"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

SIDLYARENKO, V.I.; LUKANTSEVER, Yu.L.; ZAITOV, F.N.

Distribution of F-centers in alkali halide crystal phosphors. Izv. vys. ucheb.zav.;fiz.no.2:42-45 '63.

(MIRA 16:5)

1. Oshskiy gosudarstvennyy pedagogicheskiy institut Kirgizskoy SSR.
(Color centers) (Alkali metal halide crystals)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

ZAITOV, F. N.; LUKANTSEVER, Yu. L.

Thermal discoloration of F-color centers in alkali metal halide crystals under optical conditions. Izv. vys. uch. zav.; fiz. 3: 45-48 '62. (MIRA 15:10)

1. Oshskiy gosudarstvennyy institut Kirgizskoy SSR.

(Color centers)
(Alkali metal halide crystals—Thermal properties)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKANTSEVER, Yu.L.

Study of the inertia properties of zinc sulfide crystal phosphors. Uch. zap. Osh. gos. ped. inst, no.5:3-8 '63.

Effect of the activator concentration and temperature on the brightness and emission spectra of phosphors with different crystallochemical base-activator relations. Ibid.:9-14 (MIRA 18:2)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 16704-65 EWT(1)/EEC(b)-2 IJP(c)/ESD(t)/ESD(gs)/BSD/AFWL/ASD(a)-5/
AS(mp)-2/AFMD(t)/APGC(b)
ACCESSION NR: AR5000786 S/0058/64/000/010/D049/D049

SOURCE: Ref. zh. Fizika, Abs. 10D378 B

AUTHORS: Lukantsever, Yu. L.

TITLE: Effect of activator concentration and temperature on the brightness and emission spectra and effect of crystal-chemical ratios of the base and activator

CITED SOURCE: Uch. zap. Oshsk. gos. ped. in-t., vyp. 5, 1963, 9-14

TOPIC TAGS: isomorphism, activated crystal, emission spectrum, brightness, luminescence quenching

TRANSLATION: The effect of the degree of isomorphism of the lattices of the base and the activator on the magnitude of the optimal concentration of activator, the interrelation between the temperature and concentration quenching phenomena and the influence of the concentration of the activator on the emission spectra were investigated in several phosphors. The object of the investigations were the concentration series of the following phosphors: non-isomorphous systems

Card 1/3

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 16704-65
ACCESSION NR: AR5000786

Al_2O_3-V_2O_3, NaCl-$MnCl_2$, $CdBr_2$-$AuCl_3$, $CdCl_2$-$AuCl_3$, $CdCl_2$-AgCl and the isomorphous systems Al_2O_3-$MnCl_2$, $CdCl_2$-$MnCl_2$, $CdBr_2$-$PbBr_2$. Some of these phosphors ($CdCl_2$-$AuCl_3$, $CdBr_2$-$AuCl_3$, $CdCl_2$-AgCl) were first obtained by the authors, and emission spectra are presented for them. It is noted also that these phosphors, which have a layered lattice, exhibit bright phosphorescence at room temperature. It is found that in all the investigated phosphors the magnitude of the optimal concentration on the activator in the isomorphous systems is much higher than in the non-isomorphous systems. In the phosphors $CdCl_2$(Mn), Al_2O_3(Mn), and NaCl(Mn), a regular shift of the maximum of the emission bands towards the longer waves is observed with increasing activator concentration. In the phosphors $CaCl_2$(Mn), Al_2O_3(V), and $CdBr_2$(Pb) it is found that the boundary of the temperature quenching shifts with variation of activator concentration -- the increase in the activator concentration lowers the threshold of the temperature quenching, and to the contrary, the temperature regime of the phosphor influences the optimal concentration of the activator. It is indicated that the results obtained confirm the ideas concerning the appreciable influence of the crystal-chemical ratio of the lattices of the base crystal and of the activator on the value of the optimal activator concentration and on the interrelationship between the processes of temperature and concentration quenching of luminescence in the phosphors. N. Maksimova.

Card 2/3

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 16704-65
ACCESSION NR: AR5000786

SUB CODE: SS, OP

ENCL: 00
0

Card 3/3

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 16703-65 EWT(1)/EEC(b)-2 IJP(c)/ESD(gs)/BSD/AFWL/ASD(a)-5/AS(mp)2/
ACCESSION NR: AR5000787 APGC(b) S/0058/64/000/010/D050/D050

SOURCE: Ref. zh. Fizika, Abs. 10D384

AUTHORS: Lukantsever, Yu. L.; Zaitov, F. N.

TITLE: Concerning the thermal activation of the process of capture of charge carriers in crystal phosphors

CITED SOURCE: Uch. zap. Oshsk. gos. ped. in-t., vyp. 5, 1963, 15-23

TOPIC TAGS: fluorescence quenching, thermal deexcitation, discoloring, absorption spectrum, luminor, carrier capture, capture level

TRANSLATION: The curves of fluorescence quenching, thermal de-excitation, and discoloring as well as the spectra of the excited absorption of ZnS-Cu, NaCl, NaCl-Ca, KCl-Ca, and Ag crystal phosphors were investigated as functions of the excitation temperature. It was found that the concentrations of the electrons localized at capture levels of various types change with increasing excitation temperature. In all the investigated crystal phosphors, an increase in the

Card 1/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 16703-65
ACCESSION NR: AR5000787

excitation temperature leads to an increase in the light sum stored by the phosphors at the deepest level system. It is concluded that, at least for two of the indicated classes of crystal phosphors, thermal activation is necessary in order to localize the electrons at the various capture centers, and the activation energies for the capture levels are different for different depths. N. Maksimova.

SUB CODE: OP, SS ENCL: 00

Card 2/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

SIDLYARENKO, V.I.; ZAITOV, F.N.; LUKANTSEVER, Yu.L.

Thermal stability of F-centers in KCL -Tl,Sr and KCl - Tl, Ca crystal phosphors. Izv. vys. ucheb. zav.; fiz. no.5:50-54 '63. (MIRA 16:12)

1. Oshskiy gosudarstvennyy pedagogicheskiy institut.

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

ACCESSION NR: AP4025084 S/0139/63/000/006/0034/0036

AUTHORS: Chernenko, V. P.; Zaitov, F. N.; Lukantsever, Yu. L.

TITLE: On the characteristic of light-sum storage in KCl-Tl, Ca-crystal phosphors

SOURCE: IVUZ. Fizika, No. 6, 1963, 34-36, and insert facing page 36

TOPIC TAGS: light-sum storage, phosphor, x-irradiation, thermoluminescence, luminescence intensity

ABSTRACT: The light-sum storage characteristic of single crystal KCl-Tl (0.1 mol%) Ca (0.5 mol%) phosphors has been investigated after x-irradiation in the x-ray instrument URS-55a (tube BSV-2, Cu; V- 45 kv, I - 15 ma) for a 30- to 90-min duration. The thermoluminescence curves were recorded by means of EPP-09 potentiometer with an FEO-20 amplifier for 30-, 45-, 60-min irradiation duration and one curve after a 17-hour pause. After each excitation-measurement cycle the thermoluminescence curves show a new change in the light-sum magnitude. It is believed that this effect follows from a process leading to actual lowering of luminescence intensity after repeated irradiation followed by an actual increase in luminescence intensity when the crystal undergoes a relaxation. "The authors wish to thank Yu. N. Yevstifeyev and V. Ye. Chudenkov for their help." Orig. art. has: 1 figure.

Association: Oshskiy gospedinstitut, Kirghiz SSR (Osh State Teachers Institute)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 13100-63 EWT(1)/BDS AFFTC/ASD/SSD

ACCESSION NR: AP3003414 S/0051/63/015/001/0083/0088

AUTHOR: Chernenko, V.P.; Zaitov, F.N.; Lukantsover, Yu.L.

55
53

TITLE: Investigation of the mechanism of recombination luminescence of NaCl:Ag crystal phosphor

SOURCE: Optika i spektroskopiya, v.15, no.1, 1963, 83-88

TOPIC TAGS: luminescence, glow curve, color center, luminescence center, NaCl(Ag)

ABSTRACT: The authors carried out a comprehensive investigation of the recombination luminescence of NaCl:Ag (0.1 mole percent Ag); the studies included recording integral glow curves, investigating the spectral composition of the thermostimulated emission, investigation of thermal bleaching, recording the intensity and spectra of photostimulated luminescence. The spectra were recorded by means of an SF-4 spectrophotometer coupled to an FEU-29 photomultiplier connected via a dc amplifier to a loop oscillograph; the scanning rate from 2 to 6 eV was usually 20 sec. The spectra were corrected for the spectral sensitivity of the photomultiplier and the dispersion of the monochromator. In addition, the excitation and emission spectra were corrected for nonlinearity of the scan as regards frequency. The crystals were grown from a melt; some crystals were x-irradiated. Glow curves

Card 1/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 13100-63
ACCESSION NR: AP3003414

2

and spectra at different stages of thermostimulation and bleaching are reproduced. The experimental data are analyzed and discussed. The data allow of determining the dissociation of what color centers precedes the appearance of the electrons responsible for the different glow peaks; it would appear that electrons released incident to the destruction of different centers participate in each of the observed glow peaks. The thermoluminescence spectra of NaCl:Ag change in the process of relaxation. At different stages of the relaxation process different centers may play the role of traps and/or luminescence centers. "In conclusion, the authors express their deep gratitude to Yu.N.Yevstifeyev and V.Ye.Chudenkov for assistance in performing the experiments." Orig.art.has: 2 formulas and 5 figures.

ASSOCIATION: none

SUBMITTED: 12Sept62 DATE ACQ: 30Jul63 ENCL: 00

SUB CODE: PH NO REF SOV: 010 OTHER: 004

Card 2/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKANTSEVER, Yu.I.; ZAITOV, F.N.

Allowing for reabsorption in spectrophotometry. Izv. vys. ucheb. zav.; fiz. no.4:158-163 '64 (MIRA 17:8)

1. Omskiy pedagogicheskiy institut.

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 64730-65 EWT(1)/EWT(m)/T/EWP(t)/EWP(b) IJP(c) JD/GG

ACCESSION NR: AT5021779 UR/2613/64/000/028/0111/0120

AUTHOR: Sidlyarenko, V. I.; Lukantsever, Yu. L.; Zaitov, F. N.

TITLE: Investigation by microscopic methods of the processes of the formation and destruction of color centers in NaCl single crystals

SOURCE: AN EstSSR. Institut fiziki i astronomii. Trudy, no. 28, 1964. Issledovaniya po lyuminestsentii (Research on luminescence), 111-120

TOPIC TAGS: color center, x ray coloring, activated crystal, crystal lattice deformation

ABSTRACT: Special features of the formation and destruction of F- and M-color centers in microscopic regions of nonactivated natural NaCl single crystals were investigated. The color centers were generated at room temperature with the aid of x-rays on a URS-55 installation. The formation of centers was tracked by photographing the same section of irradiated crystal after definite time intervals at the maxima of the corresponding absorption bands. The maxima were isolated by using an MK monochromator and filters: the SZS-8 filter for the F-band (λ_{max} = 460 mm) and the PS-8 filter for the M-band (λ_{max} = 720 mm). The microscopic thermal bleaching method (Izv. V. U. Z., Fizika, no. 2, 42, 1963) was used for the observation of the destruction of color centers. The formation

Card 1/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 64730-65

ACCESSION NR: AT5021779

3

and destruction of F-centers in nonactivated crystals proceeds in one stage, and after irradiation in several stages. In various crystal domains the number of F-centers increases and decreases at different rates. M-centers virtually do not form in nonactivated crystals. Multiple x-raying and subsequent heating of the crystal, when followed by x-ray excitation, caused M-centers with different thermal stabilities to form. Variations in thermal stability within a given type of color center in a natural NaCl crystal are attributed to the inherently uneven ionic distribution surrounding the centers in nonactivated centers. Orig. art. has: 7 formulas and 4 figures. [JA]

ASSOCIATION: Institut fiziki i astronomii, Akademiya nauk Estonskoy SSR (Institute of Physics and Astronomy, Academy of Sciences, Estonian SSR)

44,55

SUBMITTED: 13Dec63 ENCL: 00 SUB CODE: SS

NO REF SOV: 013 OTHER: 006 ATD PRESS: 4079

Card 2/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 22457-66 EWT(m)/T/EWP(t) IJP(c) JD/JG

ACC NR: AP6009148 SOURCE CODE: UR/0139/65/000/005/0097/0101

AUTHORS: Sidlyarenko, V. I.; Zaitov, F. N.; Lukantsever, Yu. L. 35 B

ORG: Osha State Pedagogical Institute (Oshskiy pedagogicheskiy institut)

TITLE: Investigation of processes involving the creation and destruction of color centers in alkali-halide crystals by microscopic methods

SOURCE: IVUZ. Fizika, no. 5, 1965, 97-101

TOPIC TAGS: alkali halide, color center, x ray effect, single crystal, sodium chloride, fiber crystal

ABSTRACT: The authors investigate the production of F and M color centers by x rays in different microscopic regions of single-crystal alkali-halide compounds. The objects of the investigation were synthesized NaCl single crystals, natural NaCl single crystals from different sources, and filamentary NaCl crystals. The laws governing the thermal destruction of color centers in the same microscopic

Card 1/3

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 22457-66

ACC NR: AP6009148

sections of the crystal were investigated by the authors earlier by a method of microscopic thermal discoloring (microdiscoloring) (Izv. vuzov SSSR, Fizika, no. 2, 42, 1963 and no. 5, 50, 1963). The present study was by a method developed for this purpose, called the micro-coloring method, consisting of photographing the same sections of the single crystals (with linear dimensions $\ell = 5 \times 10^{-2}$ cm) during the course of the x ray exposure at the maxima of certain absorption bands. The apparatus for the microphotography was described in the earlier work. The method makes it possible to trace the formation of color centers in sections with linear dimensions $\sim 10^{-3}$ mm. The x-ray exposures range from 90 to 240 minutes, depending on the type of crystal and on the type of centers. The color-center destruction was by means of uniform heating and was investigated by the microthermal discoloring method. The use of both microscopic methods (microcoloring and microdiscoloring) permits a study, on the one hand, of the formation and destruction of the color centers in one and the same section of the single crystal, and on the other hand, comparison of the laws governing the coloring and discoloring in microscopic

Card 2/3

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 22457-66
ACC NR: AP6009148

sections with different locations in the crystal. The results show that the increase in the degree of destruction of the regular crystal lattice of NaCl under various influences distorts both the coloring and discoloring curves. The higher the perfection of the crystal, the more regular the curves. It is concluded that a more detailed investigation by microscopic means is necessary to determine the relaxation processes in alkali-halide crystal phosphors. The authors thank Doctor Ch. B. Lushchik, M. A. Elango, and R. I. Gindina for valuable discussions and for supplying several of the crystals for the investigation. Orig. art. has: 5 figures

SUB CODE: 20/ SUBM DATE: 20Apr63/ ORIG REF: 011/ OTHREF: 006

Card 3/3

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 30051-65 EWT(1)/EPA(s)-2/EWT(m)/EPF(c)/EPF(n)-2/EWP(t)/EWP(b) Pr-4/Pt-10/
Pu-4 IJP(c) JD/JG
ACCESSION NR: AP5004521 S/0048/65/029/001/0054/0058 52 51 B

AUTHOR: Lukantsever, Yu.L.; Zaitov, F.N.; Chernenko, V.P.

TITLE: Investigation of the detailed mechanism of recombination luminescence of NaCl:Ag crystal phosphor /Report, 12th Conference on Luminescence held in L'vov 30 Jan-5 Feb 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.29, no.1, 1965, 54-58

TOPIC TAGS: recombination luminescence, alkali halide, sodium chloride, luminescent crystal, phosphorescence

ABSTRACT: The work was devoted to investigation of the last three stages of phosphorescence of NaCl:0.2 mole % Ag (introduced into the melt in the form of $AgNO_3$) crystal phosphor, for the purpose of clarifying the details of the recombination luminescence mechanism. The said three stages are release of the stored excitation energy, transfer of the energy to luminescence centers, and emission from the centers. (The first three stages - absorption of radiative energy, excitation of the phosphor, and storage of the energy - were not specifically considered.) The phosphor was excited by x-rays from BSV-2 x-ray tube with a copper anode. The energy

Card 1/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 30051-65
ACCESSION NR: AP5004521

storage was studied with reference to the additional absorption spectra, recorded with the aid of a spectrophotometer. A figure shows the steady-state emission spectrum and the phosphorescence spectra at different intervals after cessation of excitation. Other figures give the integral thermostimulation and thermobleaching curves and the spectra of the thermostimulated emission at different temperatures (different stages of the relaxation process). The possible luminescence mechanisms are discussed in somewhat general terms; the similarity of the steady-state luminescence and thermostimulated luminescence spectra indicates that the same centers are involved. A pumping mechanism is considered; this involves trapping of electrons from the conduction band to form excited centers of induced emission; this mechanism is thought to have several advantages over other, earlier hypothesized methods of excitation. Orig.art.has: 2 formulas and 4 figures. [02]

ASSOCIATION: Oshskiy gosudarstvennyy pedagogicheskiy institut KirgSSR (Osh State Pedagogical Institute, Kirgiz SSR)

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

NR REF SOV: 008 OTHER: 004 ATD PRESS: 3194

Card 2/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 39415-65 EWT(1)/EWT(m)/EWP(t)/EWP(b) Pi-4 IJP(c) JD

ACCESSION NR: AP5006057

S/0139/65/000/001/0089/0093

AUTHOR: Chernenko, V. P.; Lukantsever, Yu. L.; Zaitov, F. M.

32
31
B

TITLE: Investigation of the mechanism of destruction of color centers and recombination luminescence in the crystal phosphor NaCl-Cd

SOURCE: IVUZ. Fizika, no. 1, 1965, 89-93

TOPIC TAGS: crystal luminor, recombination luminescence, color center, thermoluminescence, emission spectrum, temperature relaxation

ABSTRACT: A comprehensive procedure previously developed by the authors (Optika i spektroskopiya v. 15, 52, 1963) was used to investigate the courses of individual peaks of integral thermoluminescence, the mechanism of destruction of color centers, and the luminescence spectra during the course of temperature relaxation of single-crystal NaCl-Cd luminor exposed to x-rays. The procedure consists essentially of combined application of a study of glow spectra during thermoluminescence, together with methods of integral and spectral thermoluminescence, thermal decoloring, and study of photostimulated luminescence. The single crystals (0.001

Card 1/3

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 39415-65
ACCESSION NR: AP5006057

mol.% Cd in the charge) were grown from the melt by the Kiropoulos method. The samples were irradiated at room temperature (295K) with copper x-radiation. The excited absorption spectra were measured with an SF-4 spectrophotometer. The automatic spectrum recording apparatus was described in the earlier paper. A joint analysis of the earlier results and of the results obtained in the present investigation leads to the following principal conclusions: 1. In alkali-halide crystal phosphors, each integral thermoluminescence peak can be the result of destruction of various color centers and subsequent recombination of the released carriers with different glow centers. 2. The destruction of color centers over a sufficiently broad temperature interval can be due to ionic processes occurring in the crystal. In non-isothermal relaxation, the color centers may be destroyed by ions, ionic vacancies, and aggregates of the two, moving through the crystal. 3. Formation of color centers of different types during the course of capture of electrons by the corresponding localization centers can be accompanied by emission. This complicates the emission spectrum in recombination luminescence. Earlier results of similar investigations of other NaCl-based alkali-halide phosphors are interpreted from a common point of view. Orig. art. has: 3 figures and 1 table.

Card 2/3

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 39415-65

ACCESSION NR: AP5006057

ASSOCIATION: Oshskiy pedinstitut (Osh Pedagogical Institute)

SUBMITTED: 24Jun63 ENCL: 00 SUB CODE: OP, SS

NR REF SOV: 007 OTHER: 005

ml

Card 3/3

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

CHERNENKO, V.P.; LUKANTSEVER, Yu.L.; ZAITOV, F.N.

Mechanism underlying the breakdown of color centers and the extinction of recombination luminescence in the NaCl - Cd crystal phosphor. Izv. vys. ucheb. zav.; fiz. 8 no.1:89-93 '65. (MIRA 18:3)

1. Oshskiy pedagogicheskiy institut.

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

ZAITOV, F.N.; LUKANTSEVER, Yu.L.; SIDLYARENKO, V.I.

Use of microscopic techniques in studying the production and breakdown of color centers in NaCl single crystals. Izv. AN SSSR. Ser.fiz. 29 no.3:449-453 Mr '65.

(MIRA 18:4)

1. Oshskiy gosudarstvennyy pedagogicheskiy institut KirgSSR.

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 6416-66 EWT(1)/T IJP(c) GG

ACC NR: AP5027408 SOURCE CODE: UR/0181/65/007/011/3302/3309

AUTHOR: Sidlyarenko, V. I.; Zaitov, F. N.; Lukantsever, Yu. L.

ORG: Osh State Teachers' Institute (Oshskiy gosudarstvennyy pedagogicheskiy institut)

TITLE: Effect of some structural factors on the thermal stability of color centers in alkali halide phosphor crystals

SOURCE: Fizika tverdogo tela, v. 7, no. 11, 1965, 3302-3309

TOPIC TAGS: alkali halide, sodium chloride, crystal phosphor, color center

ABSTRACT: The authors study the following factors with regard to their effect on the thermal stability of F-centers in NaCl-based phosphor crystals: 1. impurity ions (presence or absence, effect of ion individuality); 2. variation in the concentration of a given type of impurity ion; 3. plastic deformation; 4. previous thermal and radiation treatment; 5. preheating of the activated crystal. The results are tabulated for NaCl phosphors activated by thallium, calcium, silver, strontium and cadmium. Some of the characteristics of thermal dissolution of color centers in

Card 1/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 6416-66

ACC NR: AP5027408

3

these phosphors are experimentally determined. A theoretical expression is derived and analyzed for the rate of dissolution of color centers assuming that a considerable part in the mechanism of thermal dissolution is played by ion processes. The various factors which may change the thermal stability of color centers are discussed. Theoretical predictions are made on the basis of the ion mechanism of color dissolution. The theoretical and experimental data show that the ion mechanism may be useful in explaining the thermal dissolution of color centers in alkali halide phosphor crystals. The authors are grateful to N. L. Lukantsever for plotting the theoretical curves. Orig. art. has: 1 figure, 6 tables, 4 formulas.

SUB CODE: SS/ SUBM DATE: 15Mar65/ ORIG REF: 016/ OTH REF: 006

Card 2/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 15547-66 EWT(1)/T IJP(c)

ACC NR: AP6002080 SOURCE CODE: UR/0139/65/000/006/0043/0047

AUTHORS: Chernenko, V. P.; Zaitov, F. N.; Lukantsever, Yu. L. 43

ORG: Osha State Pedagogical Institute (Oshskiy gospedinstitut)

TITLE: Investigation of the mechanism of destruction of color centers and recombination luminescence of NaCl-Ag, Ca crystal phosphor. II. 21,44,55

SOURCE: IVUZ. Fizika, no. 6, 1965, 43-47

TOPIC TAGS: luminescence spectrum, color center, recombination luminescence, x ray irradiation, crystal phosphor, absorption spectrum

ABSTRACT: The first part of the article was published in Izv. vuzov SSSR, Fizika, no. 5, 97, 1965, and dealt with the integral thermal deexcitation, thermal discoloring, and the luminescence spectra of NaCl-Ag irradiated with x rays. The present investigation was made on a more complicated single-crystal phosphor NaCl-Ag (0.1 mol.%) Ca (0.3 mol.%), grown from the melt by the Kiropoulos method. The

Card 1/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 15547-66

ACC NR: AP6002080

investigations were made at 290 -- 600K and the excitation was by means of copper radiation (15 ma, 45 kv, 30 minute exposure). The absorption spectra, the deexcitation and the discoloration curves, and the photostimulated and thermostimulated luminescence spectra were measured with the same apparatus as before. The heating rate of the phospor was constant in all cases at 0.3°/sec. The results confirm the earlier data concerning the two-stage mechanism of luminescence excitation, consisting of destruction of the color centers followed by recombination of the carriers. The addition of the calcium gives rise to the formulation of several luminescence centers, each characterized by a different number of emitted quanta and different radiation efficiency. This causes different degrees of intensification of the luminescence peaks and a complicated structure of the individual peaks. Orig. art. has: 4 figures and 3 tables.

SUB CODE: 20/ SUBM DATE: 17Jun63/ ORIG REF: 013/ OTH REF: 006

Card 2/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 33240-66 EWT(1) IJP(c)

ACC NR: AP6009151 SOURCE CODE: UR/0139/65/000/005/0145/0152

AUTHOR: Chernenko, V. P.; Lukantsever, Yu. L.; Zaitov, F. N.

ORG: Osha Pedagogical Institute (Oshskiy pedagogicheskiy institut)

TITLE: Investigation of the mechanism of destruction of color centers and of nonstationary recombination luminescence of the crystal phosphor NaCl-Ag. I

SOURCE: IVUZ. Fizika, no. 5, 1965, 145-152

TOPIC TAGS: crystal phosphor, color center, recombination luminescence, silver chloride, absorption spectrum, emission spectrum, luminescence spectrum

ABSTRACT: This is a continuation of earlier work (Optika i spektroskopiya v. 15, 86, 1963) on thermoluminescence in synthetic NaCl-Ag crystal phosphor. The present article continues the investigation of nonstationary luminescence spectra, thermoluminescence, and thermal discoloring in a wider range of temperatures (from 100 to 550K). The NaCl-Ag crystal phosphor was grown from the melt and excited with x rays at exposures ranging from 30 to 240 minutes. A specially designed cryostat described elsewhere by one of the authors (Lukantsever, Dissertation, Tomsk, 1959) was used for the low-temperature measurements. The absorption spectra at all temperatures, and the integral thermoluminescence and thermal discolor-

Card 1/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 23240-66

ACC NR: AP6009151

2

ing of the crystals at various temperatures were recorded with a photometer consisting of a photomultiplier (FEU-29), a dc amplifier and an automatic recording potentiometer (EPP-09). The emission spectra were registered with a photometer consisting of a photomultiplier, dc amplifier, and a loop oscilloscope. In addition, a composite technique was used to investigate the destruction of the 355-, 465-, and 720-nm color centers of the phosphor. The spectra were found to vary greatly with the x-ray dose and with the prior heat treatment of the sample. The nature of the different centers is analyzed and the possibility of ion-electron and ion-hole mechanisms for their destruction at low temperatures is discussed. The authors thank Doctor of Physicomathematical Sciences Ch. B. Lushchik for a discussion of problems touched upon in the article and Yu. N. Yevstifeyev for help with the experiment. Orig. art. has: 5 figures and 2 tables.

SUB CODE: 20/ SUBM DATE: 15May63/ ORIG REF: 014/ OTH REF: 004

Card 2/2 MJS

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 28323-66 EWT(1)

ACC NR: AP6013087 SOURCE CODE: UR/0048/66/030/004/0704/0706

22
B

AUTHOR: Zaitov, F.N.; Lukantsever, Yu.L.; Dudarev, Ye.S.

ORG: Luminescence Laboratory, Osh State Pedagogical Institute (Laboratoriya lyuminestsentii Oshskogo gosudarstvennogo pedagogicheskogo instituta)

TITLE: Concerning the ionic mechanism of activation of photothermal destruction of color centers in alkali halide crystal phosphors /Report, Fourteenth Conference on Luminescence held in Riga 16-23 September 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 4, 1966, 704-706

TOPIC TAGS: color center, alkali halide, crystal phosphor, sodium chloride, electron

ABSTRACT: One of the effective processes of release of electrons and, consequently, of the light sum stored in an excited phosphor is destruction of the color centers under the simultaneous influence of two factors, for example, light and heat (photothermal destruction). By analogy with the ionic mechanism of thermal destruction of color centers it was hypothesized that ionic processes also play a significant role in photothermal destruction of F centers. However, the actual process may be somewhat different owing to the fact that the destroying ions may interact with the photoexcited color centers. The present experimental investigation of photothermal destruction of F centers was carried out on NaCl:Ag, NaCl:Tl, NaCl:Sr and NaCl crystals. The results for NaCl:Ag are presented in graphic form. It is evident from the results

Card 1/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 28323-66

ACC NR: AP6013087

that photothermal destruction of F centers occurs at lower temperatures than purely thermal destruction of these centers. This indicates that in the investigated temperature range the destroying ions interact with the photoexcited centers more effectively than with the unexcited ones. Thermal and photothermal destruction of F centers is accompanied by emission, i.e., the luminescence occurs in the same temperature interval as destruction of the color centers. This indicates that the products of ionic decay of photoexcited F centers are unstable in the given temperature region and are ionized. The electrons released in the process participate in the luminescence process. Similar results were obtained for NaCl:Tl. The results obtained for NaCl:Sr and "pure" NaCl, however, were somewhat different. In the case of these crystals recombination luminescence is not observed in the temperature range of photothermal destruction of F centers. Ionization and hence luminescence become evident at higher temperatures. By processing the experimental curves for thermal and photothermal bleaching there were deduced the values of some of the parameters of the ionic processes of destruction of F centers; the inferred values are listed in a table. It is noted that the photothermal procedure can be used for destruction at moderate temperatures of color centers that are characterized by relatively high thermal stability. Orig. art. has: 1 formula, 1 table and 2 figures.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 013/ OTH REF: 001

Card 2/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 39700-66 GD-2 SOURCE CODE: UR/0051/66/020/003/0450/0452

ACC NR: AP6011555

AUTHORS: Dudarev, Ye. S.; Zaitov, F. N.; Lukantsever, Yu. L.

ORG: none

TITLE: Concerning the ionic mechanism of photometric disintegration of F centers in alkali halide crystal phosphors, photometry

SOURCE: Optika i spektroskopiya, v. 20, no. 3, 1966, 450-452

TOPIC TAGS: alkali halide, crystal phosphor, color center, recombination emission, ionization, relaxation process

ABSTRACT: The authors take exception to the prevailing opinion that the dependence of thermal and photometric stability of F centers is due to creation of new types of localization and recombination centers, which compete with the F centers in the capture of electrons. Experimental data on the factors that lead to destruction of color centers are more complicated than merely direct ionization of these centers, so that the conditions under which the phosphor is prepared, the presence of extraneous impurities in the crystal, the prior his-

UDC: 535.373.1:535.21.096

Card 1/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 39790-66

ACC NR: AP6011555

tory of the sample, the form and temperature of excitation, and other factors influencing the stability are affected by the interaction between the ions that destroy the color centers and the color centers excited by the light. Using the results of an earlier paper on the subject (Mezhvuzovskiy sbornik nauchnykh rabot, seriya fiz.-mat. [Inter-University Collection of Scientific Papers, Physical-Mathematical Series], Frunze), they obtain an expression for the rate of change of thermal ionic destruction of color centers and from it a theoretical photothermal discoloring of F centers in NaCl-Ag phosphors. Certain numerical characteristics of these phosphors are obtained on the basis of the results. It is concluded that the influence of different factors on the stability of F centers can be satisfactorily explained from the point of view of the ionic mechanism of relaxation processes in alkali halide crystal phosphors. Orig. art. has: 6 formulas.

SUB CODE: 20/ SUBM DATE: 01Jul64/ ORIG REF: 010/ OTH REF: 001

Card 2/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 47404-66 EWT(m)/T/EWP(t)/ETI IJP(c) JG/JD

ACC NR: AR6025773

SOURCE CODE: UR/0058/66/000/004/D064/D064

AUTHOR: Sdudarev, Ye.; Zaitov, F. N.; Lukantsever, Yu. L.

TITLE: On the interaction of photoexcited F-centers with microdefects of the lattice in NaCl-Ag crystal phosphor. I.

SOURCE: Ref. zh. Fizika, Abs. 4D492

REF. SOURCE: Tr. Frunzensk. politekhn. in-ta, vyp. 22, 1964, 54-61

TOPIC TAGS: color center, light excitation, crystal lattice defect, activated crystal, sodium chloride, luminor, thermal optic effect

ABSTRACT: A calculation is presented of the kinetics of thermal and photothermal discoloring of F centers. It is proposed that the unexcited or photoexcited F center disappears, combining with the neighboring impurity ion to form new center. The impurity ions diffuse in the lattice and can be captured not only by F centers but also by other defects. The values of the activation energies of the reaction of the excited and unexcited F-centers with the destroying ion are different. Formulas are presented for the change in the concentration of the F-centers under uniform heating for illuminated and non-illuminated colored crystals. V. Pisarenko [Translation of abstract].

SUB CODE: 20

Card 1/1 hs

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 08362-67 EWT(m)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AR6028137 SOURCE CODE: UR/0058/66/000/005/D088/D088

AUTHOR: Zaitov, F. N.; Lukantsever, Yu. L.

65

TITLE: Possibility of obtaining stimulated emission in recombination processes in alkali-halide crystal phosphors

21

SOURCE: Ref. zh. Fizika, Abs. 5D691

REF. SOURCE: Tr. Frunzensk. politekhn. in-ta, vyp. 22, 1964, 69-73

TOPIC TAGS: stimulated emission, alkali halide, crystal phosphor, electron recombination, irradiation, electron capture, laser pumping

ABSTRACT: The authors consider the possibility of obtaining stimulated emission in alkali-halide crystal phosphors exposed to different types of radiation (short-wave uv, x rays, γ rays, charged particles). The stimulated emission produced in centers connected with the capture of free electrons and holes produced in the crystals by the irradiation, or in color centers produced by capture of electrons freed from different types of capture centers destroyed by thermal and photo-thermal action. The calculation shows that the minimum "pump" power needed for the generation of stimulated emission is 10^{20} quanta-cm^{-2} sec^{-1} for a crystal 2 cm long if 90% of the x-ray quanta incident on it are absorbed and if the crystal end surfaces have a reflection coefficient of 0.9. In the authors' opinion, the proposed "pumping" method

Card 1/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 08362-67

ACC NR: AR6028137

has advantages since it makes it possible to use sources of "hard" radiation and readily available alkali-halide crystal phosphors. V. Vasil'yev. [Translation of abstract]

SUB CODE: 20

Card 2/2 nst

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 08360-67 EWT(1) IJP(c)

ACC NR: AR6028135

SOURCE CODE: UR/0058/66/000/005/D058/D058

AUTHOR: Dudarev, Ye. S.; Zaitov, F. N.; Lukantsever, Yu. L.

45

TITLE: Interaction of photoexcited F centers with crystal lattice microdefects in a NaCl-Ag crystal phosphor

SOURCE: Ref. zh. Fizika, Abs. 5D446

REF. SOURCE: Tr. Frunzensk. politekhn. in-ta, vyp. 22, 1964, 62-68

TOPIC TAGS: F band, color center, crystal lattice defect, crystal phosphor, activated crystal, photoeffect, thermal effect

ABSTRACT: The authors investigate experimentally the thermal and photochemical destruction of F color centers in NaCl-Ag phosphors. Assuming that the ionic mechanism of the processes plays an important role, the authors consider the theoretical curves of thermal discoloring and photothermal discoloring. The experiment is in satisfactory agreement with the theory. Several kinetic parameters of the indicated processes are estimated. For part I see RZhFiz, 1966, 4D492. [Translation of abstract]

SUB CODE: 20

Card 1/1 nmt

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

ACC NR: AP7004979 SOURCE CODE: UR/0048/66/030/009/1479/1482

AUTHOR: Lukantsever, Yu.L.; Zaitov,F.N.; Sidlyarenko,V.I.

ORG: Osh State Pedagogical Institute of the KirgSSR (Oshskiy gosudarstvennyy pedagogicheskiy institut KirgSSR)

TITLE: Influence of microdefects on the thermal stability of F centers in alkali halide crystal phosphors /Report, Fourteenth All-Union Conference on Luminescence (Crystal Phosphors) held at Riga, 16-23 Sept. 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 9, 1966, 1479-1482

TOPIC TAGS: sodium chloride, luminescent crystal, color center, lattice defect, ion interaction, thermal effect, THERMAL STABILITY, ALKALI HALIDE

ABSTRACT: There is given a brief theoretical discksion of the thermal bleaching of color centers in alkali halide phosphors based on the hypothesis that the bleaching is effected by ions that can also be captured by trapping centers associated with lattice defects. The calculations involve the simplifying assumption that the probability for the interaction of an ion with a trapping center is much greater than that for its interaction with a color center. An equation is obtained relating the temperature T_M at which the rate of thermal bleaching is maximum to the energy $u = Q_V + Q_F - Q_t$, the frequency of lattice ion vibrations in the vicinity of a color center, the rate of heating of the crystal, and the quantity $n/\gamma N$, where Q_V is the activation energy for

Card 1/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

ACC NR: AP7004979

movement of an ion through the lattice, Q_F is the activation energy for interaction of an ion with an F center, Q_t is the activation energy for interaction of an ion with a trapping center, n is the concentration of the ions that interact with the trapping and color centers, N is the concentration of trapping centers and γ is the ratio of the interaction cross section of a trapping center to that of a color center. The relation between T_M and u is involved and not even necessarily single valued. Experiments with NaCl crystals containing different activators revealed a wide range of T_M values and values of $n/\gamma N$ for only a small range of u values. The thermal bleaching curve of each of these crystals gave a linear relation between $\log(dn_F/n_F dT)$ and $1/T$, where n_F is the F center concentration and T is the temperature. The experimental thermal bleaching curves were in good agreement with the theory even under conditions in which the essential simplifying assumption concerning the relative probabilities of bleaching and trapping appeared not to be satisfied. It is suggested that N, which was taken as the dislocation concentration, was underestimated and that other lattice defects also contribute to the trapping. Orig. art. has: 6 formulas, 2 figures and 1 table.

SUB CODE: 20 SUBM DATE: none ORIG. REF: 006 OTH REF: 002

Card 2/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKARVSKY, Miloslav., MUDr.

New working methods of a ward of internal medicine at a polyclinic. Cesk. zdravot. 4 no. 1:18-21 Feb 56.

1. Prednosta interniho oddeleni a zastupce feditele OUNZ v Gottwaldove

(HOSPITALS,
polyclinics, wards of internal med. (Cz)
(MEDICINE, INTERNAL,
internal ward of polyclinic (Cz)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, A.; SULC, J.

Quickly soluble dried milk. p. 490

PRUMYSL POTRAVIN. (Ministerstvo potravarskyho prumyslu) Praha, Czechoslovakia.
Vol. 9. no. 9, Sept. 1958

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

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, A.; BOROVANSKY, A.; KOPACOVA, L.

Study of local anesthetics 27. Basic aryloxy- and aralkoxy-acetyl xylidine. Cesk. farm. 13 no.5:225-228 Je'64.

1. Kafedra farmaceuticke chemie a katedra farmakodynamiky a toxikologie farmaceuticke fakulty UK, [University Komenskeho], Bratislava.

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, Augustin, inz.; MASOPUSTOVA, Ingrid, inz.

Some information from the 16th International Dairy Congress in Copenhagen. Prum potravin 14 no.4:206-209 Ap '63.

1. Vyzkumny ustav mlekarensky, Praha.

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

PLUTUS, Karl; ROOPALU, Henn; LUKAS, A., red.; KOHU, H., tekhn. red.

[Shall we have cooperative, collective or individual dwellings?] Kooperatiiv-, kollektiiv-voi individuaalelamu? Tallinn, Eesti Riiklik Kirjastus, 1963. 93 p. (MIRA 16:12)

(Housing)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, B.; VLASAK, Z.

Primary cultivation of Pasteurella tularensis from the conjunctival sac in man on a new solid as well as liquid medium. Cesk.epidem. mikrob.imun.10 no.2:121-123 Mr '61.

1. Katedra epidemiologie Vojenskeho lekarskeho vyzkumneho a doskolovaciho ustavu J.Ev.Purkyne v Hradci Kralove.
(PASTEURELLA TULARENSIS culture)
(CONJUNCTIVA microbiol)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

GEYZLAR, M. [Hejslar, M.]; LUKASH, B. [Lukáš, B.]

Study of the sensitivity of the tularemia pathogen and of some [types] of Pasteurella to antibiotics in vitro. Antibiotiki 7 no.2:135-140 F '62. (MIRA 15:2)

1. Kafedra epidemiologii Voyennogo meditsinskogo instituta i Instituta usovershenstvovaniya vrachey v Gradtse Kralove, Chekhoslovakiya.
(PASTEURELLA) (ANTIBIOTICS)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, Bohumir

Cultivation of Pasteurella tularensis in a simple liquid medium. Cesk. epidem. mikrob. imun. 11 no.4:246-253 Jl '62.

1. Katedra epidemiologie Vojenskeho lekarskeho vyzkumneho a doskolovaciho ustavu J. Ev. Purkyne, Hradec Kralove.
(PASTEURELLA TULARENSIS culture) (CULTURE MEDIA)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, B.; LIBICH, J.

Modification of a simple blood agar plate for cultivation of Pasteurella tularensis. Cesk. epidem. 11 no.5:290-297 S '62.

1. Vojensky ustav hygieny, epidemiologie a mikrobiologie v Praze.
(PASTEURELLA TULARENSIS) (CULTURE MEDIA)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, B.; HEJZLAR, M.; LIBICH, J.

Effect of streptomycin and kanamycin and the course of experimental tularaemia in guinea-pigs. Folia microbiol. 8 no.2:80-88 '63.

1. Military Institute of Hygiene, Epidemiology and Microbiology, Prague 5.

(STREPTOMYCIN) (KANAMYCIN) (TULAREMIA)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

IMMUNOLOGY

CZECHOSLOVAKIA UDC 615.779.93:615.371-022.71.49)-085.52

LUKAS, Bohumir; BELOHLAVEK, Stanislav; Military Institute of Hygiene, Epidemiology, and Microbiology (Vojensky Ustav Hygieny, Epidemiologie a Mikrobiologie), Prague; Institute of Sera and Vaccines (Ustav Ser a Ockovacich Latek), Prague.

"Influence of Some Antibiotics on the Immunization Effect of the Typhus Vaccine."

Prague, Vojenske Zdravotnicke Listy, Vol 35, No 4, Aug 66, pp 163 - 165

Abstract: In experiments on rabbits it was found that antibiotics streptomycin, tetracycline, and kanamycin administered in a daily dose of 50 mg for 14 days simultaneously with a typhoid vaccine did not interfere with the formation of serum antibodies. An inhibition effect interfering with the formation of serum antibodies was found, to a limited extent, after the administration of streptomycin polymethacrylate, and rarely after streptomycin, when its application started only after the secondary antigen impulse. The immunization effect of the typhoid vaccine in mice was not influenced by the administration of antibiotics for a two week period. 3 Tables, 19 Western, 7 Czech, 9 Russian references.

1/1

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

CZECHOSLOVAKIA

LUKAS, E.; Institute of Work Hygiene and Occupational Diseases (Ustav Hygieny Prace a Chorob z Povolani), Prague, Director (Reditel) Prof Dr J. TEISINGER.

"Occupational Vertebrobasilar Arterial Insufficiency."

Prague, Ceskoslovenska Neurologie, Vol 29, No 6, Nov 66, pp 382 - 385

Abstract [Author's English summary]: The importance of head posture in some types of work is a possible factor in producing transitory vascular disturbances in parts of the CNS supplied by the vertebro-basilar arteries. Particular attention was paid to cases in which work was done with the head rotated in hyperextension and inclination, where neurotic compounds are present; this suggests neurotoxic lesions. The differentiation of the vascular factor in the syndrome is important not only for a diagnosis, but also for the treatment of the patient. Four typical cases of the disease are discussed. 3 Western, 10 Czech references. (Manuscript received 1 Jun 66).

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

BARES, Ludek; LUKAS, Edgar

Combined ACTH and pyrabutol therapy in lumbar ischalgias. Cas.lek.cesk 100 no.47:1485-1490 24 N '61.

1. Neurologicke oddeleni nemocnice v Rumburku, prednosta MUDr. L. Bares.

(CORTICOTROPIN ther) (PHENYLBUTAZONE rel cpds)
(SCIATICA ther)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

CZECHOSLOVAKIA UDC 616.833.36-009.11-057

LUKAS, Edgar; Institute of Work Hygiene and Occupational Diseases (Ustav Hygieny Prace a Chorob z Povolani), Prague, Director (Reditel) Prof Dr TEISINGER

"Contribution to the Problem of Paresis of Ulnar Nerve of Occupational Origin (Slip of the Ulnar -Nerve in the Sulcus Ulnaris)."

Prague, Pracovni Lekarstvi, Vol 19, No 1, Jan 67, pp 26 - 29

Abstract /Author's English summary modified 7: 7 cases of the paresis of the ulnar nerve are described; all were confirmed by electromyography. Long-term effect of frequently repeated flexion of the upper extremity played an important role in the etiology of the disease. 2 of the patients were musicians, 2 quarry workers, 1 each a glass cutter, miner, and a worker making glass jewelry. In all cases an anomaly in the position of the nervous truncus of the ulnar nerve in the sulcus was found. 2 Figures, 16 Western, 5 Czech references. (Manuscript received 14 Dec 65).

1/1

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, E. A.

"The work of the Class Leader According to the Development of the Independent Activity of Pioneers." Moscow State Pedagogic Instimeni V. I. Lenin, Moscow, 1955 (Dissertation for the Degree of Candidate of Pedagogical Sciences)

SO: Knizhnaya Letopis', No. 32, 6 Aug 55

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, Ingrid R.

Preparation of some thin targets for cyclotron irradiation.
Studii cerc fiz 15 no.4:483-485 '64.

1. Institute of Nuclear Physics, Bucharest.

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

Lukas, J.

Lukas, J. M. Malek's Vyroba drevenych modelu (The Production of Wooden Patterns); a book review. p. 24.

Vol. 5, no. 1, Jan. 1957
SLEVARENSTVI
TECHNOLOGY
Czechoslovakia

So: East European Accessions, Vol. 6, May 1957
No. 5

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

POSPISIL, Jan; LUKAS, Jaromir; VODICKA, Ludek

Use of pyrolytic dipentene. Pt.2. Chem prum 13 no.8:398-402 Ag'63.

1. Ustav makromolekularni chemie, Ceskoslovenska akademie ved, Praha (for Pospisil and Lukas); 2. Katedra syntetiskych pohonnych latek a ropy, Vysoka skola chemickotechnologicka, Praha (for Vodicka).

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS J.

BLEKTA M., GJURICOVA J., LUKAS J.

Spravna vyziva zdrave a nemocne tehotne. [Nutrition in pregnancy]
Cesk. gyn. 15:4-5 1950 p. 220-37.

NAI

CLML 19, 5, Nov. 50

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, J.

Role of midwives in the control of perinatal mortality. Cesk.gyn. 15 no.9:629-631 1950. (CLML 20:4)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

DEMANT, F.; KUBAT, K.; LUKAS, J.; VOJTA, M.

Maternal and child welfare. Pediat.listy 6 no.2:77-88 Mar-Apr 1951. (CIML 20:9)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS

LUKAS J.

Psychoprofylaktická příprava k bezbolestnému porodu. /Prophylactic psychological preparation for painless labor/ Česk. gyn. 16:3 195 . p. 158-65.

NAI

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

BLEKTA, M., Dr.; JANOUSEK, St., Doc. Dr.; LUKAS, J., prof. Dr.; SOMMEROVA, O.; SEBEK, T., Dr.; TOMASEK, Z., Dr.

Investigations on pregnancy in the population according to certain biochemical and hematological factors. Cas.lek.cesk. 91 no.40:1138-1144 3 Oct 52.

1. Z II. porodnicke kliniky a ustredni laboratore e fakultniho zdravotnickeho' strediska Karlovy university v Praze.

(PREGNANCY, physiology,
hematol., physiology & biochem. aspects, statist. analysis)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, Josef, MUDr

Internal medical congress in Montecatini. Cas.lek.cesk, 91 no.41: 1169 10 Oct 52.
(MEDICINE, cong.)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, J.

Tasks of the J. E. Purkyne Czechoslovakian Medical Society. Cas. lek. Cesk. 93 no.1:7-10 8 Jan 1953. (CIML 25:5)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, Josef, Prof., MUDr.

At the grave of professor Dr. Frantisek Hora. Cas. lek. cesk. 94 no.29:782-783 15 July 55.

(OBITUARIES
Hora, Frantisek)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, J., Prof., Dr.

Modern problems of development of medical sciences. Cas. lek. cesk. 95 no.27:701-717 6 July 56.

(EDUCATION, MEDICAL,
in Czech., planning (Cz))

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, J., Prof., Dr.

Problems in medical research. Cas. lek. cesk. 96 no.22:665-671 31 May 57.

1. Namestek ministra zdravotnictvi. J. L., Praha 12, tr. Wilh. Piecka 98.
(RESEARCH
med., in Czech., problems (Cz))

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, J., Prof. MUDr.

Investigations in the field of medical sciences in 1960. Cesk. zdravot.7 no.7:345-346 Aug 59.

1. Namestek ministra zdravotnictvi a uradujici mistopredseda vedecke rady ministerstva zdravotnictvi.
(MEDICINE)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, Josef, prof.; DOLEZAL, Antonin, Dr.Sc.

Contribution to the detection of pregnancy complications leading to threatened abortion. Cesk.gyn. 25[39] no.3:217-221 1960.

1. II. gyn.por.klin. KU v Praze, prednosta prof. Dr.Sc. J. Lukas.
(ABORTION prev. & control)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKASH, Yosif [Lukas, J.], prof., doktor med.nauk; DOLEZHAL, Antonin [Dolezal, A.], assistent

Technic of examining women susceptible to habitual abortion. Akush.i gin. no.6:35-41 '60. (MIRA 14:1)

1. Iz 2-y akushersko-ginekologicheskoy kliniki (zav. - prof. Yosif Lukash) meditsinskogo fakul'teta Karlova universiteta i Prage.

(ABORTION)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, J.

The organization of medical research in Czechoslovakia from 1945 to 1960. Rev.Czech.M. 6 no.2:81-84 1960.

(MEDICINE)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, J., prof. MUDr.

Current status of medical research. Cas.lek.cesk 99 no.29:901-905 15 Jl '60.

(RESEARCH)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, Josef, prof. dr.

Introductory speech to the 10th plenary session of the Scientific Council of the Ministry of Health on 27 November 1962. Cas. lek. cesk. 101 no.50:1466-1468 14 D '62.
(PUBLIC HEALTH)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, J.

Introductory address to the 11th Plenary Session of the Scientific Committee of the Ministry of Health on 26 November 1963. Cas.lek.cesk. 103 no.3:57-62 17 Ja'64.

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

BRODSKY, J.; BEZDEK, M. LUKAS, J.; HRABAK, F.

Purification of technical enlo oprene. Chem prum 15 no.1: 28-30 Ja '65.

1. Section of Research and Development of Kaucuk National Enterprise, Kralupy nad Vltavou (for Brodsky). 2. Institute of Macromolecular Chemistry of th Czechoslovak Academy of Sciences, Prague (for Bezdek, Lukas and Hrabak).

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, J., prof. dr. , DrSc.; (Praha 2, Apolinarska 18); KANKA, J.; MISINGER, I.; DVORAK, Z.; ANDRASOVA, V.

The assistance of a clinical laboratory in screening of cervical carcinoma. Cesk. gynek. 30 no.4:256-260 My'65.

1. II. gyn. por. klinika fakulty vseobecneho lekarstvi Karlovy University v Praze (prednosta: prof. dr. J. Lukas, DrSc.).

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, K.

"Bituminous mats as a road."

p. 2 (Silnice, Vol. 7, No. 5, May 1958, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 9, September 1958.

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 20192-66 EWT(d)
ACC NR: AP5024842 (A) SOURCE CODE: CZ/0078/65/000/009/0010/0010

AUTHOR: Ledvina, R. (Engineer) (Prague); Lukas, M. (Engineer) (Prague); Mansfeld, J. (Engineer) (Prague)

43
B

ORG: none

TITLE: [Modulator connection] Czech patent no. 664-65

SOURCE: Vynalezy, no. 9, 1965, 10

TOPIC TAGS: transformer, signal modulation, resistor, coupling circuit, electronics, electronic component, signal transmission

ABSTRACT: The connection of a modulator with an input transformer of the carrier signal, an input transformer of a modulating signal, and an output from the modulator tapped from the center of the secondary winding of the input transformers, characterized by the fact that the input transformer of the carrier signal is divided into two independent transformers with each of their primary windings connected in series with one linear resistor, is connected in parallel, and to each of the secondary windings of both transformers one diode douple of equal polarity is connected in series. The mutual direction of the transmittivity of both diode couples is opposite to the mutual direction of the windings of the input transformers of the carrier signal and each of the two end taps of the input transformer of the modulating signal is connected at the center point of one diode couple.

SUB CODE: 09 SUBM DATE: 30Jan65

Card 1/1

2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, Milan, inz.

A low-frequency characteograph. Sdel tech 9 no.10:370-371 O '61.

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

ACC NR: AP6017895. (A) SOURCE CODE: CZ/0078/65/000/012/0011/0011

INVENTOR: Ledvina, Rudolf (Engineer; Prague); Lukáš, Milan (Engineer; Prague)

ORG: none

TITLE: Digital level measuring set connections CZ Pat. No. PV 3376-65, Class 21

SOURCE: Vynalezy, no. 12, 1965, 11

TOPIC TAGS: digital decoder, digital differential analyzer, measuring apparatus, alternating voltage

ABSTRACT: Digital level measuring set connections of alternating electric signals, derived from the calibration in natural attenuation units or decibels, in which there are arrangements of input voltage dividers whose setting is decoded by a decoder so that the adjustment of each divider is determined for the data in another series of level measuring sets, further, the comparator for the comparison of the rectified voltage travelling from the dividers with the direct current compensational voltage, to which the dividers are arranged by an automatic adjustment of the dividing ratios which is regulated by the comparator, distinguished by the fact that to each input voltage divider it is optionally dependent upon the setting of the divider determined for the data in the highest series of the gauging level, joined one of two independent decoders, from which one is determined for the decoding of the positive stage and the other for the decoding of the negative stage, and enroute of one from both voltage

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

ACC NR: AP6017895

supplies on the input comparator is dependent upon the setting of the divider, determined for the data in the highest series of the measuring level changing down the booster quadripole with the modulus of the attenuation level of minimal difference of the level of a differential level measuring unit. The six points of the subject of the patent will follow.

SUB CODE: 09/ SUBM DATE: 24May65

Card 2/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 18819-65 EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(k)/EWP(b) Pf-4 ASD(m)-3/ASD(f)-2 JD/HW

ACCESSION NR: AP5000101 Z/0065/64/000/006/0549/0557

AUTHOR: Hyspecka, L. (Gyspetska, L.); Mazanec, K. (Mazanets, K.); Lukas, P. (Lukash, P.) B

TITLE: Martensite strength in thermomechanically treated Cr-Ni-Mo steels 18 18 18

SOURCE: Kovove materialy, no. 6, 1964, 549-557

TOPIC TAGS: martensite strength, Cr Ni Mo steel, microstructural analysis 18

ABSTRACT: A microstructural analysis of the martensite for three methods of heat treating Cr-Ni-Mo steels was conducted by transmission electron microscopy of thin foils. It was found that the character of the inner twin crystals in the martensite plates was not altered by thermomechanical treatment. Measurements of the relative width and the relative distance of inner twin crystals in the plates showed that the maximum rate of measurement in both cases was 80—110Å. It is concluded that the increase in the strength of the martensite after thermomechanical treatment is probably caused

Card 1/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 18819-65

ACCESSION NR: AP5000101

2

by the refining of the martensite plates and by the decrease in the dynamic effects of these plates on the grain boundaries of the initial austenite. Orig. art. has: 6 figures, 3 tables, and 1 formula.

ASSOCIATION: Vyzkumny ustav metalurgicky VZKG, Ostrava (Metallurgical Research Institute, VZKG); Ustav vlastnosti kovu CSAV, Brno (Institute of the Properties of Metals, CSAV)

SUBMITTED: 04Jun64 ENCL: 00 SUB CODE: MM

NO REF SOV: 001 OTHER: 017

Card 2/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 10536-65 EWT(m)/T/EWP(b) IJP(c) JD

ACCESSION NR: AP4044594 Z/0055/64/014/008/0600/0607

AUTHOR: Lukas, P.; Klesnil, H.

TITLE: Dislocation arrangement during cyclic loading of pure iron

SOURCE: Chekhoslovatskiy fizicheskiy zhurnal, v. 14, no. 8, 1964, 600-607; 656a-656k

TOPIC TAGS: pure iron fatigue, pure iron fatigue mechanism, pure iron strain hardening, fatigue dislocation mechanism, fatigue induced substructure, dynamic recovery

ABSTRACT: Flat specimens of high-purity (99.95%) vacuum-melted iron were subjected to push-pull cyclic loads with an amplitude of 10.3 kp/mm^2 at a frequency of 2800 cycles per minute with a periodical electron microscope observation. It was found that the dislocation density increased sharply during the first 10 cycles (see Fig. 1 of the Enclosure) when the first dislocation loops were observed. A certain pattern in the distribution of dislocation, i.e.,

Card 1/3

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 10535-65

ACCESSION NR: AP4044594

dislocation bands, became apparent after the first 200 cyles, during which the number of dislocations continuously increased. The banding became more and more pronounced with increasing cycle numbers. Simultaneously, the density of dislocation between the bands progressively decreased. No increase in the total number of dislocations was observed. After 340,000 cycles, well-developed dislocation bands were observed with only a few dislocations remaining between the bands. No further changes in the distribution of dislocations occurred until the failure of the specimen after 1,000,000 cycles. The strain hardening was completed in the first 20 cycles. This indicates that strain hardening does not depend solely on the density and distribution of dislocation. The dynamic recovery period, after 200 cycles, when the distribution but not the number of dislocation changes, is explained by cross slip. Orig. art. has: 16 figures.

ASSOCIATION: Institute of Metallurgy, Czech. Acad. Sci., Brno

SUBMITTED: 13Jan64 ATD PRESS: 3111 ENCL: 01

SUB CODE: MM, SS NO REF SOV: 000 OTHER: 019

Card 2/3

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 10536-65

ACCESSION NR: AP4044594 ENCLOSURE: 01

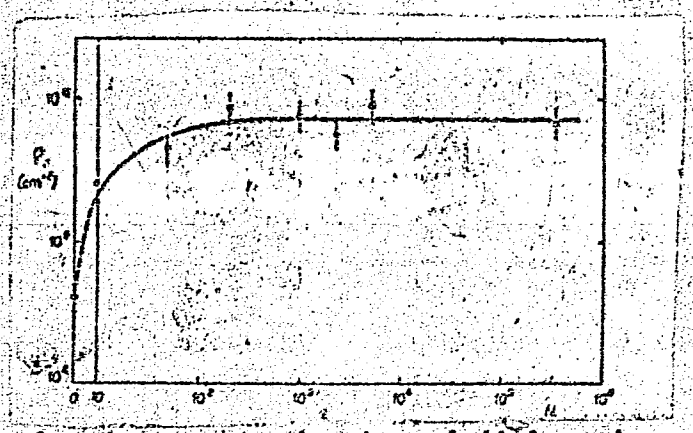

Fig. 1. The average density of dislocations ρ vs. number of cycles N

3/3

Card

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 20395-66 EWP(e)/EWP(w)/T/EWP(t) IJP(c) JD

ACC NR: AP5022459 SOURCE CODE: CZ/0030/65/011/001/0127/0137

(CZ)

32
31
B

AUTHOR: Lukas, P.; Klesnil, M.

ORG: Institute of Metallurgy, Czechoslovak Academy of Sciences, Brno

21

TITLE: Hysteresis loops in the microstrain region

SOURCE: Physica status solidi, v. 11, no. 1, 1965, 127-137

TOPIC TAGS: metal analysis, hysteresis loop, mechanical stress, tensile stress

ABSTRACT: It was shown that the condition for a loading-unloading test to form a closed hysteresis loop is the existence of a non-zero effective stress acting against the applied stress at the beginning of the loading curve. After prior tensile deformation tensile closed hysteresis loops can be observed. On annealed or fatigued specimens, where the average effective stress is zero, tensile closed loops can be observed at the sensitivity used only when a series of loading-

2

Card 1/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 20395-66

ACC NR: AP5022459

unloading tests at increasing stress amplitude is performed. In the cases of annealed and fatigued specimens tensile-compression closed hysteresis loops can be observed. Both in the case of tensile loops and in the case of tensile-compression loops the maximum stress amplitude at which the last closed loop can be observed depends upon the increment of stress amplitude throughout the whole series. The slope of plot W vs. ν_0 at $\nu_0 = 0$ is connected with friction stress $\left(\frac{\partial W}{\partial \nu_0}\Big|_{\nu_0 = 0} = 2\tau_F\right)$; this slope has no clear meaning for $\nu_0 \neq 0$.

Orig. art. has: 10 figures and 12 formulas. [Based on author's abstract]

SUB CODE: 11/ SUBM DATE: 08Jun65/ OTH REF: 013/

Card 2/2 BK

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 45421-66 T/EWP(t)/ETI IJP(c) GG/JD

ACC NR: AP6026376 (N) SOURCE CODE: GE/0030/66/015/001/0071/0082

21
20
B

AUTHOR: Lukas, P.; Klesnil, M.; Krejci, J.; Rys, P.

ORG: Institute of Metallurgy, Czechoslovak Academy of Sciences, Brno

TITLE: Substructure of persistent slip bands in cyclically deformed copper

27

SOURCE: Physica status solidi, v. 15, no. 1, 1966, 71-82

TOPIC TAGS: deformed copper, polycrystalline copper, dislocation distribution, dislocation density, surface extrusion, slip, slip band

ABSTRACT: The dislocation distribution on the surface layer of cyclically deformed specimens of polycrystalline copper is studied by measn of transmission electron microscopy of thin foils, both parallel and nonparallel to the surface. The distribution within the surface layer and near the persistent slip bands is found to differ considerably from that inside the specimens. The persistent slip bands consist of zones of alternately high and low dislocation density. The zones of high density are linked together at a particular depth below the surface. The zones of

Card 1/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

L 45421-66

ACC NR: AP6026376

low density are assumed to serve as "channels" in which the motion of dislocations emitted from Frank-Read sources is relatively free. The escape of these dislocations from the free surface results in surface extrusions. Orig. art. has: 10 figures. [Authors' abstract] [KS]

SUB CODE: 20, 11/ SUBM DATE: 22Jan66/ ORIG REF: 002/ OTH REF: 013/

hs

Card 2/2

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, Petr

Summer school of electron microscopy of thin crystals. Ces cas fys 13 no.6:529-530 '63.

1. Ustav vlastnosti kovu, Ceskoslovenska akademie ved, Brno.

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, Radomir

Experience in replacement of the usual lining of sulfite pulp mills by stainless lining. Papir a celulosa 19 no.2:31-35 F'64.

1. Vratimovske papirny, Vratimov.

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, V.

EXCERPTA MEDICA Sec.14 Vol.9/12 Radiology Dec 55

1896. LUKAS V. Szövetség utcai Kórház-Rendelőintézet, Budapest. Congenitalis oesophagus atresia, oesophago-trachealis fistulával. Congenital atresia of the oesophagus associated with oesophago-trachea fistula MAG. RADIOL. 1955, 7/2 (118-119) Illus. 3

Case report on a premature male infant, 1,900 g. in weight with inability to swallow and regurgitation of the ingested fluid partly through the nose. The ingested opaque fluid stopped at the height of the II-III thoracic vertebrae in the oesophagus which was one finger wide and with rounded lower outlines. The gas-content of the stomach and of the intestine suggested a communication between the bronchi and

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

296 CONT

the distal part of the oesophagus. This roentgenological finding was verified at the autopsy. The use of barium - in cases suggesting oesophageal atresia - is not advised because of the frequent coincidence of oesophageal atresia with oesophago-bronchial fistula. Instead of barium, fluids containing iodine should be employed.

Györgyi - Budapest

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

GOL'DSHTEYN, Ya.Ye., kand. tekhn. nauk (SSSR); VESELY, A., inzh. (Chekhoslovatskaya Sotsialisticheskaya Respublika); LUKASH, V. [Lukas, V.], inzh. (Chekhoslovatskaya Sotsialisticheskaya Respublika); [illegible] [Kosan, I.], inzh. (Chekhoslovatskaya Sotsialisticheskaya Respublika); STOYANOVA-TASEVA, S.V. (Narodnaya Respublika Bolgariya)

Effect of metallurgical factors on the mechanical properties and fatigue strength of 18KhNVA steel. Stal' 24 no.11:1033-1037 N '64. (MIRA 18:1)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

DEMIN, A.M., kand. tekhn. nauk; CHERTKOV, V.K.; VASIL'YEV, M.V., kand. tekhn. nauk; YEFIMOV, I.P.; KOKH, P.I.; KMITOVENKO, A.T., dots.; PRISEDSKIY, G.V., inzh.; DUNAYEVSKIY, Yu.N.; VOLOTKOVSKIY, S.A., prof., doktor tekhn. nauk; KUR'YAN, A.I., kand. tekhn. nauk; MAYMIN, S.R., kand. tekhn. nauk; MIROSHNIK, A.M., kand. tekhn. nauk; PETROV, I.P., kand. tekhn. nauk; TURYSHEV, B.F., kand. tekhn.nauk; SHISHKOV, A.I., kand. tekhn. nauk; AVERBUKH, I.D., inzh.; VARSHAVSKIY, A.V.; KRYUKOV, D.K.; LUKAS, V.A.; MINEYEV, V.A.; SMIRNOV, A.A., otv. red.; LYUBIMOV, N.G., red. izd-va; MAKSIMOVA, V.V., tekhn. red.

[Handbook for the operator and mechanic of open-pit mine equipment] Spravochnik mekhanika ugol'nogo kar'era. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1961. 639 p. (MIRA 15:3)

(Strip mining—Equipment and supplies)
(Coal mining machinery) (Electricity in mining)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

ARSHINSKIY, V.M.; BAGAUTINOV, G.A.; BESPALOV, M.V.; GASPAROVICH, P.I.; GOLOMIDOV, I.N.; GOLUBOV, G.B.; GRIN, L.T.; ZEL'SKIY, S.A.; IL'INYKH, A.F.; KOZIN, V.Z.; KRYUKOV, V.P.; KULAKOV, S.N.; LUKAS, V.A.; MINEYEV, V.A.; PETROV, Yu.S.; PIRUSHKO, M.G.; PROKOF'YEV, Ye.V.; REBETS, B.A.; STARTSEV, N.V.; TROP, A.Ye., prof.; KHRAMOV, V.A.; ABRAMOV, V.I., otv. red.; PROZOROVSKAYA, V.L., tekhn. red.; BOLDYREVA, Z.A., tekhn. red.

[Handbook on electric equipment for mines] Spravochnik gornogo elektrotekhnika. Pod obshchei red. A.E.Tropa. Moskva, Gosgortekhizdat, 1962. 400 p. (MIRA 16:5)
(Electricity in mining)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"

"APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0

LUKAS, V. A.; PETROV, I. P.

Possibility for extending the use of a set of infralow-frequency devices. Priborostroenie no.12:29 D '62. (MIRA 16:1)

(Electronic control)

APPROVED FOR RELEASE: 04/03/2001 CIA-RDP86-00513R001030720017-0"