SHARASHKIN, G.I., kapitan.

Orienting the antiaircraft set. Artill. zhur. no.1:58 Ja '58.
(MIRA 11:2)

(Antiaircraft guns)

Sov/85-58-8-33/40

AUTHORS: Uruvayev, S.; Sharashkin, N. and Semenov, S. (Vladimir)

TITLE: Komsomol Members' Handiwork (Rukami Komsomol'tsev)

PERIODICAL: Kryl'ya rodiny, 1958, Nr 8, p 27 (USSR)

ABSTRACT: Komsomol members of the Vladimirskiy oblastnoy aeroklub (Vladimir Oblast Aeroclub) are said to have produced various technical displays and equipment for educational purposes.

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USSR/Engineering - Scientific Organization FD-1119

Sharashkin, N. S.

Card 1/1 Pub. 41-13/13

Author : Bliznyak, Ye. V. and Sharashkin, N. S.

Title : In scientific establishments of the Department of Technical Sciences of the Academy of Sciences of the USSR. Conference on modelling of water channel processes.

Periodical : Izv. AN SSSR. Otd. tekh nauk 5, 157-160, May 1954

Abstract : This is a report on a conference on modelling of water channel processes in erodable models, under the Academy of Sciences of the USSR, 29-31 May 1954. Lists participating organizations and their locations. Gives summaries of the ten reports presented, together with author, institution, and location. The purpose of the modelling was to develop methods for the calculation of water channel processes produced in rivers by artificial changes in their character.

Institution :

Submitted :

SHARASHKIN,Ye.; KHIMUNIN,S.

Trends in major repairing of apartment buildings and ways of mechanizing it. Zhil.-kom.khoz.5 no.5:3-8 '55. (MLRA 8:11)

1. Glavnyy inzhener Zhilishchnogo upravleniya ispolkoma Leningradskogo gorsoveta (for Sharashkin)
(Apartment houses--Maintenance and repair)

FELLER, I.; SHARASHKIN, Ye.

Improve the accounting of housing property. Zhil.-kom.khoz. 5 no.7:30 '55. (MLRA 9:1)

1. Nachal'nik Leningradskogo gorodskogo inventarizatsionnogo byuro (for Feller). 2.Glavnyy inzhener zhilishchnogo upravleniya Leningradskogo gorispolkoma (for Sharashkin).
(Leningrad--Housing--Accounting)

USSR/Engineering - Hydraulics, Hydrology Dec 52

"Discussion of the Theories of Motion of Suspended Sediments at the All-Union Conference on the Problem of Stream-Bed Processes," N. S. Sharashkina

"Iz Ak Nauk SSSR, Otdel Tekh Nauk" No 12, pp 1866-1868

Briefly reviews reports presented at Conference arranged in Jan 52 jointly by Main Administration of Hydro-meteorological Service, Lab of Stream-Bed Processes of Section on Scientific Development of Problems of Water Economy and Inst of Geography.

244T67

Two theories were discussed: gravitation theory by M. A. Velikanov and diffusion theory developed by V. M. Makkaveyev. Conference made conclusion that both theories of suspension motion are based on physically sound assumptions, but still include some hypotheses which require theoretical development and experimental substantiation.

244T67

VELIKANOV, M. A. - SHARASHKINA, N. S.

Hydraulic Engineering

Conference on waterways. Vest. AN SSSR 22, no. 3, 1952.

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

BLIZNYAK, Ye.V., doktor tekhn.nauk, otv.red.[deceased]; ROSSINSKIY, K.I., kand.tekhn.nauk, zamestitel' otv.red.; ANDREYEV, O.V., kand.tekhn. nauk, red.; ZRELOV, N.P., kand.tekhn.nauk; RZHANITSYN, N.A., kand. tekhn.nauk, red.; N.S. SHARASHKINA, N.S., red.; YEGOROV, V.I., red.izd-va; KHOROZ, M.M., red.izd-va; SIMKINA, Ye.I., tekhn.red.; KASHINA, P.S., tekhn.red.

[Channel processes; a collection of articles] Ruslovye protsessy; sbornik statei. Moskva, 1958. 194 p. (MIRA 12:1)

1. AN SSSR. Sektsiya po nauchnoy razrabotke problem vodnogo khozyaystva. 2. Sektsiya no nauchnoy razrabotke problem vodnogo khozyaystva AN SSSR, Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-izyskatel'skiy inst. im. S.Ya.Zhuka (for Rossinskiy). 3. Vsesoyuznyy nauchno-issledovatel'skiy inst. transportnogo stroitel'stva Ministerstva transportnogo stroitel'stva SSSR (for Andreyev). 4. Vsesoyusnyy nauchno-issledovatel'skiy institut vodosnabzheniya, kanalizatsii, gidrotekhnicheskikh sooruzheniy i inzhenernoy gidrogeologii (for Zrelov). 5. Tsentral'nyy nauchno-issledovatel'skiy institut ekonomiki i ekspluatatsii vodnogo transporta (for Rzhanitsyn). 6. Sektsiya po nauchnoy razrabotke problem vodnogo khozyaystva AN SSSR (for Sharashkina).
(Hydraulic engineering) (Rivers)

ACC NR: AR6032368 SOURCE CODE: UR/0081/66/000/012/S071/S071

AUTHOR: Gamova-Kayukova, N. I.; Sharashkina, V. N.

TITLE: Development of production methods for artificial leather which is resistant to microorganisms

SOURCE: Ref. zh. Khimiya, Part II, Abs. 12S469

REF SOURCE: Nauchno-issled. tr. Vses. n.-i in-t plenok i iskusstv. kozhi, sb. 16, 1965, 12-20

TOPIC TAGS: bacteria, leather, artificial leather, microorganism resistant leather

ABSTRACT: To increase the biological resistance of artificial leather to molds and bacteria (particularly in countries with hot and humid climates), a number of domestically produced plasticizers and stabilizers as well as other compounds were tested for their effect on the resistance to microorganisms of film-forming polymers. Procedures were developed for new products incorporating polymers of high molecular weight, plasticizers and stabilizers with fungicidal properties, and products containing antiseptics. Mold-resistant artificial leather can be

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L 08391-67
ACC NR: AR6032368

prepared by placing on antiseptic-treated tissue the polymer mixture with antiseptics and 5 parts by weight of salicylanilide or 4—5 parts by weight of zinc dichlorosalicylanilide salt. Resistant leather substitutes can be prepared without antiseptics but with the appropriate selection of polymers of high molecular weights, plasticizers, stabilizers, and other components. Domestically produced plasticizers [phthalatedicaprylate-4, phenyl-di-(β-chloroethyl) phosphate, and diphenyl-(3-chloroethyl)-phosphate], and stabilizers (epoxy resins 5N and E-40) are mold resistant. ferrokler 1212A, ferrokler 903, stankler-40, lead silicate, 2.4-diosibenzophenone (49—4), propane (4—7) stabilizers also are resistant to mold. T. Sobko. [Translation of abstract]

SUB CODE: 06/

SHARASHOV, S.G., kand.med.nauk (Yaroslavl', Grazhdanskaya ul., d.37/45 kv. 13)

Pathogenesis of circulatory disorders and use of anti-shock measures in trauma of the abdominal organs; experimental investigations [with summary in English, p.160]. Vest.khir. 79 no.7:68-77 Jl '57. (MIRA 10:10)

1. Iz kafedry patologicheskoy fiziologii (nach. - prof. I.P.Petrov) Voyenno-meditsinskoy ordena Lenina akademii im. S.M.Kirova.

(ABDOMEN, wounds and injuries,
exper., causing circ. disord. & eff. of anti-shock substances (Rus))
(SHOCK,
anti-shock substances in exper. abdom. wds. (Rus))

SHARASHOVA, V.S.

Biology of alfalfa in the central TienShan. Trudy Biol.inst. KirFAN SSSR no.4:93-101 '51. (MLRA 9:10)
(TIEN SHAN--ALFALFA)

SHARASHOVA, V. S.

"The Biology of Perennial Seedlings of Fodder Grasses in the Kochkor Valley of the Central Tyan'Shan." Cand Biol Sci, Kirgiz Agricultural Inst, Frunze, 1954. (RZhBiol, No 8, Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

NIKITINA, Ye.V.; AYDAROVA, R.A.; KASHCHENKO, L.I.; UBUKEYEVA, A.U.; POPOVA, L.I.; TKACHENKO, V.I.; GOLOVKOVA, A.G., SHPOTA, Ye.I.; FILATOVA, N.S.; SHARASHOVA, V.S.; VVEDENSKIY, A.I., nauchnyy red.; VYKHODTSEV, I.V., red.; ANOKHINA, M.G., tekhn.red.

[Flora of the Kirghiz S.S.R.; key to the plants of the Kirghiz S.S.R.] Flora Kirgizskoi SSR; opredelitel' rastenii Kirgizskoi SSR. Sost. E.V.Nikitina i dr. Nauchn.red. A.I.Vvedenskii. Frunze, Izd-vo Akad.nauk Kirgizskoi SSR. Vol.8. [The carrot, dogwood, wintergreen, heath, primrose, leadwort, olive, gentian, dogbone, milkweed, and morning-glory families] Semeistva: zontichnye, kizilovye, grushankovye, vereskovye, pervotsvetnye, svinchatkovye, maslinovye, gorechavkovye, kutrovye, lastovnevye, v'iunkovye. 1959. 222 p. Vol.9. [The mint and nightshade families] Semeistva: gubotsvetnye i pasленovye. 1960. 213 p. (MIRA 13:7)
(Kirghizistan--Dicotyledons)

NIKITINA, Ye.V.; AYDAROVA, R.A.; UBUKEYEVA, A.U.; FILATOVA, N.S.; SUDNITSYNA, I.G.; TKACHENKO, V.I.; SHARASHOVA, V.S.; KASHCHENKO, L.I.; SHPOTA, Ye.I.; VVEDENSKIY, A.I., nauchnyy red.; VYKHODTSEV, I.V., otv. red.; SORONBAYEVA, N.V., red. izd-va; ANOKHINA, M.G., tekhn. red.

[Flora of the Kirghiz S.S.R.; classification key of the plants of the Kirghiz S.S.R.]Flora Kirgizskoi SSSR; opredelitel' rastenii Kirgizskoi SSSR. Sost. E.V.Nikitina i dr. Nauchn. red. A.I.Vvedenskii. Frunze, Izd-vo Akad.nauk Kirgizskoi SSR. Vol.10. [Families: Cuscutaceae, Polemoniaceae, Boraginaceae, Verbenaceae, Scrophulariaceae, Bignoniaceae, Orobanchaceae, Lentibulariaceae, Plantaginaceae, Rubiaceae, Caprifoliaceae, Adoxaceae, Valerianaceae, Morinaceae, Dipsacaceae, Cucurbitaceae, Campanulaceae, Lobeliaceae] Semeistva: Povilikovye, Siniukhovye, Burachnikovye, Verbenovye, Norichnikovye, Bignonievye, Zarazikhovye, Puzyrchatkovye, Podorozhnikovye, Marenovye, Zhimolostnye, Adoksovye, Valerianovye, Morinovye, Vorsiankovye, Tykvennye, Kolokol'chikovye, Lobelievye. 1962. 387 p. (MIRA 15:9)
(Kirghizistan--Dicotyledons)

LEBEDEVA, Lyudmila Petrovna; SHARASHOVA, V.S., otv. red.; SORONBAYEVA, N.V., red.izd-va; POPOVA, M.G., tekhn. red.

[Barley, beardgrass and mixed grass formations of mountainous eastern Fergana] IAchmennaia, borodachovaia i raznotravno-zlakovaia formatsii gornoi Vostochnoi Fergany; po materialam statsionarnykh issledovanii. Frunze, Izd-vo AN Kirg.SSR, 1963. 136 p. (MIRA 16:8)
(Fergana--Pastures and meadows)

SHARATSKIY, I.V.

Lumbering and woodworking industry of the Novosibirsk Economic Council. Biul.tekh.-ekon.inform. no.10:78-79 '61. (MIRA 14:10)
(Novosibirsk Province--Lumbering)
(Novosibirsk Province--Woodworking industries)

SHARAUKHOVA, K.

"Determination of steroid hormones in biological fluids" by N.A. IUdaev. Reviewed by K. Sharaukhova. Vop. med. khim. 8 no.3:332 My-Je '62. (MIRA 15:7)

(STEROID HORMONES) (IUDAEV, N.A.)

SHARAVIN, A.T.; PERSHANOV, N.A.

Reorganization of a drying plant. Der.prom. 5 no.2:22-23 F '56.
(MLRA 9:5)

1. Pestovskiy lesozavod (for Sharavin); 2. TSentral'nyy nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki drevesiny (for Pershanov).

(Lumber--Drying) (Drying apparatus)

SHARAVIN, S.V.

Results of boring holes with hydraulic-percussion machinery in iron-ore deposits. Razved. i okh. nedr 30 no.12:27-30 D '64. (MIRA 18:4)

1. Tashtagol'skaya geologorazvedochnaya partiya.

1c

L 20214-65 EWT(1)/EWG(k)/T/EWA(h) Pz-6/Peb IJP(c)/SSD/AFWL/ASD(a)-5/
RAEM(a)/ESD(gs)/ESD(t) AT S/0048/64/028/006/1010/1016
ACCESSION NR: AP4041367

AUTHOR: Inyutkin,A.; Kolosov,Ye.; Osnach,L.; Khabarova,V.; Khabarov,E.; Sharavskiy,P.

TITLE: Some investigations of solid solutions based on $A^{III}B^{V}$ and $A^{II}B^{VI}$ type compounds /Report, Third All-Union Conference on Semiconductor Compounds held in Kishinev 16-21 Sep 1963/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.6, 1964, 1010-1016

TOPIC TAGS: semiconductor, semiconductor research, solid solution, indium arsenide, indium antimonide, mercury telluride, cadmium telluride

ABSTRACT: Until recently the principal semiconductor materials were elementary, i.e. Ge and Si, and transition to even binary compounds appeared to be fraught with theoretical and practical difficulties. Now binary compounds are being increasingly used and it seems worthwhile to extend the search for new semiconductors to include ternary and quaternary compounds. Accordingly, the present investigation was devoted to InAs-HgTe and InSb-CdTe solid solutions; the choice was dictated by the consideration that whereas in the InAs-HgTe system the mutual solubility range is un-

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limited, in the InSb-CdTe system solid solutions form only in the range to 5.5% Cd-Te content. Since the corresponding element belong to the same periodic table groups (Groups III and V, and II and VI), it was felt that comparative investigation of the solutions might yield information on the mechanism of formation of solid solutions. In view of the fact that, whereas the other solution components have by now been fairly thoroughly studied, comparatively little data was available on HgTe: as a preliminary step the physical properties of HgTe were studied; by varying the proportions of Hg and Te it proved feasible to obtain either p-type or n-type specimens. The results of measurements of the electric properties of HgTe (Hall constant, transverse and longitudinal Nernst-Ettinghausen effect, conductivity and thermo-emf as a function of temperature and composition) are presented in figures. A table gives the values of the Hall constant and the carrier mobility. Then analogous data were obtained for the above mentioned solid solutions; these are also presented in the form of curves. Some tentative, preliminary inferences are drawn regarding the band structure of the investigated solid solutions. Development of more reliable and useful theoretical constructs must await the accumulation of further and more extensive experimental data on these and other systems. "In conclusion, we express our deep gratitude to Prof.N.A.Goryunova and to other members of the staff of Leningrad Physico-technical Institute, particularly D.N.Tret'yakov and O.V.Emel'yanenko,

L 20214-65
ACCESSION NR: AP4041367

who were of great help in organizing the research and who actively participated in discussion of the results." Orig.art.has: 10 figures and 1 table.

ASSOCIATION: Kafedra fiziki Leningradskogo inzhenerno-stroitel'nogo instituta (Physics Department, Leningrad Construction Engineering Institute)

SUBMITTED: 00 ENCL: 00

SUB CODE: SS,IC REF SOV: 007 OTHER:005

Card 3/3

SHARAVSKIY, F. V.

PHASE I BOOK EXPLOITATION SOV/5058

Bogoroditskiy, N. P., and F. V. Pasynkov, eds.

Spravochnik po elektrotekhnicheskim materialam. V dvukh tomakh. T. 2: Magnitnyye, provodnikovyye, poluprovodnikovyye i drugiye materialy (Handbook on Electrical Engineering Materials. In two volumes. Vol. 2: Magnetic, Conducting, Semiconducting, and Other Materials) Moscow, Gosenergoizdat, 1960. 511 p. Errata slip inserted. 30,000 copies printed.

Eds. of Handbook: N. A. Andrianov, N. P. Bogoroditskiy, Zds. (This Vol.): N. P. Bogoroditskiy and V. V. Pasynkov; Tech. Ed.: Ya. M. Soboleva.

PURPOSE: This handbook is intended for technical personnel of electrical and radio engineering establishments, power stations and substations, laboratories, and scientific research institutes.

COVERAGE: This volume of the handbook contains basic information on magnetic materials, metallic conductors, electrical carbon, and important electrolytes used in modern ferroelectric, and piezoelectric materials. It describes characteristics of semiconductor, and insulating materials. It does not include authors thank the following which were covered in Volume I. The Dielectrics and scientists associated with the Department of Khimicheskiy Institute imeni V. I. Ul'yanova (Lenina) [Leningrad Elektrotekhnical Institute imeni V. I. Ul'yanov (Lenin)], especially Ya. I. Panov, R. K. Manakov and Candidates of Technical Sciences, and O. I. Panteleyev and K. P. Voylochnikov, assistants, and O. M. Korniev for their assistance. References accompany each part.

Handbook on Electrical Engineering (Cont.) SOV/5058

Card 13/19

S/194/61/000/009/031/053
D249/D302

9.2150
AUTHOR: Sharavskiy, P.V. and Kalabin, M.M.

TITLE: Investigating surface conductivity of cuprous-oxide rectifiers

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 9, 1961, 13, anstract 9 D81 (V sb. XVIII Nauchn. konferentsiya prof.-prepodavat. sostava Leningr. inzh.-stroit. in-ta s uchastiyem predstavit. stroit. organizatsiy predpriyatiy i nauchno-tekhn. o.-v. Dokl. sektsiy soprotivl. materialov, matem. i teor. mekhan. fiz., khimii i elektrotekhn. L., 1960, 60-64)

TEXT: Using different external conditions, characteristics are investigated of 7 mm diameter cuprous-oxide rectifiers that were subjected to different chemical treatments during their manufacture. It is shown that each process applied during the industrial chemical

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S/194/61/000/009/031/053
D249/D302

Investigating surface...

treatment influences in a definite way the surface conductivity. A change in the chemical treatment results in a deterioration of the rectifier reverse characteristics. This can be explained in that the impurities which are left on the surface create additional surface levels. The main factor affecting the surface conductivity which in turn influences reverse characteristics of a cuprous-oxide rectifier is the conduction channel on the electron hole junction. The surface conductivity may also affect the forward characteristics if the top electrode is made considerably smaller than the free surface area of the cuprous-oxide. 3 references. [Abstracter's note: Complete translation]

Card 2/2

KALABIN, M.M.; SHARAVSKIY, P.V.

Surface conductivity of cuprous oxide rectifiers. Fiz. tver. tela 2 no.5:857-862 My '60. (MIRA 13:10)

1. Kafedra fiziki Leningradskogo inzhenerno-stroitel'nogo instituta.
(Copper oxide) (Semiconductors)

SHARAVSKIY, P V

82536

S/181/60/002/007/011/042
B006/B070

24.7700

AUTHORS: Geller, I. Kh., Sharavskiy, P. V.

TITLE: Electric Parameters of Some Types of Selenium Rectifiers

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 7, pp. 1441-1449

TEXT: Selenium rectifiers derive their rectifying properties from the formation of a p-n-junction. Cadmium sulfide or selenide serve as an n-type semiconductor. The purpose of the present work was to investigate how the properties of rectifiers are affected when the technological process of their manufacture is altered. For this purpose, the following rectifiers were investigated: 1) The ordinary mass-produced rectifiers of the type ABC (BCA) (AVS (VSA)) whose manufacture is described in Refs. 3-5. They have cadmium selenide as n-type semiconductor, which is formed as a result of the interaction of the cadmium of the upper electrode with the sulfur sputtered on selenium. The permissible back voltage for a rectifier plate of this type is 18 - 26 v. 2) The so-called "cadmiumized" rectifier whose selenium film is covered with a cadmium

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S/181/60/002/007/011/042
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Electric Parameters of Some Types of Selenium Rectifiers

film. The permissible back voltage is ≧26 v. 3) Thallium-sulfur rectifiers whose upper electrode contains 0.015 - 0.02% of thallium. These rectifiers, besides having a high permissible back voltage (≧26 v), possess also a lower resistance in forward direction, thus making it possible to increase the permissible current by 100% per plate. 4) Selenium rectifiers of the type TBC (TVS) with a reversed order of their layers. These rectifiers have the p-n junction not under the upper electrode, but on the base layer. They have cadmium selenide as n-type semiconductor, which is formed by the interaction with sulfur of the cadmium film applied to a thin aluminum backing. This type is distinguished by a specially high back voltage (some of them work with a back voltage of 50-60 v). The working area of all types was $1cm^2$, except TVS for which it was $2.36\ cm^2$. The data of measurement all refer to an area of $1cm^2$. At first, the measurements of the current-voltage characteristics are described. Table 1 gives the measured values of resistance of four types of rectifiers for 0.3 and 30 v, as well as the maximum values. Table 2 shows the fall of potential in forward direction. Fig. 1 shows the volt-ohm characteristics of the rectifiers. All types

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Electric Parameters of Some Types of Selenium Rectifiers

show an exponential fall of resistance with increasing potential; only the TVS type shows a weak maximum for small potentials and then a linear fall. In the following four diagrams, $\ln R = f(U)$ is shown for the four types investigated and for three different functions of U (three different abscissae). These diagrams are discussed in detail. AVS and thallium rectifiers show direct proportionality between ln R and U, the cadmium rectifiers between ln R and $\sqrt{U}$, and the TVS rectifiers between ln R and U^2. Later, the results of capacity measurements are discussed. The mean effective thicknesses of the p-n junctions for different shift voltages U are given in Table 3. The "cadmiumized" rectifiers show the thinnest junction ($3.68 \cdot 10^{-5}$cm). Fig. 6 shows $1/C^2 = f(U)$ (C-capacity); Fig. 7 shows the distribution of impurity centers of the thickness of the p-n junction, and Fig. 8 shows the temperature dependence of the latter. Finally, some additional investigations on the characteristics of semiconductors are mentioned, and their results are collected in Tables 4-6. Frenkel' is mentioned. There are 8 figures, 6 tables, and 9 references: 4 Soviet and 5 German.

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82536

Electric Parameters of Some Types of Selenium Rectifiers

S/181/60/002/007/011/042
B006/B070

ASSOCIATION: Leningradskiy inzhenerno-stroitel'nyy institut (Leningrad Construction Engineering Institute)

SUBMITTED: January 15, 1960

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Card 4/4

SHARAVSKIY, P.V.

S/181/60/002/007/018/042
B006/B070

AUTHORS: Senderikhin, I. M., Sharavskiy, P. V.

TITLE: Investigation of the Characteristics of Germanium Diodes

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 7, pp. 1497-1505

TEXT: The authors present the results of measurement of the static, and impulse characteristics of the thermal resistor in the blocking direction for a large number of germanium rectifiers. The objects of investigation were thermal resistors of the types ММТ-1 (MMT-1) and ММТ-4 (MMT-4); as well as germanium rectifiers of the types ДГЦ-1 (DGTs-1), ДГЦ-4 (DGTs-4), ДГЦ-5 (DGTs-5), ДГЦ-6 (DGTs-6), ДГЦ-7 (DGTs-7), ДГЦ-8 (DGTs-8), ДГЦ-12 (DGTs-12), ДГЦ-13 (DGTs-13), ДГЦ-21 (DGTs-21), ДГЦ-23 (DGTs-23), ДГЦ-24 (DGTs-24), ДГЦ-27 (DGTs-27), Д2Б (D2B), and Д2Д (D2D). Altogether, 6 resistors and 22 rectifiers were investigated. For the static current-voltage characteristics a pentode tube with saturated anode characteristic was used. The characteristics were taken for different temperatures. Fig. 2 shows the

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Investigation of the Characteristics of Germanium Diodes

S/181/60/002/007/018/042
B006/B070

families of static characteristics of: a) an MMT-1 resistor, b) a point contact diode of the type DGTs-5, and c) a planar diode of the type DGTs-23. The peaks of these curves are connected by a curve. Fig. 3 shows the peak parameters (voltage, current, power) of MMT-1 and DGTs-5. The following are to be observed about the peak characteristics: The peak voltage depends strongly on the temperature of the medium; the peak power of resistors increases with decrease in temperature, while that of the diode falls. In the following, predominantly the point contact rectifiers are investigated, since they show a greater stability in the falling range of the characteristic. Fig. 4 shows a static characteristic of DGTs-5 rectifiers for a high reverse current. Fig. 5 shows the effect of a large convectional heat loss from the sample (by blowing of air). It is seen that for a large heat loss the peaks of the characteristics shift to larger currents and voltages. Fig. 6 shows the static characteristics for a large heat loss in the metal. By a comparison of air-cooled samples (Fig. 2b) it is seen that a change of the temperature gradient in the sample does not affect the course of the characteristic. The peak parameters of the diodes studied are given in a Table. The

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Investigation of the Characteristics of Germanium Diodes

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B006/B070

static characteristics of the DGTs-5 point contact diode in forward direction are shown in Fig. 7. To eliminate the heating effects, dynamic current-voltage characteristics were also taken. The results of the investigation are graphically represented. Fig. 8 shows resistance of the thermal resistor MMT-1 for a pulse duration τ of 1 µsec (duration T of the impulse effect: 1 msec) at 23, 50, and 79°C (straight line). Fig. 9 shows the static and impulse characteristics of a DGTs-27 diode for τ = 1 and 10 µsec, T = 20 msec. Fig. 10 gives a comparison of static and six impulse characteristics of DGTs-12 for different τ and T at 20°C, and Fig. 11 compares the static and impulse characteristics at 22, 50, and 70°C. G. M. Avak'yants and B. I. Davydov are mentioned. There are 11 figures, 1 table, and 14 references: 5 Soviet, 5 US, and 3 British.

ASSOCIATION: Leningradskiy Inzhenerno-stroitel'nyy institut Kafedra fiziki (Leningrad Construction Engineering Institute, Chair of Physics)

SUBMITTED July 22, 1959

Card 3/3

S/194/62/000/003/040/066
D201/D301

/ 2150

AUTHORS: Sharavskiy, P. V. and Geller, I. Kh.

TITLE: The influence of thallium on the electrical properties of selenium rectifiers

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 3, 1962, abstract 3-4-24d (V sb. 'Fizika i khimiya' L., 1961, 9-13)

TEXT: An investigation into the effect of Tl on electric conductivity of Se and on the properties of selenium rectifiers. It is shown that the increase in the resistivity of Se, containing halide impurities, becomes less by 2 orders of magnitude as compared with that of pure Se, when Tl is introduced. Selenium rectifiers were prepared into which Tl was introduced, either into the upper electrode consisting of a Sn + Cd alloy or under the upper electrode in a quantity of up to 0.1% into a Se layer $\sim 10^{-3}$ cm thick. As compared with industrially manufactured rectifiers, the above rectifiers exhibit a smaller resistance in the forward direction, which permits

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an increase of 2 to 3 times of their load current. By means of depositing a layer of Tl 10^{-4} cm thick under the layer of Se and with a bismuth upper electrode rectifiers were obtained having characteristics practically the same as those of ABC (AVS) rectifiers. The good rectification properties exhibited by the above samples are assumed to be due to the formation of a Tl_2Se layer with an electron type of conductivity. 5 references. [Abstracter's note: Complete translation.]

Card 2/2

S/137/61/000/010/020/056
A006/A101

AUTHORS: Goryunova, N.A., Averkiyeva, G.K., Sharavskiy, P.V., Tovpentsev, Yu.K.

TITLE: Investigation of quaternary alloys based on indium antimonide and cadmium telluride

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 10, 1961, 44, abstract 10G344 (V sb. "Fizika i khimiya", Leningrad, 1961, 22 - 25)

TEXT: The authors present brief information on investigating a pseudo-binary section CdTe-InSb of the quaternary Cd-Te-In-Sb system. The alloys investigated were prepared by direct fusion of the initial materials in evacuated quartz ampoules and were subjected to metallographical analysis. Simultaneously microhardness was determined. It was established that in the range of 95 - 100% InSb concentration there is a homogeneous area with ZnS structure. In the other points of the system two phases were revealed whose microhardness exceeds that of the initial components - CdTe and InSb.

A. Nashel'skiy

[Abstracter's note: Complete translation]

Card 1/1

SHARAVSKIY, P.V., doktor fiz.-mat. nauk, prof., otv. red.

[Physics; reports of the 20th Scientific Conference]Fizika; doklady XX Nauchnoi konferentsii. Leningrad, 1962. 77 p. (MIRA 16:2)

1. Leningrad. Inzhenerno-stroitel'nyy institut. Nauchnaya konferentsiya.

(Physics)

S/058/63/000/001/085/120
A160/A101

24,2600

AUTHORS: Khabarov, E. N., Sharavskiy, P. V.

TITLE: The problem of measuring the galvanomagnetic and thermomagnetic properties of semiconductors

PERIODICAL: Referativnyy zhurnal, Fizika, no. 1, 1963, 69, abstract 1E478 (In collection: "Fizika". L., 1962, 37 - 39)

TEXT: A description is given of an installation for measuring the Hall's emf, the conductivity and the thermo-emf in the temperature range from 80 to 700°K. The errors connected with an inaccurate measuring and control of the magnetic field intensity and of the distance between the probes were decreased. Hall's constant, the conductivity and the thermo-emf of a number of samples of the InSb·CdTe solid solution were measured.

E. Smolyarenko

[Abstracter's note: Complete translation]

Card 1/1

S/275/63/000/001/020/035
D413/D308

AUTHOR: Geller, I. Kh. and Sharavskiy, P. V.

TITLE: On the effect of thallium doping on the forward branch of the voltage-current characteristic of selenium rectifiers

PERIODICAL: Referativnyy zhurnal, Elektronika i yeye primeneniye, no. 1, 1963, 19, abstract 1B 128 (In collection: Fizika, L., 1962, 42-45)

TEXT: The authors have investigated the forward branches of the voltage-current characteristics of selenium rectifiers prepared with the upper electrode doped with thallium. The reduction in forward resistance of this rectifier as compared with the normal selenium rectifier is explained by the injection of nonfundamental carriers through the electron-hole transition. 2 references. [Abstracter's note: Complete translation.]

Card 1/1

L 32437-65 EWT(m)/T/EWP(t)/EWP(b) IJP(c) RDW/JD

ACCESSION NR: AR5004781 S/0137/64/000/010/I003/I003

SOURCE: Ref. zh. Metallurgiya, Abs. 10I15

AUTHOR: Kleshchinskiy, L. I.; Khabarov, E. N.; Sharavskiy, P. V.

TITLE: Determination of the boundary for the existence of solid solutions in the indium-arsenic-cadmium-tellurium system

CITED SOURCE: Sb. Fizika Dokl. na 22 Nauchn. konferentsii. Leningr. inzh.-stroit. in-t. L., 1964, 12-15

TOPIC TAGS: solid solution, indium, arsenic, cadmium, tellurium, microscopic analysis, X-ray analysis, microhardness

TRANSLATION: With refinement of methods for microscopic and X-ray analyses and measurements of the microhardness of the boundary of the region of indium-arsenic, cadmium-tellurium solid solutions, it was shown that the region of concentrations for the determination of the exact boundary of solid solutions lies within the limits of 20% cadmium-tellurium. Z. Rogachevskaya.

SUB CODE: MM ENCL: 00

Card 1/1

On the dissociation of Hg in HgTe. V. A. Khabarova, P. V. Sharavskiy.

On the nature of solid solutions of CdTe in InSb. E. N. Khabarov, P. V. Sharavskiy.

Preparation and electrical properties of solid solutions of the system HgTe-CdTe. Yu. K. Tovpentsev, P. N. Sharavskiy.

Some physical properties of HgTe. L. A. Osnach, P. V. Sharavskiy. (Presented by P. V. Sharavskiy--25 minutes).

Report presented at the 3rd National Conference on Semiconductor Compounds, Kishinev, 16-21 Sept 1963

Complex apparatus for the production of highly volatile semiconducting compounds. Ye. Kolosov. (Leningrad Institute of Engineering Materials).

On solid solutions of the system HgTe-InAs. L. A. Osnach, P. V. Sharavskiy.

On interatomic forces of bonds in solid solutions of HgTe-InAs. D. I. Inyutkin, P. V. Sharavskiy.

Report presented at the 3rd National Conference on Semiconductor Compounds, Kishinev, 16-21 Sept 1963

KHABAROVA, V.A.; KHABAROV, E.N.; SHARAVSKIY, P.V.

Determining the saturation point of CdTe solution in InSb. Izv. vys. ucheb. zav.; fiz. no.6:62-64 '63. (MIRA 17:2)

1. Leningradskiy inzhenerno-stroitel'nyy institut.

KHABAROV, E.N.; SHARAVSKIY, I.V.

Properties of saturated solid solutions of InSb - CdTe. Dokl. AN SSSR 155 no. 3:542-544 Mr '64. (MIRA 17:5)

1. Leningradskiy inzhenerno-stroitel'nyy institut. Predstavleno akademikom B.P.Konstantinovym.

L 10886-65 EWT(m)/EWP(b) ASD(m)-3/AFWL/ESD(gs)/AFMDC/SSD/ESD(t)/BSD/AS(mp)-2
RDW/JD
ACCESSION NR: AR4046545 S/0058/64/000/008/E058/E059

SOURCE: Ref. zh. Fizika, Abs. 8E454

AUTHORS: Sharavskiy, P. V.; Khabarova, V. A.

TITLE: Hall effect in mercury telluride annealed in a neutral atmosphere

CITED SOURCE: Sb. Fizika. Dokl. na 22 Nauchn. konferentsii. Leningr. inzh.-stroit. in-t. L., 1964, 5-8

TOPIC TAGS: Hall effect, mercury telluride, annealing, stoichiometry, impurity conductivity, intrinsic conductivity, electronic conductivity

TRANSLATION: An investigation was made of the effect of annealing on the properties of HgTe samples prepared by fusing the main components with addition of super-stoichiometric mercury. Annealing was

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L 10886-65
ACCESSION NR: AR4046545

made in an N_2 atmosphere at normal pressure. The values of the Hall constant (R_H), the electric conductivity, and the Hall mobility of the samples was determined after annealing. It is found that annealing at 150C produces a gradual change in the electric parameters of the sample in the region of impurity conductivity (low temperatures). Annealing at 200C causes a sharp change in these parameters. However, in the region of the intrinsic conductivity (high temperatures) R_H is practically unchanged by annealing. It is also shown that the occurrence of predominantly electronic conductivity apparently indicates the diffusion of mercury into the HgTe lattice. The source of mercury may be micro-inclusions due to the excess mercury. F. Nad'.

SUB CODE: SS ENCL: 00

Card 2/2

L 64515-65 EWA(c)/EWT(m)/EWG(m)/EWP(b)/T/EWP(t) IJP(c) RDW/JD

ACCESSION NR: AR5005456 S/0275/64/000/012/B007/B007
539.293:546.651'682'24'48

SOURCE: Ref. zh. Elektronika i yeye primeneniye. Svodnyy tom, Abs. 12B40

27
B

AUTHOR: Kleshchinskiy, L. I.; Khabarov, E. N.; Sharavskiy, P. V.

TITLE: Determining the solid-solution limit in InAsCdTe

CITED SOURCE: Sb. Fizika. Dokl. na 22 Nauchn. konferentsii. Leningr. inzh.-stroit. in-t, L., 1964, 12-15

TOPIC TAGS: solid solution, InAsCdTe solid solution

TRANSLATION: A complex investigation of InAs-CdTe solid solutions was conducted for determining the limit of CdTe solubility; the investigation was intended for verifying the assumption that the cause of limited solubility of CdTe in InSb and InAs lies in the degree of dissociation of CdTe due to the polarizability of the solid-solution medium. Specimens of ten compositions, in steps of 5 mol.%, were prepared from semiconductor-purity materials. Microstructure, microhardness, and x-ray diffraction studies revealed that the limit of solubility of CdTe in InAs lies approximately at 20% CdTe. Bibliography: 4 titles.

SUB CODE: SS ENCL: 00

Card 1/1

INYUTKIN, A.; KOLOSOV, Ye.; OSNACH, L.; KHABAROVA, V.; KHABAROV, E.; SHARAVSKIY, P.

Studies of solid solutions on the basis of compounds of the types $A^{III}B^{V}$ and $A^{II}B^{VI}$. Izv. AN SSSR. Ser. fiz. 28 no.6:1010-1016 Je '64. (MIRA 17:7)

1. Kafedra fiziki Leningradskogo inzhenerno-stroitel'nogo instituta.

L 21872-65 EWT(m)/EWP(t)/EWP(b) IJP(c)/BSD/AFWL/ASD(a)-5/SSD/ESD(t)/AFETR/
RAEM(a)/RAEM(c)/ESD(gs) RDW/JD
ACCESSION NR: AP4025110 S/0020/64/155/003/0542/0544

B

AUTHOR: Khabarov, E. N.; Sharavskiy, P. V.

TITLE: Investigation of the properties of InSb--CdTe limited solid solutions

SOURCE: AN SSSR. Doklady, v. 155, no. 3, 1964, 543-544

TOPIC TAGS: indium antimonide, cadmium telluride, solid solution, electric property, physical property, semiconductor, conductivity, conductivity temperature dependence, Hall coefficient, differential thermal emf, Hall mobility, transverse Nernst Ettingshausen effect, longitudinal Nernst Ettingshausen effect, resistivity, magnetic field, microhardness, expansion coefficient

ABSTRACT: The electric properties of InSb-CdTe solid solutions containing 1-5% CdTe (the limit of CdTe solubility in InSb is 5.5%) were investigated. The conductivity, the Hall coefficient, differential thermal emf, Hall mobility, transverse and longitudinal Nernst-Ettingshausen effects, and change of specific resistance in a magnetic field and their dependence on temperature in the 77-700K temperature range were determined (Figs. 1-3). In compositions containing up to 3% CdTe the character of the change in physical values with change in temperature

Card 1/3

has a definite relationship to the composition of the solid solution; from 3-5.5% the relationship breaks down. In samples containing up to 3% CdTe the microhardness increases to a maximum, the thermal coefficient of expansion decreases to a minimum, the conductivity decreases and mobility decreases and their semiconductor-type dependence on temperature becomes clearer. The Hall constant is slightly dependent on the composition of the solid solution, increasing with higher temperature, the increase being greater the higher the CdTe concentration. The thermal emf-temperature relationship is practically independent of composition. The resistance in a magnetic field shows almost no change up to 6000 oersteds. The longitudinal Nernst-Ettingshausen effect becomes measurable only at 3% CdTe. The positive value of the transverse Nernst-Ettingshausen effect and its increase with temperature increase indicate a probability of the existence of an additional zone with high density [of electrons or holes] in the depth of the conductivity zone of the solid solutions. "In conclusion we consider it our pleasant obligation to express appreciation to Prof. N. A. Goryunov and also to O. V. Yemel'yanenko and D. N. Tret'yakov for organizing and conducting a series of valuable discussions during the course of our work." Orig. art. has: 3 figures.

L 21872-65
ACCESSION NR: AP4025110

ASSOCIATION: Leningradskiy inzhenerno-stroitel'nyy institut(Leningrad Engineering Construction Institute)

SUBMITTED: 15Oct63 ENCL: 02 SUB CODE: SS, IC

NO REF SOV: 010 OTHER: 000

Card 3/5

L 34124-66 EWT(m)/T/EWP(t)/ETI IJP(c) RDW/JD/JG/WH

ACC NR: AR6017259 SOURCE CODE: UR/0058/65/000/012/E041/E041

AUTHOR: Inyutkin, A. I.; Sharavskiy, P. V.

TITLE: Concerning the short-range order parameter of mercury telluride

SOURCE: Ref. zh. Fizika, Abs. 12E316

REF SOURCE: Sb. Fizika. Dokl. k XXIII Nauch. konferentsii Leningr. inzh.-stroit. in-ta. L., 1965, 35-36

TOPIC TAGS: mercury compound, telluride, x ray diffraction study, crystal lattice structure

ABSTRACT: HgTe with different amounts of excess Hg was synthesized. X ray diffraction tests have shown that with increasing amount of excess Hg, up to 15%, the short-range order parameter on the first coordination sphere α_1 increases strongly. Further increase of the Hg content causes a decrease in α_1. Annealing of the obtained samples at 400° (1 hour) also increases α_1. A longer annealing leads to a decrease of α_1, owing to the decomposition of the substance into its components. A. Rabin'kin. [Translation of abstract]

SUB CODE: 20, 07

Card 1/1

L 2207-66 EWT(1)/T IJP(c) GG

ACCESSION NR: AP5017339 UR/0181/65/007/007/2247/2249

AUTHOR: Kolosov, Ye. Ye.; Sharavskiy, P. V.

TITLE: On the thermal emf and thermal conductivity of mercury telluride with different impurity contents

SOURCE: Fizika tverdogo tela, v. 7, no. 7, 1965, 2247-2249

TOPIC TAGS: mercury compound, telluride, thermal emf, thermal conduction, impurity conductivity

ABSTRACT: The authors present the results of an investigation of the dependence of the thermal emf and thermal conductivity of p-type HgTe samples with different impurity contents in the interval from 140 to 340K for the thermal emf and from 90 to 430K for the thermal conductivity. Seven samples whose electric characteristics were described by the authors earlier (collection "Fizika," p. 31, 1965) were investigated. The measurement apparatus was described by D. Kh. Amirkhanova and R. I. Bashirov (FTT v. 2, 5097, 1960). The thermal conductivity was measured by an absolute stationary method. The measurements were made in vacuum of ~10^{-4} mm Hg. The thermal emf was measured simultaneously with the conductivity. The measured thermal emfs of the individual samples agreed with those expected of material of p-type. The thermal conductivity was found to be determined principally by thermal

Card 1/2

L 2207-66

ACCESSION NR: AP5017339

6

conductivity of the crystal lattice, and independent of the concentration of the acceptor impurities in the investigated interval of concentrations. The thermal resistance increases linearly with the temperature in the interval 90--370K, after which its growth slows down, probably because of the appearance of a new heat transfer mechanism. "The authors thank Ye. D. Devyatkov for a discussion of this work." Orig. art. has: 2 figures.

44,55

ASSOCIATION: Leningradskiy inzhenerno-stroitel'nyy institut (Leningrad Construction Engineering Institute)

44,55

SUBMITTED: 26Feb65 ENCL: 00 SUB CODE: SS, TD

NR REF SOV: 006 OTHER: 004

Card 2/2 DP

L 33602-66 EWT(m)/EWP(t)/ETI IJP(c) JD/RDW

ACC NR: AR6016232 SOURCE CODE: UR/0058/65/000/011/E065/E066

AUTHOR: Khabarova, V. A.; Sharavskiy, P. V.; Kuz'mina, G. A.

TITLE: Some electric properties of n-type mercury telluride

SOURCE: Ref. zh. Fizika, Abs. 11E516

REF SOURCE: Sb. Fizika, Dokl. k XXIII Nauchn. konferentsii Leningr. inzh.-stroit. in-ta. L., 1965, 9-18

TOPIC TAGS: mercury compound, telluride, stoichiometric mixture, annealing, temperature dependence, Nernst effect, Ettingshausen effect, Hall constant, electric property

ABSTRACT: To obtain n-HgTe, a direct synthesis procedure was used in conjunction with vibration, wherein the HgTe was annealed in the presence of Hg vapor. The HgTe single cyrstals were prepared by the Bridgman method. The initial substances were taken as follows: 1) in amounts corresponding to the stoichiometric formula HgTe; these samples remained of the p-type during the course of annealing; 2) with excess Hg; these samples became n-type during the annealing. The annealing was carried out in a stream of nitrogen vapor at different temperatures. After every 2 - 4 hours of annealing, the temperature dependence of the electric conductivity, Hall coefficient, thermal electric power, and longitudinal and transverse Nernst-Ettingshausen effect were measured. It was observed that annealing of samples at a temperature below 200C changes their electric properties, which are recovered in time. Annealing at temperatures above 200C causes irreversible changes of all the electric parameters. These changes remain for many months. V. Kharitonov. [Translation of abstract]

SUB CODE: 20

Card 1/1

EWT(1)/EWA(m)/EWP(w)/EWP(t)/ETI IJP(c) AT/JD/JG

ACC NR: AM6019711 SOURCE CODE: UR/0275/66/000/002/B008/B009

54
53

AUTHOR: Mimbarova, V. A.; Sharavskiy, P. V.; Kuz'mina, G. A

TITLE: Certain electrical properties of telluride of mercury for electron conductivity

SOURCE: Ref zh. Elektronika i yeye primeneniye, Abs. 2B65

REF SOURCE: Sb. Fizika. Dokl. k XXIII Nauchn. konferentsii Leningr. inzh.-stroit. in-ta, L., 1965, 9-13

TOPIC TAGS: inorganic anion, electric conductivity, vapor plating, telluride, annealing, Ettinghausen effect, Nernst effect, Hall coefficient, thermal electromotive force

ABSTRACT: A conventional method, whereby HgTe is annealed with no mercury vapors present, was used to obtain HgTe with electron conductivity. The Bridgeman method was used to prepare the HgTe crystals. The original substances were taken: (1) in amounts corresponding to the stoichiometric formula for HgTe, samples of which retained p-type conductivity during the annealing process; (2) with an excess of mercury. These samples acquired n-type conductivity during the annealing process. The annealing was done in a stream of nitrogen vapor at various temperatures. The temperature dependence of the conductivity, the Hall coefficient, the thermal

Card 1/2 UDC: 539.293:621.315.592:546.24'49

electromotive force, and the longitudinal and transverse Nernst-Ettinghausen effect, were measured every 2 to 4 hours of annealing. It was found that annealing the samples at temperatures below 200°C changed their electrical properties, which were restored with the passage of time. Annealing at temperatures above 200°C resulted in irreversible changes in all electrical parameters, which held for many months. The samples obtained by the method described are no different in their physical properties than are samples obtained by the Rodo method an annealing in mercury vapor. 8 illustrations, 1 table. Bibliography of 12 titles. V. Kh. [Translation of abstract]

SUB CODE: 20, 07

ACC NR: AT6017910 SOURCE CODE: UR/0275/66/000/002/B008/B008

AUTHOR: Kolosov, Ye. Ye.; Zharovskiy, P. V.

TITLE: Effect of the magnetic field on certain electrical characteristics of HgTe with various carrier concentrations

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 2B64

REF SOURCE: Sb. Fizika. Dokl. k XXIII Nauchn. konferentsii Leningr. inzh.-stroit. in-ta, L., 1965, 31-34

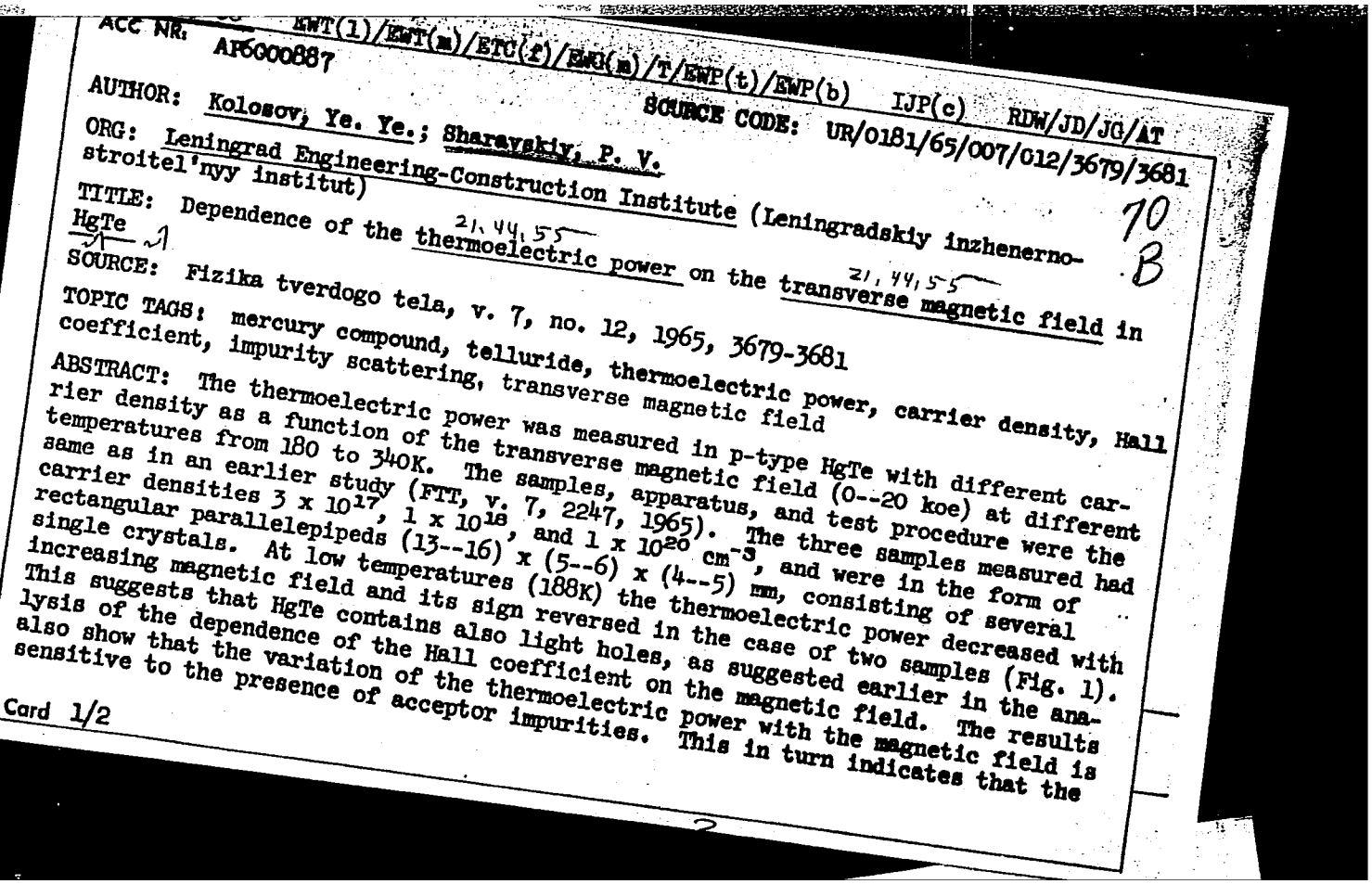
TOPIC TAGS: Hall coefficient, magnetic field, electric conductivity, carrier concentration, electron hole

ABSTRACT: The dependence of the Hall coefficient and the conductivity on the magnetic field in the 4 to 20 kilooersteds interval at temperatures of 294°K and 77°K for p-type specimens with a concentration of 10^{17} to 10^{21} cm^{-3} at 77°K was investigated experimentally. Various concentrations were arrived at by the introduction of an additional quantity of Hg. At 294°K the Hall coefficient does not depend on the carrier concentration and magnetic field, the conductivity decreases with increase in the magnetic field, and the magnetic resistive coefficient increases. At 77°K the conductivity of the specimens with large carrier concentration does not depend on the magnetic field, and decreases with increase in the field so far as the

Card 1/2 UDC: 539,293:546.24'49:537.312.8

other specimens are concerned. In order to explain the results it must be assumed that slow and fast holes exist, and that the electron and hole relaxation times are not dependent on the energy. N. Zh. [Translation of abstract]

SUB CODE: 20, 07



ACC NR: AP6000887 EWT(l)/EWT(m)/ETC(f)/EWG(m)/T/EWP(t)/EWP(b) IJP(c) RDW/JD/JG/AT

SOURCE CODE: UR/0181/65/007/012/3679/3681

AUTHOR: Kolosov, Ye. Ye.; Sharavskiy, P. V.

ORG: Leningrad Engineering-Construction Institute (Leningradskiy inzhenerno-stroitel'nyy institut)

TITLE: Dependence of the thermoelectric power on the transverse magnetic field in HgTe

SOURCE: Fizika tverdogo tela, v. 7, no. 12, 1965, 3679-3681

TOPIC TAGS: mercury compound, telluride, thermoelectric power, carrier density, Hall coefficient, impurity scattering, transverse magnetic field

ABSTRACT: The thermoelectric power was measured in p-type HgTe with different carrier density as a function of the transverse magnetic field (0--20 koe) at different temperatures from 180 to 340K. The samples, apparatus, and test procedure were the same as in an earlier study (FTT, v. 7, 2247, 1965). The three samples measured had carrier densities 3×10^{17}, 1×10^{18}, and 1×10^{20} cm^{-3}, and were in the form of rectangular parallelepipeds (13--16) x (5--6) x (4--5) mm, consisting of several single crystals. At low temperatures (188K) the thermoelectric power decreased with increasing magnetic field and its sign reversed in the case of two samples (Fig. 1). This suggests that HgTe contains also light holes, as suggested earlier in the analysis of the dependence of the Hall coefficient on the magnetic field. The results also show that the variation of the thermoelectric power with the magnetic field is sensitive to the presence of acceptor impurities. This in turn indicates that the

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L 15729-66

ACC NR: AP6000887

gap between the conduction band and the light-hole band is not smaller than the thermal energy corresponding to 188K (~0.016 ev). The results are also in agreement with deductions, obtained by various workers, that a complicated scattering mechanism operates in HgTe. Orig. art. has: 1 figure.

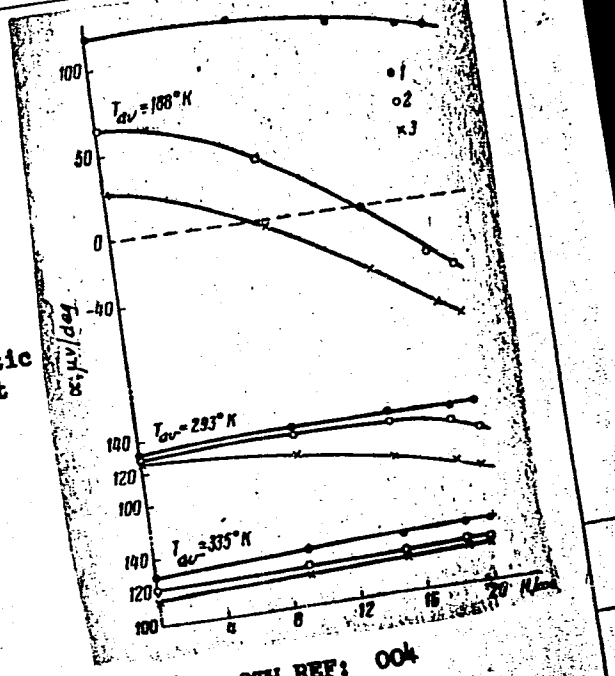

Fig. 1. Thermoelectric power against magnetic field intensity for three samples of HgTe at different temperatures.

SUB CODE: 20/ SUBM DATE: 09Jul65/ ORIG REF: 005/ OTH REF: 004

Card 2/2

L 21395-66 EWT(m)/ETC(f)/EWG(m)/EWP(t) IJP(c) RDW/JD
ACC NR: AP6003796 SOURCE CODE: UR/0181/66/003/001/0240/0241

AUTHORS: Inyutkin, A. I.; Kleshchinskiy, L. I.; Sharavskiy, P. V.

ORG: Leningrad Construction-Engineering Institute (Leningradskiy inzhenerno-stroitel'skiy institut) 44 B

TITLE: Determination of the near-order parameters in chalcogenide of lead by diffuse scattering of x rays

SOURCE: Fizika tverdogo tela, v. 8, no. 1, 1966, 240-241

TOPIC TAGS: lead compound, x ray scattering, sulfide, telluride, selenide, semiconductor property, x ray diffraction analysis, forbidden band

ABSTRACT: The authors attempted to apply to the measurement of near-order parameters of semiconductor materials procedures initially used for metallic alloys. The materials chosen were chalcogenides of lead: PdS, PdSe, and PdTe. The investigations were made with textureless polycrystals, using diffuse-scattering diffraction patterns.

Card 1/3 2

The degree of near order was modified by heat treatment. The parameters themselves were measured by an ionization method using URS-50 apparatus with CuKα radiation. The measurements were made in the range of angles from 4 to 26°. The near-order parameter chosen was the quantity $\alpha_i = 1 - P_i^{AB}/C_B$, where i is the number of the coordination sphere, C_B the concentration of atoms of species B, and P_i^{AB} is the probability that an atom B is located at a distance i from the atom A. The results show the following: 1. A change in the numerical value of the near-order parameter during the first two hours of annealing can be attributed to the elimination of the deformation damage during the preparation of the samples. Subsequent changes of this parameter must be regarded as changes in the ordering process. 2. Whereas the degree of ordering at the first coordination sphere is the same for all three compounds, it is much higher for PbTe at the second sphere. 3. The change in the near-order parameter as a function of the heat treatment is seen most strongly in PbTe. In the latter, the width of the forbidden gap also increases, and this rather unusual circumstance can be attributed to

L 21395-66
ACC NR: AP6003796

an increase in the coupling forces influencing on the degree of ordering of the atoms of PbTe. It is concluded that application of this method to semiconductors yields new data on their properties. Orig. art. has: 1 figure, 1 formula, and 1 table.

SUB CODE: 20/ SUBM DATE: 060ct64/ ORIG REF: 002/ OTH REF: 005

Card 3/3 ULR

SHARAV'YEV, I., rukovoditel' delegatsii gornyakov Kuznetskogo Basseyna.

Cooperation is growing stronger among the miners. Mast.ugl. 2 no.7:5-7 Jl '53. (MLRA 6:6)

(Kuznetsk Basin--Coal miners) (Donets Basin--Coal miners)

SHARAV'YEV, I.; FILATOV, V.

Labor protection in mines. Mast.ugl.5 no.9:6 S '56. (MLRA 9:10)

1.Predsedatel' Kemerovskogo obkoma profsoyuza rabochikh ugol'noy promyshlennosti (for Sharav'ev).2.Zaveduyushchiy otdelom okhrany truda Kemerovskogo obkoma profsoyuzov (for Filatov).
(Coal miners--Diseases and hygiene)

SHARAV'YEV, I.

Keeping pace with our times. Sov.shakht. 10 no.7:5-7 Jl '61.
(MIRA 14:8)

1. Predsedatel' Kemerovskogo obkoma profsoyuza.
(Kuznetsk Basin--Coal mines and mining)
(Trade unions)

[illegible], [illegible].

[illegible], [illegible].- "[illegible] of the Cultivation of Alfalfa [illegible] of Pastures with Perennial Grasses in the Wooded Steppes of the Khangay Zone of the Mongolian People's Republic at the Territory of the "Bogdoyskoye" [illegible]." Moscow Order of Lenin Agricultural Acad imeni K. A. Timiryazev, Moscow, 1957. (Dissertations for Degree of Candidate of Agricultural Sciences)

SO: Knizhnaya Letopis', No. 24, June 1957, Moscow

SHARAY, L.A.

Changes in the reaction of the adrenal cortex following regeneration.
Trudy LSGMI 45:205-211 '58 (MIRA 11:11)

1. Kafedra gistologii i embriologii Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (zav. kafedroy - chlen-korrespondent AMN SSSR, prof. S.I. Shchelkunov).
(ADRENAL CORTEX)

SHARAY, L.A.

Experimental histological study of the changes in the epithelium of the stomach in prolonged regular recurrent thermal stimulation. Arkh. anat. gist. i embr. 41 no.12:44-56 D '61. (MIRA 15:3)

1. Kafedra gistologii i embriologii (zav. - prof. N.I. Grigor'yev, nauchnyy rukovoditel' - chlen-korrespondent AMN SSSR prof. S.I. Shchelkunov) Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta. Adres avtora: Leningrad, ul. Kurakina. 1/3. Leningradskiy sanitarno-gigiyenicheskiy meditsinskiy institut, kafedra gistologii i embriologii.

(STOMACH)
(HEAT--PHYSIOLOGICAL EFFECT)
(EPITHELIUM)

[illegible], M.I.; [illegible] N.[illegible]; LOBANOVSKIY, V.M.

Utilization of mass determination data of the magnetic susceptibility of [illegible] for the purposes of petrological and geochemical studies. [illegible] Kiev.un. no.[illegible] '63. (MIRA 18:[illegible])

KRASOVSKIY, Sergey Sergeyevich; SUBBOTIN, S.I., akademik, otv. red.; BYCHKOVA, R.I., red.; SHARAY, N.Ya., red.

[Methods of extending geophysical studies in geological mapping; as revealed by a study made in the Azov crystalline massiv and its conjugated zone with the Donets Basin] Metodika kompleksirovaniia geofizicheskikh issledovanii pri geologicheskom kartirovanii; na primere Priazovskogo kristallicheskogo massiva i zony sochleneniia ego s Donbassom. Kiev, Naukova dumka, 1965. 142 p. (MIRA 18:12)

1. Akademiya nauk Ukr.SSR (for Subbotin).

L 41588-65 EWT(m)/EPF(c)/EPA(w)-2/EWP(j)/T Pc-4/Pab-10/Pr-4 RWH/WW/DJ/RM
ACCESSION NR: AP5008903 S/0069/65/027/002/0232/0233

40
39
B

AUTHORS: Lunina, M. A.; Sharay, T. A.

TITLE: Stability and aging of some stabilized metal organosols

SOURCE: Kolloidnyy zhurnal, v. 27, no. 2, 1965, 232-233

TOPIC TAGS: metallorganic compound, toluene

ABSTRACT: Aging for 50 days of centrifuged toluene sols of aluminum and zinc (stabilized by aluminum soap) was investigated. It was shown that the centrifuged metal sols in toluene autocoagulate. This process, which occurred during the initial aging (during the first 10 days for the aluminum sol and the first 20 days for the zinc), is caused both by the decrease of adsorptivity of the colloidal metal particles and by the aging of the stabilizer appearing in the breakdown of its structure. Measurements of the viscosity of 0.2, 0.4, and 0.6% toluene solutions of aluminum soap during the 50 days showed that the viscosity of these solutions decreases with time. It decreased most rapidly during the first 20 days and very slowly thereafter for the 0.4 and 0.6% solutions, whereas the decrease for the 0.2% solution was very slight during the whole period. Orig. art. has: 2 diagrams.

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L 41588-65
ACCESSION NR: AP5008903

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva (Moscow Chemical Engineering Institute)

SUBMITTED: 07Jul63 ENCL: 00 SUB CODE: OC

NO REF SOV: 002 OTHER: 001

Card 2/2

C. A. SHARAY V. N. Mineralogical and Geological Chemistry

1951

Mineralogical composition of quaternary clays of White Russia. V. N. Sharai (Belorusskii Politekh. Inst. J. V. Stalin, Minsk). *Doklady Akad. Nauk S.S.S.R.* 74, 591-4 (1950).—Clays partly of marine origin, partly aeolian or fluviatile, loess-like, lacustrine-alluvial, or glacial are important for *ceramic industries* in the districts of Minsk, Vitebsk, Mogilov, Pinsk, Baranovichi, and Grodno. Detailed microscopic, granulometric, chem., and thermal analysis data are given; further heating and dehydration curves and x-ray data are discussed. The ratio $R_2O_3:SiO_2$ is rather const. = 1:3; the ratio $R_2O_3:RO$ and $R_2O_3:R_2O$ is highly variable, $Al_2O_3:Fe_2O_3$ = (3.3 to 6.0): 1. The clay minerals are often illite (hydromica), and montmorillonite, with a base-exchange capacity of 20 to 40 milliequiv./100 g. The glacial clay of Vitebsk shows in its dehydration curve an analogy to "monothermite." The hydromica shows a typical birefringence between 0.014 and 0.020 with γ variable between 1.542 and 1.580 as a function of the H_2O content. The x-ray examn. shows its heterogeneity as a mixt. of montmorillonite, muscovite, kaolin, and subordinate quartz. The Fe_2O_3 content of the clays is present in nontronite which explains the low fusion temp., the swelling, and the plasticity of the ceramic clays of White Russia.

W. Eitel

SHARAY, V.N.

Distr: 4E2c

Effect of mineralogical and granulometric composition of some clays on their properties during the process of drying. V. N. Sharai and N. K. Yagovdik. *Sbornik Nauch. Rabot Belorus. Politekh. Inst.* 1955, No. 50, 125-43; *Referat. Zhur., Khim.* 1956, Abstr. No. 36688.—The mineralogical nature and the granulometric compn. of the colloidal part of quarternary clays of 3 Byelorussian deposits (the deposits of Bobruisk building combine, brick factory in Minsk, and deposit "Luzha" in Polesye Region) were detd., and the moisture-loss curves of clay as a whole and of thin fractions were prepd. The difference in the behavior of clays in drying is caused by the difference in mineralogical compn. of their thin fractions and the content of the colloidal particles in the latter. For instance, the good drying characteristics of Minsk clays are explained by the absence of colloids, by the presence of kaolin, and a considerable amt. of silica in the thin fraction. It is necessary to decrease the amt. of colloidal particles in other clays by introduction of electrolytes, by the removal of thin fractions, or by introduction of finely dispersed thinning agent. V. S. Mihailov

15-57-4-4634

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 4, p 93 (USSR)

AUTHORS: Sharay, V. N., Tsitovich, V. V.

TITLE: The Mineralogy of Clays From the Blue and Laminarites Beds in the Lower Cambrian of the Belorussian SSR (O mineralogicheskom sostave glin iz gorizontov sinikh i laminaritovykh sloyev nizhnego kembriya BSSR)

PERIODICAL: Uch. zap. Belorus. un-t, 1956, Nr 28, pp 49-78.

ABSTRACT: More than 20 mineral species were discovered when studying samples of the blue and Laminarites clays. The clays consist principally of minerals of the hydromica type in various stages of alteration to beidellite. The hydromicas are considered to be syn- genetic and diagenetic. Kaolinite as an admixture both in the coarse fraction and in the colloidal-dispersed part is due to secondary processes. The diagenetic minerals in the rocks are pyrite, siderite, and less

Card 1/2

The Mineralogy of Clays From the Blue and Laminarites (Cont.)

aburdant ferruginous dolomite (the association with organic accumulations points to a reducing environment during formation of the clay sediments). The fragmental minerals, forming the sandy and silty fraction of the rock, are quartz, feldspar, mica, chlorite, glauconite, and almandite garnet. There is no difference in the composition between the blue and the Laminarites clays.

Card 2/2

L. P. Ts.

BEZBORODOV, M.A.; SHARAY, V.N.

Chemical petrographic analysis of some new formations in industrial glass. Sbor.nauch.rab.Bel.politekh.inst. no.55:54-63 '56. (MLRA 10:7)

(Glass)

MAKAROCHKIN, Mikhail Fedorovich; SHARAY, Vera Nesterovna; LOVYGIN, Nikolay Ivanovich; POL'SKIY, S., red.; STEPANOVA, N., tekhn.red.

[Composition and engineering properties of the loess-type soils of White Russia] Sostav i stroitel'nye svoistva lessovidnykh gruntov BSSR. Minsk, Gos.izd-vo BSSR, Red.nauchno-tekhn.lit-ry, 1959. 122 p. (MIRA 13:12)
(White Russia--Loess)

SHARAY, V.N., kand.tekhn.nauk

Methods of conducting laboratory work on the cycle of geological subjects in a technical institution of higher learning. Sbor. metod. rab. Bel. politekh. inst. no. 1:61-66 '59. (MIRA 14:1)
(Geology--Study and teaching)

SHARAY, V. T. Cand Tech Sci -- (diss) "Complex study of the wear[redacted] and fatigue of steel." Kiev, 1959. 15 pp (Kiev Inst of Civil Air Fleet), 150 copies (KL, 52-59, 122)

SHARAY, V.N.; KONTSEVAYA, T.V., red.; KONCHITS, Ye.P., tekhred.

[Engineering geology; a manual for students in correspondence schools with majors in construction] Inzhenernaia geologiia; posobie dlia studentov zaochnykh fakul'tetov stroitel'noi spetsial'nosti. Minsk, Redaktsionno-izdatel'skii otdel BPI im. I.V. Stalina, 1960. 105 p.
(Engineering geology)

SHAKHNAZAROV, V. N.

PHASE I BOOK EXPLOITATION SOV/4578

Minsk. Belorusskiy politekhnicheskiy institut

Khimiya, tekhnologiya i istoriya stekla i keramiki (The Chemistry, Technology, and History of Glass and Ceramics) Minsk, Red.-izd. otdel BPI imeni I. V. Stalina, 1960. 138 p. (Series: Its: Sbornik nauchnykh trudov, vyp. 86) 1,200 copies printed.

Sponsoring Agencies: Ministerstvo vysshego, srednego spetsial'nogo i professional'nogo obrazovaniya BSSR; Belorusskiy politekhnicheskiy institut imeni I. V. Stalina.

Editorial Board: N. N. Yermolenko, Candidate of Technical Sciences, I. S. Kachan, and L. K. Petrov; Ed.: N. V. Kapranova; Tech. Ed.: S. A. Pesina.

PURPOSE: This book is intended for chemists and physicists interested in the composition, structure, and properties of glass and ceramics.

~~Card 1/6~~

COVERAGE: The articles contained in this collection deal with methods of studying the properties of various glass and ceramic compositions and the technology of glass and ceramics manufacture. The last two articles treat the history of silicate chemistry. No personalities are mentioned. References follow the articles.

TABLE OF CONTENTS:

THE PHYSICAL CHEMISTRY OF SILICATES

Shmakov, V.I.

PHASE I BOOK EXPLOITATION SOV/4136

Mosk. Dom stroitel'noy promyshlennosti Institut

Steklo i tekhnicheskaya keramika; sbornik materialov (Glass and Technical Ceramics; Collection of Articles) Moscow, Gosstroyizdat, 1961. 164 p. (Series: Its: Trudy, vyp. 35) 3,000 copies printed.

Editorial Board: M. A. Bezborodov (Resp. Ed.) Academician, Academy of Sciences USSR, L. A. Zhunina, Candidate of Technical Sciences, N. N. Yermolenko, Candidate of Technical Sciences, P. Y. Mikhaylich, Candidate of Technical Sciences; Resp. Ed. for this issue: L. A. Zhunina; Ed.: E. V. Kapranova; Tech. Ed.: P. S. Kil'mnok.

PURPOSE: This book is intended for chemists and technicians interested in the physicochemical properties and the production of glass.

CONTENTS: The collection contains 20 articles which give data on the synthesis and physicochemical properties of various widely used and some experimental glass compositions. Numerous property and phase diagrams of glass compositions.

4. Bezborodov, M.A., N.N. Yermolenko and L.A. Zhunina. Candidates of Technical Sciences, and Yu. Z. Nortsova, Engineer. Light Refractivity and Crystallization Capacity of Glasses Found in Some Sections of the System Na_2O-CaO-MgO-ZnO-SiO_2	29
7. Mesdar, L.Th., and A.I. Zelenskiy, Candidate of Technical Sciences. Synthesis and Study of the Properties of Glasses of High Clay and Low Alkali Content	54
8. Mamedov, V.B. Investigation of Some Properties of Glass in the System Li_2O-MgO-B_2O_3-SiO_2	64
9. Zhunina, L.A., A.M. Eripskiy, and V.A. Nortsova. Experiment in Producing a Glass Crystal Material From Easily Melting Soils-marian Clays	79
10. Shmakov, V.I., Candidate of Technical Sciences. Study of Crystallization in Glasses Produced From Easily Melting Clays	86
11. Zhunina, L.A., and N.N. Yermolenko. Development of Compositions for Rodineked Ost Glass	94
12. Zhunina, L.A., Yu. I. Mikhaylov and G.G. Ilyenskiy, Engineers. Utilization of Easily Melting Clays in the Production of Glass Containers	100
13. Korneyeva, O.A., Candidate of Technical Sciences. The Effect of Industrial Components and Some Additives on the Process of Forming the Ruby Color of Glass	112
14. Yermolenko, N.N., and L.N. Lamkin, Engineer. Graphical Method of Converting the Composition of Glass From Percentage Weight to Molar Percent and Vice Versa	116
15. Evgrafov, A.N. Utilization of Microphotometer MF-4 as a Radiation Meter; During Spectral Studies	120
16. Mikhaylich, P.Y., and V.E. Tsyrulik, Candidates of Technical Sciences. The Possibility of Producing Porous Materials From Various Beloretskiy Clays	126
17. Mikhaylich, P.Y., Tsyrulik, and L.I. Rusak, Engineer. Factory Test of an Experimental Jasper Composition	137
18. Ekel', L.I., Candidate of Technical Sciences, and I.M. Rybakov and O.O. Pozmyak, Engineers. The Effect of Temperature and Refraction (or Air) on Moisture Separation During Casting and on the Properties of a Ceramic Body	144

SHARAY, V.N., kand.tekhn.nauk (Minsk); TSITOVICH, V.V. (Minsk)

Mineralogical composition of refractory clays from the "Gorodok" deposits. Sbor. nauch. trud. Bel. politekh. inst. no.86:16-26 '60. (MIRA 13:10)

(Fire clay)

SHARAY, V.N., kand.tekhn.nauk

Studying the crystallization in glasses made from easily melting clays. Sbor. nauch. trud. Bel. politekh. inst. no.82:86-93 '60. (MIRA 15:5)
(Glass) (Crystallization) (Clay)

ZHUNINA, L. A.; SHARAY, V. N.; KHRIPKOVA, N. N.; LUKYANOVA, T. T.

"On some structural peculiarities of $CaO-MgO-SiO_2-(R_2O_1R_2O_3)$ system glasses."

report submitted for 4th All-Union Conf on Structure of Glass, Leningrad, 16-21 Mar 64.

ACCESSION NR: AT4019316 S/0000/63/003/001/0178/0180

AUTHOR: Zhunina, L. A.; Sharay, V. N.; Tsitko, V. F.; Khripkova, N. N.

TITLE: Crystallization of glasses with the composition CaO-MgO-alumina-silica in the presence of chromium oxide with the formation of the stable pyroxene phase

SOURCE: Simpozium po stekloobraznomu sostoyaniyu. Leningrad, 1962. Stekloobraznoye sostoyaniye, vy*p. 1: Kataliziravannaya kristallizatsiya stekla (Vitreous state, no. 1: Catalyzing crystallization of glass). Trudy* simpoziuma, v. 3, no. 1. Moscow, Izd-vo AN SSSR, 1963, 178-180

TOPIC TAGS: glass, glass crystallization, catalyzed crystallization, aluminosilicate, pyroxene chromium oxide

ABSTRACT: In continuation of earlier work at the Problemnaya laboratoriya stekla Belorusskogo politekhnicheskogo instituta (Glass Laboratory of the Belorussian Polytechnical Institute) with catalysts such as SnO_2, P_2O_5, ZnO, ZrO_2, CaF_2, NiO, CaO, TiO_2 and Cr_2O_3, all but the last two of which were ineffective, the authors investigated the crystallization of glasses of the system $CaO-MgO-Al_2O_3-SiO_2$ with or without the addition of Cr_2O_3 (0.1-5%). Two mineral phases were produced: spinellid and pyroxene. After the

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ACCESSION NR: AT4019316

formation of spinellids at 650-850C, the main mineral phase, pyroxene, was formed. The course of crystallization depending on the amount of Cr_2O_3 added, temperature and time is shown in the Enclosure. The role of Cr_2O_3 in the crystallization process has thus been clarified. Its addition gives rise to the formation of chromium spinellids, which are more stable in silicate media than the system without chromium, and which play the role of crystallization centers for the main pyroxene phase. Since the amount of spinellids depends on the temperature of crystallization, the composition of the pyroxene phase also varies and attains the calculated composition at their minimal content. The variation in pyroxene composition is confirmed by the varying chemical stability of glasses depending on the Cr_2O_3 content and temperature. By increasing the crystallization time, all these phenomena can be shifted to lower temperatures, thus increasing the number of crystallization centers and producing structures of smaller grain size. Orig. art. has: 1 figures.

ASSOCIATION: None

SUBMITTED: 17May63 DATE ACQ: 21Nov63 ENCL: 01

SUB CODE: MT NO REF SOV: 006 OTHER: 000

Card 2/3

ACCESSION NR: AT4019316

ENCLOSURE: 01

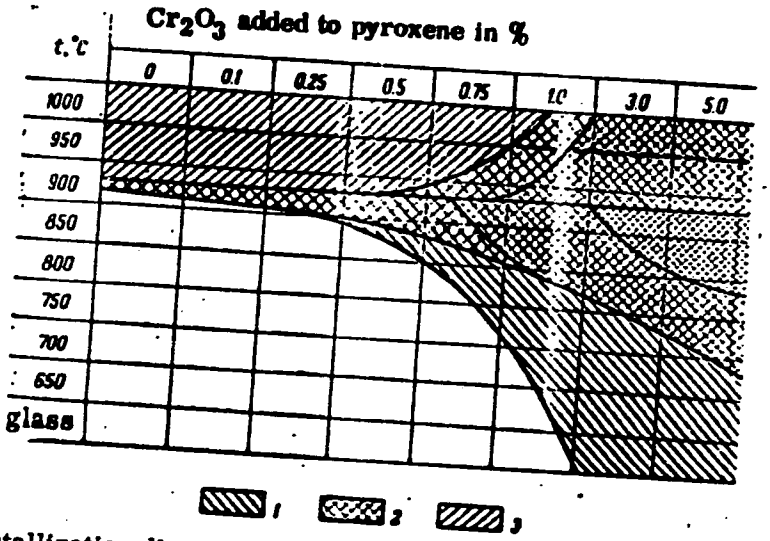

Fig. 1 - Crystallization diagram of glass of the system SiO_2-R_2O_3-RO (4 hours). 1 - spinellids; 2 - spinellids + pyroxenes; 3 - pyroxenes

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L 38864-66 EWT(m) /EWP(e) WH/WW

ACC NR: AR6015906 SOURCE CODE: UR/0081/65/000/022/B066/B066

AUTHOR: Zhunina, L. A.; Sharay, V. N.; Tsitko, V. F.; Khripkova, N. N.; Luk'yanova, T. T.; Mazurenko, V. D.

TITLE: Crystallization of glasses in the $CaO-MgO-SiO_2$ system in the presence of other components

SOURCE: Ref. zh. Khimiya, Abs. 22B478

REF SOURCE: Sb. Stekloobrazn. sostoyaniye. T. 3. Vyp. 4. Minsk, 1964, 69-74

TOPIC TAGS: glass, calcium oxide, magnesium oxide, silicon dioxide, crystallization

ABSTRACT: Dilatometric, petrographic, and x-ray diffraction methods were used to study the crystallization of glasses in the $CaO-MgO-SiO_2$ system in the presence of Al_2O_3, Fe_2O_3, Cr_2O_3, MgO, and Na_2O. It was found that Cr_2O_3 and Fe_2O_3 accelerate the process of formation of the spinel phase, which forms numerous centers around which the main pyroxene phase crystallizes. Na_2O has a direct catalytic effect on the pyroxene phase and promotes the ordering of the process of pyroceramization as a whole. It is recommended that the three catalysts Cr_2O_3, Fe_2O_3, and Na_2O be added simultaneously. Ya. Shenkin. [Translation of abstract].

SUB CODE: 07,11

Card 1/1

L 11852-66 EWP(e)/EWT(m)/EWP(b) GS/WH

ACC. NR: AT6000512 SOURCE CODE: UR/0000/65/000/000/0404/0407

AUTHOR: Zhunina, L. A.; Sharay, V. N.; Mazurenko, V. D.; Khripkova, N. N.; Lukʹyanova, T. T.

ORG: None

TITLE: Certain structural features of the products of crystallization of the $CaO-MgO-SiO_2 + (R_2O, R_2O_3)$ system

SOURCE: Vsesoyuznoye soveshchaniye po stekloobraznomu sostoyaniyu, 4th, Leningrad, 1964. Stekloobraznoye sostoyaniye (Vitreous state); trudy soveshchaniya, Leningrad, Izd-vo Nauka, 1965, 404-407

TOPIC TAGS: catalyzed crystallization, glass property, silicate glass, glass

ABSTRACT: The article presents some data gathered during the study of the catalyzed crystallization within the glasses of the $CaO-MgO-SiO_2$ system. Products of thermal processing were studied by extracting various oxides in 2n sulfuric acid and by x-ray, petrographic, thermographic, and electron microscope methods. Results concerning the oxide content in glasses made from chemically pure reagents (Pch) and those having a small sodium fluoride admixture (66) are shown in graphs. Analysis of all the results shows that the heterogeneous

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25(2) PHASE I BOOK EXPLOITATION SOV/3229

Sharay, Vladimir Timofeyevich

Kompleksnoye issledovaniye iznosa i ustalosti stali (Detailed Investigation of Wear and Fatigue of Steel) Kiyev, Gostekhizdat, 1959. 30 p. 1,500 copies printed.

Ed.: A. Novik; Tech. Ed.: S. Shafeta.

PURPOSE: This booklet is intended for the scientific worker and technical personnel engaged in production, repair, and operation of machines.

COVERAGE: The author presents data from investigations to determine the effect of changes occurring in the surface layers of machine parts during wear on the fatigue characteristics of steel. The results of tests carried out to find the relationship between the wear resistance of steel and the amount and type of cyclic stress variation are shown. Several authors from the bibliography are cited in the introduction. There are 28 references, all Soviet.

Card 1/2

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

Card 2/2

VK/mg
4/25/60

28(5)

S/032/60/026/02/048/057
B010/B115

AUTHOR: Sharay, V. T.

TITLE: A Device for the Combined Study of Wear and Fatigue of Steel

PERIODICAL Zavodskaya laboratoriya, 1960, Vol 26, Nr 2, pp 241-242 (USSR)

ABSTRACT: In machines effecting friction and cyclic loading, a change in properties of the surface layers is experienced by wear which influences the fatigue characteristics of the parts, while the stability is influenced by repeated cyclic loading. The combined effects of these two factors have little been investigated by now. For this reason, a special device designed for combined wearing and fatigue tests of steels was developed at the institute named hereafter. The device was designed on the basis of the well-known NU machine which is used to perform fatigue tests on rotating specimens with simple bending. A direct-current motor (30 to 7000 rpm) was substituted for the alternating-current motor, and is fed from a VSA-6M rectifier. The peripheral speed of the cylindrical test specimen can thus be raised to 0.027 to 6.2 m/sec with a diameter of d = 17 mm, and to 0.015 to 4.4 m/sec with d = 12 mm. The electric circuit of the NU machine was practically maintained. Frictional pressure is ef-

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