LASHCHILINA, Z. V.

28587

Materialyk Sanitarno Baktyeriologichyeskomu Standartu Lyechyebnoy Tambukanskoy Gryazi Trudy Gos. Nauch Issledovat Balbnyeol In-Ta Na Kavkazsk Mineral Vodakh T.XXVIII 1949, s. 281-307-Bibliogr: is Nazv

SO: LETOPIS NO. 38

LASHCHINSKIY, A.A., inzh.; TOLCHINSKIY, A.R., inzh.; GOLUBEV, B.A., inzh., retsenzent; YERSHOV, B.A., inzh., retsenzent; LOGINOV, N.N., inzh., red.; VASIL'YEVA, V.P., red.izd-va; MIKHEYEVA, R.N., red.izd-va; SPERANSKAYA, O.V., tekhn.red.

[Fundamentals of the design and calculation of chemical apparatus] Osnovy konstruirovaniia i rascheta khimicheskoi apparatury; spravochnik. Moskva, Mashgiz, 1963. 468 p. (MIRA 17:1)

LASHCHINSKIY, B.N.

At an enterprise of communist labor. Avtom., telem. i sviaz' 5 no.3:21-23 Mr '61. (MIRA 14:9)

1. Nachal'nik Zaporozhskoy distantsii signalizatsii i svyazi Stalinskoy dorogi.
(Railroads--Signaling)

Lashchinskiy, N.N.

USSR / Forestry. Biology and Typology of the Forest. K-2

Abs Jour: Ref Zhur - Biologiya, No. 1, 1958, 1314

Author : Lashchinskiy, N.N.

Inst : Sibirian Forest Engineering Inst.

Title : Reforestation and Cut-over Areas under Conditions of the Mountainous Regions of Irkutskaya Oblast'

Orig Pub: Sb. stud. nauchno-issled. rabot Sibirsk. lesotekhn. in-ta, Krasnoyarsk, 1957, 155-167

Abstract: The project was completed on the territory of the Shaman forestry operation of the Irkutsk forest economic region. Described are red bilberry, wild rosemary-red bilberry, red-bilberry-green moss, beach grass-varied grasses, and (not widely spread)

Card 1/2

USSR / Forestry. Biology and Typology. K-2

Abs Jour: Ref Zhur-Biol., No 16, 1958, 72783.

Author : ~~Lashchinskiy, N. N.~~
Inst : West Siberian Branch AS USSR.
Title : Deciduous Forest Types of the Ust'-Kanskiy Deskhoz.

Orig Pub: Tr. po lesn. kh-vu Zap. Sibiri. Zap.-Sib. fil. AN SSSR, 1957, vyp. 3, 153-166.

Abstract: Natural renewal of the Larix sibirica var altaica with simultaneous study of deciduous forests types were investigated in 1956 in the Koksy River Basin (left tributary of the Katun' River). One of the most widespread types is the leafy grass variety in the southwestern, western and eastern slopes at 1200-1400 m. Timber stand is single stage, purely of II-IV quality. Underbrush is rare. It is well

Card 1/4

USSR / Forestry. Biology and Typology. K-2

Abs Jour: Ref Zhur-Biol., No 16, 1958, 72783.

Abstract: developed, rich in herbaceous cover. Mosses are met in small areas along the hollow sides. This type alternates with the leafy grass variety. On the hollow slopes, an original type is the Siberian leafy grass at a height of 1300 m, characterized by significant humidity of the humus horizon, ground water lying closer to the surface, and greater density of underbrush from the Sibirica altaica. In a well-developed herbaceous stage, up to 40 species are counted. The Sibirica leafy grass variety "listvyag" of the II-IV quality is adapted to the flat lowlands. Thick underbrush, rich in composition, are adapted to gaps in the canopy. Up to 60 species are counted in the herbaceous grass variety stage. Leafy spirea-grass variety develops on the northwestern, northeastern

Card 2/4

USSR / Forestry. Biology and Typology. K-2

Abs Jour: Ref Zhur-Biol., No 16, 1958, 72783.

Abstract: and eastern slopes at a height of 1300-1600 m. Timber stand is single stage, predominantly deciduous with dense underbrush. Grass varieties predominate in well developed herbaceous cover. An original and rather rare type on the steep hollow slopes at a height of 1500-1600 m is the leafy spirea. Common spirea predominates in the dense underbrush. Herbaceous cover is rare and poor in composition. Mosses occupy up to 50% of the soil surface. The halberd-leaved leafy grass is located on the northeastern slopes at a height of 1300-1400 m. Underbrush is rare. An almost continuous grass cover is composed of grasses 2 m in height. In the moss stage Mnium predominates. In the southwestern and southern slopes to the subalpine belt, leafy reed bentgrass-grass varieties

Card 3/4

LASHCHINSKIY, N.N.; REYMERS, N.F.

Role of animals in the life of deciduous and pine forest of the Altai. Izv.Sib.otd.AN SSSR no.2:117-127 '59.
(MIRA 12:7)

1. Zapadno-Sibirskiy filial Sibirskogo otdeleniya AN SSSR.
(Altai Territory--Forest fauna)

LASHCHINSKIY, N. N.

Cand Biol Sci - (diss) "Natural reforestation of Siberian larch in the main types of forest of the Gornyy Altay." Novosibirsk, 1961. 19 pp; (Academy of Sciences, Siberian Division, Inst of Forests and Trees); number of copies not given; price not given; (KL, 6-61 sup, 208)

LASHCHINSKIY, N.N.

Interesting specimen of a birch. Trudy TSNIS no.7:193-196 '64.
(MIRA 17:11)

LASHCHINSKIY, N.N.

Interrelationship between fir and spruce in the southern taiga of Krasnoyarsk Territory. Izv. SO AN SSSR no.4 Ser. biol.-med.nauk no.1:23-26 '65. (MIRA 18:8)

1. TSentral'nyy Sibirskiy botanicheskiy sad Sibirskogo otdeleniya AN SSSR, Novosibirsk.

NIKOLAYEV, I.I., kand.tekhn.nauk; LASHCHIVER, F.M., inzh.

Electric heating of reinforced concrete products at construction sites. Bet. i zhel.-bet. 8 no.2:77-79 F '62. (MIRA 16:5)
(Precast concrete)

LASHCHIVER, F.M., inzh.; OSTROVSKIY, G.A., inzh.

Safety measures concerned with electricity in construction.
Mekh. stroi. 18 no.11:20-21 N '61. (MIRA 16:7)

(Excavating machinery--Safety measures)
(Electric welding--Safety measures)

LASHCHIVER, F.M., inzh.; VOROB'YEV, L.M., inzh.

Experience in wood drying using commercial frequency current.
Prom. energ. 19 no. 2:21-24 F '64. (MIRA 17:5)

LASHCHIVER, S.M.; SERGEYEV, S.M.; ROZEN, G.M.; YASHUNSKIY, R.G.

Automatic line for manufacturing the air brake reservoir of the ZIL-130 automobile. Avt.prom. no.3:34-38 Mr '61. (MIRA 14:3)

1. Nauchno-issledovatel'skiy eksperimental'nyy institut avtotraktornogo elektrooborudovaniya i priborov.
(Automobiles--Brakes) (Assembly-line methods)

LASHCHIVER, S.M.

B. T. R.
V. 3 No. 3
Mar. 1954
Welding and
Joining

4262* Investigation of Welding Sheet Cast Iron. (Russian.) A. Z. Blitshtein and S. M. Lashchiver. *Sel'khozmashina*, 1953, no. 11, Nov., p. 19-23.
Describes production and use of cast iron to steel weldments in agricultural machinery. Tables, diagrams, micrographs.

LASHCHIVER, S. M.

"Investigation of the Technological Process for the Repair, by Means of Electric Arc Welding, of Cast Iron Agricultural Machine Parts." Cand Tech Sci, Moscow Inst for the Mechanization and Electrification of Agriculture imeni V. M. Molotov, Min Higher Education, Moscow, 1955. (KL, No 18, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

LASHCHIVER, S.M.

135-9-6/24

AUTHOR: Lashchiver, S.M., Candidate of Technical Sciences

TITLE: Arc-Welding of Grey Cast Iron with Cast Iron Electrodes (O dugovoy svarke serogo chuguna chugunnymi electrodami)

PERIODICAL: "Svarochnoye Proizvodstvo", 1957, # 9, p 16-19 (USSR)

ABSTRACT: A method for calculating the welding technology for cast iron developed by "MVTU" is described along with experiments involved. The critical cooling speed was found to be around 5°C/sec. An approximate relation is determined between the welding technology and hardness in the case of welding upon the surface of a grey cast iron slab with the use of cast iron electrodes with graphitizing coatings.
The article contains 4 diagrams, 2 tables and 2 microphotographs

ASSOCIATION: Moscow Higher Technical School (MVTU)

AVAILABLE: Library of Congress

Card 1/1

18(5), 25(1,5) SOV/135-59-7-6/15

AUTHORS: Gel'man, A.S. Doctor of Technical Sciences, Professor, and Slepak, E.Z., Candidate of Technical Sciences (TsNIITMASh), Jashchiver, S.M., Candidate of Technical Sciences (NIITAVTOPROM), Mamrikov, P.V., (Mytishchi Machine Building Plant)

TITLE: Projection Spot Welding of Hot Rolled Steel

PERIODICAL: Svarochnoye proizvodstvo, 1959, Nr 7, pp 19-22 (USSR)

ABSTRACT: The authors review the experience in projection spot-welding of hot-rolled steel sheets at the Mytishchinskiy mashinostroitel'nyy zavod (Mytishchi Machine Building Plant). This method was suggested by TsNIITMASh several years ago, then studied by NIITAVTOPROM and finally it was introduced at the aforementioned plant. There it is used for the manufacture of semi-trailer parts with satisfactory results. The authors present operational data in tables and graphs. There are 3 photographs, 4 diagrams, 3 tables and 1 graph.

Card 1/2

SOV/135-59-7-6/15

Projection Spot Welding of Hot Rolled Steel

ASSOCIATION: TsNIITMASh; NIITAVTOPROM; Mytishchinskiy mashinostroitel'nyy zavod (Mytishchi Machine Building Plant)

Card 2/2

L 20808-65 EWT(d)/EWA(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l) Pf-4 AFTC(p)

ACCESSION NR: AR4048235 S/0137/64/000/009/E036/E036

SOURCE: Ref. zh. Metallurgiya, Abs. 9E237

AUTHOR: Shably*gin, S. V.; Balatskiy, A. A.; Lashchiver, S. M.; Gurevich, A. I. B

TITLE: Contact welding with the application of peaked current pulses

CITED SOURCE: Tr. N.-i. in-ta tekhnol. svtomob. prom-sti, vy*p. 12, 1964, 33-41

TOPIC TAGS: welding, welding equipment, welding current, contact welding, current pulse, peaked current pulse

TRANSLATION: Preliminary results are presented of an investigation of the operation of a contact welding machine whose design makes it possible to obtain peaked pulses of welding current which have a considerable magnitude but which are of short duration. A basic diagram of the setup is given. The effect of the angle of ignition of the ignitrons on the form of the pulse produced by the welding current and on the magnitude of the voltage in the condenser, as well

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ACCESSION NR: AR4048235

as the effect of capacitance on the nature of the process set up is considered. A process for ra..ng current and voltage at the moment the power is switched on is described, and there is given a comparison of curves for current and voltage with the condenser and without it. The experiments made it possible to establish that in the operation of a welding machine using a synchronized circuit breaker followed by a condenser it is possible: 1. to produce peaked current pulses with a gradual increase in the peak magnitudes of the pulses, 2. to increase the limiting power of the welding transformer, and 3. to increase the power coefficient of the equipment to a value close to unity under the condition that low power (300-600 millifarads) condensers are used. 12 figures.

SUB CODE: MM ENCL: 00

Card 2/2

LASHCHUK, I.; KHAYMOVICH, A.; MARKIN, I.; KOPCHENOV, V.

The best construction workers. Stroitel' no.11:6 N '57.
(MIRA 10:12)

1.Brigadir kompleksnoy brigady santekhnikov, Stroyupravleniye No. 74, Orel.
(Construction workers)

15-57-2-1448

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 2, p 40 (USSR)

AUTHOR: Lashchuk, L. P.

TITLE: Habitat at Krasnaya Gora Near Syktyvkar (Stoyanka Krasnaya gora bliz Syktyvkara)

PERIODICAL: Izv. Komi fil. Vses. geogr. o-va, 1955, Nr 13, pp 72-77

ABSTRACT: Collections made by various investigators at Krasnaya Gora near Syktyvkar during the last decades are very valuable in the study of early archeological locations in the territory of Komi ASSR. Various flint tools, a bronze axe (14th or 13th century B.C.) and numerous pottery vessels were discovered here. The youngest finds belong to the 14th and 15th centuries A.D. From the data of D. Rudnev given in O stoyankakh doistoricheskogo cheloveka na r. Vychegde. "Severnyy kray" (Vologda), kn. I, 1922 /Dwelling Places of Prehistoric

Card 1/2

15-57-2-1448

Habitat at Krasnay Gora (Cont.)

Man on the Vychegda River. "Northern Region" (Vologda), Book 1, 1927, pottery of the early dwelling places at Krasnaya Gora is in many respects similar to the Vanvizdinskaya (at the mouth of the Vym' River), believed to be of 8th to 6th century B.C. Careful study of the ceramics and the character of the flint tools allows us to make a few additional conclusions. The pottery of Krasnaya Gora has much in common with the Kama-Vetluga pottery (7th to 5th century B.C.). This culture was not isolated from other cultures of the Volga and Kama, and maintained a definite contact with them. One or several of such related cultures existed in the basin of the North Dvina. It follows, therefore, that one should look for the cultural roots of both the Krasnaya Gora and the Vanvizdinskiye habitats in this district.

Card 2/2

A. A. P.

LASHCU, N

BALLIF, L., PETRESKU, S. [Petrescu, S.] (Rumyniya), MOSKOVICH, M.
LASHKU, N. [Lashcu, N.] (Rumyniya)

Pyrogen therapy of progressive paralysis using baker's yeast extract.
Zhur.nevr. i psikh. 58 no.10:1201-1203 '58 (MIRA 11:11)
(PARESIS, ther.
fever ther. with baker's yeast extract (Rus))
(FEVER THERAPY, in var. dis.
paresis, baker's yeast extract as pyrogen (Rus))
(YEAST, DRIED, extract,
as pyrogen in fever ther. of paresis (Rus))

LASHENE, Ya.I. (Kaunas)

Considerations on N.A.Kraevskii and A.D.Sobolevaia's article "Patho-anatomical characteristics of leucoses" (Arkhiv patologii, 1953, no.3). Arkh.pat. 16 no.1:82-83 Ja-Mr '54. (MLRA 7:5)

1. Iz kafedry patologicheskoy anatomii (zaveduyushchiy - dotsent Ya.I. Lashene) Kaunasskogo meditsinskogo instituta. (Tumors)
(Kraevskii, N.A.)
(Sobolevaia, A.D.)

LASHENE, Ya.I.,[Lasiene, J.], prof. (Kaunas)

Functional and morphological state of the endocrine glands in newborn infants as a manifestation of the adaptation syndrome. Probl. endok. i gorm. no.2:62-67'63. (MIRA 16:7)

1. Iz kafedry patologicheskoy anatomii (zav. - prof. Ya.I. Lashene) Kaunasskogo meditsinskogo instituta.
(ENDOCRINE GLANDS) (INFANTS (NEWBORN))

LASHENE, Ya.I.

Influence of pathological factors in the mother's body on the thyroid gland of the fetus. Vop. okh. mat. i det. 5 no.6:86-87 N-D '60.
(MIRA 13:12)

1. Iz Kaunasskogo meditsinskogo instituta.
(PREGNANCY, COMPLICATIONS OF) (FETUS--DISEASES)
(THYROID GLAND)

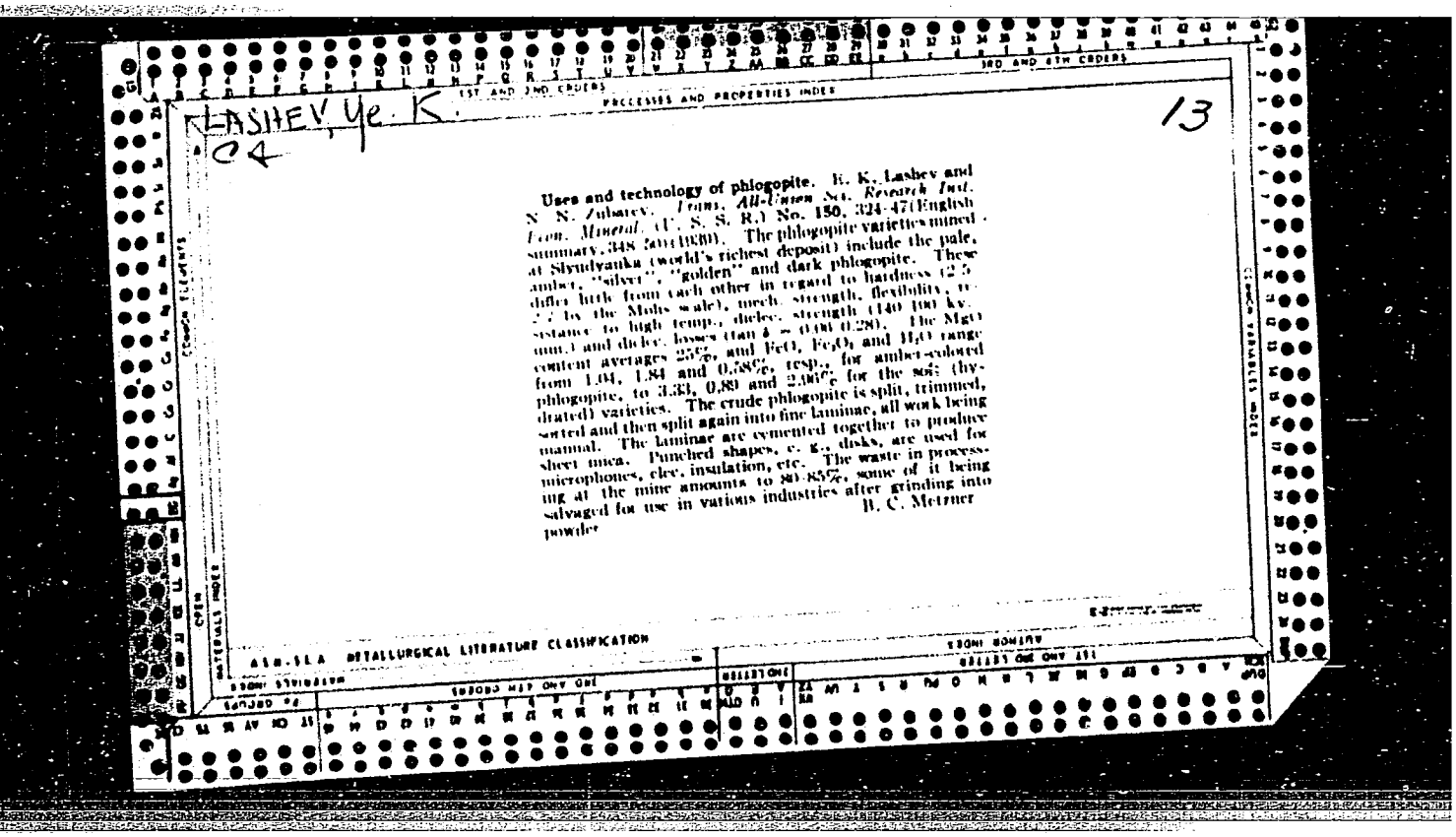
LASHENE, Ya.I., [Lashene, J.], prof.; STALIORAYTITE, Ye.I. [Staliorāityte,E.]

Fourth Republic Scientific Conference of Pathoanatomists of the Lithuanian S.S.R. Arkh. pat. 25 no.4:91-93 '63 (MIRA 17:4)

1. Predsedatel' Litovskogo Respublikanskogo obshchestva patologoanatomov (for Lashene). 2. Uchenyy sekretar' Litovskogo Respublikanskogo obshchestva patologoanatomov (for Staliorāytite).

LASHENOV, K.V.

Multiplicative method for selection of singularities in numerical integration. Uch. zap. Ped. inst. Gerts. 183:151-177 '58.
(MIRA 13:8)
(Mathematical analysis)



LASHEV, Ye. K.

13

Uses and technology of phlogopite. E. K. Lashev and N. N. Zubarev. *Trans. All-Union Sci. Research Inst. Fert. Mineral.* (U. S. S. R.) No. 150, 324-47 (English summary, 348 2m) (1950). The phlogopite varieties mined at Slyudyanka (world's richest deposit) include the pale, amber, "silver", "golden" and dark phlogopite. These differ little from each other in regard to hardness (2.5-3 by the Mohs scale), mech. strength, flexibility, resistance to high temps., dielec. strength (140-180 kv./mm.) and dielec. losses ($\tan \delta$ = 0.01-0.20). The MgO content averages 25%, and FeO, Fe_2O_3 and H_2O range from 1.04, 1.84 and 0.58%, resp., for amber-colored phlogopite, to 3.33, 0.89 and 2.01% for the soft (hydrated) varieties. The crude phlogopite is split, trimmed, sorted and then split again into fine laminae, all work being manual. The laminae are cemented together to produce sheet mica. Punched shapes, e. g., disks, are used for microphones, elec. insulation, etc. The waste in processing at the mine amounts to 80-85%, some of it being salvaged for use in various industries after grinding into powder.

B. C. Metzner

LASHEV, YE. K.; MARKOV, P. N.; SULOYEV, A. I.

Georgraphy & Geology

Requirement of industry as to the quality of mineral raw materials. Handbook for geologists--Moskva, Go. izd-vo geologicheskoi lit-ry Komiteta po delam geologii pri SNK SSSR, No. 23, Mica (muscovite and phlogopite), 1947.

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

LASHEV, Evgeniy Konstantinovich

LASHEV, Evgenii Konstantinovich: Mica. Moskva, Gos. izd-vo lit-ry po stroitel'nym materialam, 1948- (48-26061).

TN933.L35

LASHEVA, N. K

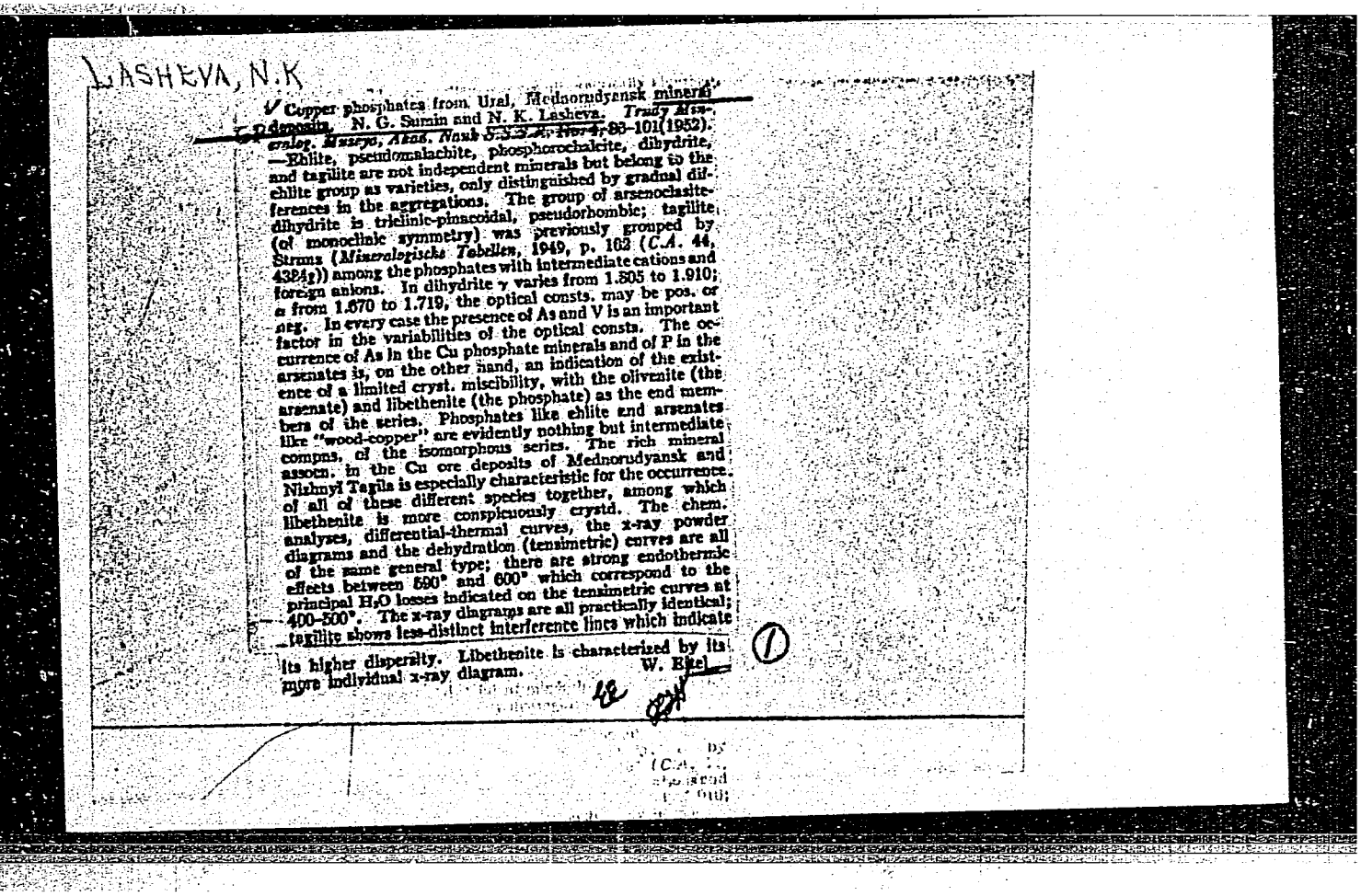
USSR

New modifications of chrysocolla of the planchéite type from Medneroudyansk in the Ural, N. G. Sumin and N. K. Lasheva. *Trudy Mineralog. Muzeya, Akad. Nauk S.S.S.R.* No. 3, 100-21(1951).—Chrysocolla is Cu metasilicate, with a variable content in H_2O, of colloidal-amorphous structure, and entirely isotropic, while planchéite is the corresponding holocryst. anisotropic compd. $2CuSiO_3.H_2O$, bisbeeite is $2CuSiO_3.3H_2O$ or $3CuSiO_3.4H_2O$, and shattuckite is $2CuSiO_3.H_2O$. Chem. analyses of these minerals show that there are not less than 3 different varieties of planchéite, and also 3 different types of chrysocolla which are different from the vitreous asperolite which is approx. $CuSiO_3.2H_2O$. All of these minerals have in common the tendency to form spherulitic aggregations, and are very similar in their x-ray powder

N. G. Sumin

diagrams, in the curves of differential thermal analysis, and in the Supergene conditions of their formation in the oxidation zones of Cu-ore deposits in typical arid climates. The chrysocolla of Mednorudyansk is exceptional in being formed in a decidedly moist climate, viz. by reactions of Cu ores with abundant underground waters. Between common chrysocolla and planchéite there are certain distinctive conditions of formation which apparently exclude their simultaneous occurrence. The fibrous chrysocolla and asperolite (or demidovite) are related to each other as products of transcrystn. from a colloidal gel formation, on malachite (sometimes in pseudomorphs after this mineral), or on chlite (a Cu phosphate). Therefore, the chem. and spectral analysis of chrysocolla and malachite of Mednorudyansk always shows strong lines of P, V, and Cu, as accessory elements Fe, Mn, Mg, and Zn, and very weak Ba and Ti; planchéite from Katanga also shows In, Ge, and Co as trace elements. The optical properties of fibrous (asbestiform) chrysocolla I are: pleochroic; γ = 1.634–1.638; α = 1.612–1.618; 2V small, optically pos. The consts. for (massive) chrysocolla II are: γ = 1.609–1.612; α = 1.603–1.605; optically pos. Asperolite I = chrysocolla III (with a high adsorption capacity for H_2O) is anisotropic with γ = 1.570; α = 1.564; modification II is isotropic, with n 1.550–1.555; optically pos. Characteristic of chrysocolla III is the loss of H_2O at 110°, the serpentine-like habit, and 2 exothermic reactions on the thermal analysis curve at 670°–690° and at 950°, as well as a recrystn. effect at 300°–330°.

W. Eitel



LASHEVA, N.K

Copper phosphates from Ural, Mednorudyansk mineral deposits. N. G. Sumin and N. K. Lasheva. *Trudy Mineralog. Muzeya, Akad. Nauk S.S.S.R.*, No. 4, 88–101(1952). —Ehlite, pseudomalachite, phosphorochalcite, dihydrite, and tagilite are not independent minerals but belong to the ehlite group as varieties, only distinguished by gradual differences in the aggregations. The group of arsenochalsite-dihydrite is triclinic-pinacoidal, pseudorhombic; tagilite (of monoclinic symmetry) was previously grouped by Strunz (*Mineralogische Tabellen*, 1949, p. 162 (*C.A.* 44, 4324g)) among the phosphates with intermediate cations and foreign anions. In dihydrite γ varies from 1.805 to 1.910; α from 1.670 to 1.719, the optical consts. may be pos. or neg. In every case the presence of As and V is an important factor in the variabilities of the optical consts. The occurrence of As in the Cu phosphate minerals and of P in the arsenates is, on the other hand, an indication of the existence of a limited cryst. miscibility, with the olivenite (the arsenate) and libethenite (the phosphate) as the end members of the series. Phosphates like ehlite and arsenates like "wood-copper" are evidently nothing but intermediate compns. of the isomorphous series. The rich mineral assocn. in the Cu ore deposits of Mednorudyansk and Nizhnyi Tagila is especially characteristic for the occurrence of all of these different species together, among which libethenite is more conspicuously crystd. The chem. analyses, differential-thermal curves, the x-ray powder diagrams and the dehydration (tensimetric) curves are all of the same general type; there are strong endothermic effects between 590° and 600° which correspond to the principal H_2O losses indicated on the tensimetric curves at 400–500°. The x-ray diagrams are all practically identical; tagilite shows less-distinct interference lines which indicate its higher disperaity. Libethenite is characterized by its more individual x-ray diagram. W. Eitel

(1)

GARANIN, N.P., red.; LASHEVICH, V.I., red.; SURIKOV, N.I., red.; URAZAYEV, A.K., red.; FISENKO, V.A., red.; YURASOVA, M.K., red.; MEL'NIKOV, V.I., tekhn. red.

[Handbook and guide to the Irtysh and the lower part of the Ob' Valley] Putevoditel'-spravochnik po Irtyshu i Nizhnei Obi. Omsk, Omskoe knizhnoe izd-vo, 1960. 156 p. (MIRA 14:10)

1. Irtyshskoye otdeleniye nauchno-tekhnicheskogo obshchestva vodnogo transporta (for all except Yurasova, Mel'nikov).
(Irtysh Valley—Guidebooks) (Ob' Valley—Guidebooks)

Y

LASHEEV, I.

U osoaviakhimovtsev Kieva. /With the Osoaviakhim members of the Kiev branch/. (Za oboronu, 1944, no. 15, p. 15).

DLC: TL504.Z3

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress Reference Department, Washington, 1952, Unclassified

AKSENOV, M. A.

L 54868-65 EWT(d)/EWT(m)/EEC(k)-2/EWP(i)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EED-2/ //
EWP(b)/EWP(l)/EWA(c) Pq-4/Pf-4/Pad/Pg-4/Pk-4 LJP(c) HB/JD/HW/JG/GG
ACCESSION NR: AP5013852 UR/0103/65/026/005/0938/0942
681.142.6

AUTHOR: Boyarchenkov, M. A.

79
58
B

TITLE: All-Union Conference on magnetic elements of automation and computer technique

SOURCE: Avtomatika i telemekhanika, v. 26, no. 5, 1965, 938-942

TOPIC TAGS: electric engineering conference, magnetism conference, computer component, automation equipment, automation, electronic data processing

ABSTRACT: The Ninth All-Union Conference on Magnetic Elements of Automation and Computer Technology, held in Kaunas from 7 to 10 September 1964, was organized by the National Committee of the USSR on Automatic Control, the Institute of Power and Electrical Engineering of the Academy of Sciences, Lithuanian SSR, the Lithuanian Scientific and Technical Society of the Instrument Building Industry, and the Institute of Automation and Telemechanics of the Main Committee on Instrument Building, Means of Automation, and Control Systems under Gosplan and the Academy of Sciences USSR. Over 450 participants discussed some 90 reports concerning the theory, design,

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production, and application of magnetic and magnetic-semiconductor elements. Reports were presented for seven areas: digital and analog elements, memory devices, magnetic power devices, magnetic amplifiers and converters, parametrons, and power sources.

At the opening plenary session, M. A. Rozenblat presented a survey of the present state of contactless magnetic elements, which he considers to be one of the most efficient and promising technical means of automation and computer technology. Problems of designing logic elements to provide stable operation for various types of circuits were discussed in a series of reports. B. A. Yefimov and G. N. Chizhukhin reported on the development of modules of ferrite-transistor elements (FTE) which can be used for various types of computers and also for discrete automation for general and special purposes. This system provides reliable operation at a 200-kc clock frequency in the -10 to +50° C temperature range.

The same authors together with M. A. Aksenov reported on the development of a general-purpose heavy-duty FTE which can be used as a cell of a clock-frequency pulse generator or as an independent heavy-duty control

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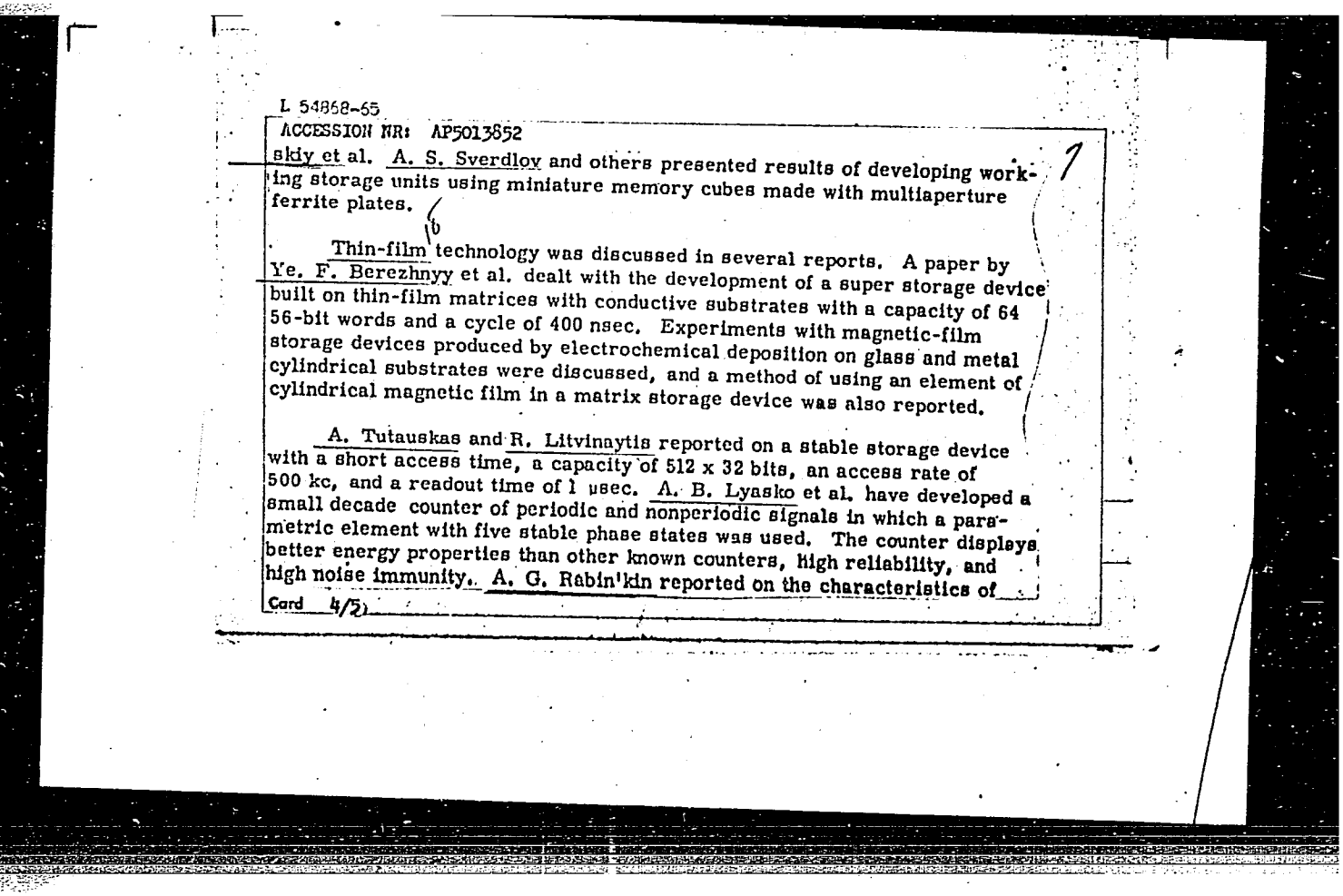
ACCESSION NR: AP5013852

element. It is capable of performing command recording or readout of information reaching it in large quantities from a low-power FTE. I. A. Tyumin, B. A. Yefimov, and A. A. Shavrov reported on the development and testing of biax-type logic circuits operating at 1 Mc and performing several logic operations. Advantages cited are: high s/n ratio, about 20; high switching rate, about 2 Mc; and high reliability due to the simplicity of the circuit. Such circuits may also be used in complex logic devices. Additional reports discussed logic circuits using biax-type elements in a working storage device with a nondestructive readout cycle of 10^{-7} sec and a recording time for new information of several microseconds.

L. P. Afinogenov et al. reported on discrete and discrete-analog computer units based on the use of the area of an emf pulse originating in the winding during magnetization reversal in the ferrite. Development of ferrite matrixes which release a voltage pulse at the output with an area proportional to the code supplied at the matrix input was also discussed.

Problems connected with the development of single-wire memory elements with multiaperture ferrite plates were presented by R. A. Lashev-

Card 3/5



L 54868-65
ACCESSION NR: AP5013852

skiy et al. A. S. Sverdlov and others presented results of developing working storage units using miniature memory cubes made with multiaperture ferrite plates.

Thin-film technology was discussed in several reports. A paper by Ye. F. Berezhnyy et al. dealt with the development of a super storage device built on thin-film matrices with conductive substrates with a capacity of 64 56-bit words and a cycle of 400 nsec. Experiments with magnetic-film storage devices produced by electrochemical deposition on glass and metal cylindrical substrates were discussed, and a method of using an element of cylindrical magnetic film in a matrix storage device was also reported.

A. Tutauskas and R. Litvinaytis reported on a stable storage device with a short access time, a capacity of 512 x 32 bits, an access rate of 500 kc, and a readout time of 1 usec. A. B. Lyasko et al. have developed a small decade counter of periodic and nonperiodic signals in which a parametric element with five stable phase states was used. The counter displays better energy properties than other known counters, high reliability, and high noise immunity. A. G. Rabin'kin reported on the characteristics of

Card 4/5

L 54868-65

ACCESSION NR: AP5013852

new high-coercivity (5000 oe) alloys of the cobalt-platinum system. M. A. Rozenblat et al. discussed the theory and design of magnetic analog computing devices (adder, integrator, multiplier) based on single-stage magnetic amplifiers using magnetic analog storage.

A large number of reports was devoted to the theory and application of power magnetic devices. The papers presented by the Gor'kiy school of A. M. Bamdas concerning frequency multipliers and voltage stabilizers were of great interest in this field.

ASSOCIATION: none

SUBMITTED: 00	ENCL: 00	SUB CODE: DP, IE
NO REF SOV: 000	OTHER: 000	ATD PRESS: 4021-F

Card 5/5

L 2779-66 EWT(d)/EED-2/EWP(1) IJP(c) BB/GG

ACCESSION NR: AP5022015 UR/0286/65/000/014/0086/0086
681.142-523.8.07

AUTHOR: Lashevskiy, R. A.; Tamarchenko, N. G. 44 3/ B

TITLE: A memory element based on a multiple-aperture ferrite plate. Class 42, No. 173028

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 14, 1965, 86

TOPIC TAGS: ferrite, computer memory 16c, 44

ABSTRACT: This Author's Certificate introduces a memory element based on a multiple-aperture ferrite plate with two pairs of apertures through which the digital place wires and the number wires are passed. A higher speed element with increased operational stability is produced by passing the numerical and digital place wires through one aperture in each pair and using the other aperture as a magnetic flux limiter.

ASSOCIATION: none
SUBMITTED: 12Jun64 ENCL: 01 SUB CODE: DP
NO REF SOV: 000 OTHER: 000

Card 1/2

L 2779-66
ACCESSION NR: AP5022015

ENCLOSURE: 01

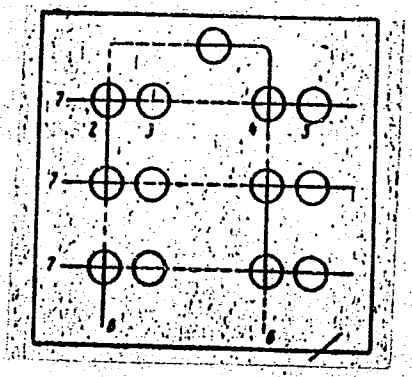


Fig. 1. 1--ferrite plate; 2-5--element apertures; 6--number wire; 7--digital place wire

Card 2/2

L 16419-66 EWT(d)/EPF(n)-2/EWP(l) IJP(c) BB/GG
ACC NR: AP6006387 SOURCE CODE: UR/0413/66/000/002/0118/0118

INVENTOR: Staros, F. G.; Berg, I. V.; Kreynin, S. I.; Lashevskiy, R. A.; Maksimov, M. N.; Tamarchenko, N. G. Shenderovich, Yu. I.; Yevstegneyev, M. I.; Bekker, Ya. M. 41 B

ORG: none

TITLE: Storage device. 16,44 Class 42, No. 178178

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1966, 118

TOPIC TAGS: storage device, computer circuit, microelectronic device

ABSTRACT: The proposed storage device (see Fig. 1) utilizes multiple-aperture ferrite plates and contains number plates and a decoder plate. To facilitate manufacture and microminiaturization of the device, the number conductor, which is printed on the number plate, is connected to a conductor passing through the

Card 1/2 UDC: 681.142

2

L 16419-66
ACC NR: AP6006387

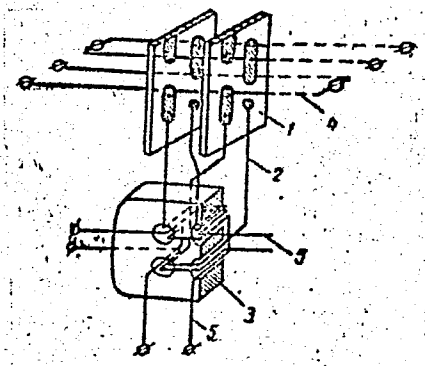


Fig. 1. Storage device

1 - Number plate; 2 - output winding; 3 - decoder plate; 4 - digit winding; 5 - decoder crossbar winding.

two apertures of the decoder; the number plates together with the decoder plate are mounted in a holder which is filled with a thermosetting compound. Orig. art. has: 1 figure. [DW]

SUB CODE: 09/ SUBM DATE: 25Jan65/ ATD PRESS: 4205

Card 2/2 SM

L 43883-66 EWT(d)/EWP(1) LJP(c) BB/GG

ACC NR: AP6030573 SOURCE CODE: UR/0413/66/000/016/0055/0055

INVENTOR: Kreynin, S. I.; Lashevskiy, R. A.; Maksimov, M. N.; Rabkina, N. V.; Khavkin, V. Ye.; Skvortsov, A. M.; Norkin, L. M.

1/2

ORG: none

TITLE: Memory device. Class 21, No. 184935

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 16, 1966, 55

TOPIC TAGS: computer memory, computer storage device

ABSTRACT: This Author Certificate introduces a word-organized memory consisting of multiaperture ferrite plates, and a magnetic decoder with transformers using multiaperture ferrite plates (see Fig. 1). To increase both the speed and capacity

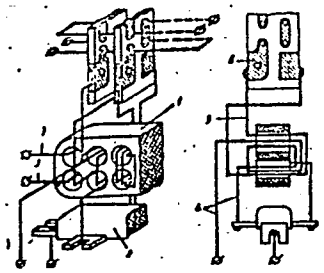


Fig. 1. Memory device

1 - Ferrite plate; 2 - diode matrix; 3 - bias winding; 4 - excitation winding; 5 - output winding; 6 - printed winding.

Card 1/2 UDC: 681.142.07

L 43883-66

ACC NR: AP6030573

and to reduce the required power, the magnetic decoder contains a diode matrix of integral planar structures with a number of p-n junctions equal to the number of addresses in the device. Orig. art. has: 1 figure. [JR]

SUB CODE: 09/ SUMB DATE: 20May65/ ATD PRESS: 5075

Card 2/2 mjs

L 08898-67 EWT(d)/EWT(l)/EWP(l) IJP(c) BB/GG/GD
ACC NR: AT6028986 SOURCE CODE: UR/0000/66/000/000/0182/0186

AUTHOR: Lashevskiy, R. A.

ORG: none

TITLE: Some problems of impulse magnetic reversal of ferrites with rectangular hysteresis loops, originating during the use of memory elements in multiperforated sheets

SOURCE: Vsesoyuznoye soveshchaniye po ferritam. 4th, Minsk. Fizicheskiye i fiziko-khimicheskiye svoystva ferritov (Physical and physicochemical properties of ferrites); doklady soveshchaniya. Minsk, Nauka i tekhnika, 1966, 182-186

TOPIC TAGS: ferrite, ferrite core memory, memory core, computer component, magnetic field, commutator

ABSTRACT: Impulse magnetic reversal of multiperforated ferrite sheets used in memory circuits was studied. Diagrams of a typical circuit and of a cross sectional view of a sheet with magnetic and inductive field distributions are shown. Three zones lying near the perforations were defined: the zone of radius r_1 in which

$$\int_0^t (H - H_0)\,dt > S_\omega,$$

where S_ω if the magnetization coefficient and H_0 is the initial field; the circular

Card 1/2

L 08898-67

ACC NR: AT6028986

zone of radius r_2-r_1 where

$$\int_0^t (H-H_0)\,dt < S_w,$$

but the field strength exceeds the coercive force ($H>H_c$); and the zone where $r>r_2$ and $H<H_c$. During magnetic reversal, a signal is affected by all three zones. A characteristic of memory storage units composed of multiperforated sheets is the presence of a general magnetic environment near adjacent memory elements. The effect of current flowing through a perforation on the magnetic flux near adjacent elements was examined. Perforated sheets made from 1.5 VT grade ferrite had 0.6 mm diameter holes spaced 1.6 mm apart. For a current flowing through hole 1 (i_1), a magnetic flux (ϕ_2) and an emf (e_2) were induced around hole 2, and vice versa. Nonreversible flux changes of ϕ_2 only occurred during the first impulse of i_1. Subsequent current impulses produced reversible flux changes. The spacing of perforations affected the dependence of magnetic flux on current. Changes in ϕ_1 and ϕ_2 were given as functions of current for an 0.8 VT grade ferrite sheet with 0.5 mm hole spacings. On the upper part of the sheet, the magnetic reversal of pairs of holes took place at a lower current than for the lower pairs. Full commutation of elements with closer spacings also occurred at a lower current. Orig. art. has: 5 figures, 2 formulas.

SUB CODE: 09,11/ SUBM DATE: 22Dec65/ ORIG REF: 002/ OTH REF: 001

Card 2/2

LASHEVSKIY, V.I., inzhener-mekhanik

Broadcast sower. Zemledelie 25 no.6:63 Je '63. (MIRA 16:7)

(Planters(Agricultural machinery))

LASHIN, A.G.

Dynamics of the working capital of the chemical plants of the Yaroslavl Economic Region and means of improving their structure. Nauch.i rez. 19 no.8:42-44 Ag '60. (MIRA 13:9)

1. Yaroslavskiy tekhnologicheskiy institut.
(Yaroslavl Province--Rubber industry)

IVANOV, Yuriy Viktorovich; VOLKOV, S.I., dots., retsenzent; LASHIN, A.N., retsenzent; MAKAROV, M.S., red.

[Planning and accounting ing in machine accounting stations] Planirovanie i uchet na mashinoschetnykh ustanovkakh. Moskva, Statistika, 1964. 66 p. (MIRA 17:11)

1. Direktor Pervoy moskovskoy fabriki mekhanizirovannogo scheta (for Lashin).

LASHIN, A.V.

Is the definition of Engels outdated? Priroda 54 no.5:87 My '65.
(MIRA 18:5)

1. Tashkentskiy politekhnicheskiy institut.

LASHIN, I.F.

LASHIN, M.A., general-mayor aviatsii, Geroy Sovetskogo Soyuza, voyennyy shturman pervogo klassa

Navigator's control over airplane flights. Vest.Vozd.Fl. no.7:49-53 Jl '60. (MIRA 13:7)
(Navigation (Aeronautics))

LASHIN, M.I.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr. 1954)

Name	Title of Work	Nominated by
Gareyev, E.Z. Arakelyan, U.G. Bychkova, N.F. Kolenko, A.Z. Lashin, M.I. Kuzema, V.G. Kryachkov, P.Ya.	"Michurinian Varieties of Fruit Trees in Kirgiziya"	Kirgiz Affiliate, Academy of Sciences USSR

SO: W-30604, 7 July 1954

LASHIN, V.N.

LASHIN, V.N. [deceased]

Scale insect of Turkmenistan. Trudy Turk.bot.sada no.2:102-157 '56.
(MLRA 10:9)
(Turkmenistan--Scale insects)

KOFMAN, D.M., dots., kand.tekhn.nauk; LASHIN, V.V.; MIKHAYLOV, S.M.

Improving the draft gear performance on RT-132 roving machines. Tekst.prom. 19 no.12:60-62 D '59. (MIRA 13:3)

1. Zamestitel' glavnogo inzhenera kombinata imeni S.M.Kirova (for Lashin).
(Spinning machinery)

SHCHERBAKOVA, K.; LASHIN, Ya.

[Feed supply of the "Aleksandrovo" State Farm] Kormovaia baza sovkhoza "Aleksandrovo." [Moskva] Moskovskii rabochii, 1956. 67 p. (MLRA 9:9)

(Moscow Province--Forage plants)

LASHINA, R. A.

LASHINA, R.A.

Occupational aminazine poisoning [with summary in English]. Zhur. nevr. i psikh. 57 no.8:1031-1032 '57. (MIRA 10:11)

1. Nevrologicheskoye otdeleniye (zav. E.A.Drogichina) Instituta gigiyeny truda i profzabolevaniy AMN SSSR, Moskva)
(CHLORPROMAZINE, poisoning,
occup. in pharm. workers (Rus))

LASHINA, V.Ya.

Characteristics of the soil-forming process on erosion surfaces which had been subject to old glaciation [with summary in French]. Rab. Tian'-Shan. fiz.-geog. lab. no.1:79-91 '58.
(MIRA 12:8)

(Soil formation)

SOLDATKINA, N.A., starshiy nauchnyy sotrudnik; LASHINA, Z.V.

Exhibition of textile fabrics. Tekst.prom.23 no.4:22-25 Ap '63.
(MIRA 16:4)

1. TSentral'nyy nauchno-issledovatel'skiy institut khlopchatobumazhnoy promyshlennosti (TSNIKhBI) (for Soldatkina). 2. Vsesoyuznyy institut assortimenta izdeliy legkoy promyshlennosti i kul'tury odezhdy (VIALegprom) (for Lashina).
(Communist countries—Textile fabrics) (Budapest—Exhibitions)

S/123/59/000/010/027/068
A004/A001

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1959, No. 10, pp. 113-114, # 38055

AUTHOR: Lashinskaya, A.S.

TITLE: A New Hardening Technology

PERIODICAL: Prom. Altay (Sovnarkhoz Altayskogo ekon. adm. r-na), 1958, No. 2, p. 32

TEXT: The author reports that a 0.5-0.7% solution of caustic soda in water is used as hardening agent. In order to reduce stresses, the heated machine parts of 45 grade steel are cooled in this solution through an oil layer (40-60 mm). The application of the mentioned cooling method results in savings of more than 100,000 rubles.

R.A.P.

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

Card 1/1

L 9559-66 EWT(1)/T IJP(c) WW/GG

ACC NR: AP5027350 SOURCE CODE: UR/0250/65/009/010/0651/0653

49
B

AUTHOR: Stepanov, B. I.; Lashitskaya, R. K.

ORG: Institute of Physics, AN BSSR (Institut fiziki AN BSSR)

TITLE: The time-dependence of the absorption coefficient under the effect of intense short-term fluxes

SOURCE: AN BSSR. Doklady, v. 9, no. 10, 1965, 651-653

TOPIC TAGS: light absorption, absorption band, absorption coefficient, optic filter, optic property

ABSTRACT: Recently, wide use has been made of optical switches made of a substance which becomes transparent under the effect of intense radiation fluxes of short duration. The search for bleachable absorbers is being conducted empirically. The present article examines the properties of a volume of the simplest two level system. It is assumed in the calculations that the broadening of the absorption band is uniform and, consequently, the incident fluxes cause no variation in the shape of the band. It is also assumed that the spectral width of the irradiating flux is considerably smaller than the width of the absorption band. An analysis of the calculations shows that the bleaching of the substance may be achieved only with certain fluxes. Flux magnitudes at which bleaching is achieved during the period of the order of 10^{-8} sec are relatively small and are easily produced under modern experimental conditions.

Card 1/2

2

L 9559-66
ACC NR: AP5027350 O

It is found that the transparency increases with decreasing width of the absorption band. Orig. art. has: 2 figures and 9 formulas. [08]

SUB CODE: OP, NP/ SUBM DATE: 08Jul65/ ORIG REF: 001/ OTH REF: 003/ ATD PRESS: 4157

beh

Card 2/2

ACC NR: AP6036811 SOURCE CODE: UR/0368/66/005/005/0595/0603

AUTHOR: Stepanov, B. I.; Lashitskaya, R. K.

ORG: none

TITLE: The properties of passive Q-switches

SOURCE: Zhurnal prikladnoy spektroskopii, v. 5, no. 5, 1966, 595-603

TOPIC TAGS: laser, laser optic material, Q-switching, passive switching

ABSTRACT: A theoretical investigation was made of the properties of bleachable filters placed outside the resonant cavity. The dependencies of filter bleaching on the radiation intensity, initial transmission, time, and transition probabilities between the energy levels were determined. The transmission of light through the passive Q-switch results in energy losses through luminescence, thermoemission, and the accumulation of particles in excited states. The energy absorbed in a shutter with a transverse cross section s for a time Δt is $W_{abs} = vu_0 s\,\Delta t\,(1 - T)$, where $vu_0 s\,\Delta t$ is the energy incident on the shutter and $T = u/u_0$. The portion of incident energy lost inside the shutter is

$$r = \frac{W_{abs}}{vu_0 s\,\Delta t} = \frac{1}{\alpha u_0} \ln \frac{T}{T_0};$$

Card 1/2 UDC: 535.89

ACC NR: AP6036811

where u is the radiation density. With an increase of u_0, T approaches unity, and the shutter is completely bleached. The energy loss, however, does not reach zero; the absorption intensity approaches a constant limit and only a portion of the energy losses Γ gradually decreases. At large u_0, Γ_{lim} is inversely proportional to u_0. The higher the nonlinearity of the system, the smaller the Γ. For a two-level system, the shorter the duration of the excited state, the larger the W_{abs}^{lim} and Γ_{lim}. Orig. art. has: 20 formulas and 3 figures.

SUB CODE: 20/ SUBM DATE: 08Apr66/ ORIG REF: 017/ OTH REF: 004/ ATD PRESS: 5107

Card 2/2

ACC NR: AP7000154 SOURCE CODE: UR/0250/66/010/011/0844/0846

AUTHOR: Lashitskaya, R. K.; Stepanov, B. I. (Academician AN BSSR)

ORG: Institute of Physics AN BSSR (Institut fiziki AN BSSR)

TITLE: Properties of bleachable filters with pre-populated metastable levels

SOURCE: AN BSSR. Doklady, v. 10, no. 11, 1966, 844-846

TOPIC TAGS: optical filter, bleachable filter, Q switching, laser modulation, passive switching

ABSTRACT: A study was made of the bleaching process and the dependence of the absorption and transmission coefficients of a bleachable filter on densities u_{pump} and u, to generalize the results for any filter operating as a four-level system. Uranyl glass was used as the model of such a filter (see Fig. 1). The results indicate that when $u \to \infty$, $T \to 1$ and the total bleaching occurs under high radiation densities. The greater the pumping, the slower the saturation. If the experimental value of the function $T(u, u_{pump})$ and the absorption due to $1 \to 2$

Card 1/2

ACC NR: AP7000154

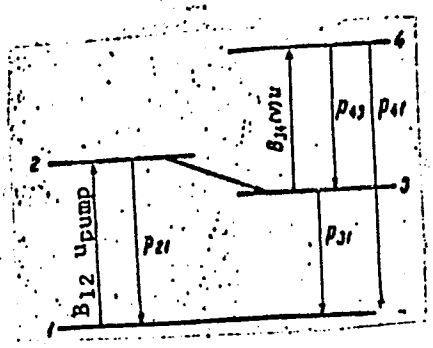


Fig. 1. Schematic of the levels

and $3 \rightarrow 4$ transition is known, the transistion probabilities ρ_{31} and ρ_{43} can be calculated. Although the probability ρ_{41} was reflected in the calculations, the analysis shows that in certain cases, systems with larger ρ_{41} are more favorable. Orig. art. has: 2 figures and 8 formulas.

SUB CODE: 20/ SUBM DATE: 31May66/ ORIG REF: 002/ OTH REF: 002/ ATD PRESS: 5108

Card 2/2

LASHKAREV, G.V. [Lashkar'ov, H.V.]; SAMSONOV, G.V. [Samsonov, H.V.]

Characteristics of high-melting compounds of transition metals as material for thermoelectric transformers. Dop. AN URSR no.9:1148-1151 '61. (MIRA 14:11)

1. Institut metallokeramiki i spetsial'nykh spalvov AN USSR.
2. Chlen-korrespondent AN USSR (for Samsonov).
(Transition metals—Thermal properties)

LASHKAREV, Georgiy Vladimovich; TARANETS, Aleksey Mikhaylovich; FOMENKO, Vladlen Stepanovich; KILLEROG, N.M., red.; MATVEYCHUK, A.A., tekhn. red.

[New sources of electric energy] Novye istochniki elektricheskoi energii. Kiev, Izd-vo Akad. nauk USSR, 1962. 85 p. (MIRA 16:4)
(Photoelectric cells) (Fuel cells) (Thermoelectricity)

LASHKAREV, G.V.; FOMENKO, V.S.

Scientific session of the Department of Technical Sciences of the Academy of Sciences of U.S.S.R. on methods for direct conversion of energy. Izv. AN SSSR. Otd. tekh. nauk. Energ. i avtom. no.4:145-150 Jl-Ag '62. (MIRA 15:8)
(Thermoelectric generators—Congresses)
(Electric power—Congresses)
(Thermoelectricity—Congresses)

40053

S/089/62/013/002/010/011
B102/B104

26.2532

AUTHORS: Lashkarev, G. V., Samsonov, G. V.

TITLE: Characteristics of some high-melting compounds of transition metals as materials for thermoelectric converters

PERIODICAL: Atomnaya energiya, v. 13, no. 2, 1962, 187-188

TEXT: The use of high-melting compounds as thermoelements in thermogenerators offers a possibility of raising their efficiency $\eta_{tg} = \eta_t N$, where $\eta_t = (T_1 - T_0)/T_1$ and T_1 and T_0 are the temperatures of the hot and cold junctions, respectively. $N = (M-1)/(M + T_0/T_1)$, $M = \sqrt{1 + \frac{1}{2} z(T + T_0)}$; $z = \alpha^2/\varkappa\varrho$, α - thermo-emf, $\varkappa$ - heat-conduction coefficient, ϱ - electrical resistivity. The authors made approximate calculations of z for T = 1200 and $T_0 = 400^\circ K$ for $MoSi_2$, CoSi, $NbSi_2$, ReSi, CrN, NbB_2, TiC, MnSi, $MnSi_2$, $ReSi_2$ and $CrSi_2$. MnSi-CrN were found to form optimum couples with $z = 3.5 \cdot 10^{-4}$ and $\eta = 6\%$. There are 1 figure and

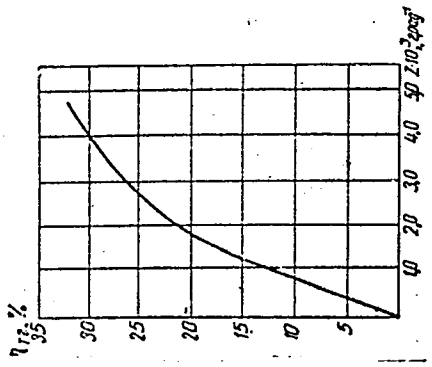
Card 1/2

Characteristics of some high- ...

1 table.

SUBMITTED: September 25, 1961

Figure: η_{ltg} as dependent on $z \cdot 10^3$ in %/deg for $T_o = 400^oK$ and $T = 1200$.



Card 2/2

L 25017-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG/MLK

ACCESSION NR: AT4048712 S/0000/64/000/000/0166/0171

AUTHOR: Obolonchik, V.A.; Lashkarev, G.V.

TITLE: Preparation, properties and prospective uses of rare earth metal selenides

SOURCE: Vsesoyuznoye soveshchaniye po splavam redkikh metallov, 1963. Voprosy* teorii i primeneniya redkozemel'ny*kh metallov (Problems in the theory and use of rare-earth metals); materialy* soveshchaniya. Moscow, Izd-vo Nauaka, 1964, 166-171

TOPIC TAGS: rare earth metal, rare earth selenide, hydrogen selenide, semiconductor, selenide synthesis, rare earth oxide

ABSTRACT: The preparation of rare earth selenides directly from the rare earth oxides by heating an intimate mixture of the metal oxide with selenium or hydrogen selenide was studied for cerium, lanthanum and other rare earth metals. CeO_2 and selenium, rapidly heated in argon to temperatures of 1200C yielded only the unstable cerium oxyselenides. Hydrogen selenide and CeO_2, heated to 1100C and maintained for a short time, yielded cerium monoselenide with admixtures of free selenium; maintaining such a temperature for 5-6 hours yielded cerium sesquiselenide in stoichiometric amounts. At temperature of 500-700C, a mixture of $CeSe_2$, Ce_2O_3 and residual CeO_2 was found. Lanthanum selenides

Card 1/3

were obtained from H_2Se and the metal oxide under the same conditions. The diselenide was formed at 700-800C, the sesquiselenide at 1100-1200C, the monoselenoide only upon further heating of the sesquiselenide in a vacuum. Further tests of the reaction of rare earth oxides with H_2Se were conducted at 1100C maintained for 2-2.5 hours. Selenides were obtained for Pr, Nd, Sm, Eu and Tb. The other rare earths yielded only oxyselenides. The compounds obtained are tabulated and described. The rare earth metals thus form selenium compounds with H_2Se having the following formulas: MeSe, Me_3Se_4, Me_2Se_3 and Me_2Se_4, as well as Me_2O_2Se; among these, only MeSe has been detected for all rare earths. The effective magnetic moments of the rare earth metal ions and their selenides are tabulated. All the monoselenides, except those of Sm, Eu and Yb, have one free electron which does not participate in the formation of the ionic bond. These should be metallic conductors, while the remaining 3 elements are apparently semiconductors. In the sesquiselenides, all ions participate in ionic bond formation; they are thus semiconductors. The selenides of the Me_2Se_4 type have 2 unfilled bonds in the molecule, which determines the hole character of conductivity. "T.M. Mikhlina took part in this work". Orig. art. has: 5 tables and 1 figure.

LASHKAREV, G.V. [Lashkar'kov, H.V.]; PADERNO, Yu.B.

Electric properties of Pr_2Se_3 and Nd_2Se_3. Ukr. fiz. zhur. 10 no.5:566-568 My '65. (MIRA 18:5)

1. Institut problem materialovedeniya AN UkrSSR, Kiyev.

L 7928-66 EWT(m)/ETC/EWG(m)/EWP(t)/EWP(b) IJP(c) RDW/JD/JG

ACC NR: AP5027936 SOURCE CODE: UR/0363/65/001/010/1791/1802

AUTHOR: Lashkarev, G. V.; Paderno, Yu. B.

ORG: Institute of Materials Science Problems, Academy of Sciences, UkrSSR, Kiev (Institut problem materialovedeniya Akademii nauk UkrSSR)

TITLE: Physical properties and chemical bonding of rare earth chalcogenides

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 10, 1965, 1791-1802

TOPIC TAGS: rare earth metal, selenide, telluride, sulfide, semiconducting material

ABSTRACT: Available data on the crystal structure and the magnetic, electric, thermal, and galvanomagnetic properties of rare earth chalcogenides are systematized. The forbidden gap widths of sesquiselenides from lanthanum to samarium and of Sm_2S_3 are determined. Coefficients of thermal expansion of these compounds and of Pr, Nd, and Sm oxytellurides and also the thermal conductivity coefficients of La, Ce, and Nd sesquiselenides are measured. The interatomic distances M-M, M-X, and X-X in mono- and sesquichalcogenides and ditellurides of rare earths are calculated. An attempt is made to account for the fact that the conduction band in rare earth chalcogenides is the 5d band of rare earth metals. The energy gap between $4f^6$, $4f^7$, and $4f^{14}$ levels of rare earth ions

UDC: 546.65'221+546.65'231+546.65'241

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ACC NR: AP5027936

can be measured by studying their depth in Sm, Eu, and Yb chalcogenides. A change in composition from $LaSe_{1.5}$ to $LaSe_{1.43}$ changes the electrical resistance by 13 orders of magnitude. The semiconducting properties of Sm, Eu, and Yb chalcogenides of the composition M_2X_3-M_3X_4 and of oxychalcogenides M_2O_2Te were predicted, and experimentally confirmed for M_2O_2Te. Authors express their sincere appreciation to G. V. Samsonov, corresponding member of AN UkrSSR, for his unflagging interest in the work and helpful comments. Orig. art. has: 4 figures and 4 tables.

SUB CODE: IC, SS / SUBM DATE: 05Jul65 / ORIG REF: 011 / OTH REF: 029

Card 2/2

L 16806-66 EWT(m)/EWP(t) LJP(c) JD/JG
ACC NR: AP6003368 SOURCE CODE: UR/0363/66/002/001/0100/0104

AUTHOR: Obolonchik, V.A.; Lashkarev, G.V.; Dem'yanchuk, V.G.

ORG: Institute of Materials Science Problems, Academy of Sciences SSSR (Institut problem materialovedeniya Akademii nauk SSSR)

TITLE: Preparation and some physicochemical properties of rare earth oxytellurides

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 1, 1966, 100-104

TOPIC TAGS: rare earth, telluride, lanthanum compound, cerium compound, praseodymium compound, neodymium compound, samarium compound, gadolinium compound, dysprosium compound

ABSTRACT: Oxytellurides of stoichiometric composition corresponding to the formula M_2O_2Te (where M = La, Ce, Pr, Nd, Sm, Gd, Dy) were synthesized by reacting rare earth oxides with tellurium vapor in a hydrogen atmosphere in graphite boats at temperatures of 1000 — 1100C. The oxytellurides are unstable. Lanthanum, praseodymium, neodymium, and samarium oxytellurides are stable at elevated temperatures in air because of formation of a thin metal oxide film on the surface. The electrical conductivity at room temperature and the temperature dependence of the thermal expansion

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L 16806-66
ACC NR: AP6003368

of praseodymium, neodymium, and samarium oxytellurides were measured for the first time, as was the temperature dependence of the magnetic susceptibility of the oxytellurides from lanthanum to samarium. The nature of chemical bonding, which causes the conductivity of these compounds to be nonmetallic in character, is discussed. Orig. art. has: 1 figure, 4 tables, and 2 formulas.

SUB CODE: 11 / SUBM DATE: 03Jun65 / ORIG REF: 005 / OTH REF: 003

Card 2/2 mc

L 06482-67 EWT(m)/EWP(e)/EWP(t)/ETI IJP(c) WH/JD

ACC NR: AP6028294 SOURCE CODE: UR/0363/66/002/006/0980/0983

AUTHOR: Dudnik, Ye. M.; Lashkarev, G. V.; Paderno, Yu. B.; Obolonchik, V. A.

ORG: Institute of Materials Science Problems, Academy of Sciences, UkrSSR (Institut problem materialovedeniya Akademii nauk UkrSSR)

TITLE: Thermal expansion of rare earth chalcogenides

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 6, 1966, 980-983

TOPIC TAGS: thermal expansion, selenide, telluride, rare earth compound

ABSTRACT: The temperature dependence of the relative elongation of EuS, EuSe, La_2Se_3, Ce_2Se_3, Pr_2Se_3, Nd_2Se_3, Nd_2Se_3, Sm_2Se_3, Sm_2S_3, Pr_2O_2Te and Sm_2O_2Te was studied in the range from room temperature to 800°K. The measurements were made with a quartz dilatometer. In passing from the rare earth metals to their compounds with an ionic-covalent bond character, the thermal expansion coefficient α increases (with the exception of europium), apparently because of an increased anharmonicity of the thermal vibrations of the crystal lattice. The value of α of the chalcogenides increases in the rare earth series and in passing from sulfides to selenides; this is also due to increased anharmonicity. The α values of oxytellurides are intermediate between those of oxides and sesquisulfides. From the α values, the Debye temperatures θ of the compounds were calculated and found to decrease with increasing atomic number of the rare earth metal (except in the case of samarium). The melting points of the sesquisele-

Card 1/2 UDC: 546.651/659'851:536.413

L 06482-67
ACC NR: AP6028294

nides were also estimated from the α values. Authors express their appreciation to T. M. Mikhlina and V. G. Dem'yanchuk for assistance in the preparation of the compact samples and for performing chemical analyses of the rare earth chalcogenides, and also to S. V. Radzikovskaya and Ye. D. Leonova for carrying out the chemical analysis of pyrite and for assistance in the preparation of Sm_2S_3 and EuS samples. Orig. art. has: 4 tables and 3 formulas.

SUB CODE: 07,20/ SUBM DATE: 29Jun65/ ORIG REF: 017/ OTH REF: 005

Card 2/2

ACC NR: AM6017555 Monograph UR/

Obolonchik, Vasiliy Andreyevich; Lashkarev, Georgiy Vadimovich

Selenides and tellurides of rare-earth metals and actinides (Selenidy i telluridy redkozemel'nykh metallov i aktinoidov) Kiev, Naukova dumka, 1966. 161 p. illus., biblio. (At head of title: Akademiya nauk Ukrainskoy SSR. Institut problem materialovedeniya) 1500 copies printed.

TOPIC TAGS: selenide, telluride, rare earth metal, actinide series, lanthanide series, inorganic synthesis, chemical detection, quantitative analysis, semiconductor research

PURPOSE AND COVERAGE: This monograph attempts a systematic review of Soviet and Western research on selenides and tellurides of the rare-earth metals and actinides for the benefit of the engineers, technicians, and scientists working in the field of research and application of rare-earth metals and actinides. An up-to-date collection of research data, mostly Western, was systematically presented in this monograph. The data concern crystal structure, physical and chemical properties, methods of preparation and chemical analysis of selenides and tellurides of rare-earth metals and actinides (uranium and thorium). A general evaluation of the data presented was made in the foreword. The Soviet scientists, V. P.

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ACC NR: AM6017555

Zhuze, V. M. Sergeyeva, and A. V. Golubkov from Leningrad, N. P. Luzhnaya, V. I. Spitsyn, and Ye. I. Yarembash from Moscow, and G. V. Samsonov and S. V. Radzikovskaya from Kiev are considered to be the chief contributors to the research on preparation and properties of the rare earth metal chalcogenides. The possibility of the application of these compounds in high-temperature semiconductor electronics is stressed in the foreword. Included in the monograph are the most recent (1965) contributions by the authors to knowledge of physical and chemical properties and to preparation of certain selenides and oxytellurides of rare-earth metals. Chapters I, III, IV, V, and VII were written by V. A. Obolonchik, II and VI by G. V. Lashkarev. Thanks are expressed to A. M. Golub, professor, PhD in chemistry, and to Yu. B. Paderno, Candidate of Technical Sciences. There are 121 references, including about 30% Communist sources.

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ACC NR: AM6017555

SUB CODE: 07, 11/ SUBM DATE: 23Feb66/ ORIG REF: 034/ OTH REF: 087

Card 3/3

ACC NR: AT7003886 SOURCE CODE: UR/0000/66/000/000/0251/0260

AUTHOR: Zalevskiy, B. K.; Lashkarev, G. V.; Sobolev, V. V.; Syrbu, N. N.

ORG: none

TITLE: Experimental studies of the structure of energy bands in certain rare earth element chalcogenides

SOURCE: AN BSSR. Institut fiziki tverdogo tela i poluprovodnikov. Khimicheskaya svyaz' v poluprovodnikakh i termodinamika (Chemical bond in semiconductors and thermodynamics). Minsk, Nauka i tekhnika, 1966, 251-260

TOPIC TAGS: ~~compound semiconductor,~~ refractory compound, sulfide, selenide, oxytelluride, rare earth compound, semiconductor band structure, reflection spectrum, ENERGY BAND STRUCTURE

ABSTRACT: Reflection spectra in the 200—1200 mμ range of seven rare earth element chalcogenides and three oxytellurides have been obtained at 293°K and interpreted in terms of the theory of energy band structure of semiconductors. The compacted polycrystalline samples used in the experiments were prepared by sintering at 1000—1750°C powdered components in hydrogen sulfide or selenide atmosphere or in evacuated quartz ampules. Reflection spectra in the region of energy greater than the minimum forbidden energy gap (Eg) were similar for all the compounds studied. This fact indicates a great similarity in the structure of energy bands between chalcogenides and oxytellurides of the rare earth elements. Structural peculiarities

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of the M_2X_3 and MX compound semiconductors were derived from the weak reflection peaks of Ce_2Sl_3, Nd_2Sl_3, and EuSe and from the reflection peaks in the 240—420 mμ region of Sm_2S_3 and sesquiselenides of La, Le, PR, Nd, and Sm. Orig. art. has: 4 figures, 1 table, and 3 formulas. [JK]

SUB CODE: 07/ SUBM DATE: 20Aug66/ ORIG REF: 011/ OTH REF: 010/

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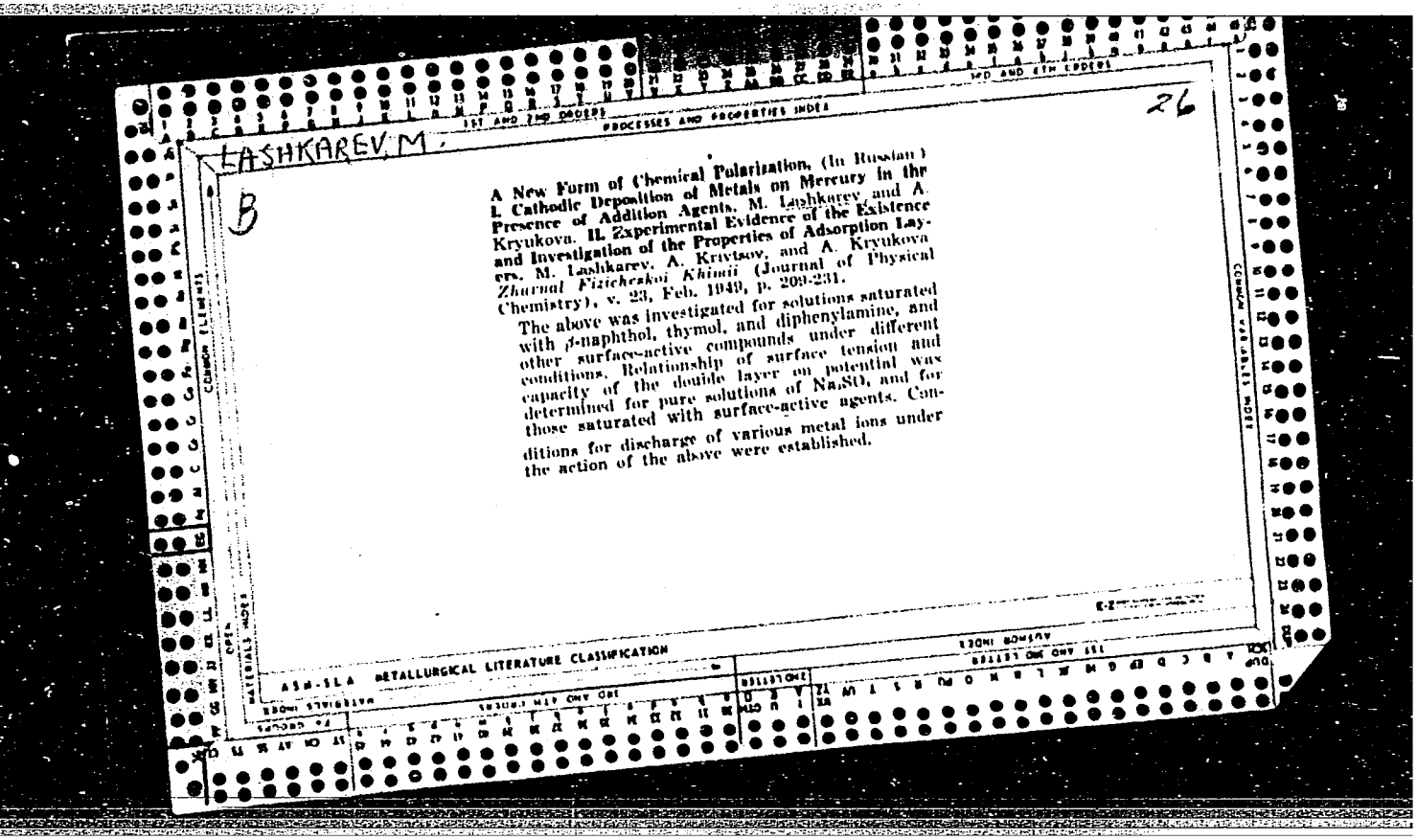


LASHKAREV, M.

B

26

A New Form of Chemical Polarization. (In Russian) I. Cathodic Deposition of Metals on Mercury in the Presence of Addition Agents. M. Lashkarev and A. Kryukova. II. Experimental Evidence of the Existence and Investigation of the Properties of Adsorption Layers. M. Lashkarev, A. Krivtsov, and A. Kryukova. *Zhurnal Fizicheskoi Khimii* (Journal of Physical Chemistry), v. 23, Feb. 1949, p. 209-231.

The above was investigated for solutions saturated with β-naphthol, thymol, and diphenylamine, and other surface-active compounds under different conditions. Relationship of surface tension and capacity of the double layer on potential was determined for pure solutions of Na_2SO_4 and for those saturated with surface-active agents. Conditions for discharge of various metal ions under the action of the above were established.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

LASHKAREV, O.N., red.; SOKOLOVA, N.N., tekhn.red.; FEDOTOVA, A.F., tekhn.red.

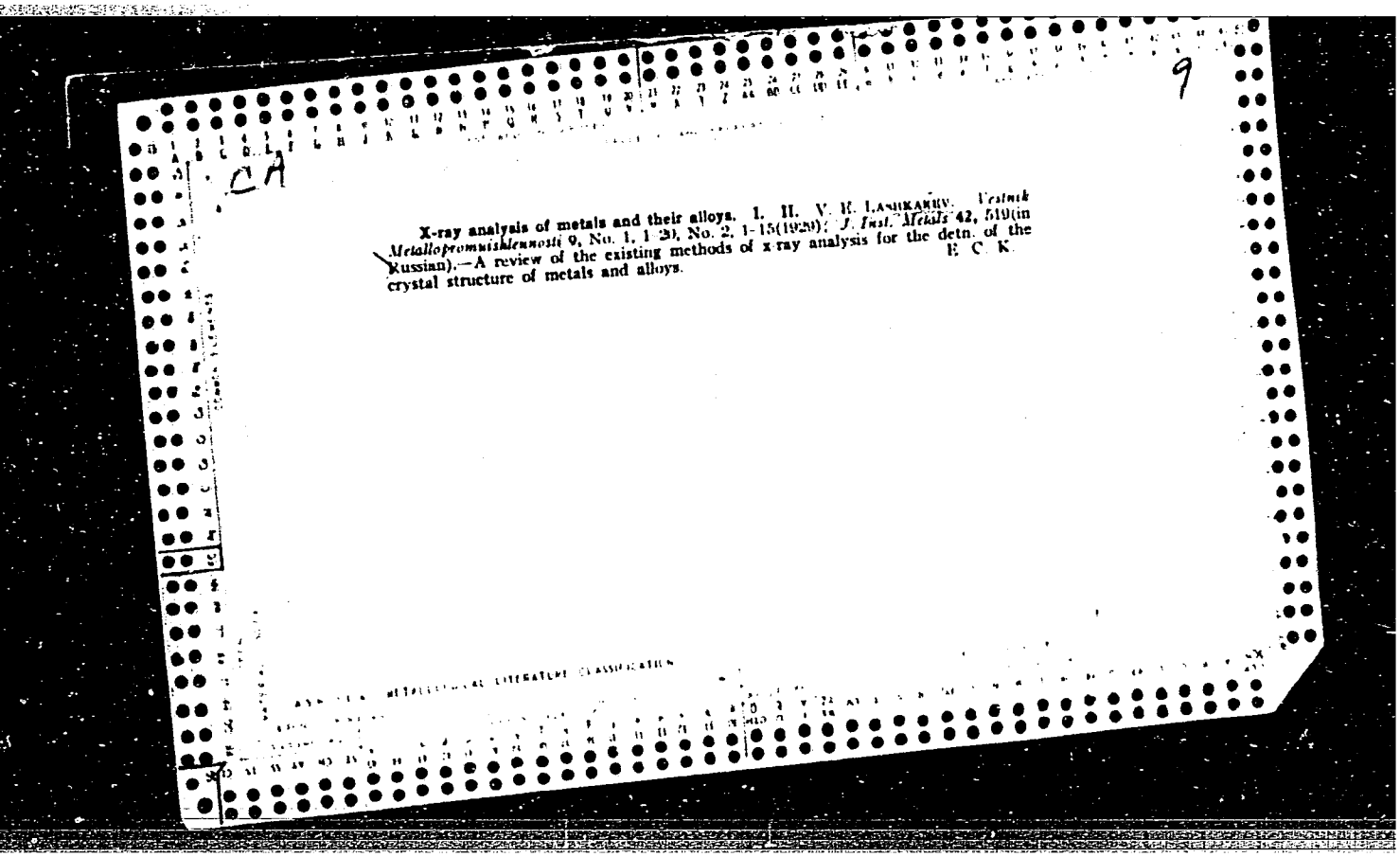
[Forestry and land improvement through afforestation] Lesovodstvo i agrolesomelioratsiia. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1959. 325 p. (MIRA 12:11)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I. Lenina.
(Forests and forestry)

DONIN, B., inzh.; KRYS'KO, A., inzh.; LEYCHIK, V., inzh.; LASHKAREV, V., inzh.

Devices and instruments for automatic signalization of overheaping and blocking of transportation tubes. Muk.-elev. prom. 25 no.9:17-19 S '59. (MIRA 12:12)

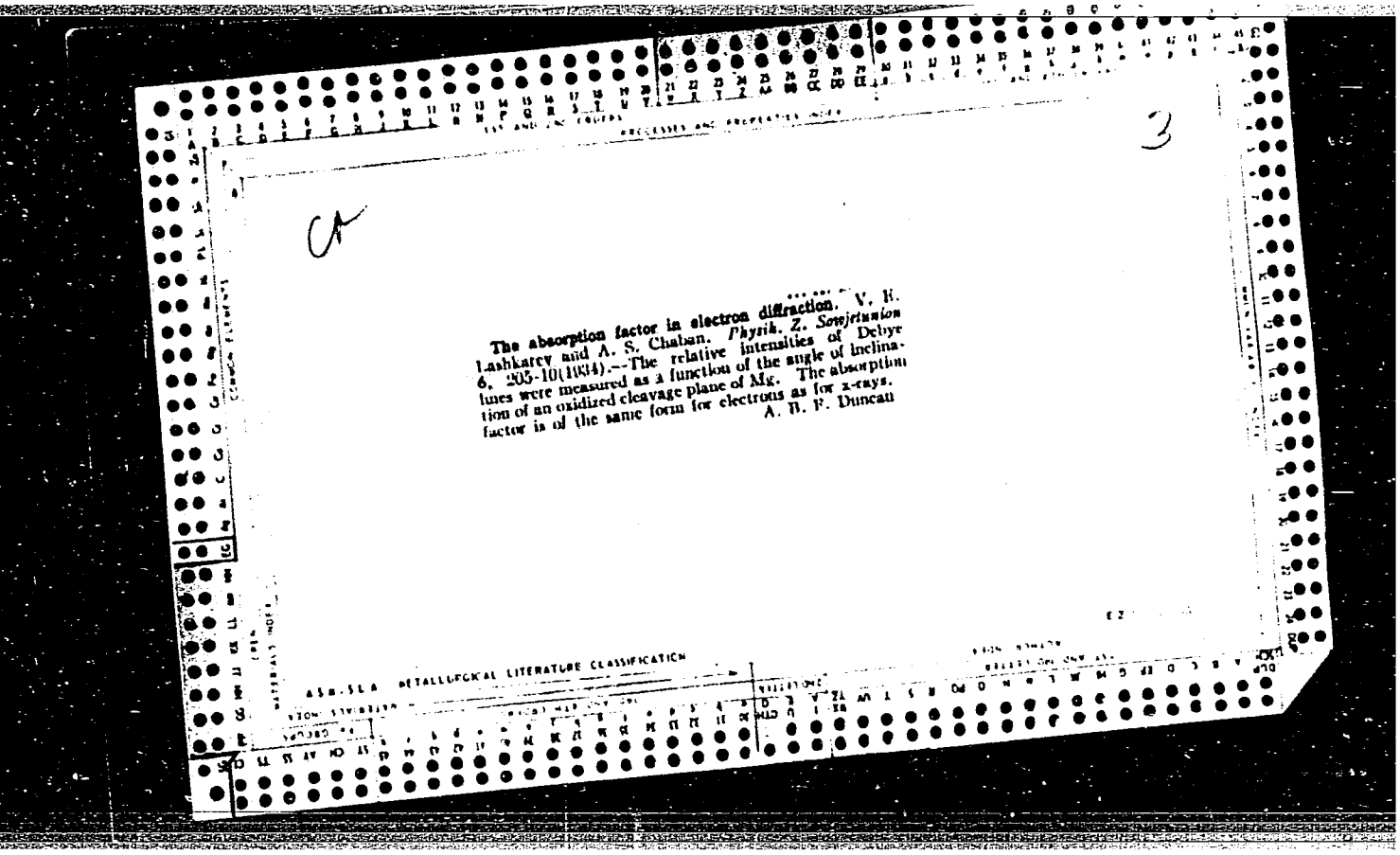
1. Odesskiy proyektno-konstruktorskiy institut kompleksnoy avtomatizatsii pishchevykh predpriyatiy.
(Signals and signaling)



CA

9

X-ray analysis of metals and their alloys. I. II. V. K. LANDKARDT. *Vestnik Metallopromushlennosti* 9, No. 1, 1-20; No. 2, 1-15(1929); *J. Inst. Metals* 42, 519(in Russian).—A review of the existing methods of x-ray analysis for the detn. of the crystal structure of metals and alloys. E. C. K.

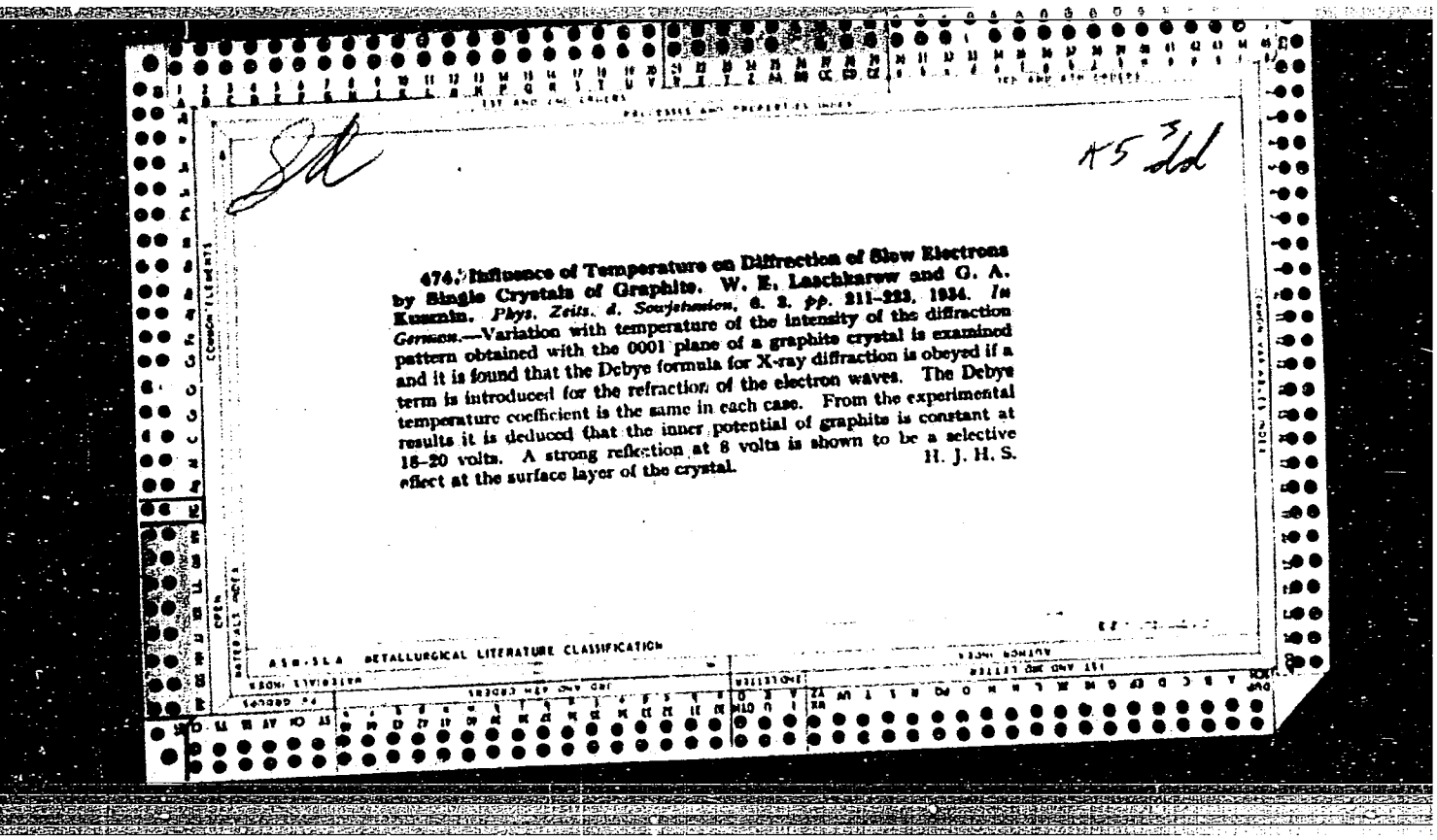


CA

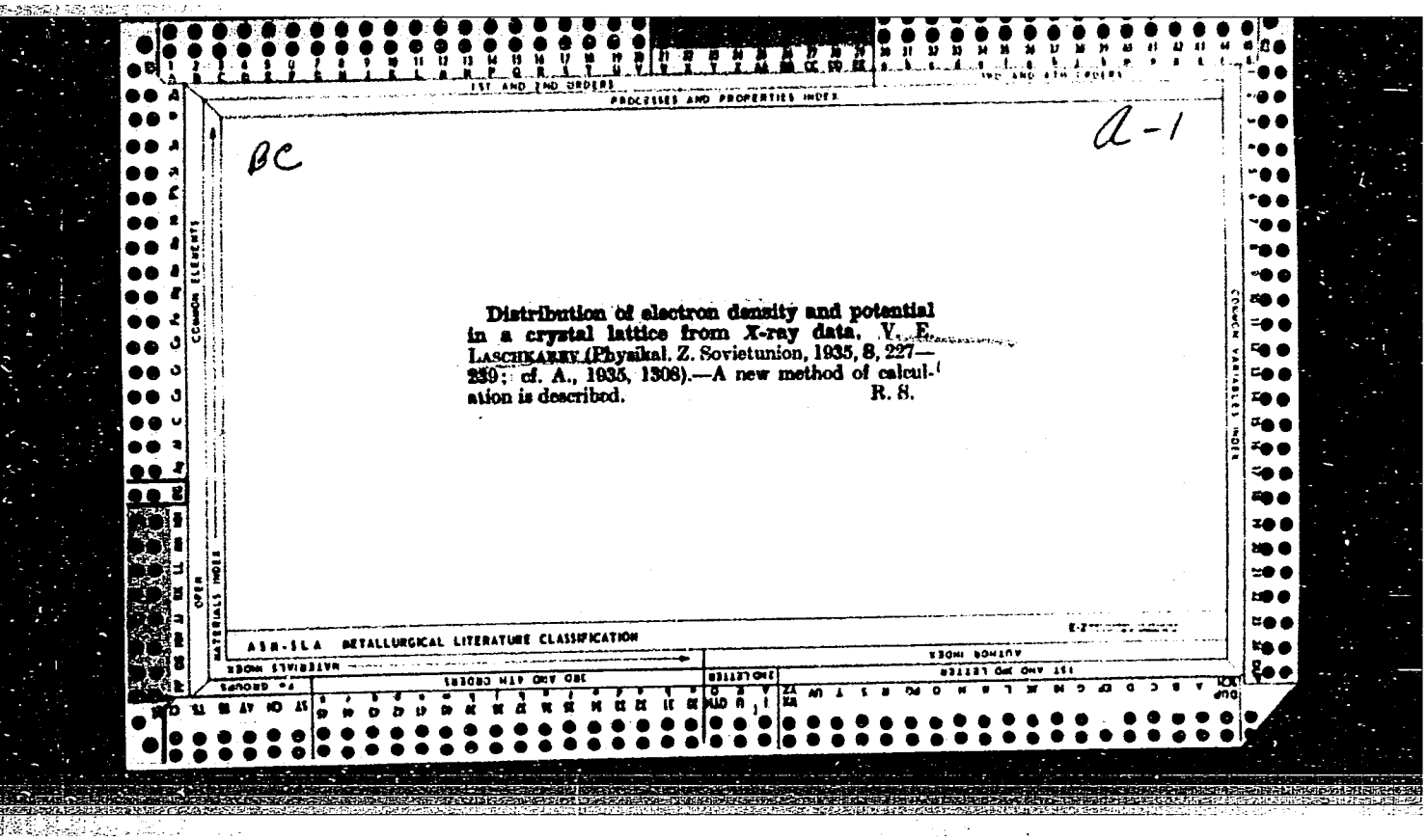
3

The absorption factor in electron diffraction. V. B. Lashkarev and A. S. Chaban. *Physik. Z. Sowjetunion* 6, 205-10(1934).—The relative intensities of Debye lines were measured as a function of the angle of inclination of an oxidized cleavage plane of Mg. The absorption factor is of the same form for electrons as for x-rays.
A. B. F. Duncan

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



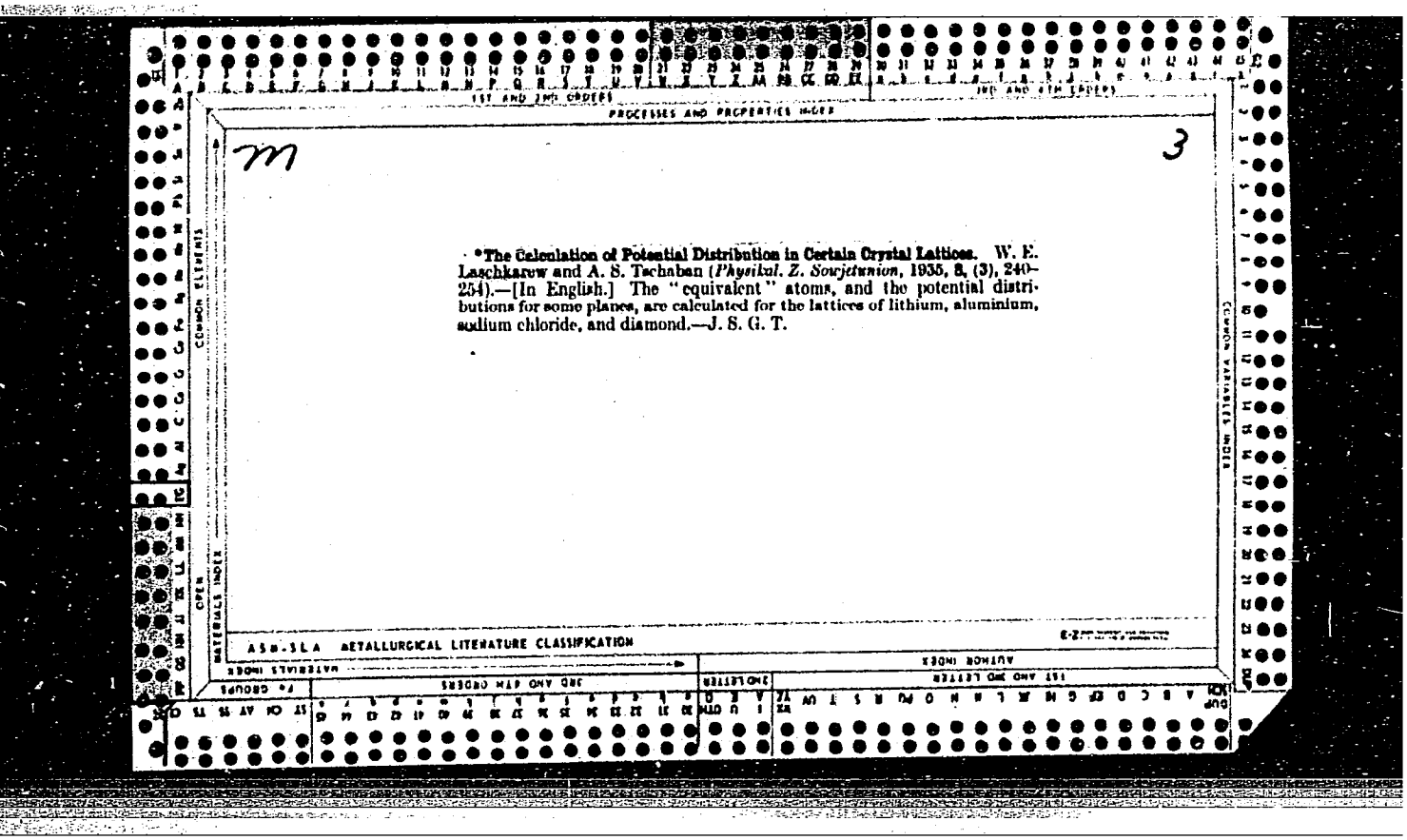
474. **Influence of Temperature on Diffraction of Slow Electrons by Single Crystals of Graphite.** W. E. Laschkarew and G. A. Kusmin. *Phys. Zeits. d. Sowjetunion*, 6. 2. pp. 211–223. 1934. *In German.*—Variation with temperature of the intensity of the diffraction pattern obtained with the 0001 plane of a graphite crystal is examined and it is found that the Debye formula for X-ray diffraction is obeyed if a term is introduced for the refraction of the electron waves. The Debye temperature coefficient is the same in each case. From the experimental results it is deduced that the inner potential of graphite is constant at 18–20 volts. A strong reflection at 8 volts is shown to be a selective effect at the surface layer of the crystal. H. J. H. S.



BC

A-1

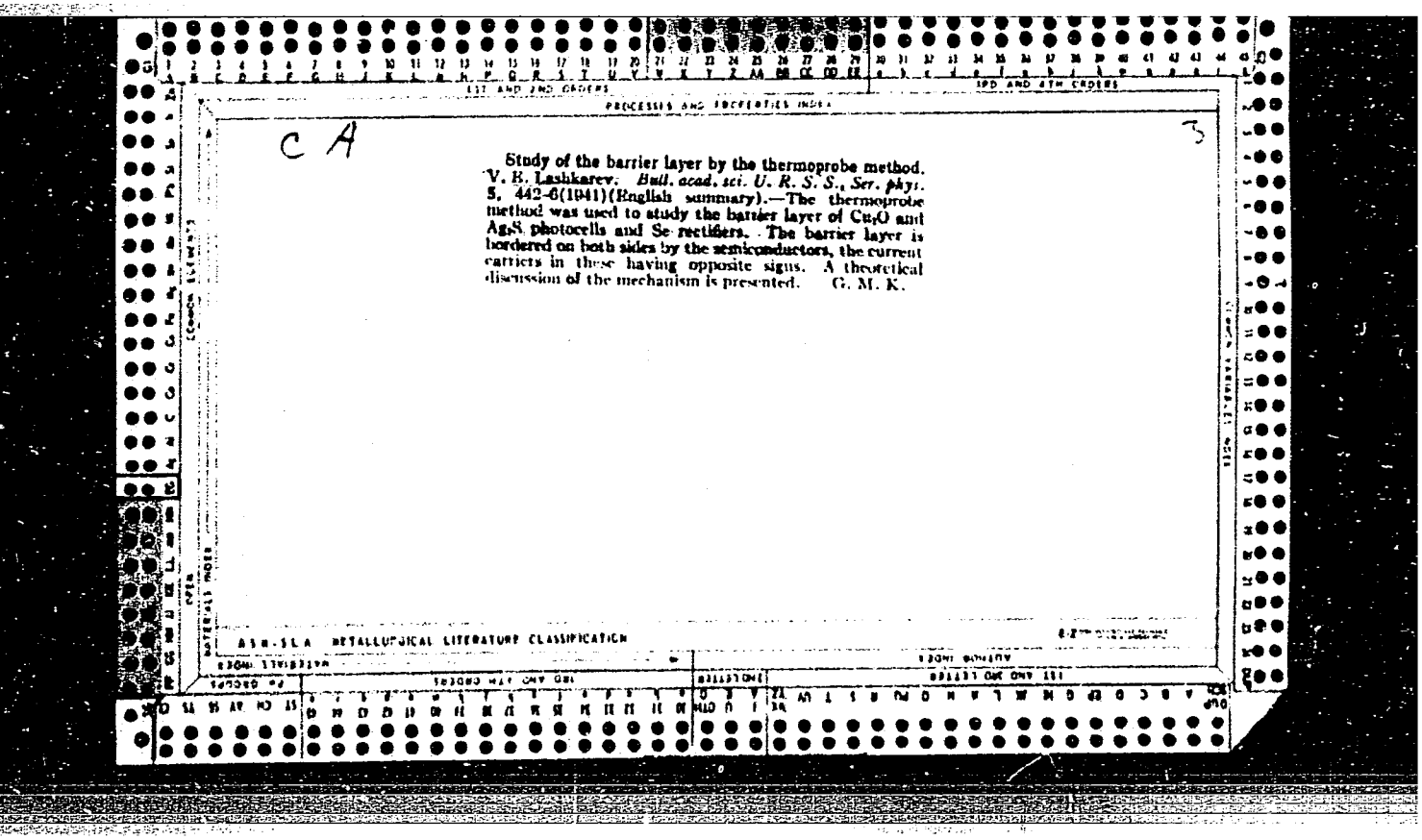
Distribution of electron density and potential in a crystal lattice from X-ray data. V. E. LASCHKAREV (Physikal. Z. Sovietunion, 1935, 8, 227—239; cf. A., 1935, 1308).—A new method of calculation is described. R. S.



m

3

*The Calculation of Potential Distribution in Certain Crystal Lattices. W. E. Laschkarew and A. S. Tschaban (*Physikal. Z. Sowjetunion*, 1935, 8, (3), 240–254).—[In English.] The "equivalent" atoms, and the potential distributions for some planes, are calculated for the lattices of lithium, aluminium, sodium chloride, and diamond.—J. S. G. T.

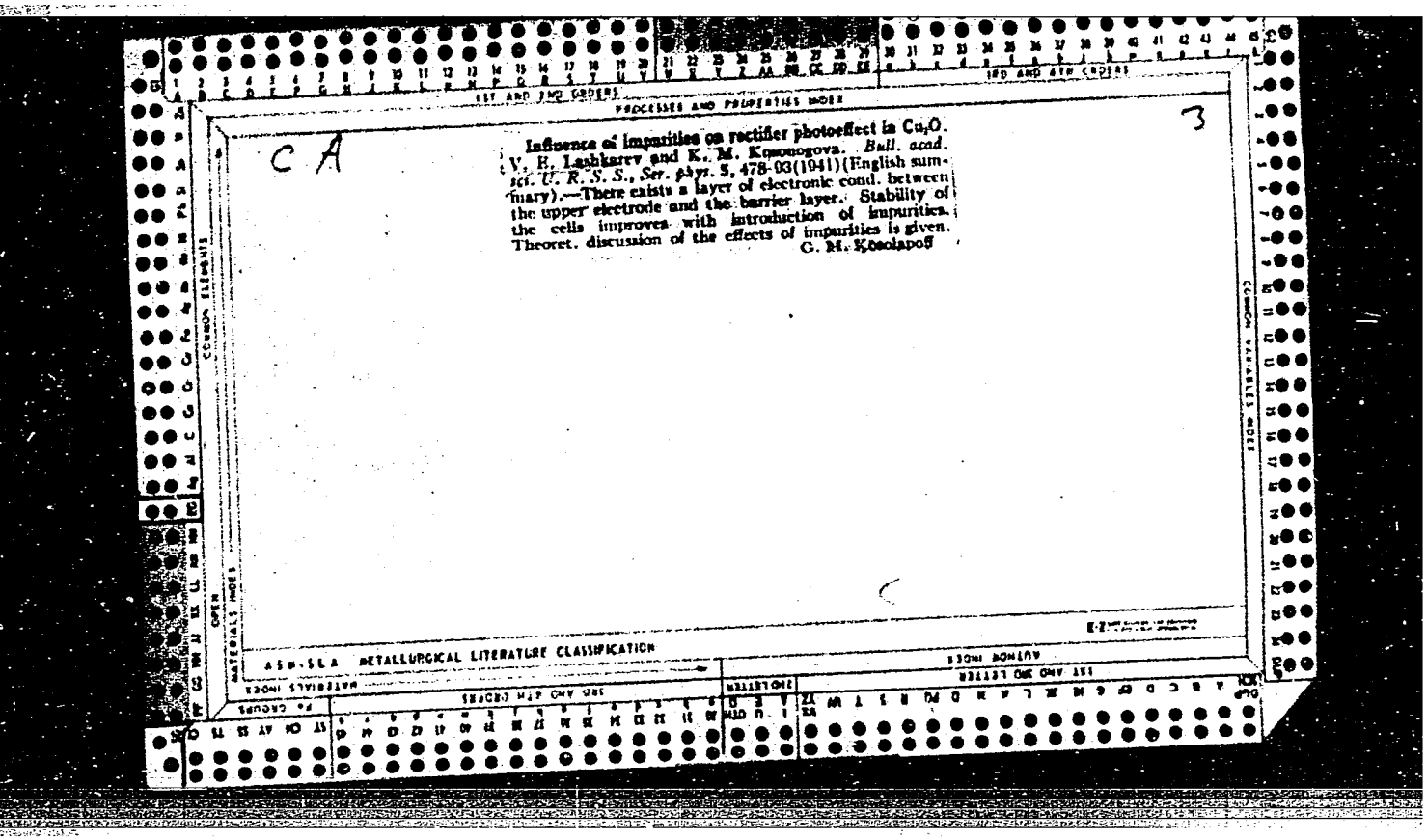


C A

3

Study of the barrier layer by the thermoprobe method. V. E. Lashkarev. *Bull. acad. sci. U. R. S. S., Ser. phys.* 5, 442-6(1941)(English summary).—The thermoprobe method was used to study the barrier layer of Cu_2O and Ag_2S photocells and Se rectifiers. The barrier layer is bordered on both sides by the semiconductors, the current carriers in these having opposite signs. A theoretical discussion of the mechanism is presented. G. M. K.

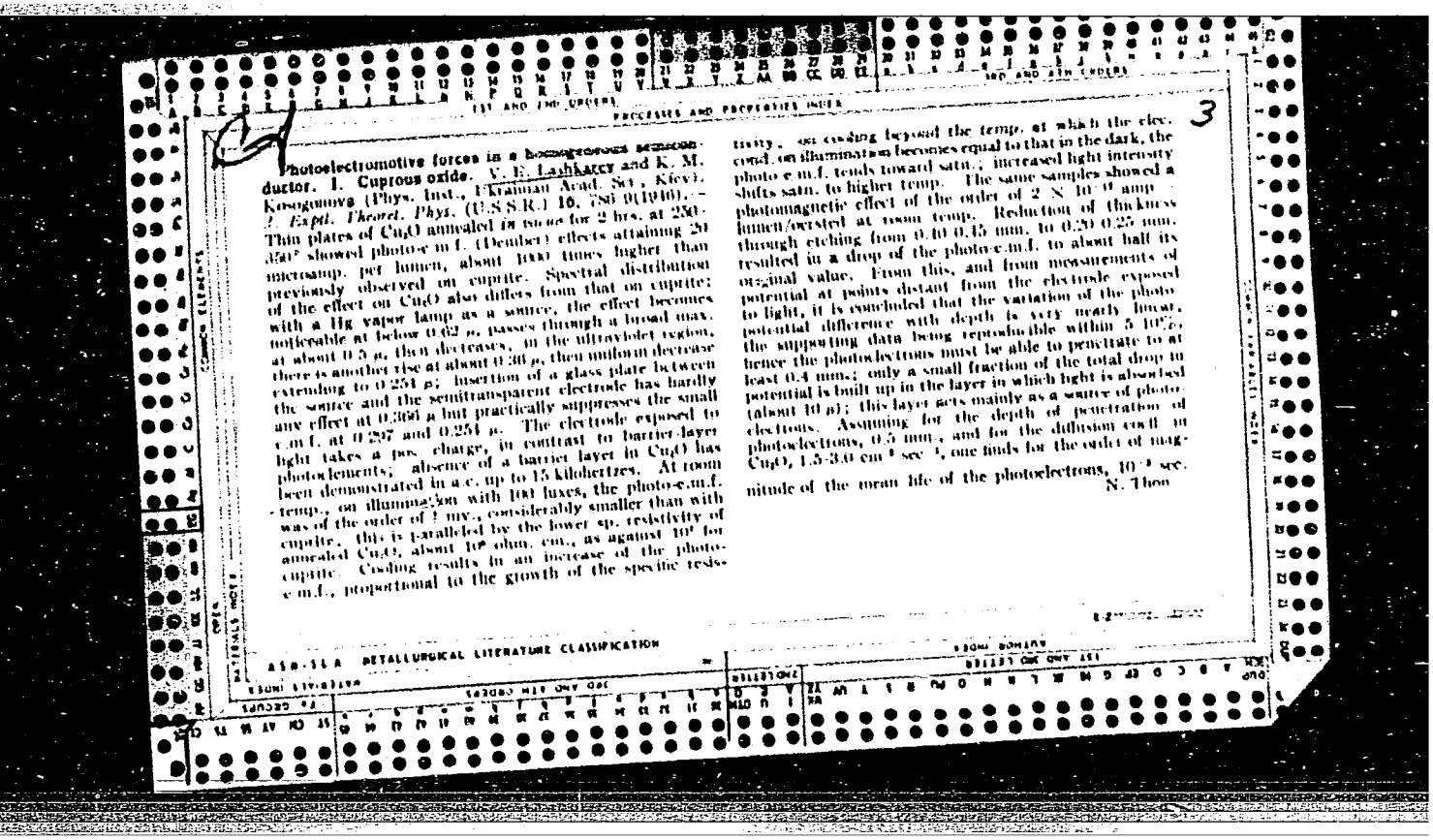
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



C A

3

Influence of impurities on rectifier photoeffect in Cu_2O. V. E. Lashkarev and K. M. Kosonogova. *Bull. acad. sci. U. R. S. S., Ser. phys.* 5, 478-93(1941)(English summary).—There exists a layer of electronic cond. between the upper electrode and the barrier layer. Stability of the cells improves with introduction of impurities. Theoret. discussion of the effects of impurities is given.
G. M. Kosolapoff



Photoelectromotive forces in a homogeneous semiconductor. I. Cuprous oxide. V. E. Lashkarev and K. M. Kosogunova (Phys. Inst., Ukrainian Acad. Sci., Kiev). *J. Expt. Theoret. Phys.* (U.S.S.R.) 16, 780–9(1946).—Thin plates of Cu_2O annealed in vacuo for 2 hrs. at 250–450° showed photo-e.m.f. (Dember) effects attaining 20 microamp. per lumen, about 1000 times higher than previously observed on cuprite. Spectral distribution of the effect on Cu_2O also differs from that on cuprite; with a Hg vapor lamp as a source, the effect becomes noticeable at below 0.62 μ, passes through a broad max. at about 0.5 μ, then decreases, in the ultraviolet region, there is another rise at about 0.30 μ, then uniform decrease extending to 0.254 μ; insertion of a glass plate between the source and the semitransparent electrode has hardly any effect at 0.366 μ but practically suppresses the small e.m.f. at 0.297 and 0.254 μ. The electrode exposed to light takes a pos. charge, in contrast to barrier-layer photoelements; absence of a barrier layer in Cu_2O has been demonstrated in a.c. up to 15 kilohertzes. At room temp., on illumination with 100 luxes, the photo-e.m.f. was of the order of 2 mv., considerably smaller than with cuprite, this is paralleled by the lower sp. resistivity of annealed Cu_2O, about 10^6 ohm. cm., as against 10^9 for cuprite. Cooling results in an increase of the photo-e.m.f., proportional to the growth of the specific resistivity, as cooling beyond the temp. at which the elec. cond. on illumination becomes equal to that in the dark, the photo-e.m.f. tends toward satn.; increased light intensity shifts satn. to higher temp. The same samples showed a photomagnetic effect of the order of 2×10^{-9} amp./lumen/oersted at room temp. Reduction of thickness through etching from 0.40–0.45 mm. to 0.20–0.25 mm. resulted in a drop of the photo-e.m.f. to about half its original value. From this, and from measurements of potential at points distant from the electrode exposed to light, it is concluded that the variation of the photo-potential difference with depth is very nearly linear, the supporting data being reproducible within 5–10%; hence the photoelectrons must be able to penetrate to at least 0.4 mm.; only a small fraction of the total drop in potential is built up in the layer in which light is absorbed (about 10 μ); this layer acts mainly as a source of photo-electrons. Assuming for the depth of penetration of photoelectrons, 0.5 mm., and for the diffusion coeff. in Cu_2O, 1.5–3.0 cm^2 sec^{-1}, one finds for the order of magnitude of the mean life of the photoelectrons, 10^{-3} sec. N. Thon