"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

Investigation of ....

phosphors grown from a melt was observed by M.L. Kats and B.Z. Semenov (Ref. 2: Dokl.Ak. nauk SSSR, 106, 415, 1956), who established that the crystals were not phosphorescent immediately after they were produced. However, after X-ray irradiation they would emit light if they were excited by illumination of a wavelength of λ = 365 mμ; the above authors consider that this represents luminescence of atomary centres. The experiments of the authors of this paper have shown that this luminescence is not pure fluorescence and is composed of induced fluorescence and optical flashes. The authors investigated separately these two types of illumination in NaCl-Ni phosphors grown from melts as well as produced by means of electrothermal diffusion. The latter were first heated for the purpose of destroying the primary centres of luminescence. It was found that the brightness of induced luminescence depended on the dose of X-ray irradiation. Fig. 2 gives the results of tests with four different specimens; Curves 1 and 2 relate to synthetic phosphors, whereby for one (Curve 1) the Ni concentration was twice as high as for the

Card 2/6

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other (Curve 2); Curves 3 and 4 characterise the increase in brightness of induced luminescence for crystals activated by the method of electrothermal diffusion. Curve 4 applies to the specimen with the minimum Ni-concentration. It is characteristic for all the curves that in the initial stage the brightness is highest for crystals with the lowest activator content. All the curves show a tendency to saturation, which is achieved the more quickly the lower the activator concentration. In investigating the initial brightness of flashes, generated under the influence of light from the F-absorption band, as a function of the concentration of F-centres, new relations were discovered. The results of these experiments are given in Fig.3 (brightness of the optical flashes in the initial instant I versus absorption coefficient in the F-band maximum, which is a measure of the concentration of the F-centres). The numbering of the curves has the same meaning as for Fig.2. The influence of activator concentration can be seen clearly since the bend in the curve will occur the sooner the lower the activator content of the crystal. Equal

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Investigation of ...

anomalous behaviour is observed in the variation of the magnitude of the optical sum of light as a function of the X-ray irradiation time. This is attributed to the fact that with increasing X-ray irradiation time, there is a decrease in the number of Ni centres, the interaction of which with the electrons leads to the formation of optical flashes. In order to verify this assumption, the authors observed the change in brightness of NaCl-Ni phosphors during the process of excitation with X-rays. Usually, with increasing accumulation of electrons at the capture level, there is a gradual increase in the brightness of excited phosphors. However, the authors have observed a different picture in NaCl-Ni phosphors: in a beam of X-rays the brightness does not increase with the progress of time but decreases and becomes continuously weaker with increasing doses of X-ray irradiation. It is probable that thermal destruction of illumination centres is due to a hole mechanism; with the cessation of electron and hole centres, the initial state of the phosphor is re-established in which all the Ni centres are in the ionised state.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

S/139/61/000/001/008/018
E073/E335

Investigation of ....

There are 3 figures and 3 Soviet references.

ASSOCIATION: Irkutskiy gosuniversitet imeni A.A. Zhdanova
(Irkutsk State University imeni A.A. Zhdanov)

SUBMITTED: June 13, 1960

Card 5/6

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Investigation of ....

Fig. 2:

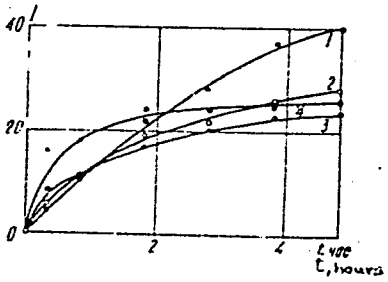
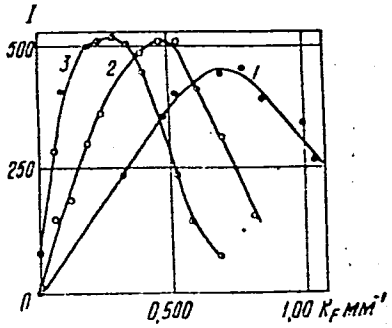


Fig. 3:



Card 6/6

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

PARFIANOVICH, I.A.; SHURALEVA, Ye. I.

Details of the mechanism of the optical flash, stimulated by light from the band region. Opt. i spektr. 10 no.4:500-504 Ap '61. (MIRA 14:3)

(Phosphors—Optical properties)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

PARFIANOVICH, I.A.; SHURALEVA, Ye.I.

Correlation of the values of the optical and thermal light sums in NaCl-Ni phosphor. Opt.i spektr. 10 no.5:680-681 My '61. (MIRA 14:8)

(Phosphors) (Photoelectric measurements)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

89240

S/048/61/025/001/006/031
B029/B067

9.6150 (0150 1395)

AUTHORS: Parfianovich, I. A. and Shuraleva, Ye. I.

TITLE: Characteristic features of the damping mechanism of optical flash-up

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 1, 1961, 38-42

TEXT: The authors present some interesting results obtained when studying the dependence of the damping rate of optical flash-up on the damping of X-radiation, and the increase of brightness of this flash-up with interrupted action of the illuminating light. First, the known experimental data and their possible explanations are briefly discussed. Fig. 2 shows the change of the ratio between the initial brightness I_o of flash-up and its final brightness I_1, as well as the ratio between the brightness of flash-up after the electrons are set free from the shallow levels and the corresponding value at the end of the preceding period of illumination (I_2/I_1). These two ratios increase with the X-radiation dose. The

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blocking effect of the M-centers is not sufficient for an explanation of these phenomena, for which also the mechanism of recombination luminescence in NaCl-Ni-phosphors has to be taken into account. Data on this mechanism were obtained by studying the changes in the initial brightness of flash-up and in the optical light sums with the time of exposure to X-rays. Fig. 3 shows the dependence of the initial brightness of flash-up on the concentration of F-centers for the three crystals nos. 1, 2, and 3. All three curves have maxima which are formed the earlier, the less the amount of activator in the crystal. The dependence of the change of the optical light sum on the time of exposure of the phosphors to X-rays is analogous. The total thermal light sums increase with increasing time of exposure to X-rays. In an X-ray beam, the luminescence of an NaCl-Ni phosphor decreases with time. With increasing X-ray dose it becomes weaker. Recombination luminescence may occur due to both recombination of the electrons with the ionization centers of luminescence and recombination of the electrons with the hole-type centers of the basic material. No agreement can be obtained between the rules established in the present paper and sensitized luminescence. Recombination luminescence in NaCl-Ni phosphors is caused by ionized luminescing centers. These ionized centers are

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assumed to have existed in the NaCl-Ni phosphors already before excitation. Exposure to X-rays reduces the number of ionized centers, and their recombination with free electrons leads to different luminescence phenomena. The dependence of the damping rate of the optical flash-up and of the increase of its brightness with interrupted action of the illuminating light on the X-radiation dose can be explained as follows: 1) reduced probability of recombination of free electrons with ionized luminescing centers due to the blocking effect of M-centers; 2) reduction of the number of ionized luminescing centers during exposure to X-rays. The ratio of optical light sum to thermal light sum depends on the activator concentration and, for a given sample, also on the degree of phosphor excitation. This is the reproduction of a lecture read at the Ninth Conference on Luminescence (Crystal Phosphors), Kiyev, June 20-25, 1960. There are 3 figures, 2 tables, and 6 references: 5 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Irkutskiy gosudarstvennyy universitet im. A. A. Zhdanova (Irkutsk State University imeni A. A. Zhdanov)

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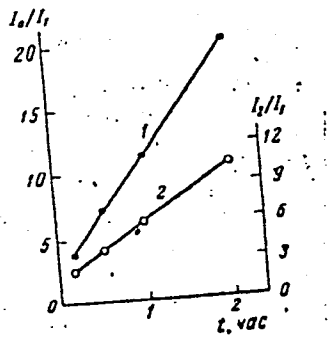

Fig. 2

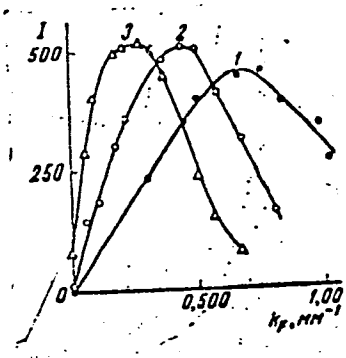

Fig. 3

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Characteristic features of the damping ... S/048/61/025/001/006/031
B029/B067

Table 1

№ кристалла	k_{max}, см$^{-1}$	20°C			70°C		
		$S_{опт}$	ΔS_T	$\Delta S_T/S_{опт}$	$S_{опт}$	ΔS_T	$\Delta S_T/S_{опт}$
1	2	3	4	5	6	7	8
1	8,80	820	20	0,02	820	9,3	0,01
2	6,40	500	41	0,08	825	18,5	0,02
3	2,20	260	92	0,35	468	54,0	0,11
4	0,60	88	134	1,52	134	48,0	0,36

Legend to Table 1:
Degree of optical illumination of NaCl-Ni phosphors of different activator concentrations. Subscript T denotes thermal, опт optical.

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B104/B202

24.3500 (1138, 1153, 1395)

AUTHORS: Parfianovich, I. A. and Shuraleva, Ye. I.

TITLE: Study of the photodecay of F-centers in alkali halide crystals

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 3, 1961, 383-384

TEXT: This paper was presented at the 9th conference on luminescence (crystal phosphors), Kiyev, June 20 to 25, 1960. The authors studied the optical scintillation and the decay of F-centers in pure and activated NaCl crystals in order to explain the mechanism of photodecay of the F-centers. The F-centers were produced by means of X-rays; light from the F-bands was used to decolorate the crystals. It could be proved that the weakening of the F-band under the action of light is caused by the transformation of the F-centers into other electron centers (M or F'-centers). After a certain limit concentration of the electrons is attained at the flat decay levels, decay ceases. This is illustrated by the results graphically shown in Fig. 1. This diagram shows the relative change of

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

Study of the photodecay of...

the concentration of the F-centers in a pure NaCl crystal where curve 1 was taken after exposure to X-rays and curve 2 after heating to 70°C for seven minutes. Curve 1 consists of two parts. The first part characterizes the rapid decay of the F-centers, the second one ceasing of the decay. It could be shown in an NaCl-Ni crystal that the introduction of an activator reduces the stability of the F-centers. Fig. 2 shows the relative changes of the concentrations of the F-centers on photodecay for one and the same NaCl-Ni crystal for different times of exposure to X-rays. Curve 1 holds for a 20-minute-irradiation. Curve 2 for a 5-hour-irradiation. The authors infer the existence of two different F-centers from the shape of these curves. Also in NaCl-Cu phosphor a decrease in the stability of the F-centers with increasing activator concentration could be observed. The activator absorption band with λ_m = 255 mμ in these phosphors is weakened by heating, whereas the stability of the F-centers increases. This result leads to the assumption that the stability of the centers not only influences that part of the activator which is distributed in the cationic nodes of the fundamental lattice but also that which lies in the especial points of the crystal. This part of the activator ions can be relatively easily displaced by heating the crystal. There are

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

Study of the photodecay of...

2 figures and 7 references: 2 Soviet-bloc and 4 non-Soviet-bloc.

ASSOCIATION: Irkutskiy gos. universitet im. A. A. Zhdanova (Irkutsk State University imeni A. A. Zhdanov)

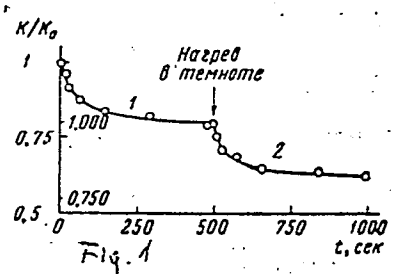

Fig. 1

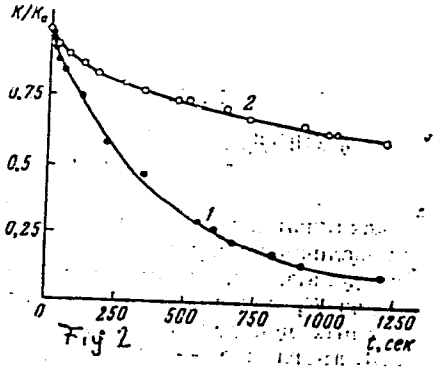

Fig 2

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S/048/62/026/004/009/014
B104/B102

AUTHORS: Parfianovich, I. A., and Shuraleva, Ye. I.

TITLE: Particularities of luminescence and the structure of some alkali-halide phosphors

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 4, 1962, 497-505

TEXT: This review article deals with investigations carried out in the years 1928-61, with special regard to the role played by dislocations in the recombination luminescence of NaCl-Cu and NaCl-Ni phosphors grown from melts or from NaCl crystals by electrolysis or diffusion. The luminescence properties of various phosphors differ greatly, depending on the specific features of their structure. Regardless of the absence of ionization of the luminescent centers by exciting irradiation, some crystals luminesce as a result of direct recombination of electrons with luminescent centers, while other crystals possess the luminescence characteristic of ion activator centers. This kind of luminescence is

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Particularities of luminescence ...

not due to recombination. There are 7 figures.

ASSOCIATION: Irkutskiy gos. universitet im. A. A. Zhdanova
(Irkutsk State University imeni A. A. Zhdanov)

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APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

PARFIANOVICH, I.A.; SHURALEVA, Ye.I.; KATS, M.L.

Discussion of the reports of I.A.Parfianofich and E.I.Shuraleva and M.L.Kats. Izv. AN SSSR. Ser. fiz. 26 no.4:513 Ap '62. (MIRA 15:4)

1. Odesskiy gosudarstvennyy universitet.
(Alkali metal halides--Spectra)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

PARFIANOVICH, I.A.; KRONGAUZ, V.G.; SHURALEVA, Ye.I.

Effects of the increase in brightness of optical flashes in pure NaCl crystals. Izv.vys.ucheb.zav.; fiz. no.3:66-70 '63.
(MIRA 16:12)

1. Irkutskiy gosudarstvenny universitet imeni Zhdanova.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

S/0139/63/000/006/0090/0094

ACCESSION NR: AP4025090

AUTHORS: Parfianovich, I. A.; Shuraleva, Ye. I.; Krongauz, V. G.

TITLE: On photostimulated luminescence in pure NaCl crystals

SOURCE: IVUZ. Fizika, no. 6, 1963, 90-94

TOPIC TAGS: optical flash, M-band absorption, x-ray tube, energy transmission phase, F-center, photostimulated luminescence

ABSTRACT: The optical flash from stimulated F- and M-band absorptions in pure natural NaCl crystals has been investigated. The specimens included one untreated NaCl, two heat-treated crystals at 300 and 760C, and another grown from a melt. Excitation was supplied from an x-ray tube BSV-2Cu (50 kv, 10ma) through a 0.1-mm thick aluminum filter at room temperature. It was found that the mechanism involved in the process of flashing is not only the general type but also involves a complex process, including the excitation energy transmission phase from F-centers to other electron centers. It is concluded that the presence of two photostimulated luminescence mechanisms is connected with nonuniform distribution in recombination centers and capture centers in the crystal volume. Orig. art. has:

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

ACCESSION NR: AP4025090

4 figures.

ASSOCIATION: Irkutskiy gosuniversitet imeni A. A. Zhdanova (Irkutsk State University)

SUBMITTED: 18Jul62 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: PH NO REF SOV: 002 OTHER: 003

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

PARFIANOVICH, I.A.; SHURALEVA, Ye.I.

Color centers and centers of recombination luminescence in alkali halide phosphors. Izv. AN SSSR Ser. fiz. 29 no.1: 19-26 Ja '65. (MIRA 18:2)

1. Irkutskiy gosudarstvennyy universitet.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

L 32816-65 EWT(1)/EWT(m)/EWP(b)/EWP(t) Pad IJP(c) JD/HW

ACCESSION NR: AP5004518 S/0048/65/029/001/0043/0045

AUTHOR: Parfianovich, I.A.; Krongauz, V.G.; Shuraleva, Ye.I.

TITLE: Roentgenoluminescence and optical flash in a NaCl:Ni 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, 43-45

TOPIC TAGS: luminescence, sodium chloride, nickel, x-ray irradiation, photoluminescence

ABSTRACT: Roentgenoluminescence and optical flash stimulated by radiation in the F absorption band was investigated in a NaCl:Ni phosphor. The NaCl:Ni phosphor was chosen for study because its recombination luminescence mechanism is believed to be understood. The intensity of the F-stimulated flash in a phosphor that had been irradiated with x rays at -160°C increased in a stepwise manner with temperature to a maximum at 80°C and decreased smoothly to zero with further increase of temperature. To explain this behavior it is hypothesized that the charge on the Ni^{2+} ions, to which recombination luminescence in this phosphor is due, is reduced by

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ACCESSION NR: AP5004518

x-irradiation and that the activator ions recover their double charge when the material is heated. This hypothesis is supported by further experiments in which a striking parallelism was disclosed between the variations of optical flash and roentgenoluminescence intensities under the influence of both thermal and optical treatment. Orig.art.has: 2 figures.

ASSOCIATION: Irkutskiy gosudarstvennyy universitet (Irkutsk State University)

SUBMITTED: 00/--Jan65 ENCL: 00 SUB CODE: SS,OP

NR REF SOV: 004 OTHER: 000

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L 32819-65 EWT(l)/EWT(m)/EWP(b)/EWP(t) IJP(c) JD/JG

ACCESSION NR: AP5004522 S/0048/65/029/001/0059/0062

AUTHOR: Parfianovich, I.A.; Shuraleva, Ye.I.; Krongauz, V.G.

TITLE: On the luminescence of "pure" alkali halide crystals /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, 59-62

TOPIC TAGS: luminescence, tenebrescence, ionic crystal, alkali halide, impurity content

ABSTRACT: The luminescence of "pure" NaCl and KCl crystals of different origin was examined in order to obtain a basis for judging whether pure crystals can be luminescent. All the crystals exhibited photoluminescence when excited by 200 to 300 millimicron radiation. The luminescence was weakest, however, in those crystals in the growth of which the greatest care had been taken to eliminate impurities, and the excitation spectra of the different crystals differed considerably. Emission characteristic of copper activated materials was observed in most of the crystals, and the presence of copper (and some other impurities) was spectroscopically demonstrated in all of them, including natural crystals. Glow curves follow-

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ACCESSION NR: AP5004522

ing x-ray excitation were recorded. These differed considerably from each other as regards both the position and relative intensity of the peaks, and the light sum stored after identical excitation differed from crystal to crystal. These results have convinced the authors that luminescence and tenebrescence in "pure" alkali halide crystals must be ascribed to the presence of residual impurities. The possibility that so-called α-luminescence may occur in pure materials, however, is not excluded. Orig.art.has: 2 figures.

ASSOCIATION: Irkutskiy gosudarstvennyy universitet (Irkutsk State University)

SUBMITTED: 00/--Jan65 ENCL: 00 SUB CODE: SS,OP

NR REF SOV: 009 OTHER: 021

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

L 43911-65 EPF(c)/EPF(n)-2/EPA(s)-2/EWT(1)/EWT(m)/EWP(b)/EWP(t) Pi-4/Pr-4/Pt-7/
Pu-4 IJP(c) JD/JG
ACCESSION NR: AP5009514 S/0048/65/029/003/0409/0411

AUTHOR: Parfianovich, I.A.; Shuraleva, Ye.I.; Dobrzhanskiy, G.F.; Magaril, I.G.; Kazintseva, M.D. 58 57 8

TITLE: Some data on the luminescent properties of europium activated sodium chloride and potassium chloride phosphors /Report, 12th Conference on Luminescence held in L'vov, 30 Jan-5 Feb 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 3, 1965, 409-411

TOPIC TAGS: fluorescence, fluorescent crystal, sodium chloride, potassium compound, europium, x ray irradiation, F center

ABSTRACT: NaCl:Eu and KCl:Eu crystals were grown from melts containing from 0.1 to 3 mole percent europium and their luminescence properties were investigated. Excitation spectra, emission spectra, and glow curves were recorded and the effects on these of various heat treatments and irradiation with 50 keV x-rays and F-band light were investigated. It is indicated that interesting peculiarities have been found, for the explanation of which further accumulation of experimental facts is required. Among these interesting peculiarities were the following. The excitation bands of NaCl:Eu at 245 and 335 mμ appeared to be due to a

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ACCESSION NR: AP5009514

single type of luminescence center, in agreement with the views of Ya.Ya. Kirs and A.I.Niylisk (Tr. In-ta fiz. i astron. AN Est SSR, No. 8, 36 (1962)), but a band at 265 mμ, distinguished by its behavior under heat treatment, appeared to be due to a second type of center. Centers of this second type did not occur in KCl:Eu. Irradiation with x-rays greatly reduced the luminescence of both materials; this effect was fully reversible in KCl:Eu, the luminescence being restored by a 300°C anneal, but only partly reversible in NaCl:Eu. Irradiation with x-rays also led to the formation of F centers; the F band in NaCl:Eu was much wider than in pure NaCl. The light sum stored in NaCl:Eu was reduced by x-ray irradiation, and the structure of its glow curve was somewhat altered. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Irkutskiy gosudarstvennyy universitet (Irkutsk State University)

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NR REF SOV: 001 OTHER: 000

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

L 26495-66 EWT(1)/EWT(m) IJP(c) JD/JG

ACC NR: AP6013056 SOURCE CODE: UR/0048/66/030/004/0581/0589

AUTHOR: Parfianovich, I. A.; Shuraleva, Ye. I.; Penzina, E. E.; Krongauz, V. G.

ORG: Irkutsk State University (Irkutskiy gosudarstvennyy universitet)

TITLE: Roentgenoluminescence of and trapping levels in NaCl and KCl crystals activated by Ag and Cu /Report, Fourteenth Conference on Luminescence held in Riga, 16-23 September 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 4, 1966, 581-589

TOPIC TAGS: luminescence, thermoluminescence, luminescence center, sodium chloride, potassium chloride, crystal phosphor, ionizing radiation, roentgenoluminescence, activated crystal, temperature dependence, electron trapping

ABSTRACT: One of the outstanding problems in the physics of ionizing radiations is elucidation of the mechanism of roentgenoluminescence (RL). Accordingly, the purposes of the present study were to investigate the RL mechanism in Ag-activated NaCl and KCl crystals and to obtain new, comparative data on RL of like crystals activated by Cu, in view of the similarity of this activator to Ag. The work included determination of the temperature dependence of the stationary RL and recording thermostimulated and light-stimulated emission curves. The experimental data are presented mainly in the form of graphis: plots of build-up of RL, temperature dependences of the RL and glow curves, Ausleuchtung curves, optical flash curves, and absorption curves. At temperatures

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

ACC NR: AP6013056

above 100° C the RL spectra of all the phosphors have a principal peak associated with type I centers. NaCl:Ag and NaCl:Cu also exhibit an emission identified with type II centers. The KCl phosphors, however, in addition to the type I center luminescence, emit visible bands that cannot be identified with type II centers. In general, the stationary RL is made up of two components - a short-lived and a long-lived one - which are characterized by different relative intensities at different temperatures. The experimental data are analyzed at some length and some hypotheses are proposed. It is noted that the characteristic green phosphorescence of KCl:Ag is also observed, although in weaker form, in the case of "pure" KCl crystals. In view of the temperature range in which this green afterglow is evinced it is inferred that this emission is due to recombination of free electrons with V_k centers, for holes are immobilized at low temperatures. However, holes may participate in other forms of green luminescence. In general, there apparently participate in the roentgenoluminescence of alkali halide phosphors several different types of centers (including oxygen centers), some of which are more active in one temperature range, and some in another; both electron and hole processes are significant (above the temperature of self-trapping of holes). Orig. art. has: 5 figures.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 009/ OTH REF: 011

Card 2/2 0 e

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

L 26487-66 EWT(l)/EWT(m) IJP(c) JD/JG

ACC NR: AP6013057 SOURCE CODE: UR/0048/66/030/004/0590/0592

49
B

AUTHOR: Parfianovich, I. A.; Babin, P. A.; Shuraleva, Ye. I.

ORG: Irkutsk State University (Irkutskiy gosudarstvennyy universitet)

TITLE: Some peculiarities of the roentgenoluminescence of NaCl and KCl crystals activated by Ag and Cu /Report, Fourteenth Conference on Luminescence held in Riga, 16-23 September 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 4, 1966, 590-592

TOPIC TAGS: luminescence, potassium chloride, sodium chloride, crystal phosphor, x ray effect, temperature dependence, roentgenoluminescence, electron trapping

ABSTRACT: Investigations by the authors and others have shown that NaCl and KCl phosphors doped with Ag and Cu exhibit some peculiarities as regards build-up of their roentgenolumiscence (RL) and the temperature dependence of the RL. In the series of experiments first described the phosphor specimens were first x irradiated to attainment of a steady RL intensity, i.e., to "saturation"; then the radiation was cut off for a period (dark pause), and then again turned on. The measurement results are presented in the form of growth curves; it was found that whereas in the case of both NaCl:Ag and NaCl:Cu the second growth curve is virtually identical with the initial one, in the case of KCl phosphors the dark pause results in initial intensification of

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L 26487-66

ACC NR: AP6013057

the RL, that is, instead of the gradual rise characteristic of the initial irradiation (and of the NaCl phosphors) the emission abruptly rises to a sharp peak that is substantially above the steady RL level and then gradually falls off to the steady level (in some cases with a slight preliminary dip). This effect is temperature dependent and disappears about 308°K. This would imply that the "flash" effect is due to some sort of trapping centers that dissociate at this temperature; the possible nature of these centers is discussed in general terms. Further experiments involved study of the temperature dependence of the RL and recording of glow curves after x-ray excitation. Here again the curves for the NaCl and KCl phosphors are different; KCl:Cu, for example, is characterized by strong increase in the RL intensity in the temperature region of quenching of the photoluminescence excited in the range of the long-wavelength absorption band. Some possible reasons for this phenomenon are suggested, but admittedly these are not the only ones that may be hypothesized. In conclusion, it is inferred that in the range of higher temperatures, where trapping of current carriers is unlikely and RL is the only detectable form of recombination luminescence, there occurs a change in the mechanism of excitation energy transfer to the luminescence centers. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 002/ OTH REF: 000

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

ACC NR: AP7004958 SOURCE CODE: UR/0048/66/030/009/1416/1419

AUTHOR: Parfianovich,I.A.; Ivakhnenko,P.S.; Shuraleva,Ye.I.

ORG: Irkutsk State University (Irkutskiy gosudarstvennyy universitet)

TITLE: Investigation of the roentgenoluminescence, absorption and emission spectra of NaCl:Eu single crystals /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, 1416-1419

TOPIC TAGS: luminescence, sodium chloride, europium, luminescent crystal, luminescence spectrum, absorption spectrum, x ray irradiation, luminescence center, temperature dependence

ABSTRACT: The authors investigated the luminescence and absorption of NaCl:Eu crystals grown from a melt in order to obtain information concerning the nature and conversion of the luminescence centers. The absorption spectrum of crystals that had been heated to 350° C had peaks at 240, 340, and 370 mμ. Illumination in these bands excited luminescence peaking at 425 mμ. All three of these absorption bands are ascribed to the same type I centers. In annealed crystals there were found centers of a second type (type II), characterized by absorption peaks at 260, 272, and 330 mμ and a broad luminescence spectrum peaking at 455 mμ, which was strongly stimulated by illumination in the 272 mμ band but not by illumination in the 260 mμ band. When the

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ACC NR: AP7004958

specimens were irradiated with x-rays there was first a build-up of the luminescence, then a decline. The decline is ascribed to transformation of the luminescence centers by the x-rays. Induced absorption peaks were found at 272, 312, 410, and 570 mμ. The 272 and 312 mμ induced absorption bands did not appear in annealed crystals and no emission was observed from the induced activator centers in any of the specimens. The roentgenoluminescence intensity exhibited a complex temperature dependence, first decreasing as the temperature was raised above room temperature and then increasing and passing through two maxima at about 150 and 320° C. The 150° maximum was found to be due to increase of the build-up light sum. From the temperature dependence of the absorption spectra it is concluded that the presence of the 320° C maximum is due to conversion of type I centers to type II centers at temperatures between 160 and 260° and their subsequent re-establishment at higher temperatures. Orig. art. has: 8 figures.

SUB CODE: 20 SUBM DATE: none ORIG. REF: 005

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

SHURALOV, V.

26451 O klassifikatsii maslos-bivateley. Moloch. Prom-St', 1949, No. 8, S.23-2F

SO: LETOPIS' NO. 35, 1949

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

SHURAN, I., arkitekter.

Selecting plans for noncontractual building. Stroitel' no.6:[illegible]-21 Je '57. (MLRA 10:9)

(Apartment houses)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

SHURAN, I., arkhitektor.

New model plans for residential homes. Zhil.-kom.khoz. 7 no.9:24-25 '57. (MIRA 10:10)

(Apartment houses)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

SHURAN, I., inzh.

New structural components. Stroitel' no.11:28 N '57. (MIRA 10:12)
(Building blocks)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

SHURAN, I., inzh.-arkhitektor

Standard designs of prefabricated houses used during highway construction. Avt.dor. 21 no.3:27-28 Mr '58. (MIRA 11:3)
(Buildings, Prefabricated)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

LOPATIN, G., inzh.; SHURAN, I., inzh.

Simplified sheepfolds. Sel'. stroi. no.12:13 D '62.
(MIRA 16:1)

(Sheep houses and equipment)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

ROZINOV, M.V.; SHURAN, N.M.

Rare case of natural mummification of a corpse. Sud.-med. eskpert. 6 no.2:48-51 Ap-Je'63. (MIRA 16:7)

1. Byuro sudebnomeditsinskoy ekspertizy (nachal'nik L.S.Velisheva) Moskovskogo gorodskogo otdela zdravookhraneniya.
(MEDICAL JURISPRUDENCE) (MUMMIES)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

SHURAN, Ye.M., redaktor

[Union of Soviet Socialist Republics; map] Soiuz Sovetskikh Sotsialisticheskikh Respublik. Otvetstvennyi redaktor Shuran, Ye.M. Moskva, 1953. (MLRA 7:6)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye geodezii i kartografii.
(Russia--Administrative and political divisions--Maps)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

ASOYAN, N.S.; GAVRILOV, N.I.; GORNUNG, M.B.; KREMEN', K.S.; OLEYNIKOV, I.N.; PUCHKOV, I.B.; CHERNIKOV, G.P.; SHURAN, Ye.M., red.; ZABIROV, B.Sh., red.; KUZNETSOV, A.D., tekhn. red.

[West Africa; 1:5 000 000] Zapadnaia Afrika; 1:5 000 000. Moskva, Geografizdat, 1961. fold.map. ___[Text] 45 p. (MIRA 15:7)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye geodezii i kartografii.

(Africa, West--Maps)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

KRIMER, I.L., otv.red.; SOBOLEVA, V.S., otv.red.; SKURYGINA, P.V., P.V., otv.red.; SHURAN, Ye.M., otv.red.; TRET'YAKOVA, L.Ye., otv.red.; BALANTSEVA, I.A., otv.red.; SHAPIRO, Ye.M., otv.red.; FEDOSEYEV, V.A., red.; BENEVSKAYA, V.A., red.; SOLOV'YEV, S.N., tekhn.red.

[Cartographic chronicle; organ of the state bibliography of the U.S.S.R. for 1951-1953] Kartograficheskaia letopis'; organ gosudarstvennoi bibliografii SSSR, 1951-1953. Moskva, Izd-vo Vses.knizhnoi palaty, 1954. 162 p. (MIRA 12:7)

1. Vsesoyuznaya knizhnaya palata.
(Bibliography--Maps)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

YANYSHEVA, S.K., otv.red.; SLASHCHEVA, S.K., otv.red.; KRIMER, I.L., otv.red.; SOBOLEVA, V.S., otv.red.; SHURAN, Ye.M., otv.red.; FEDOSEYEV, V.A., red.; BENEVSKAYA, V.A., red.; SOLOV'YEV, S.N., tekhn.red.

[Cartographic chronicle; organ of the state bibliography of the U.S.S.R., 1954] Kartograficheskaia letopis'; organ gosudarstvennoi bibliografii SSSR, 1954. Moskva, Izd-vo Vses.knizhnoi palaty, 1955. 124 p. (MIRA 12:7)

1. Vsesoyuznaya knizhnaya palata.
(Bibliography--Maps)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

L 13550-66 EWT(d)/EWT(l) IJP(c) GG

ACC NR: AP6001157 SOURCE CODE: UR/0367/65/002/003/0501/0511

AUTHOR: Domokosh, G. (Associate); Shuran'i, P. (Associate)

ORG: Joint Institute of Nuclear Research (Ob"yedinennyy institut yadernykh issledovaniy); Budapest Physics Institute, Hungary (Budapeshtskiy Institut fiziki)

TITLE: Spontaneous breakdown of symmetries in quantum field theory

SOURCE: Yadernaya fizika, v. 2, no. 3, 1965, 501-511

TOPIC TAGS: quantum field theory, mathematic analysis

ABSTRACT: The authors examine symmetry breakdown solutions in quantum field theory by means of functional methods. It is shown that if a normal solution is renormalizable, then a symmetry breaking solution is also renormalizable. The Goldstone theorem is proved for orthogonal symmetry groups. In the case of SU(3)-symmetry preferred direction in unitary space is uniquely determined by the self-consistency condition, i.e., it coincides with the hypercharge axis. The general procedure is illustrated by an example of a self-coupled scalar field. Approximate calculations are performed by means of a generalized diagram technique. A discussion is given on the validity of the Gell-Mann-Okubo mass formula independent of the perturbation theory. Some unsolved problems of a fundamental nature are indicated. Authors find it their pleasant duty to thank Prof. N. N. Bogolyubov and Prof. Jona-Lasinio [Iona-Lasinio] for many interesting discussions on the subjects studied. Orig. art. has: 3 figures and 26 formulas.

Card 1/2

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L 13550-66
ACC NR: AP6001157

SUB CODE: 12,18,20 / SUBM DATE: 22Jan65 / OTH REF: 007

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24 5 [illegible]

37897
S/056/62/042/005/049/050
B108/B138

AUTHOR: Shuran'i, P.

TITLE: Behavior of the real part of scattering amplitude at very high energies

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42, no. 5, 1962, 1425-1426

TEXT: In earlier work (preprint, OIYaI, 1962) it was found that the Mandelstam equation (Phys. Rev. 115, 1741, 1959) furnishes two possible types of asymptotic behavior of the imaginary part of amplitude. One of these behaviors (which is unique as it alone can give constant total cross section) coincides with a Regge-type behavior (Nuovo Cim., 14, 951, 1959; 16, 947, 1960): $A_s(s, t) = f(t)s^{L(t)}$ $(L(0) = 1)$. If $|u| \gg 1$, the imaginary part of the elastic scattering amplitude in the second channel of isoscalar particles will have the form $A_u(u, t) = f(t)u^{L(t)}$. The real part of the amplitude can be found from these formulas by using $s \approx -u$ if t is finite

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Behavior of the real part of scattering ...

and $s \to \infty$:

$$\mathrm{Re}A(s, t) = f(t)s^{L(t)} \frac{1 \mp \cos\pi L(t)}{\sin\pi L(t)} + O(1).$$

According to the optical theorem, $f(0) = \sigma_{tot}$. This procedure is applied to πN-scattering.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: March 31, 1962

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

ACCESSION NR: AP4012083 S/0020/64/154/002/0317/0320

AUTHOR: Shuran'i, P.

TITLE: Peculiarities of a solution for the Bethe-Salpeter equation in an angular momentum plane

SOURCE: AN SSSR. Doklady*, v. 154, no. 2, 1964, 317-320

TOPIC TAGS: Bethe Salpeter equation, relativistic equation, quantized field, quantized field theory, relative time variable, quantum mechanics, angular momentum, scalar meson, vector meson

ABSTRACT: A solution to the Bethe-Salpeter equation by a ladder approximation based on the theories of scalar mesons with a $\lambda\varphi^4$ interaction and with a vector meson substitution interaction where the particle mass and the total energy $\sqrt{s}$ was equal to zero was studied previously by the author. (P. Suranyi, Phys. Letter 6 (1963) 59). The present work is devoted to the case where the particle mass and $\sqrt{s}$ are not equal to zero. The Bethe-Salpeter equation, after rotation of the integration boundary in the ω-plane, can be written in the form

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ACCESSION NR: AP4012083

$$T_l(p_0, \omega_0, p_2, \omega_2, s) = K_l(p_0, \omega_0, p_2, \omega_2) + \\ + \int_0^\infty dp_1 \int_{-\infty}^{\infty} d\omega_1 K_l(p_0, \omega_0, p_1, \omega_1) \frac{1}{F(p_1, \omega_1, s)} T_l(p_1, \omega_1, p_2, \omega_2, s),$$

where

$$F(p, \omega, s) = \left[p^2 + m^2 + \left(\omega - \frac{i\sqrt{s}}{2}\right)^2\right]\left[p^2 + m^2 + \left(\omega + \frac{i\sqrt{s}}{2}\right)^2\right],$$

$$K_l(p_0, \omega_0, p_1, \omega_1) = \frac{\lambda^2}{8(2\pi)^5} \int_{4\mu^2}^{\infty} \sqrt{\frac{x - 4\mu^2}{x}}\, Q_l\left(\frac{p_0^2 + p_1^2 + (\omega_0 - \omega_1)^2}{2p_0p_1}\right)$$

for the $\lambda\varphi^4$ theory and

$$K_l(p_0, \omega_0, p_1, \omega_1, s) = \frac{2G^2(p_0^2 + p_1^2 + \omega_0^2 + \omega_1^2 + s/2 + \mu^2/2)}{(2\pi)^3} \times \\ \times Q_l\left(\frac{p_0^2 + p_1^2 + \mu^2 + (\omega_0 - \omega_1)^2}{2p_0p_1}\right)$$

for the theory with vector meson substitutions. The kernels $V_e = \frac{1K}{F}e$

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

ACCESSION NR: AP4012083

are not kernels of the Fredholm type. Nonetheless, an iterative solution to the integral equation (1) for the case m = μ = s = 0 (i.e. $\bar{V}_l$) will exist if Re $l > 0$. The author showed that $\bar{V}_l > V_l > 0$ in some domain of the variables s, m and μ. The formal solution can be represented in the form of

$$T_l = \int S_l(\lambda) \frac{K_l(\lambda)}{1 - V_l(\lambda)} d\lambda + \sum S_l(\lambda_i) \frac{K_l(\lambda_i)}{1 - V_l(\lambda_i)},$$

where $V_e(\lambda)$ and $S_e(\lambda)$ are the eigenvalues and eigenvectors of the operator V_e. The kernel $\bar{V}_l$ possesses a pure continuous spectrum, while the kernel V_e generally has a discrete spectrum.

"Author wishes to thank A. A. Logunov, G. Domokosh, I. T. Todorov and D. S. Chernanskiy for valuable discussions."

Orig. art. has: 10 equations.

ASSOCIATION: Ob"edinenny*y institut yaderny*kh issledovaniy
(Joint Nuclear Research Institute)

Card 3/3

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

DOMOKOSH, G.; SHURANYI, P.

Spontaneous disturbance of symmetries in quantum field theory.
IAd. fiz. 2 no.3:501-511 S '65. (MIRA 18:9)

1. Ob"yedinennyy institut yadernykh issledovaniy.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

CHURANOV, Nikolay Pavlovich.

Prokop'evsk. Kemerovo, Kemerovskoe knizhnoe izd-vo, 1964. 112 p. (MIRA 18:4)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

SHURANOV, S.A., red.; SHVETSOV, G.V., tekhn.red.

[Standard statutes for fruit growing cooperatives of workers and employees] Tipovoi ustav sadovodcheskogo tovarishchestva rabochikh i sluzhashchikh. Moskva, 1957. 13 p. (MIRA 12:1)

1. Russia (1917- R.S.F.S.R.) Laws, statutes, etc. (Fruit growing)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

SHURANOV, S.A., red.; SHVETSOV, G.V., tekhn.red.

[Model statutes for garden clubs of workers and employees] Tipovoi ustav sadovodcheskogo tovarishchestva rabochikh i sluzhashchikh. Moskva, 1957. 13 p. (MIRA 11:1)

1. Sadovodcheskie tovarishchestva rabochikh i sluzhashchikh. (Gardening--Societies, etc.)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

SHURANOV, S.

[Our collective orchard] Nash kollektivnyi sad. Moskva, M-vo khoz.SSSR, 1959. 78 p. (MIRA 13:7)
(Fruit culture)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

SHURANOV, S.A.

Protection of fruit trees. Zashch. rast. ot vred. i bol.
5 no.1:51-52 Ja '60. (MIRA 14:6)
(Fruit trees—Diseases and pests)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

SHURANOV, S.

Posters for stock farmers. Veterinariia 37 no.8:94-95 Ag '60. (MIRA 15:4)

(Posters, Russian) (Stock and stockbreeding)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

L 4172-66 EWT(d)/EWT(l)/EPA(s)-2/EEC(k)-2 IJP(c) GG

ACC NR: AP5025693 SOURCE CODE: UR/0286/65/000/018/0040/0040

INVENTOR: Gladyshev, G. I.; Shuranov, V. A.; Antonov, A. V.

ORG: none

TITLE: Instrument for measuring the parameters of dielectrics at low temperatures in the centimeter wavelength range. Class 21, No. 174677

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 18, 1965, 40

TOPIC TAGS: cavity resonator, measuring instrument, dielectric property, electronic measurement, dielectric material

ABSTRACT: The proposed instrument for measuring the parameters of dielectrics at low temperatures consists of a tunable measuring resonator, a waveguide connected to the resonator, a hermetically sealed body, and a dewar. Provision is made to maintain controlled low temperatures in the working space of the resonator. The cavity of the resonator is ringed with a coiled heat exchanger linked with the dewar. Temperature stabilization and control are effected by application of a controlled voltage to the end of the tubing passing into the dewar. Orig. art. has: 1 figure. [DW]

SUB CODE: EC,EM/SUBM DATE: 11Jul63/ ORIG REF: 000/ OTH REF: 000/ ATD PRESS: 4129

Card 1/1 mf UDC: 621.317.335.3

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

PINNEKER, E.V.; UGLANOV, I.N.; SHURANOVA, N.N.

Underground waters of Irkutsk Province. Mat. Kom. po izuch. podzem. vod. Sib. i Dal' Vost. no.2:101-111 '62. (MIRA 17:8)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

SHURANOVA, Zh.P.

Bioelectric characteristics of the reaction to light in the electrogram of tectum opticum in pigeons. Nauch.dokl.vys.shkoly; biol. nauki no.2:67-72 '59. (MIRA 12:6)

1. Rekomendovana kafedroy fiziologii vysshey nervnoy deyatel'nosti Moskovskogo gosudarstvennogo universiteta im. M.V.Lomonosova.
(ELECTROENCEPHALOGRAPHY) (VISION)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

KHOLODOV, Yu.A.; KRUSHINSKAYA, N.L.; SHURANOVA, Zh.P.; SHCHERBINA, Z.D.

Comparative physiological data on the differentiation of two positive stimuli. Trudy Inst. vys. nerv. deiat. Ser. fiziol. 6:188-194 '61. (MIRA 14:12)

1.Iz Laboratorii sravnitel'noy fiziologii vysshey nervnoy deyatel'nosti, zav. - L.G.Voronin.

(CONDITIONED RESPONSE)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

SHURANOVA, Zh.P.

Prolonged shifts of the cortical potential after stimulation of the reticular formation of the midbrain. Dokl. AN SSSR 153 no.5:1220-1222 D '63. (MIRA 17:1)

1. Institut vysshey nervnoy deyatel'nosti i neyrofiziologii AN SSSR. Predstavleno akademikom V.N. Chernigovskim.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

SHURANOVA, Zh.P.

Constant potential in the rabbit cerebral cortex.
Biul. eksp. biol. i med. 57 no. 2:3-6 F '64. (MIRA 17:9)

1. Laboratoriya elektroentsefalografii (nauchnyy rukovoditel'-chlen-korrespondent AN SSSR prof. M.N.Livanov) Instituta vysshey nervnoy deyatel'nosti i neyrofiziologii (dir.-chlen-korrespondent AN SSSR E.A.Asratyan) AN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR N.I. Grashchenkovym.

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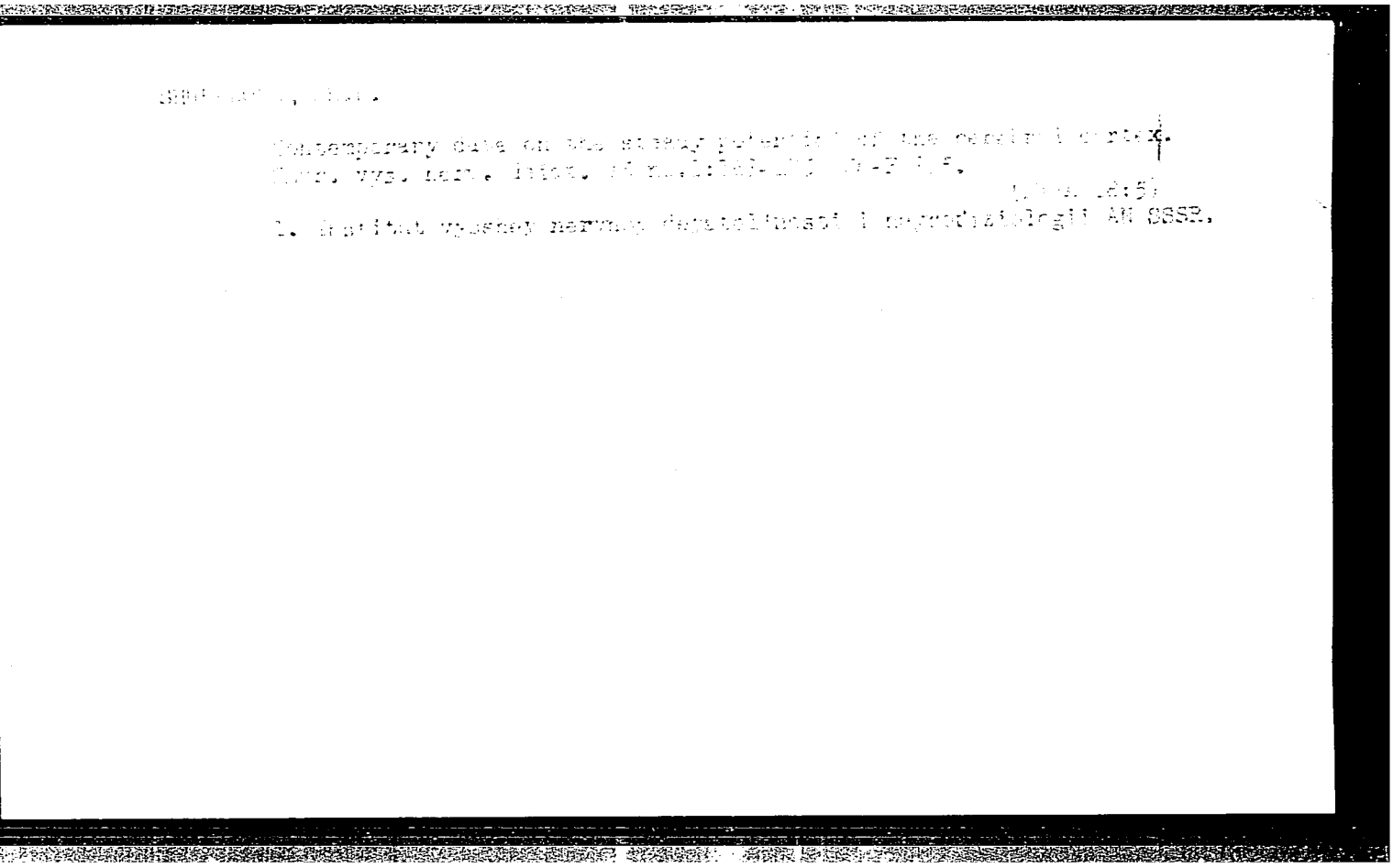

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SIUKAIOVA, Zh.P.

Long-lasting changes in the steady potential of the cerebral cortex in response to photic and electric stimulation of nonspecific structures of the brain. Zhur. vys. nerv. deiat. 16 no. 1:62-66 Ja-F '66 (MIRA 19:2)

1. Institut vysshey nervnoy deyatel'nosti i neyrofiziologii AN SSSR. Submitted May 31, 1964.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

DOROKHOV, A.; LAZARENKO, I.; SHURAPEY, G.

Change the conditions of livestock reception at meat combines. Mias.ind.SSSR 30 no.2:24-25 '59. (MIRA 13:4)

1. Moskovskiy myasokombinat imeni A.I.Mikoyana.
(Moscow--Meat industry)

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L 7540-66 EPA(s)-2/EWT(m)/EPF(c)/EWP(j)/EWP(t)/EWP(b)/ETC(m) IJP(c)/RPL JD/WW

ACC NR: AP5027904 JW/JG/RM SOURCE CODE: UR/0189/65/000/005/0003/0007

AUTHOR: Vorob'yev, A. F.; Ibragim, N. A.; Skuratov, S. M.

ORG: Department of Physical Chemistry, Moscow State University, (Kafedra fizicheskoy khimii Moskovskogo gosudarstvennogo universiteta)

TITLE: Enthalpies of formation of Rb super + and Cs super + ions in infinitely dilute aqueous solutions

SOURCE: Moscow, Universitet. Vestnik. Seriya II. Khimiya, no. 5, 1965, 3-7

TOPIC TAGS: rubidium, cesium, enthalpy, rubidium compound, cesium compound, calorimeter

ABSTRACT: The work is a part of systematic investigations of the thermochemistry of ionic compounds being performed at the thermochemical laboratory of Moscow State University. The enthalpies of formation of ribidium and cesium compounds are best determined via the enthalpies of formation of the Rb+ and Cs+ ions. Ethalpies of reactions of metallic rubidium and cesium with water and enthalpies of dilution of rubidium and cesium hydroxides were determined experimentally. A vacuum apparatus was used to prepare high-purity metal samples and to pour them into the ampoules employed in the calorimetric measurements. An air-tight low-heat-value calorimeter was employed. The data obtained permitted the calculation of the enthalpy of formation

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ACC NR: AP5027904

2

of RbOH and CsOH in infinitely dilute solutions, and thus enabled the authors to find the standard enthalpies of formation of the Rb+ and Cs+ ions. Orig. art, has: 3 figures and 2 tables.

SUB CODE: TD, GC / SUBM DATE: 28Dec64 / ORIG REF: 002

Alkali metal 44, 55

Card 2/2

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[illegible], [illegible]V., kand. tekhn. nauk

Drainage of bogs in the floodlands of the Northern Dvina River.
Gidr. i mel. 16 no.5:28-36 My '64. (MIRA 17:6)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

MARTYNOV, I.S., inzh.; SHRAYT, A.D., inzh.

Combined benchboard for electric wiring. Priborostroenie no.12: 22 D '65. (MIRA 19:1)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

SHURAVIN, A.D.

Multiple-purpose cutter head for milling machines. Mashinostroitel' no.3:29 Mr '64. (MIRA 17:4)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

SHURAVLEV, Mikhail Vasil'yevich; SKORNYAKOV, Venedikt Borisovich; LEDNEV, M.P., retsenzent; GUBASHEV, N.I., red.; SKOROBOGACHEVA, A.P., red.izd-va; MATLYIK, R.M., tekhn. red.

[Cleaning and finishing of rolled products]Otdelka prokata. Sverdlovsk, Metallurgizdat, 1962. 215 p. (MIRA 16:2)
(Rolling (Metalwork)) (Metals--Finishing)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

SHURAVLEV, V. K.; ZHUKHOVITSKIY, A. A. (Prof., Dr. Chem. Sci.)

"Measurement of the Thermodynamic Activity of Sulphur, Diffused in Iron," in book The Application of Radioisotopes in Metallurgy, Symposium XXXIV; Moscow; State Publishing House for Literature on Ferrous and Nonferrous Metallurgy, 1955.

V. K. SHURAVLEV: Prof. A. A. ZHUKOVITSKIY, Dr. Chem. Sci./Chair of Physical Chemistry, Moscow Inst. of Steel im I. V. Stalin.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

1. DROZDOV, [illegible]; SHURAVSKAYA, M.

2. USSR (600)

4. Meat--Analysis

7. Speedy method for determining glycogen in meat. Mias. ind. SSSR 23 no. 5 1952.

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

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

AVETIS'YAN, G.M.; ATSEKHOVSKAYA, V.A.; SHURAY, L.I.

Effect of nicotinic acid on blood coagulation under experimental conditions. Farm. i toks. 26 no.2:216-219 Mr-Ap '63. (MIRA 17:8)

1. Kafedra farmakologii (zav. - prof. I.E. Akopov) Kubanskogo meditsinskogo instituta imeni Krasnoy Armii.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

USSR/Engineering - Hydraulics, Canals Jun 51

"Removing Earth Mass by Explosions During Construction of Canals," A. A. Shurayev, D. M. Kushnarev, Engineers

"Gidrotekh Strol" No 6, pp 11-16

Describes blasting as most efficient method for throwing ground material from proposed canal bed. Discusses combination of this method with hydraulic removal of ground and application of dynammon as more effective and economical explosive than amatol. Blasting costs are 25-30% above cost of

199T50

USSR/Engineering - Hydraulics, Canals Jun 51
(Contd)

excavator use, but method is recommended in certain cases, since it requires considerably less manpower.

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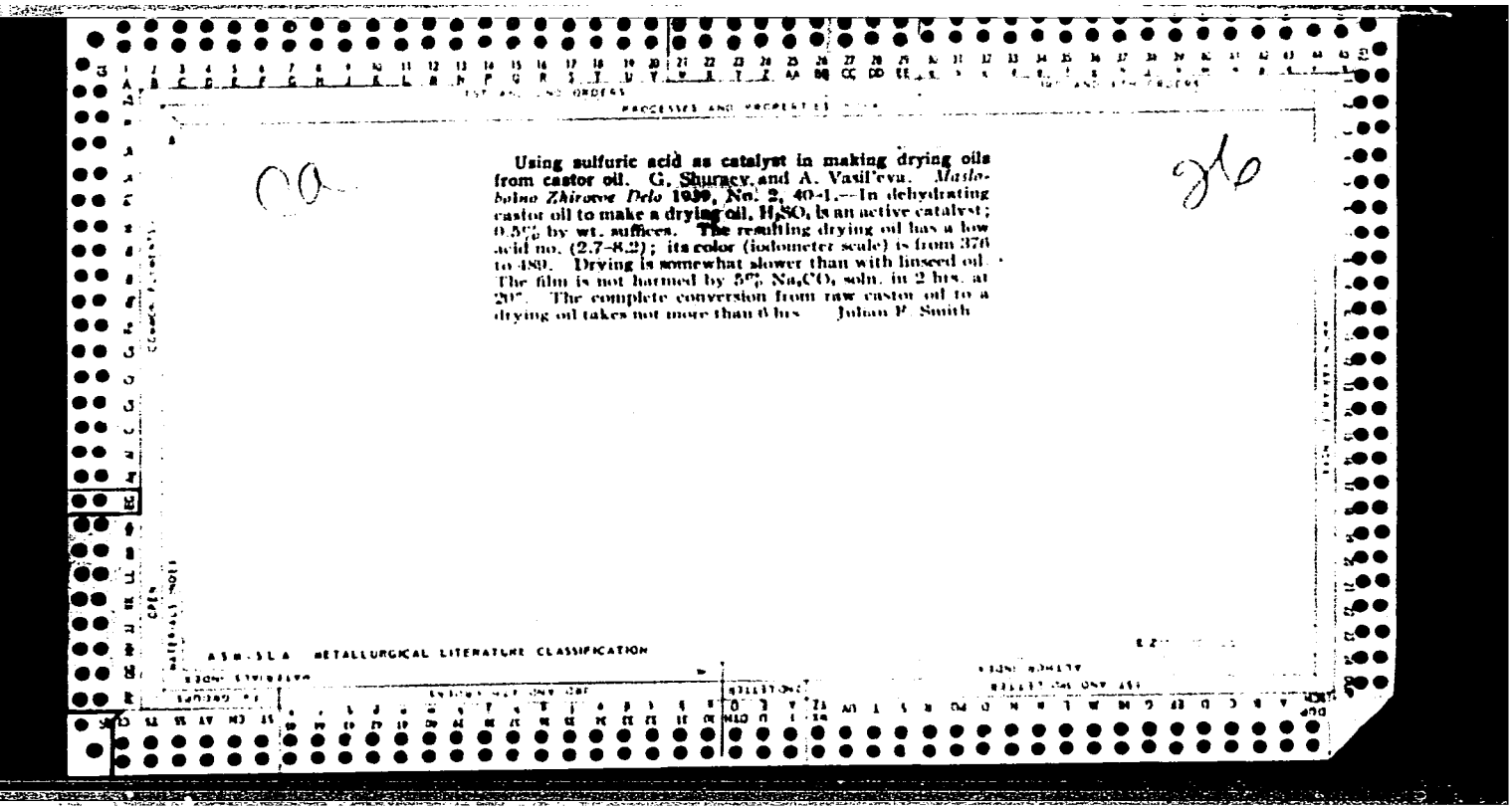

Using sulfuric acid as catalyst in making drying oils from castor oil. G. Shuraev and A. Vasil'eva. *Maslobolno Zhirovoe Delo* **1939**, No. 2, 40-1.—In dehydrating castor oil to make a drying oil, H_2SO_4 is an active catalyst; 0.5% by wt. suffices. The resulting drying oil has a low acid no. (2.7–8.2); its color (iodometer scale) is from 376 to 489. Drying is somewhat slower than with linseed oil. The film is not harmed by 5% Na_2CO_3 soln. in 2 hrs. at 20°. The complete conversion from raw castor oil to a drying oil takes not more than 6 hrs. Julian P. Smith

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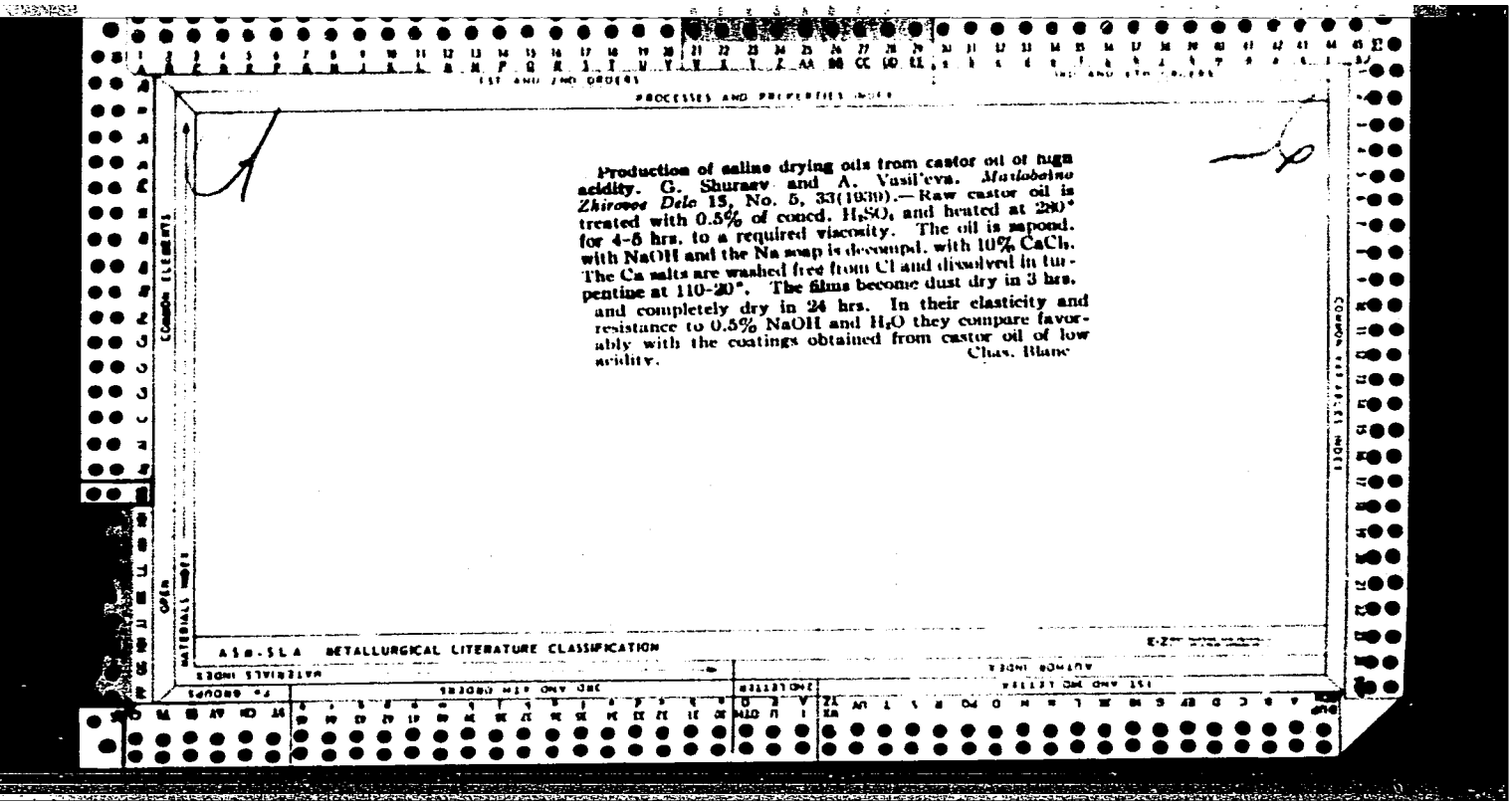

Production of saline drying oils from castor oil of high acidity. G. Shuraev and A. Vasil'eva. *Maslobeino Zhirovoe Delo* 15, No. 5, 33(1939).—Raw castor oil is treated with 0.5% of concd. H_2SO_4 and heated at 280° for 4–5 hrs. to a required viscosity. The oil is sapond. with NaOH and the Na soap is decompd. with 10% $CaCl_2$. The Ca salts are washed free from Cl and dissolved in turpentine at 110–20°. The films become dust dry in 3 hrs. and completely dry in 24 hrs. In their elasticity and resistance to 0.5% NaOH and H_2O they compare favorably with the coatings obtained from castor oil of low acidity.

Chas. Blanc

A58-SLA METALLURGICAL LITERATURE CLASSIFICATION

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1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

8A

27

Analysis of castor oil soapstock. [illegible] and A. Vasil'eva. *Masloboino Zhirovoe Delo* 15, No. 6, [illegible] The usual methods of detn. of free and combined fat acids in castor-oil soapstock cannot be used because the oil is sol. in alc. and insol. in Et_2O. Satisfactory results can be obtained by the following method: To 5 g. of soapstock in a porcelain evapg. dish add a min. of H_2O (5 ml.), heat, with stirring, on a water bath and neutralize with dil. NaOH. To convert the Na soap into insol. Ca salts, introduce dropwise 10% $CaCl_2$ until the formation of a milky soln. stops and the bottom aq. layer becomes entirely clear. Evap. to dryness, work up with hot alc., filter, wash the ppt. on the filter with alc. and det. neutral castor oil in the filtrate as usual. Det. combined fat acids from the difference of the total content of fat acids, detd. in the usual manner, and the neutral oil. Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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SHURAEV, S.

CA

27

Analysis of castor-oil soapstock. I. S. Shuraev and A. Vasil'eva. *Maslobolno Zhirovoe Delo* 15, No. 6, 27 (1939). —The usual methods of detn. of free and combined fat acids in castor-oil soapstock cannot be used because the oil is sol. in alc. and insol. in Et_2O. Satisfactory results can be obtained by the following method: To 5 g. of soapstock in a porcelain evapg. dish add a min. of H_2O (5 ml.), heat, with stirring, on a water bath and neutralize with dil. NaOH. To convert the Na soap into insol. Ca salts, introduce dropwise 10% $CaCl_2$ until the formation of a milky soln. stops and the bottom aq. layer becomes entirely clear. Evap. to dryness, work up with hot alc., filter, wash the ppt. in the filter with alc. and det. neutral castor oil in the filtrate as usual. Det. combined fat acids from the difference of the total content of fat acids, detd. in the usual manner, and the neutral oil. Chas. Blanc

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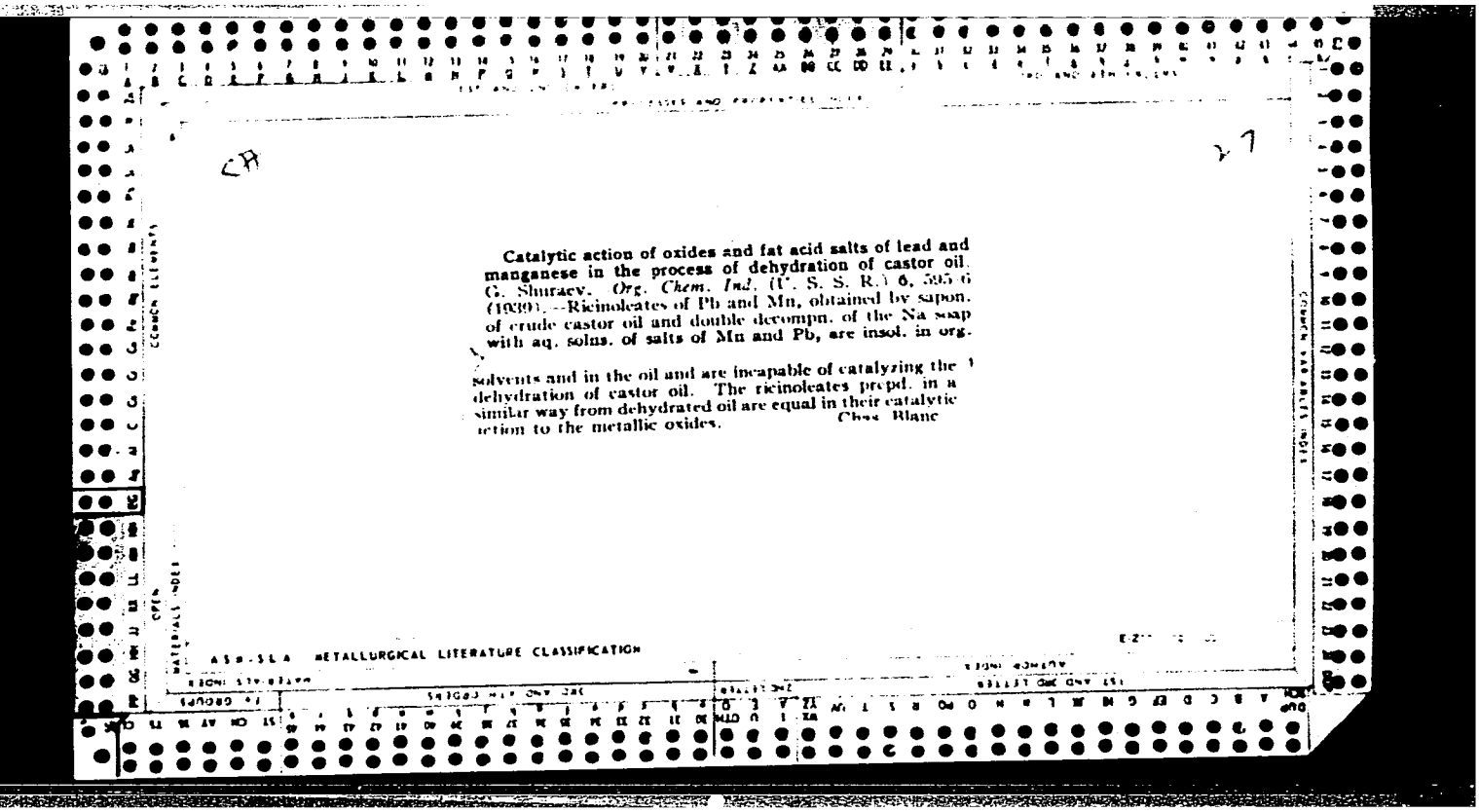

Catalytic action of oxides and fat acid salts of lead and manganese in the process of dehydration of castor oil. G. Shuraev. *Org. Chem. Ind.* (U. S. S. R.) 6, 595-6 (1939).—Ricinoleates of Pb and Mn, obtained by sapon. of crude castor oil and double decompn. of the Na soap with aq. solns. of salts of Mn and Pb, are insol. in org. solvents and in the oil and are incapable of catalyzing the dehydration of castor oil. The ricinoleates prepd. in a similar way from dehydrated oil are equal in their catalytic action to the metallic oxides. Chas. Blanc

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

Dehydration of castor oil with sulfuric acid. G. Shuraev. *Novosti Tekhniki* 1939, No. 35-36, 31; cf. C. A. 33, 9838.—H_2SO_4 (1.84) is gradually added in an amt. of 0.5% by wt. to water-free castor oil at 30°, the mixt. is constantly stirred and heated. At about 150° there is a rapid reaction of dehydration. The temp. is gradually raised to 275° to obtain more thorough dehydration and to expel the SO_2. The mixt. is kept at 275° for about 2 hrs. and then cooled. At 100-120° the solvent and drier are added to give a drying oil. B. Z. Kamich

26

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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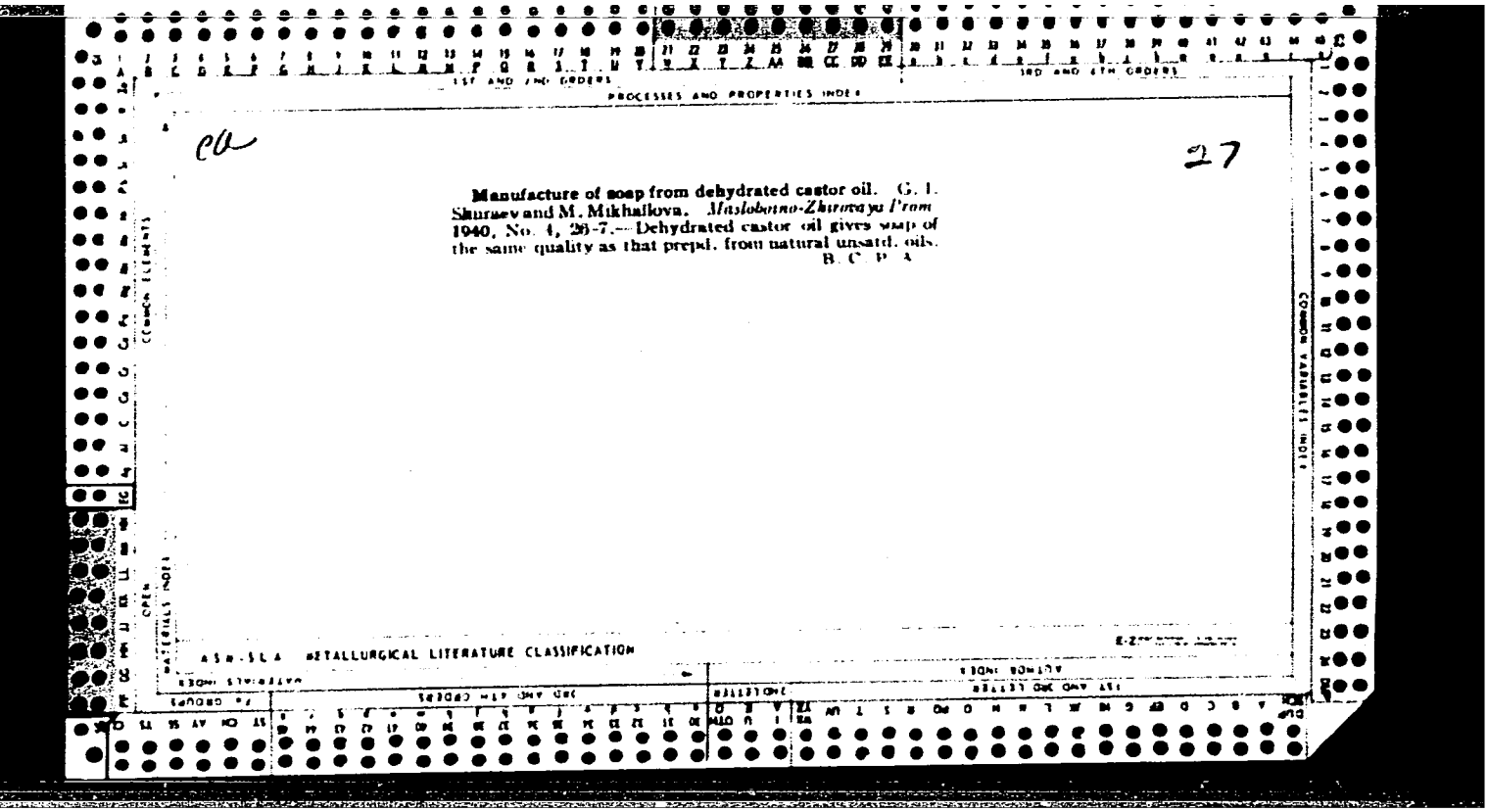

PROCESSES AND PROPERTIES INDEX

27

Manufacture of soap from dehydrated castor oil. G. I. Shurmev and M. Mikhailova. *Maslobuino-Zhirovaya Prom* 1940, No. 4, 26-7.—Dehydrated castor oil gives soap of the same quality as that prepd. from natural unsatd. oils.
B. C. P. A

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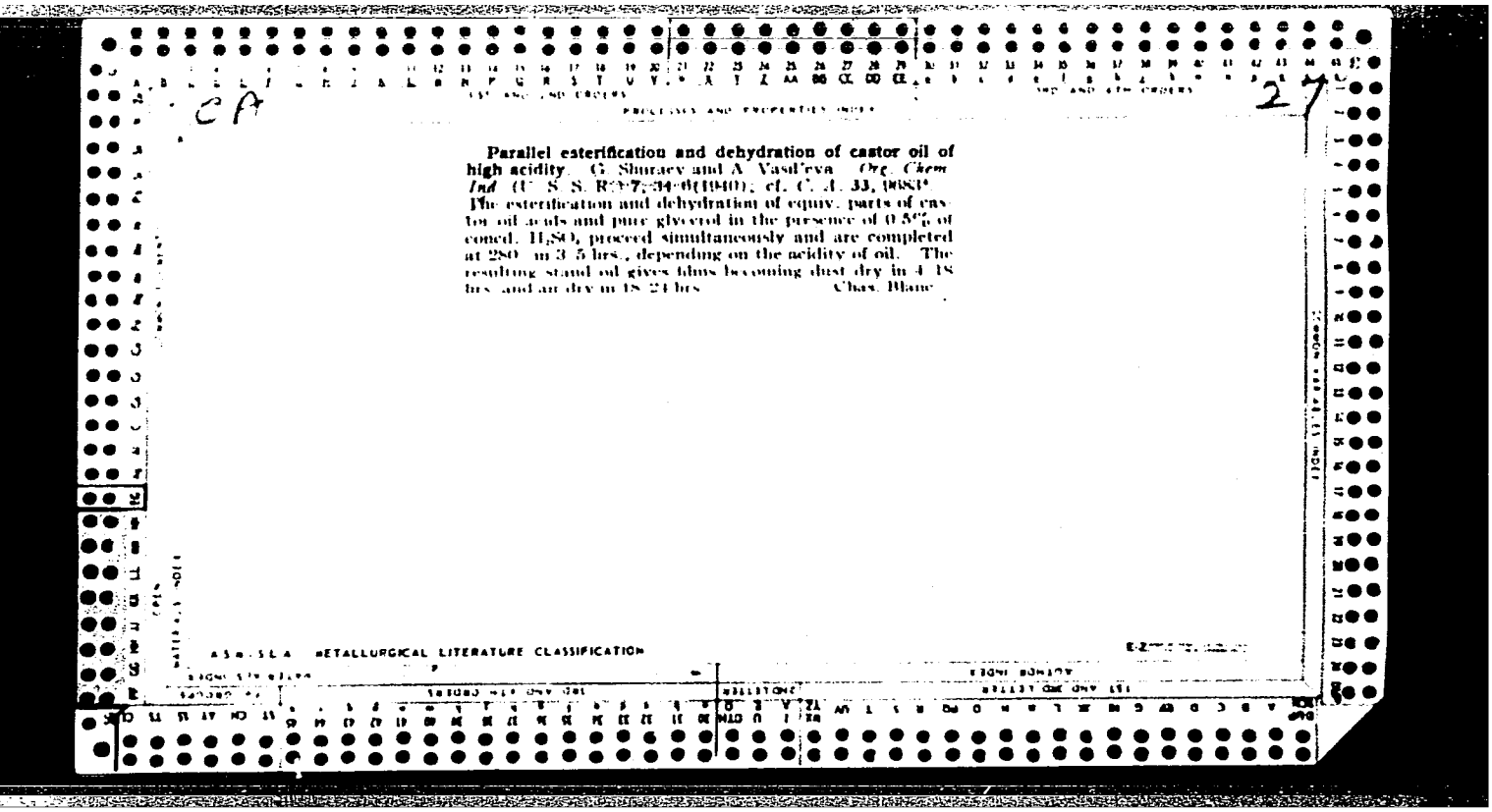

CA

27

Parallel esterification and dehydration of castor oil of high acidity. G. Shuraev and A. Vasil'eva. *Org. Chem. Ind.* (U. S. S. R.) 7, 34-9 (1940); cf. C. A. 33, 9083⁹. The esterification and dehydration of equiv. parts of castor oil acids and pure glycerol in the presence of 0.5% of concd. H_2SO_4 proceed simultaneously and are completed at 280° in 3-5 hrs., depending on the acidity of oil. The resulting stand oil gives films becoming dust dry in 4-18 hrs. and air dry in 18-24 hrs. Chas. Blanc.

A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

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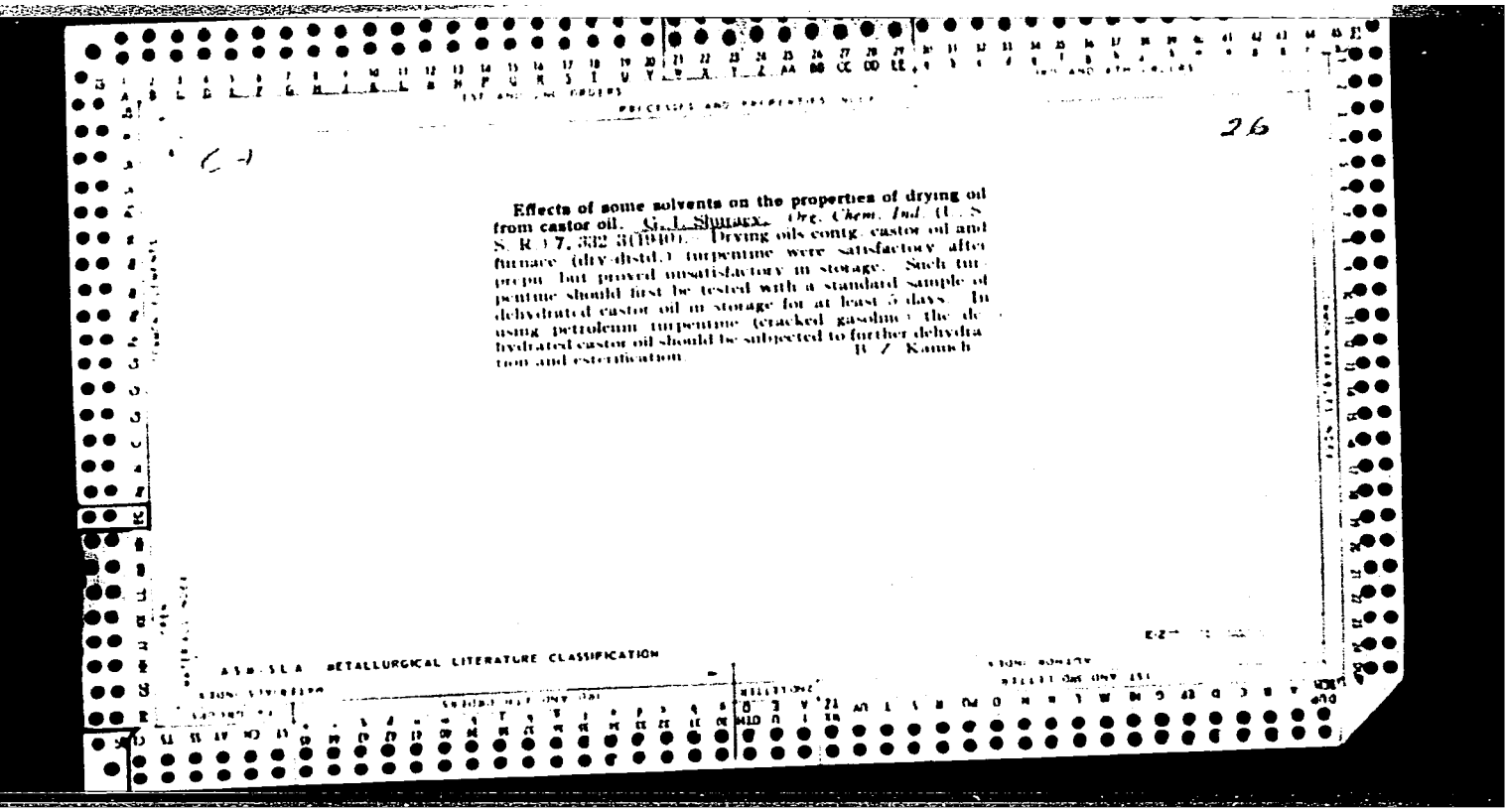

26

Effects of some solvents on the properties of drying oil from castor oil. G. I. Shmarev. *Org. Chem. Ind.* (U. S. S. R.) 7, 332-3(1940). Drying oils contg. castor oil and furnace (dry-distd.) turpentine were satisfactory after prepn. but proved unsatisfactory in storage. Such turpentine should first be tested with a standard sample of dehydrated castor oil in storage for at least 5 days. In using petroleum turpentine (cracked gasoline) the dehydrated castor oil should be subjected to further dehydration and esterification. B. Z. Kanuch

AVB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

PROCESSES AND PROPERTIES INDEX

Obtaining drying oil from castor oil with high acidity. G. Shuraev and A. Vasil'eva. *Maslobolno Zhirovoe Delo* 16, No. 2, 16-17(1940); cf. *C. A.* 33, 9683; 34, 2198.—Castor oil was sepd. from the soapstock and then treated with glycerol at 275-80° for about 6 hrs. until the acidity was reduced from 21 to 6.3 mg. KOH. The esterification is accompanied by dehydration and partial polymerization; this gives drying oil comparable to the product obtained from standard oil. Equally good results were obtained with castor oil with the acidity 98 and 141 mg. KOH. Chas. Blanc

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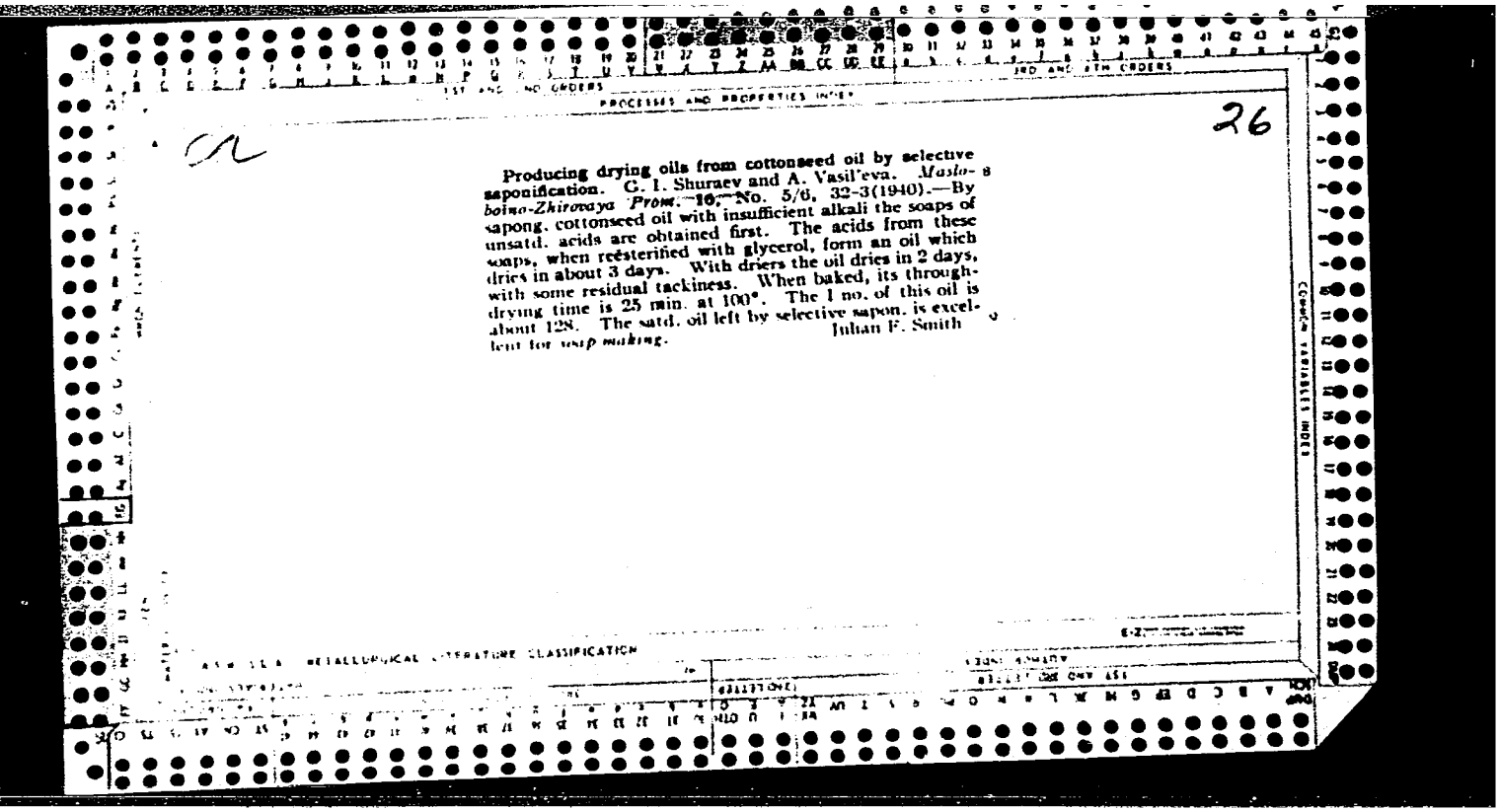

26

Producing drying oils from cottonseed oil by selective saponification. G. I. Shuraev and A. Vasil'eva. *Maslo-boino-Zhirovaya Prom.* 10, No. 5/6, 32-3(1940).—By sapong. cottonseed oil with insufficient alkali the soaps of unsatd. acids are obtained first. The acids from these soaps, when reësterified with glycerol, form an oil which dries in about 3 days. With driers the oil dries in 2 days, with some residual tackiness. When baked, its through-drying time is 25 min. at 100°. The I no. of this oil is about 128. The satd. oil left by selective sapon. is excellent for *soap making*.

Julian F. Smith

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

Casein substitute for manufacture of galalith. B. Kogan and G. Shumarev. *Myasnaya Ind. S.S.S.R.* 21, No. 3, 90(1950). *Coagulated blood albumin* is recommended as a substitute for casein in the manuf. of galalith, a casein plastic. M. M. Piskur

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

SHAPIRO, D. SHUPAYEV, G.

TAPE

Marking tare with a solution of potassium permanganate. Mias. ind. SSSR No. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, August 1952. UNCLASSIFIED

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

SHURAYEV, S., SHIPIRO, D.

Sausages

Lessening the amount of sodium nitrite in sausage meat. Mias. ind., 23, No. 4, 1952

Monthly List of Russian Accessions, Library of Congress, December 1952. UNCLASSIFIED

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

1. SHURAEV, G.

2. USSR (600)

4. Meat - Specifications

7. Mistakes in figures and formulas. Mias. ind. 24, No. 1, 1953.

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

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550220019-6

VEITSHTEYN, L.; SHURAYEV, V.

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