A.I.; POKROVSKIY, M.I.; RASPONOMAREV, Ye.A.; SEMIN, I.N.; SKLYAROV, Yu.N.; TIBABSHEV, A.I.; FARBEROV, Ya.D.; FEDOROV, G.P.; SHUL'GIN, Ya.S.; YAKIMOV, I.A.; VERIHA, G.P., tekhn.red.

[Labor feats of railway workers; stories about the innovators] Trudovye podvigi zheleznodorozhnikov; rasskazy o novatorakh. Moskva, Gos.transp.zhel-dor.izd-vo, 1959. 267 p. (MIRA 12:9)
(Railroads) (Socialist competition)

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

SKLYAROV, Yu.N.; GURETSKIY, S.A.

Flanged brake shoes with hard insets. Elek. i tepl. tiaga 3 no.3:24-25 Mr '59. (MIRA 12:5)
(Electric railroads--Brakes)

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

LEVASHEV, Ye.D., inzh.; ASTAF'YEV, G.K., inzh.; GURETSKIY, S.A., inzh.; MIRONOV, K.A., inzh.; Prinimal uchastiye STRUCHKOV, Ye.I., inzh.; VINNICHENKO, N.G., kand. ekon. nauk, retsenzent; KULAGIN, N.N., inzh., retsenzent; NEVEZHIN, P.P., inzh., retsenzent; KALININ, V.K., kand. tekhn. nauk, red.; KHITROVA, N.A., tekhn. red.

[Economics, organization, and planning of electric transport] Ekonomika, organizatsiia i planirovanie elektrotiagovogo khoziaistva. [By] E.D.Levashev i dr. 2., perer. izd. Moskva, Transzheldorizdat, 1963. 286 p. (MIRA 16:9)
(Electric railroads--Management)

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

CHERNYSHEVICH, Fedor Ignat'yevich, inzh.; GURETSKIY, Semen Aleksandrovich, inzh.; KULISH, Viktor Fedorovich, inzh.; Prinimal uchastiye MIRONOV, K.A., inzh.; ROMADINA, I.V.; AYBASHEVA, T.V., red.

[Safety procedures in the repair of electric rolling stock] Tekhnika bezopasnosti pri remonte elektropodvizhnogo sostava. Moskva, Transport, 1965. 98 p. (MIRA 18:8)

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GURETSKIY, V. M., CAND TECH SCI, "PROBLEMS OF WORKING the STEEPLY ~~DIPPING~~ sloping ORE BODIES." MAGADAN, 1960. (MIN OF HIGHER AND SEC SPEC ED USSR. LENINGRAD ORDER OF LENIN AND ORDER OF LABOR RED BANNER MINING INST IMENI G. V. PLEKHANOV). (KL-DV, 11-61, 219).

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GURETSKIY, V.

New buoyage system on seas and lakes of the U.S.S.R. Mor.flot 7 no.5:43-46 My'47. (MLRA 9:5)

(Buoys)

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

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1. GURETSKIY, V.

2. USSR (600)

4. Harbors

7. "Sea ports of capitalist countries." ("Ports of the World. edited by A. Hurd"). Reviewed by V. Guretskiy Mor.flot 12 no. 11 1952

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

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

1. GURETSKIY, V. O.

2. USSR (600)

4. Names, Geographical - Japan

7. Russian geographical names in Japan. Izv. Vses. geog. obshch. 84 no. 6, 1952.

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

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

1. GURETSKIY, V.O.; VSES, IZV

2. USSR (600)

4. Discoveries (In Geography) - Marshall Islands

7. Forgotten discovery of Russian mariners in the Marshall Islands, V.O. Guretskiy, Izv. Vses, geog.ob-va 85 no. 2, 1953.

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

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

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GURETSKIY, V.O.

Russian geographical names in the Antarctic. Izv.Vses.geog.ob-va 86 no.5:457-465 S-O '54. (MLRA 7:10)
(Antarctic regions) (Names, Geographical)

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GURETSKIY, V.O.

"Russian navigators." V.S.Lupach, ed. Reviewed by V.O.Guretskii. Izv.Vses.geog.ob-va 86 no.6:559-561 N-D '54. (MLRA 8:2)
(Explorers)

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GURETSKIY, V.

Shortcomings of a reference book ("Seaports of Asia and Africa" by A. Hard. Reviewed by V. Guretskii). Mor. flot 18 no.12:30-31 D '58. (MIRA 12:1)

1.Ekspeditsionnoye sudno "Sedov."
(Harbors)

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

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L 32708-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/EWP(k)/EWP(h)/EWP(l) IJP(c) WW/EM

ACC NR: AP6011134 (A) SOURCE CODE: UR/0424/66/000/001/0167/0170

AUTHOR: Guretskiy, V. V. (Leningrad)

ORG: none

TITLE: Choice of optimum characteristic parameters of shock absorbers

SOURCE: Inzhenernyy zhurnal. Mekhanika tverdogo tela, no. 1, 1966, 167-170

TOPIC TAGS: shock absorber, vibration theory, vibration isolation, vibration spectrum

ABSTRACT: The general problem of determining the optimum characteristics of shock absorbers is considered for the case when the input acceleration profile (profile of the impact pulse) is rectangular. The problem is to choose a shock absorber which will give a desired factor of attenuation with a minimum required stroke. Three particular cases of shock absorbers are considered which have characteristic equations of the form

$$f(x, x') = k^2 x$$

(linear, undamped),

$$f(x, x') = k^2 x + h \operatorname{sign} x'$$

(dry friction),

and

$$f(x, x') = k^2 x + 2nx'$$

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ACC NR: AP6011134

(viscous friction) where x = relative coordinate of the object. After setting up the equations of motion, expressions for the optimum values of the characteristic constants in the above damper equations are derived by a combination of graphical and analytical methods. Orig. art. has: 40 formulas and 6 figures.

SUB CODE: 13/ SUBM DATE: 06May65/ ORIG REF: 001

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

L 48329-65 EWT(d)/EPF(n)-2/EWP(1) Po-4/Pq-4/Pg-4/Pu-4/Pk-4/Pl-4 IJP(c) WW/EC

ACCESSION NR: AP5010193 UR/0373/65/000/001/0159/0162

AUTHOR: Guretskiy, V. V. (Leningrad) 44

TITLE: Optimal control problem 9 B

SOURCE: AN SSSR. Izvestiya. Mekhanika, no. 1, 1965, 159-162 16

TOPIC TAGS: optimal control, differential equation, shock absorber

ABSTRACT: The author considers the problem of finding the piecewise continuous control u(t) satisfying

$$|u(t)| \leqslant u_0 \qquad (1)$$

which for given $\sigma(t)$ of the form

$$|\sigma(t)| \leqslant u_0 \quad (0 \leqslant t \leqslant \tau), \qquad |\sigma(t)| \leqslant u_1 < u_0 \quad (t > \tau) \qquad (2)$$

minimizes

$$I = \max_t |x(t)| \qquad (3)$$

where

$$x'' = \sigma(t) - u(t), \qquad x(0) = x_0, \quad x'(0) = x_0'. \qquad (4)$$

The problem reduces to that of solving a basic problem in shock absorption. As a result of nonadditivity of (3), the techniques of L. M. Pontryagin, V. G. Boltyanskiy, R. V. Gamkrelidze, and Ye. F. Mishchenko (Matematicheskaya teoriya

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ACCESSION NR: AP5010193

optimal'nykh protsessov. Fizmatgiz, 1961) and R. Bellman (Dinamicheskoye programmirovaniye. Izd-vo inostr. liter., 1960) are not usable, while the presence of an uncontrolled external influence makes it impossible to use the minimax methods of R. Bellman, I. Gliksberg, and O. Grose (Nekotoryye voprosy matematicheskoy teorii protsessov upravleniya. Izd-vo inostr. liter., 1962) and R. Bellman (Notes on control processes. I. On the minimum of maximum deviation., Quart. Appl. Math., 1957, v. 14, pp. 419-423). For final solution he formulates the problem as follows. Among all functions $U^{\cdot}(t)$ with piecewise continuous and bounded in modulus first derivative, for given $S^{\cdot}(t)$, find a function $U^{\cdot}_{-}(t)$ for which the values of the area formed by the mutual intersection of $S^{\cdot}(t)$ and $U^{\cdot}_{-}(t)$ satisfy

$$|\Sigma_0| \leqslant \xi_0, \quad |\Sigma_0 + \Sigma_1| \leqslant \xi_0, \ldots, \quad |\Sigma_0 + \Sigma_1 + \ldots + \Sigma_i| \leqslant \xi_0, \ldots \tag{5}$$

and the quantity ξ_0 takes on the least possible value. He shows that, given existence, either this solution is unique or there exists an infinite set of solutions. He gives the computation of $\min_u$ and $\max_t |x(t)|$ for the cases of a rectangular impulse, an exponential impulse, and a cosinusoidal impulse. Orig. art. has: 2 figures and 20 formulas.

ASSOCIATION: none

Card 2/3

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

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L 1972-66 EWT(d)/EWT(m)/EWP(w) EM

ACCESSION NR: AP5021451 UR/0146/65/008/004/0127/0132
62.567.1

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18
B

AUTHOR: Guretskiy, V. V.

TITLE: On the limits of feasibility of shock absorption

SOURCE: IVUZ. Priborostroyeniye, v. 8, no. 4, 1965, 127-132

TOPIC TAGS: shock absorber, sinusoidal wave, ordinary differential equation

ABSTRACT: Exact solutions are obtained to determine the minimal deflection of objects under various types of shocks. The types of shock loadings $\sigma(t)$ are divided into two categories as shown in Fig. 1 of the Enclosure. The analysis is based on a simple shock-absorber model shown in Fig. 2. The equation of motion for the object is given in the form $\ddot{x} + f(x,\dot{x}) = \sigma(t)$, the solutions of which lie between the two curves

$$x_+(t)=\int_0^t dt\int_0^t \sigma(t)\,dt+\frac{1}{2}u_0t^2;\quad x_-(t)=\int_0^t dt\int_0^t \sigma(t)\,dt-\frac{1}{2}u_0t^2.$$

In particular, $\Delta > \max_t x_-(t);\quad \Delta < \min_t x_+(t).$

Thus, for a pulse in the form of a sinusoidal half-wave, at $u_0/\sigma_0 < 0.6$, Δ is

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ACCESSION NR: AP5021451

equal to $\Delta = \max_t x_-(t) = \frac{(\sigma_* \tau)^2}{2 u_0}\left(1 - \frac{u_0}{\sigma_*}\right); \left(\sigma_* = \frac{2}{\pi} \sigma_0\right).$

Orig. art. has: 15 formulas and 4 figures. [04]

ASSOCIATION: Leningradskiy politekhnicheskiy institut im. M. I. Kalinina (Leningrad Polytechnic Institute)

SUBMITTED: 13Nov64 ENCL: 02 SUB CODE:

NO REF SOV: 001 OTHER: 000 ATD PRESS: 4090

Card 2/4

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ACCESSION NR: AP5021451 ENCLOSURE: 01

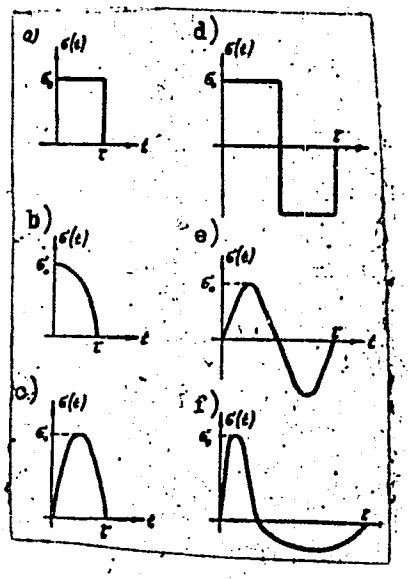

Fig. 1. Standard shock-pulse shapes

a, b, c - Case with finite variations in base velocity; d, e, f - zero-component base velocity.

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AAACCESSION NR: AP5021451

ENCLOSURE: 02

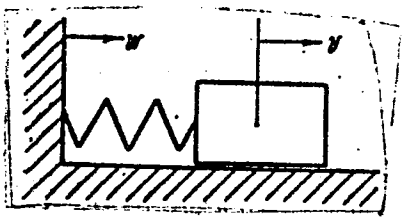

Fig. 2. Shock-absorber model

W - Absolute base coordinate;
V - absolute object coordinate.

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GURETSKIY, V.V.

Maximum deviation of an optimally damped unit. Trudy LPI 252:16-23 '65. (MIRA 18:9)

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GURETSKIY, V.V.; Shturman

Sailing directions as the collective work of many generations of navigators. Mor. flot. 24 no.8:16-18 Ag '64. (MIRA 18:9)

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GURETSKIY, V.V. (Leningrad)

Maximum protection of equipment from shock. Izv. AN SSSR. Mekh. no.2:76-81 Mr-Ap '65. (MIRA 18:6)

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[illegible] V.

[illegible] Captain's manual. Mir. [illegible] 3:45 Mr '65.

(MIRA 18:4)

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

3318. TREATMENT OF GONORRHOEAL POLYARTHRITIS WITH ADRENOCORTICOTROPIC HORMONE (Russian text) - Gurev A. N. - NAUCH. RAB. I LEN. VOEN. -MORSK. GOSP. 1957 (111-113)

ACTH treatment was carried out as follows: the patients received 10 units 4 times daily during the first 5 days, then 10 units twice daily until a total dose of 1000 units was reached. Follow-up of the patients for 2.5 months after discharge from the hospital showed that they were well and fit for military service. (S)

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L 28886-66 EWT(m)/EWP(w) IJP(c) EM/WW

ACC NR: AT6019153 SOURCE CODE: UR/2563/65/000/252/0016/0023

AUTHOR: Guretskiy, V. V.

ORG: none

19
B+1

TITLE: Maximal deviation of an optimally damped object

SOURCE: Leningrad. Politekhnicheskiy institut. Trudy, no. 252, 1965, 16-23

TOPIC TAGS: vibration damping, mechanical engineering

ABSTRACT: A further generalization of an earlier article by the same author on the problem of optimal damping, for on object installed on several dampers when the object has more than one degree of freedom. The movement equations of the damped object are writted in generalized coordinates $x_1, x_2, \ldots, x_n$, where x_i is deformation of the i-th elementary damper in the direction of its axis (each actual damper is divided into a set of elementary dampers with axes corresponding to the main stiffness axes of the actual damper) and n is the number of such elementary dampers. Examples analysed included an object resting on two dampers, and an object resting on two dampers, with two additional dampers located one on each side. Orig. art. has: 2 figures and 56 formulas /JPRS/

SUB CODE: 13 / SUBM DATE: none / ORIG REF: 003

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GUREV, A.V.

17857* (The Coefficient of Transverse Deformation in the Elastic Region.) O koeffitsiente poperechnoi deformatsii v uprugoi oblasti. A. V. Gurev. *Zhurnal Tekhnicheskoi Fiziki*, v. 24, no. 8, Aug. 1954, p. 1441-1447.

Experimental data show that Poissons ratio does not change with C content of the steel. A new material constant is introduced based on the non-uniformity of microelements in the plastic state. Tables, graphs. 6 ref.

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[illegible], T. [illegible]

Astronomy

"System of the world from ancient times to the present day." G. A. Gurev. Reviewed by Yu. Perel'. Astron. zhur. 29, no. 4, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952, Unclassified

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GUREV, Grigoriy Abramovich; SHEVELEV, A., redaktor; IGNAT'YEVA, A., tekhnicheskiy redaktor.

[How the human race originated] Kak proizoshel chelovecheskii rod. [Moskva] Moskovskii rabochii, 1955. 102 p. (MLRA 8:11)
(Man--Origin)

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GUREV, Grigoriy Abramovich; SAMSONENKO, L.V., redaktor; AKHLAMOV, S.N., tekhnicheskiy redaktor

[What is the universe] Chto takoe vselennaia. Izd. 2-e, perer. Moskva, Gos.izd-vo tekhniko-teoret. lit-ry, 1955. 198 p.
(Cosmology) (MLRA 9:2)

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GUREV, G.A.

PHASE I BOOK EXPLOITATION 240

Gurev, Grigoriy Abramovich

Chto takoye vselennaya (What the Universe is) 3d ed., Moscow, Gostekhizdat, 1957, 198 p. illus. 50,000 copies printed.

Ed.: Samsonenko, L.V.; Tech. Ed.: Akhlamov, S.N.; Corrector: Belitskaya, Y.A.

PURPOSE: This book is a popular presentation of the materialistic concept of astronomy.

COVERAGE: This book presents basic facts concerning the structure of the universe, the nature of its component parts, their origin, and development. The inadequacy of the religious-idealistic position is stressed. Personalities: Maksutov, D.D., inventor of the mirror-lens telescope used at the Pulkovo Observatory;

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Popov, A.S.; Tikhov, G.A.; Deych, A.N.; Ambartsumyan, V.A.; Gordeladze, Sh.G.; Fesenkov, V.G.; Kukarkin, B.V.; Kalinyak, A.A.; Krasovskiy, V.I.; Nikonov, V.B.; Ogorodnikov, K.F.; Parenago, P.P.; Shlovskiy, I.S.; Professor; Belopol'skiy, A.A.; Shayn, G.A.; Krat, V.A.; Martynov, D.Ya.; Masevich, A.G.; Rozkhovskiy, D.A.; Markaryan, B.Ye.; Pariyskiy, N.N.; Shmidt, O.Yu,; Academician; Gurevich, L.E.; Lebedinskiy, A.I.; Levin, B.Yu.; Khil'mi, G.F.

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GUREV, G.A., kand. filos. nauk

Discussion on natural selection. Nauka i zhizn' 26 no.9:45-50 S '59. (MIRA 13:1)

(Natural selection)

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GUREV, G.A., kand.filos.nauk

Churchmen want to forget it. Nauka i zhizhn' 27 no.2:43-49 F '60. (MIRA 13:6)

(Religion and science)

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GUREV, G.A., kand.filos.nauk

Persecutors of the reason. Nauka i zhizn' 27 no.9:51-56 S '60. (MIRA 13:9)

(Religion)

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GUREVA, Z.

"Calendar for women." Rabotnitsa 34 no. 12:30 D '56.
(MLRA 9:12)

(Calendars)

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

MOVCAN, B.A.; RABKIN, D.M.; GUREVIC, S.M.; ZAGREBENJUK; ENBULAJEV, N. [translator]

Technological peculiarities in welding by electron beam in vacuum. Zavarivac 5 no.4:12-13 '60.

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

1. GUREVICH, A.

2. USSR (600)

4. Technology

7. Hollow resonators and wave guides. Moskva, Sovetskoe radio, 1952

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

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

1. CURNVICH, A.

2. USSR (600)

4. Tractors

7. Improving the construction of separate units of the DT-54 tractor. Tekhsov. MTS 13 No. 1952.

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

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

KAPLAN, N.; GUREVICH, A.,

Building meat combines in the Crimea. Mias. ind.SSSR 26 no.6: 36-39 '55. (MLRA 9:2)

1.Ciprenyase.
(Crimea--Meat industry)

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GUREVICH, A.

Concerning a lumbering camp. Sov. profsoiuzy 7 no. 7:42-45 Jl '58. (MIRA 11:8)

1. Zaveduyushchiy organizatsionno-massovym otdelom obkoma profsoyuza rabochikh lesnoy, bumazhnoy i derevoobrabatyvayushchey promyshlennosti. (Perm Province--Lumbering)

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BOGUN, I.; GUREVICH, A.

Urgent tasks of specialization in machinery manufacturing.
Vop.ekon. no.1:133-135 Ja '59. (MIRA 12:1)
(Machinery industry)

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

BOLDYREV, P.; KAPLAN, N.; GUREVICH, A.

Selecting the type and capacity of meat industry enterprises under construction. Mias.ind.S.S.S.R, 33 no.6:29-33 '62. (MIRA 16:1)

1. Gosudarstvennyy institut po proyektirovaniyu predpriyatiy myasnoy promyshlennosti.

(Meat industry)
(Factories—Design and construction)

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SHUMEYKO, G.; PIMENOV, P.; ORFANITSKIY, V.; VLADYCHENKO, I.; RYABOV, N.; YEGORICHEV, A.; TARNOPOL'SKIY, A.; GURVICH, A.; USHATIKOV, N., profsoyuznyy aktivist

Let's strengthen fraternal international connections. Sov. profsoiuzy 16 no.16:49-54 Ag '60. (MIRA 13:8)

1. Nachal'nik Tsentral'nogo turistsko-ekskursionnogo upravleniya Vsesoyuznogo tsentral'nogo soveta profsoyuzov (for Shumeyko). 2. Predsedatel' TSentral'nogo komiteta profsoyuza rabochikh ugol'noy promyshlennosti (for Vladychenko). 3. Sekretar' TSentral'nogo komiteta profsoyuza rabochikh elektrostantsiy i elektropromyshlennosti (for Ryabov). 4. Predsedatel' zavkoma Kuznetskogo metallurgicheskogo kombinata (for Yegorichev). 5. Predsedatel pravleniya Doma kul'tury stroiteley "Oktyabr'" (for Tarnopol'skiy). 6. Predsedatel' komissii po zarubezhnym svyazyam zavodskogo komiteta stankostroitel'nogo zavoda imeni Sergo Ordzhonikidze (for Gurvich). 7. Avtomobil'nyy zavod imeni Likhacheva (for Ushatikov).
(Russia--Relations (General) with foreign countries)

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VOLOKHONSKIY, N.G., inzh.; GUREVICH, A.A., inzh.; KOMLEV, A.I., inzh.

New devices designed by the Planning and Design Institute of Overall Automation of the Food Industry. Mekh. i avtom. proizv. 17 no.5:25-27 My '63. (MIRA 16:6)

(Food industry) (Automation)

APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3"

"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GUREVICH, A., kand.ekonomicheskikh nauk

Prospects for the expansion of passenger transportation.
Rech. transp. 21 no.6:10-11 Je '62. (MIRA 15:7)
(Merchant marine--Passenger traffic)
(Inland water transportation)

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GUREVICH, A.A., uchitel'

Work of a school club on the study of algae. Biol. v shkole no.1: 83-84 Ja-F '62. (MIRA 15:1)

1. Shkola No.210, Leningrad.
(ALGAE)

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GURVICH, A.A., inzh.

New type of mine in the Karaganda Basin. Ugol' 34 no.1:11-15 Ja '59. (MIRA 12:1)

1. Karagandagiproshakht.
(Karaganda Basin--Coal mines and mining)

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GUREVICH, A.A.

Observations on the formation and germination of zygotes in Spirogyra weberi Kutz. Bot. zhur. 46 no.1:112-115 Ja '61. (MIRA 14:3)

1. 210-ya srednyaya shkola, Leningrad.
(Algae) (Zygotes)

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GUREVICH, A.A.; TRUBACHEV, I.N.; [illegible], M.S.

Effect of hydrogen peroxide on the reduction of nitrates in a green plant. Dokl. AN SSSR 156 no. 2:457-460 My '64. (MIRA 17:7)

1. Institut fiziki Sibirskogo otdeleniya AN SSSR. Predstavleno akademikom N.M.Sisakyanom.

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

GUREVICH, A. N.

CN

19

The rate of solution of wollastonite in sodium silicates in relation to temperature. O. K. Botvinkin and A. A. Gurevich. *Monograph on Physics and Phys. Chem. of Glass* (Moscow) 1933, 34; *J. Soc. Glass Tech.* 18, 392A.—A study was made of the soln. of synthetic wollastonite in a pure glass of the compn. $Na_2Si_2O_5 + 0.7SiO_2$, corresponding to the eutectic mixt. according to G. W. Morey and F. C. Kracek. The wollastonite, ground in an agate mortar, was added to the molten Na silicate in a quantity of 3 g. per 20 g. of melt. The crucible contents were immediately stirred with a Pt spatula and maintained at a const. temp. The times of complete soln. (in min.) and temps., resp., were: 1440, 1035°; 900, 1125°; 300, 1192°; 120, 1210°; 60, 1240°; 30, 1290°. The following formula is proposed for the process of soln.: $\log t = A - B \log T$, where t = time of complete soln. in min., T = abs. temp., A and B = consts. relative to solvent and dissolved substance. In the present case $A = 100{,}047$ and $B = 31{,}100$.

G. G.

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PROCESSES AND PROPERTIES INDEX

Determining the germination of seeds by detecting the embryo respiration with dinitrobenzene. A. A. Gurevich. *Khimizatsiya Sotsialist. Zemledeliya* (Moscow) No. 4, 96-105(1935).—The method is based on the property of living cells to reduce dinitrobenzene in the process of respiration. The reduction products, nitrophenylhydroxylamine and nitraniline, distribute themselves through the cell tissues and reacting with ammonia the nitrophenylhydroxylamine gives a characteristic color reaction which is an indication of the germination. J. S. Joffe

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CA

1/k

Reduction of o-dinitrobenzene in green plants. A. A. Gurevich. *Biokhimiya* 6, 4/5, 407-75(1941)(German summary).—o-Dinitrobenzene (I) is reduced in the living tissue of plants to o-nitrophenylhydroxylamine (II) then to o-nitraniline. The effect of air, O and illumination on this reaction was investigated in the roots and leaves of wheat and shoots of *Elodea* (?). Air hampers the reduction. In darkness good aeration arrested completely the reduction of I in leaves. Light promoted the reduction, and even good aeration could not prevent the reduction of I and II. The reduction of I in green plants is detd. by two mutually interdependent factors. When the O supply is limited, the reduction takes place in the respiratory cells; when the aeration is good, the reduction of I in green cells takes place only in light. It is concluded that in the expts. of Warburg and Negelein (cf. C. A. 15, 380) a photochem. reduction of nitrates took place which was independent of the assimilation of CO_2.

M. Hosch

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

CA

11 D

Reduction of o-dinitrobenzene in green plants. A. A. Gurevich (Lab. Plant. Physiol. and Microbiol., K. A. Timiryazev Agr. Acad., Moscow). *Compt. rend. acad. sci. U.R.S.S.* 47, 646-8(1945)(in English); *Doklady Akad. Nauk S.S.S.R.* 47, 672-5(1945), cf. C.A. 36, 6578[illegible]. —Severed green leaves of wheat were placed in solns. of o-dinitrobenzene (I), in sealed test tubes, contg. filter paper soaked in 30% NaOH or KOH. Under these conditions I was readily reduced to o-nitroanaline when the tubes were exposed to light for 24 hrs., showing that this reaction proceeds independently of the assimilation of CO_2. The reaction is $C_6H_4(NO_2)_2 + 2H \rightarrow C_6H_4NO_2NH_2 + O_2$ and this reaction is used to prove that the assimilation of CO_2, as well as many other reduction processes that take place in chloroplasts under the influence of light, are brought about by H activated in the course of a photochem. reaction.

J. E. Webster

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PROCESSES AND PROPERTIES INDEX

CA

11 D

Reduction of o-dinitrobenzene in green plants theory of regulation of protein exchange in plants A. A. Gurevich (Lab. Plant Physiol. Microbiol., K. A. Timiryazev Agr. Acad., Moscow). *Doklady Akad. Nauk S.S.S.R.* 48, 123-6(1945). *Compt. rend. acad. sci. U.R.S.S.* 48, 117-20(1945); cf. *Biokhimiya* 6, 16-(1941). The reduction of o-dinitrobenzene (I) to o-nitrophenylhydroxylamine and o-nitroaniline is used to det. the oxidation-reduction potentials of wheat leaves (II). In the dark under full aeration, there was no reduction of I but intense reduction with impeded air supply. Hence under natural conditions II do not suffer a considerable drop in oxidation potential (III) in the dark. In the light, III is very low in the chloroplasts (IV) since I undergoes reduction due to the activity of IV. The exptl. evidence is opposite to that required by the theory of Mothes (cf. C.A. 28, 3442[1]) for protein exchange. Carl S. Gillett

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PROCESSES AND PROPERTIES INDEX

11 D

CA

Reduction of o-dinitrobenzene in the light by extracellular isolated chloroplasts. A. A. Gurevich (Tomiriazev Agr. Acad., Moscow). *Compt. rend. acad. sci. U.R.S.S.* **55**, 263-6(1947)(in English); cf. C. I. 40, 4111[8], 4117[8]. Suspensions of chloroplasts, prepd. by grinding fresh leaves of *Primula*, *Stellaria media* or *Atriplex* in H_2O, sugar solns. or phosphate-buffered (pH ~ 8) sugar solns., are shown to reduce o-$(O_2N)_2C_6H_4$ in the light to o-$O_2NC_6H_4NHOH$ and then to o-$O_2NC_6H_4NH_2$. As the chloroplasts were found to be very sensitive to o-$(O_2N)_2C_6H_4$, the reagent was introduced on an impregnated filter paper strip, the reaction time being usually 1 hr. No differences were observed in the reaction as to the kind of media employed. In the absence of light only a trace of o-$O_2NC_6H_4NHOH$ was found on prolonged contact. Since chloroplasts outside the cell lose the ability to reduce CO_2, it follows that the products of CO_2 reduction cannot serve as an H-donor, and the formation of active H is directly connected with the photochem. process within the chloroplast. R. W. Fleming

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"APPROVED FOR RELEASE: 03/20/2001 CIA-RDP86-00513R000617410009-3

Photosensitizing action of chlorophyll on oxidation-reduction reactions. A. A. Gurevich. *Doklady Akad. Nauk S.S.S.R.* **59**, 937-40(1948). Chlorophyll in soln has the properties of a photocatalyst which activates H, i.e., it is a photodehydrase. This effect appears only in spontaneous oxidation-reduction reactions. Chlorophyll soln. (5 ml.) in EtOH (direct plant ext.), 0.5 ml. $PhNH-NH_2$ soln (10% in alc.), and 0.5 ml. o-dinitrobenzene soln. (satd. alc. soln.) were mixed in test tubes and irradiated by an incandescent lamp (heat filter used); the control was not illuminated. The expt. was run for 0.5-3.0 hrs. and the resulting o-nitrophenylhydroxylamine was estd. by addn. of NH_4OH soln., which gives a violet color reaction. In the controls the reaction did not take place, until NH_4OH was added, which showed that the reaction was inherently possible. The irradiated samples showed significant progress of the reaction even in a 0.5-hr. period. Substitution of ascorbic acid for $PhNHNH_2$ gave similar results.

G. M. Kosolapoff

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

11A

CA

Catalytic action of chlorophyll-hemin and iron on oxidation-reduction reactions. A. A. Gurevich. *Doklady Akad. Nauk S.S.S.R.* 64, 369-71(1949); cf. *C.A.* 42, 6244g.—Chlorophyll-hemin (prepd. by replacement of Mg in the pigment by Fe, by treatment with Fe acetate in warm AcOH) in EtOH soln. was investigated in the systems: $PhNHNH_2$ (H donor) and *o*-dinitrobenzene (H acceptor). Mixing alc. solns. of the components in the presence of a little NH_4OH gives a deep red-violet color within 30 min. (indicating H transfer), and immediately in the presence of water (in aq. soln. the catalysis is not required). $FeCl_3$ also has the same effect in EtOH soln. Both catalysts act as dehydrogenases which transfer protons from one mol. to the other. G. M. Kosolapoff

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11 C

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Model of bacterial photosynthesis. A. A. Gurevich (K. A. Timiryazev Agr. Acad., Moscow). *Doklady Akad. Nauk S.S.S.R.* **68**, 525-6(1949).—Chlorophyll in soln. exhibits photosensitizing action on transfer of H from H_2S to *o*-dinitrobenzene, as it does in such transfers from phenylhydrazine or ascorbic acid (*C.A.* **42**, 6344*g*.), as shown by *in vitro* expts. The photosynthetic activity of green S bacteria appears to have points of analogy to the above activity of chlorophyll *in vivo*. G. M. K.

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GUREVICH, A-A

Gurevič, A. A., and Rohlin, V. A. Approximation theorems for measurable flows. Izvestiya Akad. Nauk SSSR. Ser. Mat. 14, 537–548 (1950). (Russian)

Detailed proofs of results announced earlier [Doklady Akad. Nauk SSSR (N.S.) 64, 619–620 (1949); these Rev. 10, 549].

P. R. Halmos (Chicago, Ill.).

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Catalytic action of copper on oxidation-reduction reactions. A. A. Gonsevich (K. A. Timiryazev Agr. Acad., Moscow). *Doklady Akad. Nauk S.S.S.R.* 82, 431-3 (1952).—Test-tube expts. on oxidation-reduction reactions in the system ascorbic acid (I) or $PhNHNH_2$ (II) and o-$(O_2N)_2C_6H_4$, with I or II acting as H-transfer agent, were run, in which violet o-nitrophenylhydroxylamine color is developed in alk. soln. $CuSO_4$ and $Cu(OAc)_2$ were used as catalysts. In pure H_2O the effect of Cu is slight and only after 24 hrs. a color (yellow) is seen. In 80% EtOH the reaction is visible in 20 min. with 0.0001 *M* Cu soln.; Et_2O accelerates the reaction even more, possibly acting as a catalyst also. Thus Cu ions with EtOH act as a dehydrase. O_2 or H_2O_2 added to the system accelerates the reaction 5-10-fold; no reaction occurs without Cu. The H transfer to dinitrobenzene is spontaneous and the "initiation" reaction of O_2 or H_2O_2 serves merely as an activator. EtOH or Et_2O can be replaced by chick-egg protein, where Cu complex acts as a model of ascorbic acid oxidase. G. M. Kosolapoff

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GUREVICH, A. A.

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General & Physical Chemistry

Catalytic action of iron on reduction of *o*-dinitrobenzene by ascorbic acid. A. A. Gurevich (K. A. Timiryazev Agr. Acad., Moscow). *Doklady Akad. Nauk S.S.S.R.* 92, 543–4 (1953); cf. *C.A.* 45, 7600h.—To mixts. of satd. aq. solns. of *o*-dinitrobenzene and 30–50 mg. ascorbic acid per 10 ml. of soln. were added a few drops of 30% H_2O_2 and a trace of $FeSO_4$. The reduction to bright yellow *o*-nitrophenylhydroxylamine took place only when all components were present; without Fe several days were necessary to produce the color. The possible course of reactions is: reaction between ascorbic acid and H_2O_2 yields H_2O and dehydroascorbic acid; the H_2O at the instant of its formation activates another mol. of ascorbic acid, which loses H_2-forming dehydroascorbic acid while the H_2 forms an active perhydride $H_2O.H_2$, after which the induced reaction takes place in which this perhydride reacts with the dinitrobenzene to form the hydroxylamine deriv. and H_2O. Fe^{++}, being a peroxidase-type substance, catalyzes the reduction-oxidation reaction.

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