

Septilici, R.

The unification stage of tolerance standards in socialist countries. p. 148.

STANDARTEAREA. Comisiunea de Standardizare. Bucuresti, Romania
Vol. 11, no. 3, Mar. 1959

Monthly List of East European Accessions (EEAI) LC, vol. 8, no. 9, Sept. 1959

Uncl.

SEPTILICI, R., conf. ing.

New works regarding surface roughness. Metrologia apl 9 no.1:1-7
Ja-F '62.

SEPTILICI, Raul, ing.

Standardization of the new metric threads. Metalurgia constr mas
14 no.7:639-642 JI '62.

1. Oficiul de stat pentru standarde.

SEPTILICI, R., conf. ing.

Characteristics of optical glass for measuring devices. Metrologia
apl 10 no.2:58-62 F '63.

SEPTILICI, Raul, ing.

Standardization of the trapezoid acme screw threads.
Constr mas 15 no.7:498-502 J1'63.

1. Oficiul de stat pentru standarde.

SEPTILICI, R., conf. ing.

Present problems in the soicalist countries on the dimensional interchangeability. Metrologia apl 9 no. 4:145-148
Jl-Ag '62.

SEPTILICI, R., conf. ing.

Characteristics of optic measuring apparatus. Metrologia
apl 10 no.8:346-350 Ag'63.

SEPTILICI, R., conf. ing.

The E system for surface rugosity evaluation. Metrologia
apl 11 no. 4: 145-149 Ap '64.

SEPTILICI, R., conf. ing.; CHESA, I., ing.

Tensiometry. Metrologia apr 12 no.2:61-66 F '65.

SEPTILICI, R., conf. ing.

The ISO/R 286 recommendation; "The ISO system of tolerances and fittings." Metrologia apl 12 no.4:157-163 Ap '65.

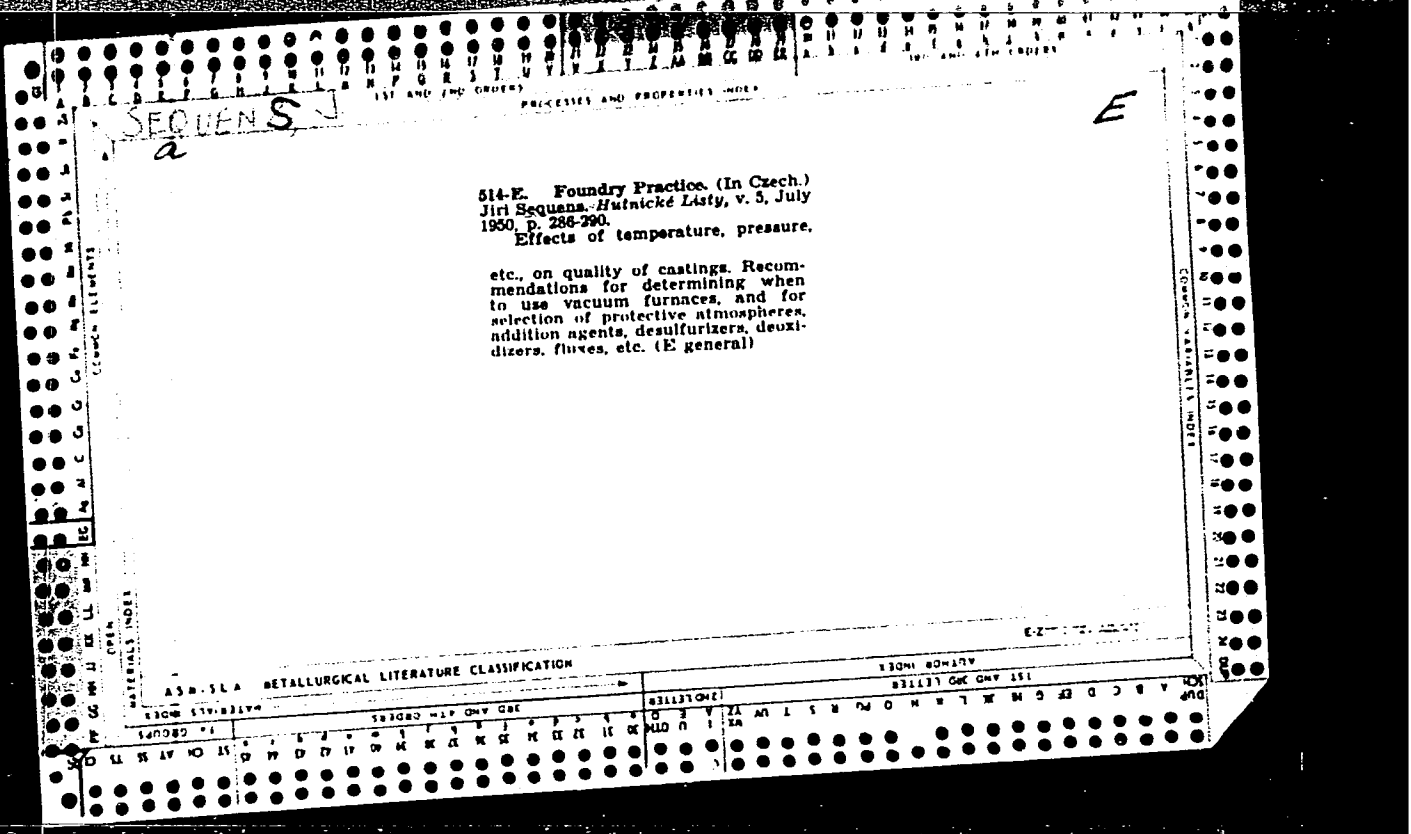
SEPTORA, M.

Technoscientific sessions at the regional branch of the Scientific Association of Engineers and Technicians of Rumania, Banat; Section of Chemistry. Rev chimie Min petr 12 no.11:685 N '61.

GUKASYAN, E.I.; SEPYAN, G. Kh.

Case of a secondary calculus following an adenomectomy. Azerb.
med. zhur. 41 no. 10:74-75 0 '64 (MIRA 19:1)

1. Iz khirurgicheskogo otdeleniya (zav. - G. Kh. Sepyan) Stepanakertskoy oblastnoy bol'nitsy (glavnyy vrach - A.N. Zargarov).



SEQUENS, J., inz., dr.

Electric drive of machine tools in German firm AEG. El tech
obzor 50 no.12:697-698 D :61.

ACCESSION NR: AP4042353

Z/0050/64/000/007/0010/0010

AUTHOR: Kubic, V. (Engineer, Candidate of sciences); Sequens, J.
(Doctor, Engineer); Vasko, A. (Engineer)

TITLE: Magnetic fields made visible

SOURCE: Bulletin Ceskoslovenske akademie ved, no. 7, 1964, 10

TOPIC TAGS: magnetic field, weak magnetic field, magnetic field
visualization

ABSTRACT: In a previous study conducted at the Ustav pro elektrotechniku, CSAV (Institute of Electrical Engineering, CSAV), temperature fields had been made visible (CSAV Bulletin, no. 3, 1963). Using the experience gained, scientists developed a new method of making magnetic fields visible by means of a polariscope. The method is based on the Majorana effect (a colloidal solution consisting of ferromagnetic particles becomes doubly refracting in a magnetic field which is perpendicular to the optical axis of polarized light). A thin layer of magneto-optic liquid illuminated by polarized light is placed in a magnetic field, whose image can then be seen on the screen of a

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ACCESSION NR: AP4042353

polariscope. A colloidal solution of magnetite prepared at the Fyzikalni ústav, CSAV (Institute of Physics, CSAV) was used. This solution aids in visualizing relatively weak dispersed magnetic fields (e.g., around the winding of electric machines), mainly in cases when it would be difficult to calculate their shape. The inventors of the method are V. Kubec and J. Sequens of the Electrotechnical Institute, CSAV, and A. Vasko, of the Ustav radiotechniky a elektroniky CSAV (Institute of Radio Engineering and Electronics, CSAV). A patent has been applied for.

ASSOCIATION: none

SUBMITTED: 00

ATD PRESS: 3053

ENCL: 00

SUB CODE: EM

NO REF SOV: 000

OTHER: 000

Crd 2/2

KOMAREK, Vladimír, inž., kandidát technických ved; SEQUENS, Jiri, inž.,
dr.; SCHIER, Pavel, inž.

Dynamic stress of electricity conducting materials. El tech obzor
51 no.10:513-519 0 '62.

1. Vyzkumny ustav kovu, Panenske Brezany (for Komarek).
2. Ustav pro elektrotechniku, Ceskoslovenska akademie ved, Praha (for Sequens).
3. Hutnický ustav, Ceskoslovenska akademie ved, Praha (for Schier).

Z/017/63/052/002/002/002
E081/E420

AUTHORS: Sequens Jiří, Engineer Doctor
Vasko Antonín, Engineer

TITLE: The visual presentation of temperature gradients of transient phenomena

PERIODICAL: Elektrotechnický obzor, v.52, no.2, 1963, 86-92

TEXT: The use of the Schlieren method for observing temperature gradients in the range of temperature 20 to 300°C is described. The optical methods of Toepler and Philpot Svensson are considered in detail. Toepler's method uses two screens (Fig.1) where Z is a light source of constant intensity with a sharp edge at A; the lens O_1 produces an image of the source Z at C' where the edge of the screen is placed at a distance a' from the edge of the source image; the lens O_2 produces an image P' of the object P. If the image produced by the parallel rays is cut off by the edge at C' and only the image produced by the refracted rays is allowed to be projected, then a change of intensity is observed in places where there are thermal gradients. An expression is derived relating the relative change in intensity
Card 1/3

Z/017/63/052/002/002/002
E081/B420

The visual presentation ...
of the image to the thermal gradient

$$\frac{\Delta L}{L} = \frac{sh}{a'} \mu \frac{d\vartheta}{dx} \quad (6)$$

where μ is the thermal coefficient of the refractive index and ϑ is the temperature. Experimental results obtained on a simple arrangement of small cylindrical resistances are given. Thermal models are also given which enable a comparison of theory and experiment to be made. In addition, the paper deals with the inclined slit method developed by Philpot - Svensson (Arkiv för kemi, mineralogi o geologi, v.22A, no.10) which renders visible temperature gradients over a whole cross section of the medium. The gradient curve thus obtained yields after integration a curve showing the distribution of temperature over the investigated cross section. Tests made on simple thermal models are described as in the former case. The experimental results show that the graphical representation of the temperature gradients enables the shape of even complicated two dimensional gradient fields to be traced. In this way it is possible to examine the temperature

Card 2/3

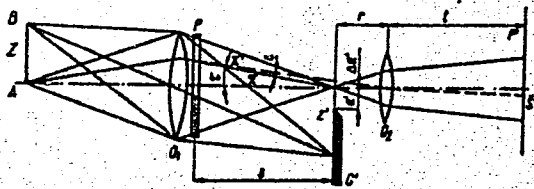
The visual presentation ...

Z/017/63/052/002/002/002
E081/E420

rise at various points on the tested device or to investigate on models the cooling arrangements and changes of them, necessary to improve their operation. There are 14 figures.

ASSOCIATION: Ústav pro elektrotechniku ČSAV a Laboratoř optiky
ČSAV (Institute of Electroengineering Czech AS
Optical Laboratory Czech AS)

SUBMITTED: April 19, 1962



Card 3/3

Fig.1.

RUBEC, V.; SEQUENS, J.

Visualization of magnetic fields by means of the Majorana effect.
Et tech oss 15 no.2:115-119 '64.

MILER, Miroslav, pracovník ústavu fyziky, Jiri, Ing. dr.

Temperature models on optical waves. Acta techn 62 10 no.2:
121-133 '65.

1. Czechoslovak Academy of Sciences, Prague-Kobylisy, Lunubova
1 (for Miler). 2. Czechoslovak Academy of Sciences, Prague 1-Nove
Mesto, Varšavské nám. 55 (for Sequens). Submitted May 10, 1963.

L 33206-66 EWP(w)/T/EWP(+)/ETI LJP(c) JD

ACC NR: AP6023827

SOURCE CODE: CZ/0017/65/054/012/0591/0595

AUTHOR: Sequens, Jiri (Doctor of engineering)

60
53

ORG: Institute of Electrical Engineering, CSAV (Ustav pro elektrotechniku CSAV)

TITLE: Utilization of mechanically stressed current-carrying materials at higher temperatures

SOURCE: Elektrotechnicky obzor, v. 54, no. 12, 1965, 591-595

TOPIC TAGS: mechanical stress, creep, current carrier, dynamic stress, heat stress, mechanical heat treatment

ABSTRACT: This paper presents the results of complex mechanical tests of the materials EA1, VUK 33 E, Jareal, ECu, ECuAg subjected to static and dynamic stresses at temperatures up to 250°C, including creep-resistance tests. The influence of the preceding mechanical and heat treatment of the materials is investigated. Reference data for designers are given, as well as the possibilities of improving the required properties by preceding moderate forming, and, finally, data are presented for the correct working of the materials during manufacture. The research results are utilized for more detailed standardization and for improvement of the current-carrying materials. [Based on author's Eng. abst.] [JPRS]

SUB CODE: 11 / SUBM DATE: 10Jul64 / ORIG REF: 018

Cord 1/1 *de*

0915

1556

SEQUENZ, H.

Peak performance of Austrian electric machinery after the Second World War. p. 172

ELEKTROTECHNICKY OBZOR. (Ministerstvo tezkého strojírenství a Československé vědecká technická společnost pro elektrotechniku při Československé akademii věd) Praha, Czechoslovakia. Vol. 48, No. 4, Apr. 1959

Monthly List of East European Accessions (EEAI), LV, Vol. 8, No. 7, July 1959
Uncl.

DRASKIC, Dragisa, dr inz.; SER, Filip, dipl. inz.

Possibilities of concentrating the Blagodac and Podvirovi lead and zinc ore deposits. Rudar glasnik no.3:17-27 '63.

1. Nacelnik Odeljenja za metale Zavoda za FMS (for Draskic).
2. Sef grupe za metale, Zavod za FMS Rud. inst., Beograd (for Ser).

ŠER, Filip, dipl. inž., saradnik

Possibilities of the flotation concentration by applying selective flocculation of iron oxidized minerals. Rud met zbor 3:12-23 '64.

1. Mining Institute, Belgrade.

LESIC, Dura, dr. inz., redovni profesor; SER, Filip, inz., strucni saradnik

Industrial use of tetrabromoethane as a heavy medium in mineral dressing processes. Rudar glasnik no.4:98-103 '62.

1. Rudarsko-geoloski fakultet Univerziteta u Beogradu, upravnik Zavoda za pripremu mineralnih sirovina u Rudarskom institutu, Beograd, i glavni urednik, "Rudarski glasnik. Bulletin of Mines" (for Lesic).
2. Zavod za pripremu mineralnih sirovina (for Ser).

ROCEK, V.; FAJTA, F.; DOUBRAVSKY, J.; SEPA, D.; SERY, Z.; HOLUSA, R.; KALENICEK, O.;
TALAS, M.

Contribution of simple mammography in the differential diagnosis
of dysplasia of the female breast. Rozhl. chir. 43 no.5:288-292
My'64.

I. Ustredni rentgenologicky ustav (prednosta: doc. dr. J.
Doubravsky, CSc.); II. chirurgicka klinika (prednosta: doc.
dr. J. Burian); patologickoanatomicky ustav (prednosta: doc.
dr. V. Valach) a gynekologicka klinika (prednosta: doc. dr.
F. Gazarek, CSc.) lekarske fakulty PU (Palackeho university)
v Olomouci.

SERY, Z.; SERA, D.; FAJTA, M.; HOLUSA, R.; KAMENICEK, O.; ROCEK, V.;
TALAS, M.

Breast dysplasia. Rozhl. chir. 43 no.5:273-277 My '64.

Clinical picture of breast dysplasia. Ibid.:283-287

Vaginal cytology and endometrial histology in breast
dysplasia. Ibid.:293-296

1. II. chirurgicka klinika (prednosta: doc. dr. J. Burian);
ustredni rentgenologicky ustav (prednosta: doc. dr. J.
Doubravsky, CSc.), patologickoanatomicky ustav (prednosta:
doc. dr. V. Valach), a gynekologicka klinika (prednosta: doc.
dr. F. Gazarek, CSc.) lekarske fakulty PU (Palackeho university)
v Olomouci.

HOLUSA, R.; VALACH, V.; SERY, Z.; SERA, D.; FAJTA, M.; KAMENICEK, O.; ROCEK, V.;
TALAS, M.

Pathology of breast dysplasia. Rozhl. chir. 43 no. 5:278-282
My'64.

I. Patologickoanatomicky ustav (prednosta: doc. dr. V. Valach);
II. chirurgicka klinika (prednosta: doc. dr. J. Burian); ustredni
rentgenologicky ustav (prednosta: doc. dr. J. Doubravsky, CSc.)
a gynekologicka klinika (prednosta: doc. dr. F. Gazarek, CSc.)
lekarske fakulty PU [Palackeho university] v Olomouci.

SERA, Ibolya, Dr.

GAVALLER, Istvan, Dr.; OROSZ, Etelka, Dr.; SERA, Ibolya, Dr.

Significance of eclampsia in damages of the fetal nervous system with late manifestations. Orv. hetil. 99 no.1:16-19 5 Jan 58.

1. A Debreceni Orvostudományi Egyetem Szülészeti és Nőgyógyászati Klinikájának (igazgató: Arvay Sándor dr. egyet. tanár) és Ideg- és Elmegyógyászati Klinikájának (igazgatóhelyettes: Ruzs Sándor dr. egyet. docens) közleménye.

(ECLAMPSIA, compl.

fetal NS damages with late manifest. (Hun))

(FETUS, dis.

NS damages with late manifest. caused by eclampsia (Hun))

(NERVOUS SYSTEM, dis.

fetal NS damages with late manifest. caused by eclampsia (Hun))

JUHASZ, Pal, dr.; SEHA, Ibolya, dr.

Certain data on the problem of clinical therapy and pathology of polioencephalitis haemorrhagica superior. Ideg.szemle 12 no.12:353-361 D '59.

1. Debreceni Orvostudományi Egyetem Ideg- és elmegyógyászati klinikájának (Igazgató: dr. Juhasz Pal egyetemi tanár) közleménye.

(VITAMIN B DEFICIENCY)

SERA, J.

Good example for the rest. p. 171.
KRIDLIA VLASTI, Praha, No. 3, Apr. 1955.

SO: Monthly List of East European Accessions, (SEAL), LC, Vol. 4, no. 10, Oct. 1955,
Uncl.

SERA, T. YA

21
 The effect of low temperature upon the absorption spectrum of additively colored silver chloride. T. Ya. Sera and M. P. Kir'yakova. *Sbornik Fiz.-Mat. Fak. i Nauch. Prilozhen. Inst. Fiz. Odessk. Univ.* 5, 23-8(1954); *Referat. Zhur., Khim.* 1956, Abstr. No. 3252. — Layers of AgCl 10⁻⁴ cm. thick were obtained by distn. at 10⁻⁴ mm. pressure onto a glass sheet. Half of the AgCl layer was additively colored by thermal atomization on it of pure Ag *in vacuo*. Photochem. coloring was produced by ultraviolet rays. The absorption curve of additively and photochemically colored AgCl at -160° is situated above the curve obtained at room temp. Different sections of the curve were displaced by different amts., and in the region of 600-80 mμ a decrease of absorption was noticed. These phenomena are attributed to differences in concn., structure, and degree of bonding of color centers in the lattice of AgCl. A. N. P.

6
1-4E2C
1-4E3D

NS JK

21520

9.4177 (incl. 3005; also 1138, 1147)

26.2421

S/139/61/000/002/015/018
E032/E414

AUTHORS: Serdyuk, V.V. and Sera, T.Ya.

TITLE: Optical Absorption of Some Metal Impurities in the Crystal Lattice of Cadmium Sulphide

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1961, No.2, pp.132-137

TEXT: Changes in the absorption spectrum of cadmium sulphide films which are due to heat treatment and the introduction of some metal impurities have been investigated. Yellow non-luminescing cadmium sulphide powder obtained by chemical methods was evaporated in a vacuum on to quartz plates. The films obtained in this way had a thickness of the order 5×10^{-4} mm which ensured that they were sufficiently transparent in the region 400 to 700 m μ . The absorption spectra were measured with the C Φ -4 (SF-4) quartz spectrophotometer. A thinner layer of cadmium sulphide was used as the standard specimen. In this way possible errors due to unequal reflection of light from the semiconducting film and from quartz were excluded. Changes in the absorption spectra of cadmium sulphide were determined after it was heated in a vacuum for 20 minutes at 300°C. In addition, the effect of cadmium, Card 1/6

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E032/E414

Optical Absorption of ...

silver and copper impurities on the absorption spectra was investigated. The metal impurities were introduced by vacuum evaporation and subsequent heating at 300 to 400°C. This operation facilitated the diffusion of the metal into the semiconducting material. The standard specimen was subjected to the same thermal treatment as the specimen under investigation after the introduction of the impurity. This ensured that only effects due to the introduction of the metal impurity were observed, while other possible effects due to heating were excluded. The absorption spectrum of cadmium sulphide measured relative to the thin standard before (curve 1) and after (curve 2) heating is shown in Fig.1. As can be seen, the heating of the specimen in a vacuum for 20 minutes at 300°C gives rise to the appearance of a new band with a maximum at 490 mμ. This band also appears if the heating is carried out in air. It is suggested that the new band is associated with the appearance of surplus cadmium atoms in the cadmium sulphur lattice. This is confirmed by the fact that the band does not appear when the specimen is heated in a sulphur atmosphere. Fig.2 shows the absorption of cadmium sulphide after

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Optical Absorption of ...

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E032/E414

the introduction of the following metal impurities: Cd (curve 1), Ag (curve 2) and Cu (curve 3). As was to be expected, the introduction of cadmium gives rise to the appearance of a band in the same region as in the case of heating. However, the two methods of introducing cadmium atoms into the lattice are not entirely equivalent since the position of the band in the second case is 515 m μ as compared with 490 m μ in the previous case. The addition of silver gives rise to an absorption band with a maximum at 550 m μ while the band associated with the copper impurity has a maximum at 600 m μ . In these experiments the average impurity concentration was of the order of 10^{-5} g/g. Fig.3 shows the dependence of the absorption band due to silver on the impurity concentration (curve 1 - 10^{-4} g/g, curve 2 - 10^{-3} g/g, curve 3 - 10^{-2} g/g). A slight displacement of the maximum towards longer wavelengths is observed at the higher concentrations. Fig.4 shows the effect of cobalt (curve 1), nickel (curve 2) and iron (curve 3) on the absorption spectrum. Definite absorption minima are clearly present in these curves. The optical absorption effects are closely related to photoconductivity and

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E032/E414

Optical Absorption of ...

luminescence effects. Thus, for example, the absorption bands associated with the introduction of copper and silver into the cadmium sulphide lattice coincide in position with the corresponding photo-conductivity maxima. This indicates that the impurity centres are responsible both for absorption and photo-conductivity. On the other hand, the introduction of cobalt, nickel and iron does not give rise to selective absorption but, on the contrary, leads to the appearance of characteristic absorption minima. This is in agreement with the quenching action of these impurities on the photoconductivity of cadmium sulphide. The entire situation can be represented by the energy level diagram shown in Fig.5 which is used to interpret the photoconductivity and luminescence effects in activated cadmium sulphide crystals. There are 5 figures and 11 references: 7 Soviet and 4 non-Soviet.

X

ASSOCIATION: Odesskiy gosuniversitet imeni I.I.Mechnikova
(Odessa State University imeni I.I.Mechnikov)

SUBMITTED: March 23, 1960 (initially)
November 10, 1960 (after revision)

Card 4/6

Optical Absorption of ...

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E032/E414

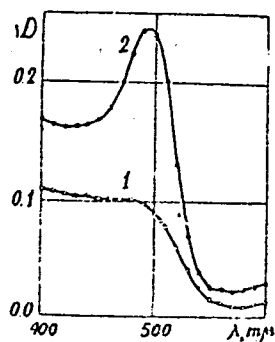


Fig.1.

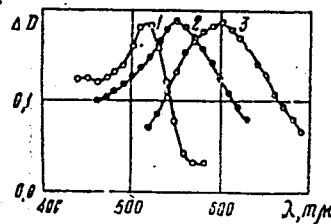


Fig.2.

α

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Optical Absorption of ...

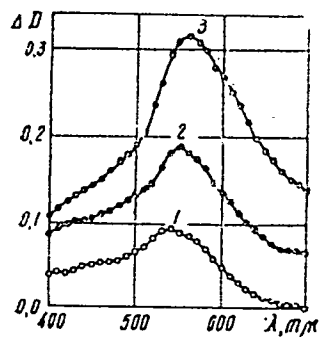


Fig.3.

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Fig.4.

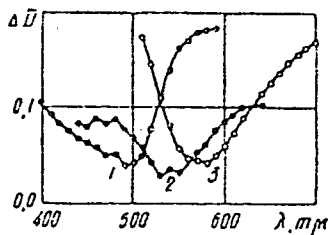
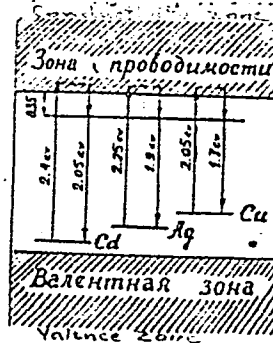


Fig.5.



SERA, T.Ya.; GUMENYUK, A.G.

Effect of the silver sulfide additive on the absorption spectra
of silver halide emulsions sensitized by dyes at low temperatures.
Zhur.nauch. i prikl.fot i kin. 5 no.5:321-326 S-0 '60.

(MIRA 13:12)

I. Institut fiziki gosudarstvennogo universiteta imeni I.I.Mechnikova,
Odessa.

(Photographic emulsions)

83370

S/051/60/009/003/009/011
E201/R691

26.1512

AUTHORS: Söra, T. Ya. and Sverdlik, V.V.

TITLE: A New Band in the Absorption Spectrum of Polycrystalline Cadmium Sulphide Layers

PERIODICAL: Optika i spektroskopiya, 1960, Vol. 9, No. 3, pp. 407-409

TEXT: The authors studied the effect of heat treatment on the absorption spectra of polycrystalline cadmium sulphide layers. Non-luminescent bright-yellow cadmium sulphide powder was sublimated in vacuum onto glass plates. Layers produced in this way were about 10^{-6} cm thick so that interference did not affect absorption measurements. Absorption spectra were recorded in the 400-600 m μ region with a quartz photoelectric spectrophotometer SF-4. Before heat treatment the absorption spectrum had its usual form (Fig. 1a). After heating in air for 5 min at 300°C a new wide band appeared with a maximum at 485 m μ (Fig. 1b). This band can be seen more clearly in Fig. 1b which represents subtraction of the curve a from the curve b in Fig. 1. The same band could be produced by heating in vacuo, i.e. it was not due to interaction with atmospheric oxygen. Additional experiments

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83370

S/051/60/009/003/009/011
E201/E691

A New Band in the Absorption Spectrum of Polycrystalline Cadmium Sulphide Layers

showed (Fig. 2) that the new band was not produced by structural changes during heat treatment. It was concluded that a new band originated as follows. Heating caused local cracks which could be seen with a microscope. Metal atoms collected in these cracks producing centres responsible for the additional absorption in the 430-540 μ region with a maximum at 485 μ . The new absorption band was accompanied by a sharp rise of the electrical resistance. There are 2 figures and 8 references; 7 Soviet and 1 English.

SUBMITTED: August 11, 1959

Card 2/2

SERDYUK, V.V.; SERA, T.Ya.

Optical absorption by certain metallic impurities in the crystal lattice of cadmium sulfide. *Izv.vys.ucheb.zav.; fiz.* no.2:132-137 '61.
(MIRA 14:7)

1. Odesskiy gosudarstvennyy universitet imeni I.I.Mechnikova.
(Cadmium sulfide crystals—Optical properties)

S/081/62/000/009/021/075
B158/B101

AUTHORS: Gumenyuk, A. G., Sera, T. Ya., Stasenko, A. G.

TITLE: The absorption spectrum of silver halide exposed to monochromatic light

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 9, 1962, 76, abstract 9B524 (Nauchn. yezhegodnik. Odessk. un-t. Fiz.-matem. fak. i N.-i. in-t fiz., no. 2, Odessa, 1961, 157 - 158)

TEXT: The absorption spectrum of a fine-grain AgCl emulsion exposed to monochromatic light of $\lambda = 313, 336, 405$ and $436 \text{ m}\mu$ was studied. This was found to be little dependent on λ of the acting light. The same bands were observed in it as for emulsions exposed to full radiation from a Hg lamp. The positions of the band maxima lying in the short wave region of the spectrum completely coincided, whereas the maximum of the band in the long wave region was somewhat displaced towards long λ . Preparations of AgBr dust, in contrast to emulsion layers, often show areas with "inverted" spectral curves (Sera, T. Ya., Sb. Fiz.-matem. fak-ta OGU, 1951). [Abstracter's note: Complete translation.]

Card 1/1

38157
S.558/62/000/004/045/160
A058/A101

26.2421
9.4177

AUTHORS: Sera, T. Ya., Serdyuk, V. V.

TITLE: Effect of preheating and extra irradiation on the absorption spectra of cadmium sulfide and cadmium selenide

PERIODICAL: Referativnyy zhurnal, Fizika, no. 4, 1962, 33, abstract 4V242 ("Nauchn. yezhegodnik Odessk. un-t. Fiz.-matem. fak. 1 N.-1. in-t fiz." no. 2, Odessa, 1961, 187-190)

TEXT: The change in the absorption spectra of polycrystalline CdS and CdSe films under the action of heat treatment and short-wave irradiation was investigated. Thin films of CdS and CdSe of different thicknesses (from 10^{-5} to 10^{-3} mm) were used, which were applied by thermal evaporation in a vacuum onto quartz and glass backings. Heat treatment of the films was effected by preheating them in a vacuum at 300°C for 10 - 30 minutes. After such treatment of the CdS film its spectrum evinces an extra wide band with a maximum at 4,800 - 4,900 A, which is associated with an excess of Cd atoms in the crystal lattice. A similar effect is also observed in CdSe, in which a band appears at 6,900 A. Short-wave light with a wavelength in the range from 3,500 to 6,000 A causes "excitation" of

Card 1/2

Effect of preheating and extra irradiation ...

S/058/62/000/004/045/160
A058/A101

both CdS and CdSe thin films, which is manifested in the appearance of extra absorption bands in the red and infrared regions of the spectrum: CdS has conspicuous bands at 6,700, 8,300 and 12,000 - 13,000 Å, and CdSe has bands at 8,000, 12,000 and 15,000 Å.

E. Nagayev

[Abstracter's note: Complete translation]

Card 2/2

SERDYUK, V.V.; SERA, T.Ya.

Some problems of the photoconductivity of polycrystalline samples
of cadmium selenide. Fiz.tver.tela 3 no.7:2166-2169 JI '61.
(MIRA 14:8)

1. Odesskiy gosudarstvennyy universitet imeni I.I.Mechnikova.
(Photoconductivity) (Cadmium selenide crystals)

9.4177 (1035,1051)
26.2421

30801
S/181/61/003/011/048/056
B104/B138

AUTHORS: Sëra, T. Ya., Serdyuk, V. V., and Shevchenko, I. M.

TITLE: The effect of γ -irradiation on spectral distribution of photo-sensitivity in CdS single crystals

PERIODICAL: Fizika tverdogo tela, v. 3, no. 11, 1961, 3537-3539

TEXT: The experiments were carried out on single crystals of CdS with a photo-sensitivity spectrum with two maxima (Fig.). The crystals were exposed to a cobalt 60 milliroentgens radiation. Photoconductivity decreased and the maxima vanished, but in most cases a very low level of sensitivity remained through the visible range of the spectrum (Fig., curves 2 and 3). The variations in photo-sensitivity in CdS single crystals due to γ -irradiation were stable. In essence, the interaction of a γ -radiation with the atoms of single crystals is a Compton effect which means there is bombardment of the substance with electrons, and multiple ionization of the atoms. First the sulfur atoms are ionized until they become positively charged and are displaced to interstitial sites under the action of the field of surrounding ions. A considerable number of

Card 1/2

X

30801

S/181/61/003/011/048/056
B104/B138

The effect of γ -irradiation ...

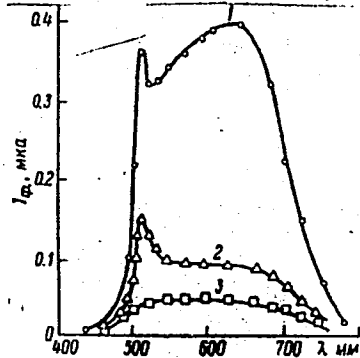
negative ion vacancies are thereby created, and impurity levels are formed in the forbidden band of the crystal, which play the role of recombination levels for photo-electrons. There are 1 figure and 7 references: 3 Soviet and 4 non-Soviet.

ASSOCIATION: Odesskiy gosudarstvennyy universitet im. I. I. Mechnikova
(Odessa State University imeni I. I. Mechnikov)

SUBMITTED: May 15, 1961 (initially) July 14, 1961 (after revision)

Fig. The spectral distribution of the photo-current of a CdS single crystal.

Legend: (1) before irradiation;
(2) after a 24-hour irradiation;
(3) after a 48-hour irradiation.



Card 2/2

35793

S/120/62/000/001/041/061
EO39/E520

24,3430

AUTHORS: Sëra, T.Y. and Stasenko, A.G.

TITLE: On the question of obtaining a "vacuum creeping spark"

PERIODICAL: Pribory i tekhnika eksperimenta, no.1, 1962, 167-169

TEXT: In the vacuum ultraviolet region of the spectrum a number of different sources are used in spectral analysis. These are: the normal gas discharge; high and low frequency gas discharges; and contact sparks. The so-called "vacuum creeping spark" comes in the last category and it consists of a spark discharge over the surface of a dielectric or semiconductor between two metal electrodes, the whole system being in a vacuum. A lower voltage than that used with the H.F. discharge is required. The source described in this article makes use of a standard condenser spark generator ИГ-2 or 3 (IG-2 or 3) (15 kV) as a power supply. In order to obtain a stable discharge it is essential to have a good contact between the electrodes and the dielectric. This is done by forcing aluminium electrodes into the ends of a porcelain tube of length 50 mm, internal diameter 10 mm and external diameter 20 mm. A 10 mm diameter aperture is drilled in the side

Card 1/2

On the question of ...

S/120/62/000/001/041/061
E039/E520

of this tube perpendicular to its axis, thus exposing the gap between the electrodes (about 1.5 mm). The electrodes are cut in such a way that the discharge passes over the internal surface of the procelain tube opposite to the aperture. The tube with its electrodes is mounted on an insulated support inside a vacuum chamber which is attached to a vacuum spectrograph. The voltage to the electrodes is carried through high voltage vacuum seal inserts and the position of the spark can be adjusted to lie on the optical axis of the spectrograph. Part of a spectrogram obtained using this source with aluminium electrodes is shown. The spectrum was recorded on X-ray film sensitized with an alcoholic solution of sodium salicylate using a ДСС -6 (DFS-6) spectrograph (exposure 90 min). This spectrograph was calibrated over the range 500 to 2000 Å using the source described. There are 2 figures.

ASSOCIATION: Odesskiy gosudarstvennyy universitet
(Odessa State University)

SUBMITTED: May 15, 1961
Card 2/2

9.4174
26.2420
26.2532

36886
S/181/62/004/004/030/042
B102/B104

AUTHORS: Serdyuk, V. V., and Sera, T. Ya.

TITLE: The long-wave photo-sensitivity and the infrared photo-current extinction in cadmium sulfide single crystals

PERIODICAL: Fizika tverdogo tela, v. 4, no. 4, 1962, 1032-1037

TEXT: The paper gives additional information (cf. FTT, 3, 1229, 1961; FTT, 3, 1152, 1961) on the long-wave band of photosensitivity of heat-treated CdS single crystals; the photoconductivity in the 520 mμ band is compared with that in the 650 mμ band which arises in heat treatment. The CdS crystals studied were grown by CdS powder sublimation in nitrogen current. The initial samples had a photocurrent maximum at λ = 510-520 mμ, a weak band at 600-620 mμ, and a dark conductivity of about 10¹⁰ ohm·cm, which was reduced by heat treatment (500°C, 15-20 min), by 2-3 orders of magnitude. The spectrum of the annealed crystals showed a band with λ_{max} = 650-700 mμ whose intensity increased with the annealing period. The heating, which was carried out with focused solar light, did

Card 1/3

X
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S/151/62/004/004/030/042
B102/B104

The long-wave photo-sensitivity,...

not only cause this long-wave band but also raised the total photo-sensitivity of the crystals. In some cases, the intensity of the band with $\lambda_{max} = 520 \text{ m}\mu$ was after heating higher than before by more than one order of magnitude. This fact is attributed to the hole traps arising in the forbidden band. The spectral distribution of the photocurrent is not only red-shifted but also broadened and distorted when the CdS crystal is ground and pressed (5 tons/cm²) to tablets. These changes are due to the effect of the highly increased defect concentration. If the crystals were heated and subsequently cooled, the photocurrent peak was split into two components. The relaxation time (τ^0) of the photocurrent increased with λ . The coefficient Q of infrared extinction was determined as dependent on the wavelength of exciting light in the range 500-800 $\text{m}\mu$. The curves $\tau^0(\lambda)$ and $Q(\lambda)$ are similar in shape: They both show a minor maximum between 500 and 600 $\text{m}\mu$, and then rise monotonically. If $I_{phot} \sim E^\alpha$, then the "quenching" illumination raises α ; E is the illumination intensity. With $\lambda_{exc} = 520 \text{ m}\mu$ and $\lambda_{quench} = 820 \text{ m}\mu$, the lux-ampere characteristics were studied. While $\log I_{ph} = f(\log E_{exc})$ is

Card 2/3

L 33593-66 EWI(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AR6016202

SOURCE CODE: UR/0058/65/000/011/D035/D035

AUTHORS: Sera, T. Ya.; Stasenko, A. G.

TITLE: Absorption spectrum of CdS in the vacuum ultraviolet region

SOURCE: Ref. zh. Fizika, Abs. 11D270

REF SOURCE: Tr. Komis. po spektroskopii, AN SSSR, t. 3, vyp. 1, 1964, 495-502

TOPIC TAGS: absorption spectrum, cadmium sulfide, uv band, spectrographic analysis

ABSTRACT: Results are presented of measurements of the absorption spectrum of CdS in the vacuum ultraviolet region. The measurements were made with apparatus built around a vacuum spectrograph with a radiation source consisting of a hydrogen discharge tube with a capillary. The CdS absorption was measured with thin films sublimated on single-crystal LiF plates. The absorption spectrum of these compounds in the longer-wavelength region agrees with the data obtained by others. In the short-wave part of the investigated vacuum ultraviolet region the absorption of CdS increases. [Translation of abstract]

SUB CODE: 20

Card 1/1

80

SERA, T.Ya.; CHEMERESYUK, G.G.

Photoelectric properties of cadmium selenide single crystals subjected to a gas discharge. Fiz. tver. tela 6 no.1:128-133. Ja '64.
(MIRA 17:2)

1. Odesskiy gosudarstvennyy universitet imeni Mechnikova.

s/0181/64/006/001/0128/0133

ACCESSION NR: AP4011749

AUTHORS: Sera, T. Ya.; Chemeresyuk, G. G.

TITLE: The photoelectric properties of single crystals of cadmium selenide treated by gas discharge

SOURCE: Fizika tverdogo tela, v. 6, no. 1, 1964, 128-133

TOPIC TAGS: photoelectric effect, cadmium selenide, cadmium selenide single crystal, gas discharge, photocurrent, spectral distribution, thermal conductivity, fundamental absorption, photosensitivity, dark current, extinction band, capture cross section, hole, electron

ABSTRACT: Measurements were made on single crystals of CdSe grown by recrystallization from the vapor phase. Ga or Ga-In alloy was used to obtain ohmic contacts. The spectral measurements were made with a DMR-4 double monochromator with quartz optics. Before treatment, the dark resistance, the spectral distribution of the photocurrent, the dependence of intrinsic time on wave length of incident light, the spectral dependence of photocurrent yield, and the extinction of photocurrent were measured. The specimens were then subjected to a single treatment of gas

Card 1/2

ACCESSION NR: AP4011749

discharge. After treatment, the same parameters were measured again. It has been shown that this treatment leads to a considerable increase in intrinsic time and in photocurrent yield in deep bands of fundamental absorption because of the marked increase in photosensitivity of CdSe in this band. A large capture cross section for holes results, and a small capture cross section for electrons. Recombination of carriers at the surface is greatly diminished. The yield of electrons at room temperature by neutral vacancies in Se, forming by the gas-discharge treatment, leads to an increase in thermal conductivity. It was observed that the dark current increased. A new extinction band of photocurrent was observed in the vicinity of 7300 Å, forming as a result of treatment on the surface of the crystal. "In conclusion, the authors express their thanks to V. N. Dul'diyer for making some of the measurements." Orig. art. has: 5 figures.

ASSOCIATION: Odesskiy gosudarstvennyy universitet im. I. I. Mechnikova (Odessa State University)

SUBMITTED: 17Jul63

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: PH

NO REF SOV: 006

OTHER: 010

Card 2/2

L 17092-65 AFWL/SSD(a)/AS(md)-2/ASD(a)-5/BSD/APGC(b)/ESD(dp)/ESD(gs)/ESD(t)

ACCESSION NR: AP4048414

S/0181/64/006/011/3361/3363

AUTHOR: Sera, T. Ya.; Stasenko, A. G.

TITLE: On the absorption spectrum of cadmium sulfide in the vacuum ultraviolet region and the associated transitions B

SOURCE: Fizika tverdogo tela, v. 6, no. 11, 1964, 3361-3363

TOPIC TAGS: absorption spectrum, cadmium sulfide, thin film, optical transition, crystal lattice structure

ABSTRACT: The purpose of the study was to go beyond the hitherto investigated quantum-energy range, namely above 6 ev. The intrinsic absorption of CdS in the vacuum ultraviolet region was investigated with apparatus based on a DFS-6 vacuum spectrograph, the calibration of which was described by the authors elsewhere (PTE No. 1, 167, 1962). The absorption of cadmium sulfide was measured on thin films sublimated in vacuum on single-crystal lithium-fluoride sub-

Card 1/3

L 17092-65

ACCESSION NR: AP4048414

strates. The same films were used to measure the absorption in the vacuum ultraviolet region and at longer wavelengths. The effect of reflection was eliminated by taking x-ray photographs of two films of different thickness on the same x-ray plate. The measured spectrum is shown in Fig. 1 of the enclosure. The increase in absorption at energies exceeding 8.3 eV is attributed to excitation of the 3s-electrons of the sulfur in the CdS. Absorption bands with maxima near 7.95 and 9.95 eV have been observed and are attributed to transitions between levels due to the Cd atoms and Cd⁺ ions, respectively, making up the CdS crystal lattice. The transformations of these levels in the field of the crystal lattice of CdS, which has the symmetry of wurtzite, are described. Orig. art. has: 2 formulas and 1 figure.

ASSOCIATION: Odesskiy gosudarstvennyy universitet (Odessa State University)

SUBMITTED: 03Jun64

ENCL: 01

SUB CODE: SS, OP

NO REF SOV: 011

OTHER: 002

ATD PRESS: 3149

Card 2/3

L 17092-65

ACCESSION NR: AP4048414

ENCLOSURE: 01

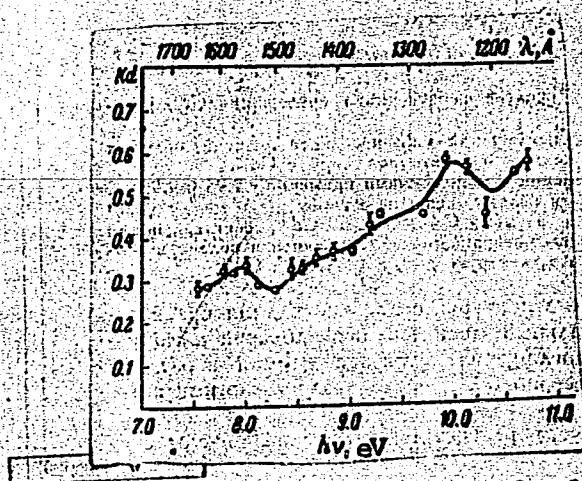


Fig. 1. Spectrum of intrinsic absorption of cadmium sulfide in the vacuum ultraviolet region

Card 3/3

L 20284-65 ENT(1)/ENG(k)/EMT(m)/EEC(t)/T/EWP(t)/EWP(b) IJP(c)/AEDC(a)/SSD/
SSD(c)/BSD/AFWL/AS(mp)-2/ESD(gs)/ESD(t) AT/RDW/JD
ACCESSION NR: AP5000700 S/0181/64/006/012/3754/377

AUTHOR: Sera, T. Ya.; Chemeresyuk, G. G.; Dul'diyer, V. N.

TITLE: Negative photoconductivity of cadmium selenide single crystals treated in a gas discharge. 27 16

SOURCE: Fizika tverdogo tela, v. 6, no. 12, 1964, 3754-3757

TOPIC TAGS: cadmium selenide, photoconductivity, single crystal, gas discharge, recombination

ABSTRACT: The negative photoconductivity of discharge-treated CdSe was investigated in the range $\lambda = 720-750$ nm at room temperature, as well as below and above it [Abstracter's note; temperature not specified]. The resultant negative photoconductivity depended to a considerable extent on the degree of treatment of the crystal. A small dose (1 sec) of additional treatment applied to a sample having maximum negative photoconductivity reduced or even destroyed this photoconductivity. At low temperatures, the negative conductivity was observed after less intense treatment of the crystal than at room temperature. Increase of the temperature above room temperature destroyed the negative photoconductivity com-

Card 1/3

L 20284-65

ACCESSION NR: AP5000700

pletely. The lux-ampere characteristics, recorded for $\lambda = 730$ nm at room temperature after various treatments of a crystal in a gas discharge, were linear before treatment, became sublinear after treatment and, as the duration of the treatment increased, the negative photoconductivity appeared at low illumination intensities. At high illumination intensities, the negative photoconductivity decreased and finally disappeared because of the superposition of the positive photoconductivity. The negative photoconductivity kinetics were investigated in the 710--800 nm region. The positive and negative photoconductivity appeared in all photocurrent rise curves (except for $\lambda = 730$ nm). The rise time constant of the negative photoconductivity was higher than that of the positive. The process of establishing a steady-state value of the photocurrent was slow and could last several minutes. The gas-discharge treatment produced levels with a small electron-capture cross section near the bottom of the conduction band. On illumination with light of energy slightly less than the forbidden band width ($\lambda = 730$ nm), electrons were transferred from the valence band to these levels, while holes were captured by recombination centers and recombined with free electrons. If the recombination of free electrons was faster than the thermal excitation of electrons from the new levels to the conduction band, the number of free carriers decreased, and this gave rise to the negative photoconductivity.

Card 2/3

L 20284-65

ACCESSION NR: AP5000700

The observed increase of the negative photoconductivity on cooling was obviously due to a reduction of the thermal excitation of electrons to the conduction band from the levels formed by the gas-discharge treatment. The observed decrease of the negative photconductivity at high illumination intensities could be associated with a change in the degree of population of these levels and the recombination levels. Orig. art. has: 2 figures.

ASSOCIATION: Odesskiy gosudarstvennyy universitet im. I. I. Mechnikova (Odessa State University)

SUBMITTED: 04May64

ENCL: 00

SUB CODE: SS

NR REF SOV: 008

OTHER: 010

Card 3/3

GUMENYUK, A.G. [deceased]; SERA, T.Ya.; MAYSTRENKO, Ya.I.

Centers of photochemical coloring in a silver chloride emulsion
with gold additive occurring at low temperatures. Zhur,nauch.
i prikl.fot. i kin. 9 no.2:108-111 Mr-Ap '64. (MIRA 17:4)

1. Odesskiy gosudarstvennyy universitet imeni Mechnikova.

SERA, T.Ya.; STASENKO, A.G.

Absorption spectrum in vacuum ultraviolet and the related electron
transitions in cadmium sulfide. Fiz. tver. tela 6 no.11:3361-3363
N '64. (MIRA 18:1)

1. Odesskiy gosudarstvennyy universitet.

SERA, T.Ya.; CHEMERESYUK, G.G.; DUL'DIYER, V.N.

Negative photoconductivity of cadmium selenide single crystals
subjected to a gas discharge. Fiz. tver. tela 6 no.12:57 14-3757
D '64 (MIRA 18:2)

1. Odesskiy gosudarstvennyy universitet imeni Mechnikova.

L 09364-67 EWF(m)/EWP(t)/EFI IJP(c) JD/WB

ACC NR: AFG023421

SOURCE CODE: UR/0139/66/000/003/0130/0134

AUTHOR: [Sera, T. Ya.] (deceased); Chemeresyuk, G. G.; Dunayevskiy, V. I. 52

ORG: Odessa State University im. I. I. Mechnikov (Odesskiy gosuniversitet) 27 B

TITLE: Influence of oxidation¹ of copper¹ in the activation of polycrystalline cadmium selenide on the photoelectric properties of the latter

SOURCE: IVUZ. Fizika, no. 3, 1966, 130-134

TOPIC TAGS: cadmium selenide, cuprous oxide, photoelectric property, activated crystal, oxidation

ABSTRACT: The authors studied the oxidation accompanying the activation heat treatment of CdSe powder produced by the "Krasnyy khimik" plant. The copper was introduced by several methods (sputtering, mixing of amorphous copper in the powder, treatment with CuCl_2 solution) and heat treated at 550C in air for several hours. The photoconductivity of both the activated CdSe and undoped CdSe used as a comparison standard, at wavelengths 500 - 900 nm obtained from a monochromator, was determined. The standard CdSe polycrystal had a photocurrent maximum near 725 nm, the same as single crystals. Addition of copper in solid form and heat treatment in air lowered the maximum wavelength, the shift increasing with the copper density and with the duration of exposure to the air. Heat treatment in a hydrogen atmosphere after oxidation produced a shift toward longer wavelengths. The results show that the decrease in maximum wavelength is due to the formation of cuprous oxide in the intercrystallite layers. The cuprous

Card 1/2

L 09364-67

ACC NR: AF6023421

oxide also reduces the photosensitivity appreciably and decreases the relaxation time of the samples. When the copper was introduced into the CdSe in the form of a $CuCl_2$ solution, no cuprous oxide was formed after heat treatment in air, so that this procedure is recommended for CdSe activation. Orig. art. has: 6 figures.

SUB CODE: 20/ SUBM DATE: 06Oct64/ ORIG REF: 003/ OTH REF: 006

Card

2/2

BRASOVAN, M.; VAZDAUTEANU, V.; SERACIN, E.; PRODAN, M.

Experimental studies on steering wheel control in a laboratory installation. Bul St si Tehn Tim 7:197-205 '62.

VAZDAUTEANU, Vlad, ing.; SERACIN, Eugen

Braking direct current electric traction equipment with
serially excited motors by recovery of energy. Rev transport
10 no.5;223-230 My '63.

SERACIN, E.

Contributions to the use of simplified diagrams for calculating
electric operations with connecting rod reversing gear mechanism.
Bul St si Tehn Tim 9 no.1:197-205 Ja-Je '64.

SERACU, D.

From the experience of the Focsani Furniture Factory in
improving the quality of products and reducing the cost
price of furniture. Ind lemnului 15 no. 3:93-96 Mr '64.

SERADA, V. S.

SERADA, V. S. (Veterinarian, Training Farm Yur'yevskoe, Naro-Forminskiy rayon, Moscow oblast.) Experimental use of flavacridin and groflavin in diseases of the uterus in cows.

So: Veterinariya; Vol. 31; No. 1; January 1954; Uncl.

TABCON

SERADSKIY, Yu.

TITOV, A., inzh.; SERADSKIY, Yu., inzh.

Experimental unit for manufacturing swollen slag materials.
Stroi. mat. 4 no.2:20-21 F '58. (MIRA 11:2)
(Slag cement)

S/081/80/000/010/004/007
A153/A026

AUTHOR: Serafimov, A., Chief Engineer-Inspector of the Board of the Aviation Engineering of the GUGVF

TITLE: From Mobile Mechanisms to Stationary Units

PERIODICAL: Grazhdanskaya aviatsiya, 1960, No. 10, pp. 16-17

TEXT: The author notes an increased complexity of ground servicing modern jet airliners, (e.g., about 17 special vehicles are required to service a Tu-114 plane). This being so, the author recommends replacement of such special vehicles on airfields having intensive air traffic by stationary facilities: water pipelines, compressed air conduits, fuel supply lines, power lines, sewage ducts, etc. Such facilities should be consolidated into a "dock" with concrete surface, so that aircraft brought in there can be subjected to a number of servicing operations at one time. Such a dock must be provided with various tools, jacks, hoses, etc., and should be automated to a feasible maximum degree so that it can be controlled from a control panel. Docks can be open or covered (hangar-type docks). A variant of open dock for the An-10 aircraft has been suggested by the design engineering office of the Kiyev LERM (Line Maintenance Repair Shop). The Vnukovo airport's LERM has already acquired some experience

Card 1/2

C

SERAFIMOV, A., inzh.; GRIBAKIN, G., inzh.

On a foundation of line maintenance and repair workshops not
otherwise. Grazhd.av. 18 no.2:23 F '61. (MIRA 14:3)
(Airplanes--Maintenance and repair)

SERAFIMOV, A.

Ways of progress. Grazhd. av. 21 no.7:22-23 J1 '64.

(MIRA 18:4)

1. Nachal'nik otdela Upravleniya inzhenerno-aviatsionnoy sluzhby
Glavnogo upravleniya Grazhdanskogo vozdušnogo flota.

DIMITROV, N.; SERAFIMOV, A.

Electrocardiographic changes in influenzal infection. Suvrem.med.,
Sofia no.8:59-63 '59.

1. Iz Gradskata obedinena bolnitsa - Dimitrovo. Gl.lekar: B. Ivanov i Profilaktoriuna pri mini "T. Nenkov" - Dimitrovo. Gl.lekar: G. Naumov.

(INFLUENZA diag.)
(ELECTROCARDIOGRAPHY)

SERAFIMOV, AN.

"Mekhanichna tekhnologija na tekstilnite materiali; apretura na platove za VI klas na tekstilnite tehnikumi. Sofiya, Narodna prosveta, 1951. 114 p. (Mechanical technology of textile materials. Mercerization of fabrics; a textbook for the third course in textile schools.)

SO: Monthly List of East European Accessions, L.C., Vol. 2 No. 7, July 1953, Uncl.

SERAFIMOV, A.

"Drawing Apparatus for Cotton Spinning." p. 24,
(LEKA PROMISHLENOST, Vol. 3, No. 2, 1954, Sofiya, Bulgaria)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4
No. 5, May 1955, Uncl.

CA 11H

Methods of study of "meningeal permeability for iodides. I. A. Oberhard and B. N. Serafimov. *Arch. sci. biol.* (U. S. S. R.) 34, 101-4 (in German 104) (1934). --

On the basis of animal and clinical expts. the authors conclude: The permeability of the barrier between the blood and the spinal fluid for Cl^- and Br^- but not for I^- is only apparently paradoxical. The explanation (not supported by exptl. data) lies in the ready oxidizability of I^- to free I and the fact that the latter is easily absorbed and bound by the blood lipides. The permeability for I^- (as LiI) was increased by oral administration of saponin (aq. ext. of *radix saponariae*) and decreased by $CaCl_2$. This conclusion is based on qual. tests for I_2 only in the spinal fluid, and no I dems. were made.

W. A. P.

ASW-55A METALLURGICAL LITERATURE CLASSIFICATION

1201 57123174

121003 411 044 221

0111211042

0121211 044 044 221

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

1ST AND 2ND ORDERS PROCESSES AND PROPERTIES INDEX 3RD AND 4TH ORDERS

AMS / A + B

FEB 1951

2.2-149 551.506:612

Serafimov, B. N. Gornala bolezn'. [Mountain sickness.] (In Trudy Ekspeditsii Akademii Nauk, SSSR, i Vsesoiuznogo Instituta Eksperimental'noi Meditsiny 1934 i 1935. [Reports of the Elbrus Expedition 1934 and 1935.] Moscow, 1936. p. 313-319. Summary in English p. 319. [Ak. Nauk, SSSR, Komissiya po izucheniiu stratosfery, Tom II]) DLC—The author describes the cause and symptoms of mountain sickness and attempts to account for its etiology. *Subject Headings:* Physiological climatology, Atmospheric pressure, Mountain sickness, Elbrus Expedition, U.S.S.R.—J.L.D.

ASB-55A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS 3RD AND 4TH ORDERS

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

SERAFIMOV, B. N.

PA 70T60

USSR/Medicine - Pneumoconiosis Mar/Apr 1948
Medicine - Prophylaxis

"Neuropsychiatric Symptomatology in Silicosis," Prof
B. N. Serafimov, Inst of Regional Path, Acad Sci,
Kazakh SSR, Chair of Psychiatry, Kazakh Med Inst,
Alma-Ata, 3 pp

"Nevropatol i Psikhiat" Vol XVII, No 2

Explains some of the more interesting and yet vital
problems in contemporary intoxication, silicosis,
which in recent years has been thoroughly studied
in the USSR, with regard to prophylactic measures
and other aspects of interest to hygienists and
pathologists. Submitted 29 Apr 1947.

70T60

SERAFIMOV, B. N.

Serafimov, B. N. - "Histopathological changes in the nervous system of cats under mescaline intoxication," Trudy Fiziol. in-ta im. Pavlova, Vol. III, 1949, p. 123-30 -- Bibliog: p. 130

SO: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 14, 1949).

SERAGIMOU, B. N.

Med

✓ Experimental silicosis in animals. B. N. Serafimov. *Zhur. Neoropatol. i Psikhiiatrii im. Korotkova* 52, No. 3, 33-45 (1952).—Four white mice and 3 young rabbits were placed in glass chambers into which 0.5 g. of dust of the indicated composition was blown every min. Mixture No. 94 consisted of SiO₂ 57.2%, Al₂O₃ 3.64%, Fe₂O₃ 0.04%, Pb 3.0%, Zn 7.0%; mixture No. 98: SiO₂ 60.98%, Al₂O₃ 3.63%, Fe₂O₃ 8.13%, Pb 3.9%, Zn 7.1%. The dust concn. in the chambers varied between 0.6-1.0 mg./cm³; particle size was 1-5 μ. Animals were kept in the dust chamber 1 hr. daily during 3 mos. Subjective effects appeared after 3-4 weeks, when animals became less mobile, lost wt., and began to show signs of developing alopecia. No changes were observed in the differential counts on blood of the white mice; in the rabbits the Turk cells increased numerically to 3%; changes in the erythrocytes were more pronounced in the rabbits. At the end of 3 mos. the animals were killed by pneumothorax. Gross anatomical and histological changes are described. In the central nervous system of the exptl. animals varying degrees of change were observed in the nerve tissue. A reactive gliosis and changes in the vascular network were evident. In some animals pseudogranulomas of Si origin were observed in the internal organs, such as the lungs and the liver and in the brain and spinal cord.

B. S. Levine

SERAFIMOV, B.N., prof.

In memory of V.M.Bekhterev. Zdrav.Kazakh. 17 no.1:47-48
'57. (MIRA 12:6)
(BEKHTEREV, VLADIMIR MIKHAILOVICH, 1857-1927)

SERAFIMOV, Dimo

Some conclusions from the work of teachers in mathematics in the medium grades during the 1963/64 school year. Mat i fiz Bulg 8 no.1:23-26 Ja-F '65.

1. Senior Inspector, Ministry of National Education, Sofia.

SERAFIMOV, K.

"Electron Lens."

p. 23 (Radio I Televiziia, Vol. 7, No. 6, 1958, Sofia, Bulgaria)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 11,
Nov. 1958

SERAFIMOV, K., inzh.

Ionospheric forecast used in determining optimum frequencies for radio communication. Radio i televiziia 11 no.6:168-169 '62.

1. Sutrudnik pri Geofizicheskiia institut na Bulgarskata akademiia na naukite.

SERAFIMOV, K.B., inzh., nauchn. sotrudnik

Ionospherical forecast in determining optimum frequencies for radio communication. Radio i televiziia 31 no.8:254 '62.

1. Geofizicheski institut na Bulgarskata akademiia na naukite.

S/169/63/000/001/009/062
D218/D307

AUTHORS: Uzunova, S. and Serafimov, K.

TITLE: An expression for the angle of emission of an antenna in the vertical plane which corresponds to a given range

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 1, 1963, 40, abstract 1A206 (Dokl. Bolg. AN. 1962, v. 15, no. 3, 265-268 (summary in Eng.))

TEXT: A new improved formula and a simplified expression are reported which are convenient for engineering calculations of the vertical angle (Δ) of emission of an antenna. The formula gives Δ as a function of the working part and the ionosphere parameters.

[Abstracter's note: Complete translation]

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SERAFIMOV, K.; TAFRADZHIYEV, B. [Tafradzhieva, B.]

Bond coefficient between the maximum applicable and critical frequency of the ionospheric radio wave propagation. Doklady BAN 15 no.5:475-478 '62.

1. Predstavleno akad. L. Krystanovym [Krustanov, L.].

ACC NR: AP6028353 SOURCE CODE: UR/0203/66/006/004/0685/0694

AUTHOR: Serafimov, K.

ORG: Geophysical Institute of the Bulgarian Academy of Sciences
(Geofizicheskiy institut Bolgarskoy akademii nauk)

TITLE: Stratification and fine structure of the E layer

SOURCE: Geomagnetizm i aeronomiya, v. 6, no. 4, 1966, 685-694

TOPIC TAGS: E layer, ^{atmosphere} stratification, ionogram, ~~critical frequency,~~
~~reflection frequency,~~ ~~negative perturbation,~~ ~~upper culmination,~~ solar
activity, ionosphere ~~disturbance~~

ABSTRACT: The stratification of the E layer of the ionosphere consists of individual layers which appear and vanish in groups. These layers may be classified in three groups: 1) morning and evening E2 layer (which is a regular layer of the ionosphere), 2) intense stratified formations caused by quasiperiodic oscillations, and 3) stratifications caused by the change of gradient in the E layer. These stratifications generate the appearance of E2 and E_s layers. Special stratification measurements were made at the Sofia Station on frequencies of 1 and 4 Mc. Analysis of ionograms shows that stratifications appear at any place in the layer with the same probability. This result denies the

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UDC: 550.388.2

SERAFIMOV, K.

Corpuscular effects of the total solar eclipse of February 15, 1961, and ionization of the night layer E. Doklady BAN 15 no.5:479-482 '62.

1. Predstavleno akad. L. Krystanovym [Krustanov, L.].

SERAFIMOV, K.; UZUNOVA, S.

Optimum covered zones by main aerals. Doklady BAN 15 no.7:
727-730 '62.

1. Otvetstvennyy redaktor, "Doklady Bolgarskoy Akademii
nauk". Predstavleno akad. L. Krystanovym [Krustanov, L.].

ACCESSION NR: AT4013671

B/2506/63/004/000/0109/0125

AUTHOR: Samardzhiev, D.; Serafimov, K.

TITLE: Some regularities of the E2 layer above Sofia observed in 1961

SOURCE: B"lgarska akademiya na naukite, Geofizichen institut, Izv., v. 4, 1963, 109-125

TOPIC TAGS: E2 layer, E layer, F layer, critical frequency, reflection, ionosphere

ABSTRACT: Refined in the work are distinguishing criteria for classifying radio reflections from the intermediate E-F region -- a region for which very few data have been accumulated and which is very poorly illuminated in the literature. Various methods of investigating the E2 layer are indicated. Obtained from analysis of ionograms made by the Sofia ionospheric station is the seasonal histogram of instances when reflection from the E2 layer appears (Fig. 1 of the Enclosure). This histogram shows a significant minimum in the summer and maximum during December. The intermediate E region is shown to be in constant intensive movement, and this often leads to changes in the type of layerlike structures in it. A monthly diagram of f_{oE2} frequencies (Fig. 2 of the Enclosure) was constructed for the month (December) with especially frequent appearance of reflections from the E2 layer,

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and a determination made of the diurnal variation of median values (Fig. 3 of the Enclosure). Critical frequencies of the E2 layer have little scattering and are well grouped. Also analyzed is the daily variation of instances of appearance of reflections from the E2 layer during December. Such analyses are indicated to be correct only when allowance is made for the screening capabilities of the sporadic E layer. With these corrections made, a unimaximal distribution of instances of appearance of reflections from the E2 layer is obtained, with greatest probability during the period 0900-1000 hours local time (Figure 4 of the Enclosure). Also investigated is the duration of reflections from the E2 layer in December and April 1961 (Fig. 5 of the Enclosure). On the basis of the monthly picture of f_oE2 for December 1961 and the obtained diurnal variations of f_oE2 for individual days of the same month, the conclusion is drawn that there is a close association between electron concentration of the E2 layer and the zenith angle of the Sun. Established on the basis of this is the law governing the variation of critical frequencies:

$$f_o E2 \sim (\cos \kappa)^n$$

Exponent n is in every case smaller than the corresponding exponent in the known dependence for the E layer:

$$f_o E \sim (\cos \kappa)^m \sim \text{r. e. } n < m.$$

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Explained on the basis of this law is the disappearance of reflections from the E2 layer during the summer (the reason being the slower increase in ionization in the E2 layer as compared with the relatively rapid increase of critical frequencies of the E layer, screening the higher-lying E2 layer). Also derived is an equation relating to the possibility of obtaining reflections from the E2 layer. Through the use of the obtained dependence

$$\frac{f_0 E2}{f_0 E2_s} = \left[\frac{\cos \alpha}{\cos \alpha_s} \right]^n,$$

the summer daily variation of the critical frequencies of the E2 layer can be constructed. Orig. art. has: 9 formulas, 11 figures.

ASSOCIATION: none

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