28(5)

AUTHORS: Shvetsov, V. B., Pavlushkin, N. M. SOV/32-25-7-28/50

TITLE: News in Brief (Korotkiye soobshcheniya)

PERIODICAL: Zavodskaya laboratoriya, 1959, Vol 25, Nr 7, p 862 (USSR)

ABSTRACT: V. B. Shvetsov (Ural'skiy nauchno-issledovatel'skiy khimicheskiy institut) (Ural Scientific Chemical Research Institute) suggest a device for using the recording galvanometer as a contact galvanometer. Its function as a recording galvanometer was not influenced by its use as a contact galvanometer. In principle, the device is a contact arrangement (Fig) by which the minimum and maximum temperature of a furnace can be fixed. N. M. Pavlushkin (Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva) (Moscow Institute of Chemical Technology imeni D. I. Mendeleyev) describe the preparation of corundum cuts which are used in the investigation of baked corundum samples. The prismatic samples (three samples: 5 x 5 x 18 mm) are pasted on to steel disks (diameter: 25-30 mm) and fixed to a grinding roll with 100 rpm. The samples are cut on cast iron disks (of the type SChM 32-52) with electrocorundum powder. The following substances are used in cutting: electrocorundum Nr 320 for ten minutes, M-10 for ten minutes, M-5

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for 10 minutes, and alumina (annealed at 1450°, grain > 2 μ) for 20 minutes. After cutting the samples are polished. There is 1 figure.

ASSOCIATION: Ural'skiy nauchno-issledovatel'skiy khimicheskiy institut (Ural Scientific Chemical Research Institute). Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva (Moscow Institute of Chemical Technology imeni D. I. Mendeleyev)

PAVLUSHKIN, N. M., Doc Tech Sci (diss) -- "Investigation of sintered corundum", Moscow, 1959. 33 pp (Min Higher and Inter Spec Edc RSFSR, Moscow Order of Lenin Chem-Tech Inst im D. I. Mendeleyev), 220 copies (KL, No 4, 1960, 124-

PAVLUSHKIN, N.V., inzh.

Aid to technologists and designers. Sudostroenie 31 no.4:49-51 Ap '65. (MIRA 18:8)

PAVLUSHINS, Konstantin Andreyevich, inzh.; LAUBERTE, A.[translator]; LIEPINS, J., red.; ZAGERS, A., tekhn. red.

[What the young concrete worker has to know] Kas jazina jaunam betonetajam. Riga, Latvijas Valsts izdevnieciba, 1962. 60 p. (MIRA 16:7)
(Concrete construction)

PAVLUSHKOV, A. P.

PAVUSHKOV, A. P.
ed. Gidrograficheskii spravochnik po bassejnam rek SSSR. Moskva, ONTI, 1936.
xvuuum 646 p. (Materialy po gidrologii, gidrologii, gidrografii i vodnym silam SSSR, no, 34, seriia I) DLC: UNclass.

SO: LC, Soviet Geography, Part I, 1951, Uncl.

PAVLUSHKOV, A.P., inzh.

First plenary session of the All-Union Engineering Research Section of the Central Administration of the Power Industry Technological Department. Gidr.stroi. 31 no.4:61 Ap '61. (MIRA 14:5)
(Electric power production)

PAVLUSHKOV, L.S.

Odnoshpindel'nye tokarnye avtomaty; rukovodstvo po naladke. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1955. 195 p. illus., diagrs. (Part title)

Automatic single-spindle lathes; manual for the setting up of lathes. (In Russian)

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1955.

PAVL[illegible], I.V., [illegible]OV, [illegible].

"Soviet KT-12 Tractor on a Lengthened Chassis" Les Prom No 5, May 1951 W-22333

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001239720003-4"

PAVLUSHKOV, L. V. (Engr.) and ORLOV, S. F.

"Soviet KT-12 Tractor on a Lengthened Chassis," Lesnaya Promyshlennost', No 5, 1951.

Translation W-22833, 23 May 52

PAVLUSHKOV, V.V., inzh.

Bridge piers on centrifuged shell-pile foundations. Avt. dor. 21 no.4:4-5 Ap '58. (MIRA 11:4)
(Bridges, Pile)

AR'YEV, Yu.A., Inzh.; PAVLISHKOV, V.V., Inzh.; CHEL[illegible], V.A., Inzh.

Cantilever erection of reinforced-concrete spans made of blocks with dry seams. Transp. stroi. 13 no.1:17-22 Ja '63 (MIRA 16:2)

AR'YEV, Yuriy Alekseyevich; PAVLUSHKOV, Vladimir Vsevolodovich; CHEZHIN, Vladimir Aleksandrovich; IVANOVSKAYA, F.M., red.

[Cantilever erection of reinforced concrete bridges] Sooruzhenie zhelezobetonnogo mosta navesnoi sborki. Moskva, Transport, 19[illegible]. 31 p. (MIRA 18:4)

PAVLUSHKOV,V.V., inzhener; TELYAYEV,P.I., inzhener

Placing bridge spans with the aid of floating supports. Avt. dor. 18 no.3:9-10 My-Je '55. (MLRA 8:9)
(Bridge construction)

AR'YEV, Yuriy Alekseyevich; LUGA, Aleksandr Aleksandrovich; PAVLUSHKOV, Vladimir Vsevolodovich; SOBAKIN, Aleksandr Vladimirovich; CHEZHIN, Vladimir Aleksandrovich; SERGEYEV, A.P., red.; GALAKTIONOVA, Ye.N., tekhn.red.

[Constructing large bridges with supports on pile rafts] Postroika bol'shogo mosta s oporami na svainykh rostverkakh. Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'nogo transp. i shosseinykh dorog RSFSR, 1959. 50 p. (MIRA 13:4)
(Bridges--Foundations and piers)

IVANOV, G.A., inzhener; SHATSMAN, I.M., dotsent; PAVLUSHOV, E.D., inzhener, redaktor; VERINA, G.P., tekhnicheskiy redaktor

[New methods of repairing locomotives] Novoe v tekhnike remonta parovozov; opyt parovozoremontnykh zavodov. Moskva, Gos. transp. zhel.-dor. izd-vo, 1955. 96 p. (MLRA 9:6)
(Locomotives--Repairs)

ALFEROV, A.A.; ARTEMKIN, A.A.; ASHKENAZI, Ye.A.; VINOGRADOV, G.P.; GALEYEV, A.U.; GRIGOR'YEV, A.N.; D'YACHENKO, P.Ye.; ZALIT, N.N.; ZAKHAROV, P.M.; ZOBNIN, N.P.; IVANOV, I.I.; IL'IN, I.P.; EMETIK, P.I.; KUDRYASHOV, A.T.; LAPSHIN, F.A.; MOLYARCHUK, V.S.; PERTSOVSKIY, L.M.; POGODIN, A.M.; RUDOY, M.L.; SAVIN, K.D.; SIMONOV, K.S.; SITKOVSKIY, I.P.; SITNIK, M.D.; TETEREV, B.K.; TSETYRKIN, I.Ye.; TSUKANOV, P.P.; SHADIKYAN, V.S.; ADELUNG, N.N., retsenzent; AFANAS'YEV, Ye.V, retsenzent; VLASOV, V.I., retsenzent; VOROB'YEV, I.Ye., retsenzent; VORONOV, N.M., retsenzent; GRITCHENKO, V.A., retsenzent; ZHEREBIN, M.N., retsenzent; IVLIYEV, I.V., retsenzent; KAPORTSEV, N.V., retsenzent; KOCHUROV, P.M., retsenzent; KRIVORUCHKO, N.Z., retsenzent; KUCHKO, A.P., retsenzent; LOBANOV, V.V., retsenzent; MOROZOV, A.S., retsenzent; ORLOV, S.P., retsenzent; PAVLUSHKOV, E.D., retsenzent; POPOV, A.N., retsenzent; PROKOF'YEV, P.F., retsenzent; RAKOV, V.A., retsenzent; SINEGUBOV, N.I., retsenzent; TERENIN, D.F., retsenzent; TIKHOMIROV, I.G., retsenzent; URBAN, I.V., retsenzent; FIALKOVSKIY, I.A., retsenzent; CHEPYZHEV, B.F., retsenzent; SHEBYAKIN, O.S., retsenzent, SHCHERBAKOV, P.D., retsenzent; GARNYK, V.A., redaktor; LOMAGIN, N.A, redaktor; MORDVINKIN, N.A., redaktor; NAUMOV, A.N., redaktor; POBEDIN, V.F., redaktor; RYAZANTSEV, B.S., redaktor; TVERSKOY, K.N., redaktor; CHEREVATYY, N.S., redaktor; ARSHINOV, I.M., redaktor; BABELYAN, V.B., redaktor; BERNGARD, K.A., redaktor; VERSHINSKIY, S.V., redaktor; GAMBURG, Ye.Yu., redaktor; DERIBAS, A.T., redaktor; DOMBROVSKIY, K.I., redaktor; KORNEYEV, A.I., redaktor; MIKHEYEV, A.P., redaktor

(Continued on next card)

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ALFEROV, A.A. ---- (continued) Card 2.
MOSKVIN, G.N., redaktor; RUBINSHTEYN, S.A., redaktor; TSYPIN, G.S., redaktor; CHERNYAVSKIY, V.Ya., redaktor; CHERNYSHEV, V.I., redaktor; CHERNYSHEV, M.A., redaktor; SHADUR, L.A., redaktor; SHISHKIN, K.A., redaktor

[Railroad handbook] Spravochnaia knizhka zheleznodorozhnika. Izd. 3-e, ispr. i dop. Pod obshchei red. V.A.Garnyka. Moskva, Gos. transp.zhel-dor. izd-vo, 1956. 1103 p. (MLRA 9:10)

1. Nauchno-tekhnicheskoye obshchestvo zheleznodorozhnogo transporta. (Railroads)

BUSYGIN, Ivan Vasil'yevich, inzh.; PAVLOV, Yuriy Vladimirovich, inzh.; PAVLUSHKOV, E.D., inzh., red.; VERINA, G.P., tekhn. red.

[Organization of shop repair of locomotives; from the experience of the Michurinsk Locomotive Repair Shop] Organizatsiia zavodskogo remonta parovozov; iz opyta Michurinskogo parovozoremontnogo zavoda. Moskva, Gos. transp. zhel-dor. izd-vo, 1958. 55 p. (MIRA 11:12)
(Michurinsk--Locomotives--Maintenance and repair)

PODSHIVALOV, Boris Dmitriyevich; KOCHUROV, Pavel Mikhaylovich; PLAVINSKIY, Yuriy Eduardovich; MALOZEMOV, N.A., doktor tekhn. nauk, retsenzent; PARAMONOV, A.A., inzh., retsenzent; PAVLUSHKOV, E.D., inzh., red.; KISELEVA. N.P., inzh., red.; KHITROV, P.A., tekhn. red.

[Production organization in diesel locomotive repair plants] Organizatsiia proizvodstva na teplovozoremontnykh zavodakh. Moskva, Vses. izdatel'sko-poligr.ob"edinenie M-va putei soobshcheniia, 1961. 189 p. (MIRA 14:12)

(Diesel locomotives--Repais) (Railroads--Repair shops)

CZECHOSLOVAKIA

PAVLOSOVA, J., and JANDRICHOVA, J. [affiliation not given].

"Dental Hygiene as Part of the Work Hygiene. A Contribution to the Article by Professor E. GOERNSBERGER, MD"

Prague, Pracovni Lekarstvi, Vol XV, No 6, August 1963, pp 251-252.

Abstract: Both authors give their opinion on the article by GOERNSBERGER, published in the same issue of this periodical, pp 247-251. Three Czech references.

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New principle for investigating atmospheric corrosion of metals. I. L. Rozenfel'd and T. I. Pavlutskaya. *Doklady Akad. Nauk S.S.S.R.* 91, 315-17(1953).—Expt. data were obtained on the effect of the thickness of the layer of electrolyte on cathodic and anodic polarization. These data were significant because, although atm. corrosion is electrochem., the usual measurements in bulk solns. are not applicable in view of the thin layer of electrolyte present in atm. corrosion. A special app. was used to obtain curves of cathodic polarization of Cu with thin layers of 0.01 *N* NaCl and also in the bulk soln. At a current d. of 250 microamp./sq. cm. the potentials relative to a normal H electrode had dropped from initial values of about 150 mv. to −1050 for the bulk soln., −1000 for a 165 μ layer, −800 for 100 μ, and −700 for 70 μ. Similar curves of anodic polarization had increased at 200 microamp./sq. cm. to 350 mv. for the bulk soln., 400 for 165 μ, 650 for 100 μ, and 1100 for 70 μ. Results for some other metals were just the opposite of these, and it was necessary to consider other explanations of this behavior besides the ease of diffusion of O through the layer.

A. G. Guy

ROZENFEL'd, I.L.; PAVLUTSKAYA, T.I.

Electrochemical methods of studying the atmospheric corrosion of metals. Trudy Inst.fiz.khim. no.5:198-215 '55. (MLRA 9:5)
(Corrosion and anticorrosives) (Electrochemistry)

PAVLUTSKAYA, T. I.

Methods in use in electrochemical investigations of atmospheric metal corrosion. I. Ia. Rozenfel'd and T. I. Pavlutskaya. *Zavodskaya Lab.* 21, 437–42(1955); cf. *C.A.* 49, 8157c.—A detailed description is given of an app. for the study of atm. electrolytic corrosion. The description gives the method of formation of a thin electrolyte film on the metal surface, of control of the film thickness, the design of electrodes, electrolytic switches, and some experimentally obtained polarization curves of *Fe* and *Zn* in contact with 0.1*N* NaCl films of various thickness. W. M. S.

USSR/Corrosion - Protection From Corrosion J.

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 14091

Author : Rozenfel'd I.L., Pavlutskaya T.I.

Title : On Correlation Between Polarization and Ohmic Resistances in Local Elements Operating Under Thin Layers of Electrolytes

Orig Pub : Zh. fiz. khimii, 1956, 30, No 6, 1427-1428

Abstract : By means of specific procedures an analysis is made of correlations between ohmic, cathodic and anodic polarization resistances in the case of some models of corrosion couples that operate under films of electrolytes (NaCl, Na_2SO_4, H_2O) of different thickness (70-165 μ). The conclusion is reached that operation of corrosion macrocouples under a thin film of electrolyte is almost not dependent upon ohmic resistance. The asumption is made that this conclusion also holds in the case of actual corrosion microelements, the operation of which takes place under anode-cathode control.

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13434* (Russian) The Mechanism of Metal Corrosion Under Thin Layers of Electrolytes/ O mekhanizme korrozii metallov pod tonkimi sloiami elektrolitov. I. L. Rosenfel'd and T. I. Pavlutskaya. *Zhurnal Fizicheskoi Khimii*, v. 31, Feb. 1957, p. 337-352.

The corrosion current of elements in thin layers of electrolyte (70 to 165μ) is determined by the rate of the cathode process. The overall corrosion current in thin layers is less than during complete immersion of the element in the solution, but the current density at the site of contact of the electrodes is higher for films than bulk solutions.

ROZENFEL'D, I.L.; PAVLUTSKAYA, T.I.

Distribution of the current density along the surface of local cells covered with thin layers of electrolytes. Zhur.fiz.khim. 35 no.6:1307-1314 Je '61. (MIRA 14:7)

1. Akademiya nauk SSSR, Institut fizicheskoy khimii.
(Electric charge and distribution) (Electrolytes)

ROZENFEL'D, I.L.; PAVLUTSKAYA, T.I.; LAPIDES, L.M.

Study of contact corrosion in laboratories and in natural atmospheric conditions. Trudy Inst.fiz.khim. 8:155-172 '60. (MIRA 14:4)

(Electrolytic corrosion)

83641

S/081/60/000/015/008/014
A006/A001

18.8300

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 15, p. 82, # 60701

AUTHORS: Rozenfel'd, I.L., Pavlutskaya, T.I., Zhigalova, K.A., Akimova T.I.

TITLE: Methods of Electrochemical and Corrosion Investigations in Thin Electrolyte Layers

PERIODICAL: Tr. In-ta fiz. khimii AN SSSR, 1959, No. 7, pp. 22-40

TEXT: Information is given on methods and devices used to investigate the electrochemical and corrosion behavior of metals under thin electrolyte layers. It is exemplified on Cu in 0.1 n. solution of NaCl Na_2SO_4 and HCl and on Fe in 0.1 n. NaCl that a reduced thickness of the electrolyte layer entails an acceleration of the cathode process on account of facilitated O_2 reduction. A noticeable inhibition of the anode process was not observed. The authors investigated the nature of potential distribution, current density and resistivity on the electrode surfaces and the correlation of the polarization and ohmic resistivity R (ohm.). The corrosion process under thin electrolyte layers does almost not depend on R(ohm) and is mainly determined by electrode polarization, principally of the cathode. It was established that higher corrosion

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S/081/60/000/015/008/014
A006/A001

Methods of Electrochemical and Corrosion Investigations in Thin Electrolyte Layers

of Fe, Cu, Al and its alloys, Д 16 (D16) and В 95 (V95), in the presence of SO_2 depended mainly on the strong depolarizing activity of SO_2. Charge curves taken in atmospheres with different moisture, are used to study the effect of the relative air moisture on kinetics of electrode processes, proceeding under thin electrolyte layers, and to determine the mechanism of O_2 transition through thin electrolyte layers (up to 0.03 cm). A method of investigating corrosion of metals by periodical moistening them with electrolytes, is described.

G. Golovina

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

PAVLUTSKAYA, T.I.

PHASE I BOOK EXPLOITATION SOV/4271

Akademiya nauk SSSR. Institut fizicheskoy khimii

Issledovaniya po korrozii metallov. [vyp.] 5: Novyye metody i pribory dlya korrozionnykh ispytaniy (Investigations on Corrosion of Metals [No. 5]: New Methods and Instruments for Corrosion Testing) Moscow, Izd-vo AN SSSR, 1959. 176 p. (Series: Its: Trudy, vyp. 7) Errata slip inserted. 3,000 copies printed.

Resp. Ed.: N. D. Tomashov, Doctor of Chemistry, Professor; Ed. of Publishing House: N. G. Yegorov; Tech. Eds: G. A. Astaf'yeva and Ye. V. Zelenkova; Editorial Board: N. D. Tomashov, A. V. Byalobzheskiy, Candidate of Chemistry, and P. V. Shchigolev, Candidate of Chemistry.

PURPOSE: This collection of articles is intended for scientific workers at research institutes and technical personnel of plant laboratories.

COVERAGE: The articles included in this collection deal basically with methods of corrosion investigation which have not yet been published in Soviet periodical literature but are of definite interest for studying corrosion processes. A wide range of problems is covered. In addition to the methods discussed the articles provide some experimental data which make possible full utilization of each individual method. No personalities are mentioned. References accompany each article.

Card 3/6

ROZENFEL'D, I.L.; PAVLUTSKAYA, T.I.; ZHIGALOVA, K.A.; AKIMOVA, T.I.

Methods of electrochemical and corrosion investigations in thin layers of electrolytes. Trudy Inst.fiz.khim. no.7:22-40 '59. (MIRA 13:5)

(Electrochemical analysis)
(Electrolytes--Testing)

SOV/137-58-9-19517

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 198 (USSR)

AUTHORS: Rozenfel'd, I.L., Pavlutskaya, T.I.

TITLE: Investigation of the Electrochemical Behavior of a Metal Under Thin Layers of Electrolyte (Issledovaniye elektrokhimicheskogo povedeniya metalla pod tonkimi sloyami elektrolita)

PERIODICAL: Tr. In-ta fiz. khimii, AN SSSR, 1957, Nr 6, pp 56-68

ABSTRACT: The method of the study of the electrochemical corrosion of metals under thin layers of electrolytes by means of the construction of polarization curves is described. The results obtained for Fe and Cu are adduced. The investigation of the corrosion of metals was conducted in a hermetically sealed chamber within which a 98% relative humidity was sustained with the aid of a saturated aqueous solution of $CuSO_4 \cdot 5H_2O$. The film of the electrolyte was applied on the surface of the metal, starting with a known weight and volume of drops released from a micropipette and of the area of the specimen. Control of the thickness of the film can be achieved directly in the chamber. Cu- and Fe-polarization curves were drawn at $25^{\circ}C$ for various thicknesses of the film of 0.1N solution of

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Investigation of the Electrochemical Behavior of a Metal (cont.)

$NaCl_1$ (from 70 to 330 μ) and upon complete immersion in the solution. It is shown that upon the decrease in the thickness of the film of electrolyte the cathode polarization of Cu and Fe decreases regularly as a result of a greater access of O_2 to the surface of the metal and the greater facility of the process of the ionization of O_2. At a film thickness of 300-350 μ the difference in the cathode behavior of Cu immersed and under the electrolyte film disappears. The anodic polarization of Cu under thinner films of electrolyte increases Fe in the role of an anode evidences anomalous polarization curves which result from some activation of its surface. A method is proposed for calculating the corrosion process according to the curves of the distribution of potentials on the surface of the local element working under thin layers of electrolyte. It is shown that for the Fe-Cu pair (at a distance of 0.25 mm between the electrodes) working under a layer of 0.1N solutions of NaCl or Na_2SO_4 or of distilled water the cathodic polarization resistance constitutes 70-92%, the anodic one can increase to 26-28%, and the ohmic potential drop constitutes only 4-6% of the initial potential difference.

P.S.

1. Metals--Analysis 2. Thin layers--Metallurgical effects
3. Metals--Corrosion 4. Electrolytes--Performance 5. Mathemat[illegible]

Card 2/2

Name	:	PAVLUTSKAYA, T. I.
Dissertation	:	Mechanism of metal corrosion under a fine layer of electrolytes
Degree	:	Cand Chem Sci
Defended At	:	Acad Sci USSR, Inst Physical Chemistry
Publication Date, Place	:	1956, Moscow
Source	:	Knizhnaya Letopis' No 5, 1957

PAVLOTSKAYA, T. I.

Distr: 4E4f

†The Relationship Between Polarizational and Ohmic Resistances in Local Cells Working under Thin Layers of Electrolytes. I. L. Rozenfel'd and T. I. Pavlotskaya (*Zhur. Fiz. Khim.*, 1956, 30, (6), 1427-1428).—[In Russian]. For electrodes working in different electrolytes ohmic resistance is very small (4–6% increase), but anodic polarization-resistance shows 4-5 26% increase, and cathodic 70-92%. With decrease in thickness of the electrolyte layer it can be expected that anodic polarization would increase, but the process would carry on with the anodic-cathodic and not anodic-ohmic control.—A. W.

ROZENFEL'D I. L. (Moskva); PAVLUTSKAYA, T.I. (Moskva)

The mechanism of metal corrosion under thin layers of electrolytes (with summary in English). Zhur.fiz.khim. 31 no.2:328-339 F '57. (MIRA 10:9)

1. Akademiya nauk SSSR, Institut fizicheskoy khimii.
(Electrolytic corrosion)

PAVLUTSKAYA, T. I.

Electrochemical methods of investigation of atmospheric corrosion of metals. I. I. Rozenfel'd and T. I. Pavlutskaya. *Trudy Inst. Fiz. Khim., Akad. Nauk S.S.S.R.* No. 5, *Issledovan. Korrozii Metal.* No. 4, 198-215(1955); cf. *C.A.* 49, 13868f.—The method of investigation consisted of detg. polarization curves on metal electrodes covered with thin films of electrolyte whose thickness was maintained const. during the expts. The app. is described in detail. Potentials were measured on Cu, Fe, Al and Mg covered with thin films (70, 100, 150, and 350 μ) of 0.01*N* and 0.1*N* solns. of NaCl or HCl. The rate of the cathode process, when detd. by diffusion of O, decreases with the thickness of the layer of electrolyte. When, however, the cathode process is detd. by regeneration of O the thickness of the layer has no effect. The anode overpotential increases when the thickness of the layer decreases. Consequently with concd. solns. of medium thickness (150 and higher) the corrosion rate under thin films of electrolyte can be equal to or greater than that of immersed samples because of the facilitation of the cathode process and the insufficient decrease of the anode process. With thin films (70 and lower) of weak solns. the corrosion rate may be lower than on immersion because of the increase of the anodic overpotential.

N. Goldowski

PAULOTSKAYA, T. I.

18

5
4E2c
4E4j

The mechanism of metal corrosion under thin layers of electrolytes. I. L. Rosenfel'd and T. I. Paulotskaya (Phys.-Chem. Inst. Acad. Sci. U.S.S.R., Moscow). *Zhur. Fiz. Khim.* 31, 328–38 (1957).—The p.d. and c.d. distribution upon the electrodes was detd. under thin layers of electrolytes (70–105 μ thick) by using as models of corrosion elements some short-circuit couples with electrodes in a single plane and detg. the p.d. and c.d. along the surface. Changes of potential were observed only upon the cathodes; Fe and Zn in 0.1*N* NaCl or Na_2SO_4 solns. behaved like nonpolarizable anodes. The anodic polarization was somewhat increased when using distd. H_2O only, but the corrosion current was always detd. by the cathode-process rate. The total corrosion current in the layers was lower than through the bulk of the soln., but the c.d. at the contact surface was higher than when the electrodes were completely immersed in the liquid. The relation between the ohmic and the polarization resistances of the corrosion elements 0.25 mm. apart in distd. H_2O, 0.1*N* NaCl, and Na_2SO_4 solns. represented only 4–6% of the initial p.d. The absences of anodic polarization and the ohmic drop in p.d. explains the cathodic O-reduction process. With the electrolytes investigated, the cathode polarization resistance formed 70–92% of the total resistance. W. M. Sternberg

RM

PAVLUTSKAYA, T. I.

(2)

1810* New Principle in the Investigation of Atmospheric Corrosion of Metals. (Russian.) I. L. Rozenfel'd and T. I. Pavlutskaia. *Doklady Akademii Nauk SSSR*, v. 91, no. 2, July 11, 1953, p. 315-317.

Presents a hypothesis on the possibility of the existence of corrosion elements having considerable differences in potential. Graphs

KOVALEV, F.I. [deceased]; TSYGANKO, N.I.; PAVLUTSKAYA, Ye.I., redaktor; GUROVA, O.A., tekhnicheskiy redaktor

[Instructions for applying the classification of reserves to copper deposits] Instruktsiia po primeneniiu klassifikatsii zapasov k mestorozhdeniiam medi. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nedr, 1954. 25 p. (MLRA 10:10)

1. Russia (1923- U.S.S.R.) Gosudarstvennaya komissiya po zapasam poleznykh iskopayemykh.
(Copper ores)

PAVLUTSKAYA, Ye.I., redaktor.

[Material on palynological analysis and stratigraphy; a collection of articles] Materialy po palinologii i stratigrafii; sbornik statei. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geologii i okhrane nedr, 1954. 200. (MLRA 7:7)

1. Leningrad. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut.
(Pollen, Fossil) (Geology, Stratigraphic) (Spores (Botany))

KUREK, N.N.; PAVLUTSKAYA, Ye.I., redaktor; MALEK, Z.N., tekhnicheskiy redaktor

[Altered ore-bearing rocks and their significance for prospecting] Izmenennye okolorudnye porody i ikh poiskovoe znachenie; sbornik statei. Pod red. N.N.Kureka. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geologii i khrane nedr, 1954. 271 p. (MLRA 7:10)

1. Leningrad. Vsesoyuznyy geologicheskiy institut.
(Rocks, Crystalline and metamorphic)

ABEL'SKIY, M.Ye.; ANDREYEV, B.A.; GOLOMB, V.E.; SAMSONOV, N.N.; PAVLUTSKAYA, Ye.I., redaktor; POPOV, N.D., tekhnicheskiy redaktor.

[Course in the gravitational method of prospecting for technical schools of geological surveying] Kurs gravirazvedki dlia geologo-razvedochnykh tekhnikumov. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geologii i okhrane nedr, 1954. 357 p. [Microfilm]
(Prospecting--Geophysical methods) (MLRA 7:11)

PAVLYAK, YA. S.

S/129/60/000/07/005/013
E193/E235

AUTHORS: D'yachenko, S. S., and German, S. I., Candidates of Technical Sciences, and Pavlyak, Ya. S., Engineer

TITLE: Investigation of the Zone of Low Strength Formed During Welding of Steels

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1960, No. 7, pp. 24-26 + 1 plate

TEXT: It has been observed in the course of examination of welded components, made of steels 20KhMF, 15Kh1M1F, 34KhM, and 22K, that, irrespective of the welding technique employed, narrow zones, etching differently from the rest of the metal, are formed at a certain distance from the weld on both sides of the welded join. The width of these zones and their distance from the weld, have been found to depend on the conditions during welding, the volume of the molten metal, and the rate of cooling after welding. It has been found, also, that welded assemblies of this type, subjected to creep tests, failed across these zones. The results of X-ray analysis, metallographic examination conducted with the aid of both optical and electron microscope, and hardness measurements, have revealed that

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D'YACHENKO, S.S.; PAVLYAK, Ye.S.

Effect of conditions of electrolysis on the "activity" of electrolytic copper powder. Nauch.dokl.vys.shkoly; met. no.4:79-81 '58. (MIRA 11:11)

1. Khar'kovskiy politekhnicheskiy institut.
(Powder metallurgy) (Copper--Electrometallurgy)

19(6)

AUTHORS: D'yachenko, S. S., Pavlyuk, Ya. S. SOV/163-58-4-13/47

TITLE: The Influence of the Electrolysis Method on the "Activity" of Electrolytic Copper Powder (Vliyaniye rezhima elektroliza na "aktivnost'" elektroliticheskogo mednogo poroshka)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1958, Nr 4, pp 79-81 (USSR)

ABSTRACT: "Active" powders are those which show considerable shrinkage during the agglomeration process. The influence of the cathode current density on the shape of particles, on agglomeration, and on the degree of deformation of crystal lattices in electrolytic copper powder was investigated. The powder was obtained by the method described earlier (Ref 5) at a current density of 10 to 50 A/dm^2. Agglomeration took place in hydrogen at 600, 700, 800, 900, and 1000°C with a duration of 1 hour. Simultaneously the shapes of powder particles obtained at various current densities were investigated by electron microscope and radiographic examinations were made of the deformation of crystal lattices in order to estimate the variation of the line-intensity ratio I (111) : I (222). The following results were obtained: 1.) An increase of current

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The Influence of the Electrolysis Method on the "Activity" of Electrolytic Copper Powder SOV/163-58-4-17/47

density from 10 to 50 A/dm^2 does not cause any significant changes of shape in electrolytic copper particles. 2.) The deformation of crystal lattice and therefore also the "activity" of the powder increase simultaneously with the increase of current density in electrolysis. 3.) As regards its influence on the "activity" the reduction of current density during electrolysis from 50 to 20 A/dm^2 is equivalent to the [illegible] of the powder obtained at 50 A/dm^2 at 650° for one hour. There are 4 figures and 5 Soviet references.

ASSOCIATION: Khar'kovskiy politekhnicheskiy institut (Khar'kov Polytechnical Institute)

SUBMITTED: December 16, 1957

Card 2/2

73. **Electromechanical Moments in Instruments With Moving Magnet**

"Electromechanical Moments in Instruments With a Moving Magnet," by A. V. Pavlyayev, Tr. Leningr. in-ta Aviats. priborostr., 1956, Issue 11, pp 35-61 (from Referativnyy Zhurnal --Mashinostroyeniye, No 3, Feb 57, Abstract No 5647)

"This article presents analytical expressions for moments of rotation which produce the reciprocal action between the magnetic field of a live stationary coil and the field of a moving magnet, and also for the stabilizing moment which is produced when the needle deflects from the equilibrium position in an instrument with a moving magnet. It is shown that, regardless of the simplicity of the physical principles incorporated in instruments with moving magnets, analytical calculations are complex and insufficiently accurate because of the impossibility of taking into account the deflection during the magnetization of the moving magnet and the distribution of field intensity.

"Therefore, to establish the validity of these analytical calculations we must compare their results with experimental data obtained on a special model constructed to determine the dependence of moments of rotation on the angle of deflection under stable conditions for the maximum moment and number of ampere turns, the dependence of the maximum moment of rotation over the length of the coil on its diameter, and the dependence of the equalizing moment on the angle of intersection and on the angle of deflection. These functions are shown on graphs. The bibliography contains seven articles." (U)

L 29556-66 EEC(k)-2/EWP(k)/EWT(l)/FBD/ETC(f)/T IJP(c) AT/WG
ACC NR: AP6018036 SOURCE CODE: UR/0185/66/011/006/0615/0618

AUTHOR: Adamov, I. Yu.; Dushyn, L. O.—Dushin, L. A.; Pavlychenko, O. S.—Pavlichenko, O. S.

ORG: Physicotechnical Institute AN URSR, Khar'kov (Fizyko-tekhnichnyy instytut AN URSR)

TITLE: Plasma interferometry with the aid of a laser

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 11, no. 6, 1966, 615-618

TOPIC TAGS: plasma diagnostics, electromagnetic wave interference, bridge interferometer, plasma density

ABSTRACT: The authors describe a plasma diagnostic procedure which combines the high phase-measurement accuracy provided by radio-frequency sounding and at the same time increases the range of measured electron density by using the shorter-wavelength optical range. The phase information obtained at radio frequency is converted into optical-frequency information by introducing into the reference arm of an interferometer a single side-band modulator, which modulates in amplitude one of the laser side bands (Fig. 1). The oscillations from both arms of the interferometer are mixed in a quadratic detector (photomultiplier). In this manner the phase shift of the laser signal passing through the plasma is interpreted as the time variation of the laser frequency deviation. Frequency detection and subsequent integration of the obtained signal yield the plasma density, since its rate of change is proportional to the laser frequency deviation. It is shown that the method can be used to estimate changes in

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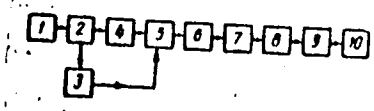
ACC NR: AP6018036

the plasma density in the range 10^{12} — 10^{16} cm^{-3} in 10^{6} sec at a laser wavelength of 3 μ and for a plasma 5 cm in length. Orig. art. has: 1 figure and 6 formulas. [02]

Fig. 1. Diagram of plasma interferometer. 1 - Laser, 2 - beam splitter, 3 - single-band amplitude modulator, 4 - investigated plasma, 5 - photomultiplier, 6 - intermediate frequency amplifier, 7 - limiter, 8 - frequency detector, 9 - integrator, 10 - recording instrument.



SUB CODE: 20/ SUBM DATE: 07Aug65/ ORIG REF: 002/ OTH REF: 002/ ATD PRESS: 5115

Card 2/2 CC

PAVLYCHEV, F., prepodavatel'

Stand for light signals. Prof.-tekh. obr. 20 no.9:18 S '63.
(MIRA 16:11)

1. Professional'no-tekhnicheskoye uchilishche No.27 g. Gor'kovskoy obl.

PAVLYCHEV, I.M.

USSR/ Miscellaneous - Teletype

Card 1/1 Pub. 133 - 18/24

Authors : Pavlychev, I. M., Telegraph Engineer

Title : Automatic inking-tape of the ST-35 telegraph apparatus

Periodical : Vest. svyazi 6, page 28, June 1954

Abstract : A method for automatic inking of the telegraph tape directly on the working ST-35 telegraph apparatus is briefly described. Illustration.

Institution : Central Telegraph Office, Kursk

Submitted : ...

BARKOV, V.Ye.; BYKHOVSKIY, Ya.L.; GRZHIBOVSKIY, V.V.; PAVLYCHEV, L.Ye.; RABOTNOVA, K.A.; SOKOLOV, V.B.; SOLOV'YEV, P.M.; KHERSONSKIY, D.S.; ZVENIGORODSKIY, I.S., red.; SAVEL'YEV, V.I., red.; BORUNOV, N.I., tekhn.red.

[Safety rules in the construction and use of communication structures and equipment] Pravila tekhniki bezopasnosti pri ekspluatatsii i stroitel'stve sooruzhenii i ustroistv sviazi. Moskva, Gos.energ. izd-vo, 1959. 103 p. (MIRA 13:4)

1. Russia (1923- U.S.S.R.) Ministerstvo stroitel'stva elektrostantsiy. Tekhnicheskoye upravleniye. 2. Tekhupravleniye Ministerstva elektrostantsiy (MES) (for Berkov). 3. Vsesoyuznyy nauchno-issledovatel'skiy institut energetiki (VNIIE) (for Bykhovskiy, Pavlychev, Sokolov). 4. Gosudarstvennyy trest po organizatsii i ratsionalizatsii elektrostantsiy (ORGRES) (for Grzhibovskiy). 5. Leningradskoye rayonnoye upravleniye energokhozyaystva (Lenenergo) (for Rabotnova). 6. Moskovskoye rayonnoye upravleniye energokhozyaystva (for Solov'yev, Khersonskiy).

(Electric engineering--Safety measures)
(First aid in illness and injury)

PAVLYCHEV, L. Ya

Operation of low-power electric equipment. Moskva, Gos. izd-vo mestnoi prom. RSFSR, 1952. 2[illegible] p. (5[illegible]-1[illegible]1[illegible])

PAVLYCHEV, L.Ye., inzhener.

Effect of high-frequency channels of 400 Kv electric transmission lines upon high-frequency telephone channels. Elektrichestvo no.1:26-34 Ja '54. (MLRA 7:2)

1. TSentral'naya nauchno-issledovatel'skaya telektrotekhnicheskaya laboratoriya MESEP. (Electric lines) (Telephone lines)

[illegible], L. Ye.

"Effect of [illegible] Electric [illegible] Lines on the [illegible] Channels of Lines of Communication." Cand Tech Sci, Tomsk Order of Labor Red Banner Polytechnic Inst imeni S. M. Kirov, [illegible] Higher Education USSR, Tomsk, 195[illegible]. (KL, No 1[illegible], Mar 55)

SO: Sum. No. 6[illegible], 20 Sep 55-Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

PAVLYCHEV, L.Ye., kand.tekhn.nauk

Drainage coils as a special measure for protecting communication lines from dangerous and interfering effects of electric power transmission lines operating in a nonsymmetrical mode. Trudy VNIIE no.7:315-339 '58. (MIRA 16:12)

PAVLYCHEV, L.Ye.

Electrical Engineering Abstracts
May 1954
Telecommunication

2189. Influence of h.f. channels of 400 kV transmission lines on h.f. telephone channels. L. E. PAVLYCHEV. *Elektrichestvo*, 1954, No. 1, 25–33. In Russian.

A study of the effect of h.f. channels of a 400 kV transmission line on h.f. telephone channel, for different line approach conditions, showed that according to the nature of the crosstalk attenuation curves the screening effect of the neighbouring phases on the attenuation at the approaches to substations between the phase-earth circuit and the communication circuit amounted on an average for all distances to an increase in the attenuation of 0·14 N. Under these conditions the disturbing voltage induced in the communication circuit is reduced by only 15% on an average for all distances between circuits. The circuit phase-earth may be considered as the influencing circuit and the compensating effect of the inverse currents in the neighbouring phases should not be considered at approaches to substations. Corresponding to the theoretical norm of crosstalk attenuation of 15·86 N or the norm of the disturbing voltage, 25 μV, the minimum distance of approach becomes 1100 m. If the near end of the communication line is at a longitudinal distance of at least 20 km from the near end of the transmission line and the total value of the inverse currents in the neighbouring phases equals the direct current in the influencing circuit phase-earth, the crosstalk attenuation by screening effect of the neighbouring phases becomes 2·33–3·8 N for approaches of 300–1800 m. The disturbing voltage in the telephone circuit is correspondingly reduced by 90–95%. The minimum permissible distance of approach thus becomes 330 m with the above norms, or ≤⅓ of the previous value. In similar cases the compensating effects of the currents in neighbouring phases must therefore be considered.

B. L. LEVIN

PAVLYCHEV, I.M.

Automatic dyeing of the color tape of a ST-35 apparatus. Vest. sviazi 14 no.6:28 Je '54. (MLRA 7:7)

1. Glavnyy inzhener Kurskogo tsentral'nogo telegrafa.
(Telegraph--Apparatus and supplies)

ROZENTRETER, R.G.; TKACHEVA, Z.S.; PAVLYCHEVA, A.I.; LILEYEV, I.S.

Sintering of sulfate-limestone charges. Trudy Khim.-met.inst.Sib. otd.AN SSSR no.15:27-39 '60. (MIRA 14:6)
(Aluminum--Metallurgy) (Sintering)

PAVLYENKO, YU.

29622

Myekhanieatsiya i Ratsionalieatsiya stroityel'nykh Rabot. Moloch. Prom-st' 1949, No.9. S.18-21

SO: Letopis' No.40

PAVLYGINA, R. A.

PAVLYGINA, R. A. - "Disturbance and restoration of higher nervous activity in creating a focus of stimulation in the hypothalamic region." Moscow, 1955. Inst of Higher Nervous Activity, Acad Sci USSR. (Dissertations for degree of Candidate of Biological Sciences.)

SO: Knizhnaya letopis', No. ... 1955. Moscow.

PAVLYGINA, R.A.

USSR/Human and Animal Physiology - Nervous System. V-12

Abs Jour : Ref Zhur - Biol., No 1, 1958, 4423

Author : R.A. Pavlygina

Inst : Institute for the Higher Nervous Activity, Academy of Sciences, USSR

Title : Establishment of a Dominant Factor in the Hypothalmic Area and Investigation of Its Properties.

Orig Pub : Seriya Fiziologii, 1956, 2, pp 124-138

Abstract : The orienting reaction of rabbits to auditory and light stimuli was reflected in motion, accelerated breathing and, occasionally, a quickened pulse, decreased amplitude of potentials in the motor region of the cortex (C) as well as the appearance of a rhythm of 6-8 oscillations per second in the optical and hypothalmic areas (H). Upsurge in blood pressure was only observed during the

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[illegible] 20-30 v). In a series of cases the dominant factor

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Abs Jour : Ref Zhur - Biol., No 1, 1958, 4423

prevailed for several days after polarization. When the current was boosted (up to 15 v) the dominant state was transformed into a pessimal state which, in turn, was accompanied by a reduction in the electroactivity (up to 10 mv) in C.

PAVLYGINA, R.A.

Electrical activity of the cortex, thalamus, hypothalamus, and the reticular formation of the brain stem in rabbits following the combination of sound with rhythmic light. Trudy Inst. vys. nerv. deiat. Ser. fiziol. 5:39-48 '60. (MIRA 13:10)

1. Iz Laboratorii obshchey fiziologii tsentral'noy nervnoy sistemy (zav. - V.S. Rusinov) instituta vysshey nervnoy deyatel'nosti.
(ELECTROPHYSIOLOGY) (CEREBRAL CORTEX) (CONDITIONED RESPONSE)
(LIGHT—PHYSIOLOGICAL EFFECT) (SOUND—PHYSIOLOGICAL EFFECT)

PAVLYGINA, R.A.

Study of the excitation focus of the "single tetanic contraction" type developed in the cerebral oortex. Trudy Inst.vys.nerv.deiat. Ser.fiziol. 7:39-48 '62. (MIRA 16:2)
(CONDITIONED RESPONSE) (ELECTROENCEPHALOGRAPHY)

PAVLYGINA, R.A.; POZDNYAKOVA, R.A.

Creation of a dominance focus in the motor analyzer with a pulsating constant current. Trudy Inst. vys. nerv. deiat. Ser. fiziol. 5:49-57 '60. (MIRA 13:10)

1. Iz Laboratorii obshchey fiziologii (zav. - V.S. Rusinov) instituta vysshey nervnoy deyatel'nosti.
(CEREBRAL CORTEX) (ELECTROPHYSIOLOGY)
(LIGHT—PHYSIOLOGICAL EFFECT) (SOUND—PHYSIOLOGICAL EFFECT)

PAVLYGINA, R.A.

Impairment and restoration of the higher nervous activity as related to the creation of a focus of excitation in the hypothalamic region of the rabbit brain. Trudy Inst. vys. nerv. deiat. Ser. fiziol. 3:19-31 '59. (MIRA 12:3)

1. Iz laboratorii obshchey fiziologii nervnoy sistemy, zav. - V.S. Rusinov.
(HYPOTHALAMUS) (CONDITIONED RESPONSE)

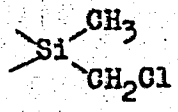
S/021/63/000/002/014/016
D405/D301

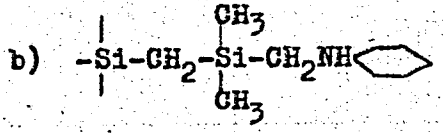
AUTHORS: Chuyko, A. A., Pavlyk, H. Ye. and Neymark, I. Ye.

TITLE: Synthesis and adsorptive properties of amino-organic silicas with Si-C bond

PERIODICAL: Akademiya nauk UkrRSR. Dopovidi. no. 2, 1963, 230-233

TEXT: The investigation had the purpose of obtaining amino-organic silicas with Si-C bond, and of studying their adsorptive and ion exchange properties. Modified silicas were obtained, having the following chemical compounds on their surface:

a) 

b) 

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Synthesis and adsorptive ...

c) $-\overset{|}{\underset{|}{Si}}-CH_2-NH_2$.

On the original and modified silica specimens the sorption isotherms of vapors of methanol, benzene, heptane and dry gaseous hydrogen chloride were studied at 20°C in a vacuum adsorption device with quartz spring balances. It was found that substitution of part of the hydroxyl groups of the aerosol by organic radicals leads to a decrease in absorption of methanol and benzene, as well as of heptane. The obtained results are in agreement with the data available in the literature. The fact that methanol and benzene is much more adsorbed by aniline methyl aerosol than by chloromethyl aerosol can be explained by the possible formation of a hydrogen bond of these materials with the >NH-group of aminosilicas. It was found that the modification of the aerosol of the chloromethyl group leads to a sharp decrease in its adsorption as compared to the original specimen. It is established that amino-organic silicas are selective adsorbents of acidic substances. It is noted that the

Synthesis and adsorptive ...

concentration of the amino-groups in the aminomethyl aerosol, obtained by ion exchange, is nearly equal to the amount of irreversibly chemisorbed hydrogen chloride; this is not the case with aniline methyl aerosol. There are 2 figures.

ASSOCIATION: Instytut fizychnoyi khimiyi AN URSR (Institute of Physical Chemistry of the AS UkrRSR)

PRESENTED: by Academician O. I. Brods'kyy of the AS UkrRSR

SUBMITTED: July 19, 1962

Card 3/3

L 23242-66 EWT(1)

ACCESSION NR: AP6009067 SOURCE CODE: UR/0185/66/011/003/0271/0279

AUTHORS: Pavlyk, B. M. (Pavlik, B. M.)

ORG: Chernovtsy State University (Chernivets'kyy derzhuniversytet)

TITLE: Scattering of light by impurity centers in a solid with account of the deviations from the Franck-Condon principle

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 11, no. 3, 1966, 271-279

TOPIC TAGS: light scattering, Raman scattering impurity scattering, impurity center, spectral distribution, spectral line, line width, absorption band, distribution function

ABSTRACT: A general expression is obtained for the probability of Rayleigh and Raman scattering of light with account of deviations from the Franck-Condon principle in the harmonic approximation in the oscillations of the nuclei of a solid solution. The correction to the spectral distribution of the scattered light, due to deviations from the Franck-Condon principle, is calculated. The resultant expression is considered in the special case when the spectral intensity distribution of the incident light is Lorentzian and consists of a narrow spectral line, and under

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ACCESSION NR: AP6009067

the assumption that the maximum of the Lorentz curve is far from the absorption band of the impurity molecule. It is concluded that in general in regions far from the impurity absorption band the indicated deviations from the Franck-Condon principle do not contribute to the spectral distribution function of the scattered light and the spectral distribution function is given by the term which does not include the effects due to the deviations. The form of the scattering spectrum as a function of the light frequency is obtained in the region of absorption by the impurity centers. A general correction to the integral scattering intensity due to inclusion of the deviations from the Franck-Condon principle is obtained. Author thanks A. F. Lubchenko for valuable advice and a discussion of the results. Orig. art. has: 19 formulas.

SUB CODE: 20/ SUBM DATE: 16Apr65/ ORIG REF: 009/ OTH REF: 003/

Card 2/2 MJS

LUBCHENKO, A.F.; PAVLIK, B.M. [Pavlyk, B.M.]

Law of mirror symmetry in spectra of light absorption and emission by impurity centers in solids. Ukr. fiz. zhur. 9 no.11:1221-1232 N '64 (MIRA 18:1)

1. Institut fiziki AN UkrSSR, Kiyev.

S/169/62/000/001/008/083
D228/D302

AUTHORS: Bykhovskiy, V. A., Korchinskiy, I. L. and Pavlyk, V. S.

TITLE: The earthquake of May 4, 1959, at the town of Petropavlovks-na-Kamchatke

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 1, 1962, 15-16, abstract 1A158 (Tr. Tsentr. n.-i. in-ta stroit. konstruktsiy, Akad. str-va i arkhitekt. SSSR, no. 6, 1961, 5-38)

TEXT: The earthquake's epicenter was situated in the ocean at a distance of 170 km from the coast. The coordinates of the epicenter were 53°45'N and 161°E, the focal depth being 30 km. The (SBM) seismometer showed a deflection of 4.8 mm. More than 100 shocks with a force of 2 - 4 points were noted in the period from May 1 to July 1. The areas of strong damage are located in lowlying localities with a datum of from +10 to +20 m. The groundwaters stand relatively high in these districts. Considerable nature was noted, too, on dredged water-saturated ground. Buildings located

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S/169/62/000/001/008/053
D228/D302

The earthquake of May 4 ...

on rocky and semirocky ground were hardly damaged. The damage to small-block buildings was expressed by oblique cracks in the walls, partitions, and bulkheads. Assembled ceilings had small cracks in the joints between the floorings. In large-block buildings the damage was expressed by horizontal cracks in the joints between the partition blocks and by vertical cracks along the facets of window openings. Framework buildings endured the earthquake better. / Abstractor's note: Complete translation. /

Card 2/2

PAVLYK, V.S.

Actual measurements of the vibrations of a large-panel apartment house. Trudy TSNIISK no.18:124-143 '62. (MIRA 16:2)
(Apartment houses—Vibration)
(Earthquakes and building)

PAVLYK, V.S., inzh.

Calculating the seismic effect on single-story framed buildings with rigid end walls. Prom. stroi. 41 no.6:38-40 Je '64. (MIRA 17:9)

BYKHOVSKIY, V.A.; KORCHINSKIY, I.L.; PAVLYK, V.S.

Earthquake in Petropavlovsk-Kamchatskiy on May 4, 1959.
Trudy TSNIISK no.6:5-38 '61. (MIRA 15:1)
(Petropavlovsk-Kamchatskiy--Earthquakes, 1959)

KORCHINSKIY, I.L., prof., doktor tekhn. nauk; BYKHOVSKIY, V.A., kand. tekhn. nauk; PAVLYK, V.S., inzh.; SOLOVEY, I.N.; SUMINOV, N.A.; KOTOVA, L.S., inzh.; SHITOVA, L., red. izd-va; KUDAKOVA, N.I., tekhn. red.

[Instructions for determining the seismic load for vertical equipment and examples of calculation] Ukazaniia po opredeleniiu seismicheskoi nagruzki dlia vertikal'nykh apparatov i primery rascheta. Moskva, Gosstroiizdat, 1961. 30 p. (MIRA 15:8)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut stroitel'nykh konstruktsiy. 2. TSentral'nyy nauchno-issledovatel'skiy institut stroitel'nykh konstruktsiy Akademii stroitel'stva i arkhitektury SSSR (for Korchinskiy, Bykhovskiy, Pavlyk). 3. Gosudarstvennyy institut po proyektirovaniyu neftyanykh zavodov pri Gosudarstvennom planovom komitete Soveta Ministrov SSSR (for Solovey, Suminov, Kotova).
(Earthquakes and building)

KORCHINSKIY, I.L., prof.; POLYAKOV, S.V.; BYKHOVSKIY, V.A.; DUZINKEVICH, S.Yu.; PAVLYK, V.S.; BEGAK, B.A., red. izd-va; SHERSTNEVA, N.V., tekhn. red.

[Principles of designing buildings in earthquake districts] Osnovy proektirovaniia zdanii v seismicheskikh raionakh; posobie dlia proektirovshchikov. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1961. 487 p. (MIRA 14:12)
(Earthquakes and building)

KORCHINSKIY, I.L., prof., doktor tekhn. nauk; POLYAKOV, S.V., doktor tekhn. nauk; BYKHOVSKIY, V.A., kand. tekhn. nauk; PAVLYK, V.S., inzh.; YUSFIN, I.M., inzh.; AVEDIKOVA, S.A., inzh.; IFTINKA, G.A., red. izd-va; GOL'BERG, T.M., tekhn. red.

[An example of earthquake design of a multi-story frame building with and without enclosure walls with attached instructions] Primer rascheta mnogoetazhnogo karkasnogo zdaniia so stenovym zapolneniem i bez nego na seismicheskie vozdeistviia i ukazaniia k primeru rascheta. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1961. 66 p. (MIRA 14:11)

1. TSentral'nyy nauchno-issledovatel'skiy institut stroitel'nykh konstruktsiy Akademii stroitel'stva i arkhitektury SSSR (for Korchinskiy, Polyakov, Bykhovskiy, Pavlyk). 2. Proyektnyy institut No.5 Ministerstva stroitel'stva RSFSR (for Yusfin, Avedikova).
(Earthquakes and building)

38846
S/185/62/007/006/009/014
D407/D301

18 8/0

AUTHORS: Pidstryhach, Ya. S. and Pavlyna, V. S.

TITLE: Diffusion in a non-uniformly heated strained layer in the presence of mass-exchange with the ambient medium

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 6, 1962, 652-659

TEXT: The relation between the processes of diffusion, heat conduction and deformation in a binary isotropic solid solution is considered for the case of an infinite layer of thickness 2 l. The differential equations and the boundary conditions for these processes are set up; thereby certain simplifying assumptions are made. The infinite layer is subjected to stretching and bending; it is heated by convection with the ambient medium; an exchange of atoms may take place between layer and medium. The system of equations reduces to two:

Diffusion in a ...

$$D_c^* \frac{\partial^2 c}{\partial x^2} + D_t^* \frac{\partial^2 t}{\partial x^2} = \frac{\partial c}{\partial \tau}$$

$$K \frac{\partial^2 t}{\partial x^2} = \frac{\partial t}{\partial \tau} \qquad (5)$$

where $K = \lambda/c$ is the coefficient of heat conductivity and D_c^* and D_t^* are the reduced diffusion coefficients. The stress-strain relations are set up. In order to determine the stressed-strained state of the layer, it is necessary to find the distribution $c(x, \tau)$ of the solute and the temperature distribution $t(x, \tau)$. These are obtained by solving system (5) and the corresponding boundary conditions. The formula for $c(x, \tau)$, thereby obtained, is considerably simplified by assuming that the settling time of the thermal regime is considerably smaller than that of the diffusion process.

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The simplified formula shows that the change in the concentration of the solute is a result of 3 different diffusion processes: The first process is due to the difference in chemical potentials, the second to the strain gradient (due to the force P and moment ..) and to the strain due to the temperature variation, the third is thermodiffusion. In the case of vacuum evaporation of the solute the obtained formulas are modified (by setting the chemical potentials equal to zero). In a stationary process, the stresses in the layer arise as a result of the external forces only. The strain components consist of three terms; the first is related to the force P and the moment M, and the other two to the diffusion processes and the non-uniform heating. From the strain tensor, corresponding to the state following the removal of the applied load, it is possible to calculate the radius of curvature of the middle surface of the layer; two formulas are obtained for the radius of curvature, corresponding to the residual strain. These formulas can be used in the experimental determination of the physico-mechanical constants of materials.

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S/185/61/006/005/008/019
D274/D303

AUTHORS: Pidstryhach, Ya.S., and Pavlyna, V.S.

TITLE: General thermodynamical relationships for solid solutions

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 6, no. 6, 1961, 655 - 662

TEXT: A thermodynamic system, represented by a single-phase n-component solid solution, is considered. The principal thermodynamic equation for this system is

$$dU = TdS + \sum_{i=1}^{6} \sigma_i de_i + \sum_{k=1}^{n} \mu_k dc_k. \qquad (1)$$

The system is characterized by five groups of thermodynamic constants, namely those relating to elasticity moduli, linear expansion, stress, diffusion and heat capacity. These constants constitute a complete system of physico-mechanical characteristics. By means of these characteristics and equations of type (1), it is possible

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to set up tables of all possible first derivatives of the parameters of the thermodynamic system, as well as tables of the characteristic functions with respect to the independent variables. This is done by the Jacobians method (Ref. 6: F.A. Crawford, Am. J. Phys., 17, 1, 1949). Thus, the derivative $(\partial c_l/\partial T)_{e,\mu}$ can be written as follows:

$$\frac{\partial(c_l, \mu, e, c')}{\partial(T, \mu, e, c')} = \sum_k \frac{\partial(c_l, \mu_k, \mu', e, c')}{\partial(c_l, T, \mu', e, c')} : \frac{\partial(T, \mu_k, \mu', e, c')}{\partial(c_l, T, \mu', e, c')} =$$

$$= -\sum_k \left(\frac{\partial \mu_k}{\partial T}\right)_{e,c} : \left(\frac{\partial \mu_k}{\partial c_l}\right)_{T,e}.$$

Hence, by using a formula involving the constants of the fourth group, one obtains

$$\left(\frac{\partial c_e}{\partial T}\right)_{e,\mu} = -\sum_k \frac{d^e_{k,T}}{d^{T}_{kl}}.$$

Analogously, other derivatives of characteristic functions and s.

tem parameters can be obtained. All these derivatives are listed in 8 tables. As an example, illustrating the use of the tables, the relation between the adiabatic- and isothermic moduli is derived. Other typical relationships between the above constants can be readily determined as well. Some of these relationships are listed in another table. It is noted that some of the constants are independent and that the other constants can be expressed in terms of the former. The system under consideration has 6 degrees of freedom. The number of independent constants decreases considerably if the system is an isotropic two-component solid solution under hydrostatic pressure. Such a system has 3 degrees of freedom and only 6 independent constants. There are 9 tables and 6 references: 3 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: Tsham Wu Ting, James C.M. Li, Phys. Ref., 106, 6, 1957; James C.M. Li, J. Chem. Phys., 26, 4, 1957; F.A. Crawford, Am. J. Phys., 17, 1, 1949.

ASSOCIATION: Instytut mashynoznavstva ta avtomatyky AN URSR m. L'viv (Institute for the Science of Machines and Automation AS UkrSSR, L'viv)

SUBMITTED: January 2, 1961

Card 3/3

L 32095-65 FSF(h)/EWT(l)/FS(v)-3/EEC(k)-2/EWA(d) Pae-2 GW

ACCESSION NR: AR5005696 S/0313/64/000/009/0008/0008

SOURCE: Ref. zh. Issledovaniye kosmicheskogo prostranstva. Otd. 27 vyp., Abs. 9.62.54 B

AUTHORS: Kondratenko, V. M.; Pavlyniv, Ye. A.

TITLE: Procedure for visual observations of artificial satellites at the satellite observation station of the Chernovtsy University

CITED SOURCE: Byul. st. optich. nablyudeniya iskusstv. sputnikov Zemli, no. 35, 1962(1963), 6-8

TOPIC TAGS: artificial satellite motion, satellite observation

TRANSLATION: The authors describe in detail the organization of visual observation of artificial satellites at the Chernovtsy University. Working in each station are seven groups of observers, with six observers in each group. The group, headed by an instruc-

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ACCESSION NR: AR5005696

tor, carries out the observations during one night each week. The observations are carried out with the aid of TZK telescopes. The observers determine the instant of passage of the satellite through the hairline of a grid aligned with two selected stars identified by the observers by using the atlas of A. A. Mikhaylovskiy. The time of observation is fixed with the aid of chronographs, using the readings of stop-watches and a marine chronometer. A graphic method is described for estimating the quality of the satellite observations made by each observer. A. Kuznetsov.

SUB CODE: SV ENCL: 00

Card 2/2

L 36288-66 EWT(1)/EEC(k)-2/FSS-2 TT/GW

ACC NR: AR6004323 SOURCE CODE: UR/0274/65/000/009/A021/A021

AUTHORS: Pavlyniv, Ye. A.; Safronov, Yu. I.; Melenevskiy-Grishchenko, V. A.

TITLE: Operator's panel in a station for visual observations of an artificial earth satellite

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz', Abs. 9A161

REF SOURCE: Byul. st. optich. nablyudeniya iskusstv. sputnikov Zemli, no. 40, 1964, 18-19

TOPIC TAGS: artificial earth satellite, artificial satellite observation, satellite tracking, SPACECRAFT OBSERVATION STATION

ABSTRACT: Construction and work plan for separate blocks of an operator's panel in conducting visual observation of an artificial earth satellite (AES) are described. The panel was prepared at the AES observation station No. 1062 at the Chernovtsy State Institute, and it has worked for a year without failure. 4 illustrations. A. K. [Translation of abstract]

SUB CODE: 22

Card 1/1

UDC: 621.396.946:629.198.5

Pavlenkov, F.

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(Continued on next card)

ANDREYEV, A.B. (continued) .... Card 2.

YAKOVLEV, A.V.; ANDREYEV, Ye.S., retsenzent, redaktor; BEKKEN-GEYM, B.M., retsenzent, redaktor; BERMAN, L.D., retsenzent, redaktor; BOLTINSKIY, V.N., retsenzent, redaktor; BONCH-BRUYEVICH, V.L., retsenzent, redaktor; VELLER, M.A., retsenzent, redaktor; VINOGRADOV, A.V., retsenzent, redaktor; GUDTSOV, N.T., retsenzent, redaktor; DEGTYAREV, I.L., retsenzent, redaktor; DEM'YANYUK, F.S., retsenzent; redaktor; DOBROSMYSLOV, I.N., retsenzent, redaktor; YELANCHIK, G.M. retsenzent, redaktor; ZHEMOCHKIN, D.N., retsenzent, redaktor; SHURAVCHENKO, A.N., retsenzent, redaktor; ZLODEYEV, G.A., retsenzent, redaktor; KAPLUNOV, R.P., retsenzent, redaktor; KUSAKOV, M.M., retsenzent, redaktor; LEVINSON, L.Ye., [deceased] retsenzent, redaktor; MALOV, N.N., retsenzent, redaktor; MARKUS, V.A. retsenzent, redaktor; METELITSYN, I.I., retsenzent, redaktor; MIKHAYLOV, S.M., retsenzent; redaktor; OLIVETSKIY, B.A., retsenzent, redaktor; PAVLOV, B.A., retsenzent, redaktor; PANYUKOV, N.P., retsenzent, redaktor; PLAKSIN, I.N., retsenzent, redaktor; RAKOV, K.A. retsenzent, redaktor; RZHAVINSKIY, V.V., retsenzent, redaktor; RINBERG, A.M., retsenzent; redaktor; ROGOVIN, N. Ye., retsenzent, redaktor; RUDENKO, K.G., retsenzent, redaktor; RUTOVSKIY, B.N., [deceased] retsenzent, redaktor; RYZHOV, P.A., retsenzent, redaktor; SANDOMIRSKIY, V.B., retsenzent, redaktor; SKRAMTAYEV, B.G., retsenzent, redaktor; SOKOV, V.S., retsenzent, redaktor; SOKOLOV, N.S., retsenzent, redaktor; SPIVAKOVSKIY, A.O., retsenzent, redaktor; STRAMENTOV, A.Ye., retsenzent, redaktor; STRELETSKIY, N.S., retsenzent, redaktor;

(Continued on next card)

ANDREYEV, A.V.,(continued) .... Card 3.

TRET'YAKOV, A.P., retsenzent, redaktor; FAYERMAN, Ye.M., retsenzent, redaktor; KHACHATYROV, T.S., retsenzent, redaktor; CHERNOV, H.V., retsenzent, redaktor; SHERGIN, A.P., retsenzent, redaktor; SHESTOPAL, V.M., retsenzent, redaktor; SHESHKO, Ye.F., retsenzent, redaktor; SHCHAPOV, N.M., retsenzent, redaktor; YAKOBSON, M.O., retsenzent, redaktor; STEPANOV, Yu.A., Professor, redaktor; DEM'YANYUK, F.S., professor, redaktor; ZNAMENSKIY, A.A., inzhener, redaktor; PLAKSIN, I.N., redaktor; RUTOVSKIY, B.N. [deceased] doktor khimicheskikh nauk, professor, redaktor; SHUKHGAL'TER, L. Ya, kandidat tekhnicheskikh nauk, dotsent, redaktor; BRESTINA, B.S., redaktor; ZNAMENSKIY, A.A., redaktor.

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