

TAIROV, Sh.G.

Dynamics of soil salinization in the western part of the Shirvan  
Steppe. Izv. AN Azerb. SSR. Ser. biol. i med. nauk no. 4:113-  
125 '60. (MIRA 14:2)

(KURA LOWLAND--ALKALI LANDS)

TAIROV, Sh.G.

Leaching monoliths of chloride- and sulfate-rich saline soils from  
the Kura-kras Lowland. Izv.AN Azerb.SSR.Ser.biol.i med.nauk no.1:  
117-123 '61. (MIRA 14:6)  
(Kura-Aras Lowland--Saline and alkali soils) (Leaching)

TAIROV, Sh.G.

Meadow Solonetz and Solonchak soils of the Shirvan Steppe. Izv.  
AN Azerb. SSR. Ser. biol. i med. nauk no.6:75-83 '61. (MIRA 14:8)  
(KURA ~~LOWLAND~~—SALINE AND ALKALI SOILS)

TAIROV, V.D., kandidat tekhnicheskikh nauk; ULITSKIY, I.I., kandidat  
tekhnicheskikh nauk, redaktor; TUROVSKIY, B., redaktor;  
ZELENKOVA, Ye., tekhnicheskiy redaktor

[Planning structural panels for two- and three-story dwellings]  
Porektirovanie panel'nykh konstruksii maloetazhnykh zhilykh  
zdaniy. Pod red. I.I.Ulitskogo. Kiev, Izd-vo Akademii arkhitektury  
Ukrainskoi SSR, 1953. 74 p. [Microfilm] (MLRA 7:10)  
(Buildings, Prefabricated)

ROKHLIN, I.A., kandidat tekhnicheskikh nauk; TAIROV, V.D., kandidat  
tekhnicheskikh nauk.

Precast reinforced concrete elements for buildings in  
machine-tractor stations. Nov. v stroi. tekhn. no.7:14-36  
'55. (MLRA 9:11)

1. Nauchno-issledovatel'skiy institut stroitel'noy tekhniki  
Akademii arkhitektury USSR.  
(Precast concrete construction) (Machine-tractor stations)

1955, p. 1.

"Panel Construction of Buildings of Two Stories. (Generalization of Experience and Fundamental Principles of Planning)." Acad of Architecture (Ukrainian SSR, Sci Res Inst of Construction Engineering, Kiev, 1958  
(Dissertation Series, Department of Institute of Technical Sciences)

SC: 'Prilozhenie Detalii', c. 30, # Aug 55

TAIROV, Vladimir Dmitriyevich; VOL'VICH, Nikolay Iosifovich; MEDVEDEV, Mikhail Ivanovich. Primali uchastiye: BOCHKOVSKAYA, N.L., starshiy inzh.; YEZHEL', F.A., glav. arkhitekto; ALEKSANDROVSKIY, A., red.; ZELENKOVA, Ye., tekhn. red.

[Built-up roofs] Sovmeshchennye pokrytiia. Kiev, Gos. izd-vo lit-ry po stroit. i arkhitekt. USSR, 1961. 74 p. (MIRA 14:9)

1. Rabotniki Nauchno-issledovatel'skogo instituta stroitel'nykh konstruktsiy i Nauchno-issledovatel'skiy institut eksperimental'nogo proyektirovaniya Akademii stroitel'stva i arkhitektury USSR (for Tairov, Vol'vich, Medvedev).  
(Roofs)

L 4294-7  
ACC NR: AR6010519 SOURCE CODE: UR/0196/65/000/010/B019/B019

AUTHOR: Tairov, V. N.

TITLE: High-voltage insulators for operation in a rarefied atmosphere

SOURCE: Ref. zh. Elektrotehnika i energetika, Abs. 10B90

REF SOURCE: Sb. Probov dielektrikov i poluprovodnikov. M.-L., Energiya, 1964, 93-97

TOPIC TAGS: electric insulator, high voltage line, upper atmosphere

ABSTRACT: Data are presented for the selection of the design, as well as approximate formulas for engineering calculations, by means of which calculations were made and a design was created for insulators for a dc working voltage of 4-63 kv. The insulators are intended for operations at pressures up to 5 mm Hg in the temperature range from -60 to +125C, and to withstand vibration with a frequency of 5-1000cps at 10 g acceleration, 4000 impacts with an acceleration of 75 g, and centrifugal acceleration up to 25 g. The design of the insulators has been developed for serial plant production. [ Translation of abstract ] 5 illustrations and bibliography of 4 titles. [ Leningrad Electrotechnical Institute im. V. I. Ul'yanov (Lenin) (Leningradskiy el-tehnich. in-t) ] A. Petrashko

SUB CODE: 09  
Card 1/1 MLP UDC: 621.315.62



BUKOLOV, I.Ye.; ASTAKHOV, K.V.; ZIMIN, V.L.; TAIROV, V.S.

Complex compounds of strontium with some dicarboxylic organic acids.  
Zhur.neorg.khim. 7 no.7:1577-1582 J1 '62. (MIRA 16:3)  
(Strontium compounds) (Acids, Organic)

L 15534-63 EPR/EPF(c)/EWP(q)/EWT(m)/ES(v)/EDS AFFTC/ASD Ps-4/Pr-4/  
Pe-4 WW/JD/WH/JG/K

ACCESSION NR: AP3004913

S/0120/63/000/004/0176/0180

AUTHOR: Pichugin, I. G.; Tairov, Yu. M.; Yas'kov, D. A.

80

77

TITLE: Preparing silicon carbide crystals

SOURCE: Pribory i tekhnika eksperimenta, no. 4, 1963, 176-180

TOPIC TAGS: silicon carbide, crystal, SiC, crystal growing

ABSTRACT: An outfit is described that permits developing a temperature of about 2,500C in a 500-cm<sup>3</sup> crucible containing 10<sup>-4</sup>-torr vacuum and an inert gas. The construction, including an electrically-heated graphite block, a set of temperature-distributing screens, a water-cooled stainless-steel housing, a set of electrodes, a vacuumizing system, etc., is described in detail; a structural drawing and a photo of its general appearance are presented. The average output is 50 SiC crystals, 5-7-mm thick (with 6-7 hrs growing time), in one crucible. Intended for semiconductor devices, the crystals have a carrier concentration of

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L 15534-63

ACCESSION NR: AP3004913

3

$5 \times 10^{17} \text{ cm}^{-8}$ . "The authors are thankful to V. I. Abramov and V. P. Novikov for a number of valuable hints in developing the outfit." Orig. art. has: 4 figures.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut (Leningrad Electrotechnical Institute)

SUBMITTED: 15Jun62

DATE ACQ: 28Aug63

ENCL: 00

SUB CODE: GE

NO REF SOV: 000

OTHER: 005

Card 2/2

L 12000-65 ENG(j)/EPA(s)-2/EWT(m)/EPF(c)/EPF(n)-2/ENG(v)/EPR/EPA(w)-2/EWP(j)/  
EWP(b)/EWP(e) Pc-4/Pe-5/Pt-4/Ps-4/Pt-10/Pu-4/Pab-10 AS(mp)-2/RAEM(e)/RAEM(c)/  
ESD(gs)/ESD(t) JD/WW/JG/RM/WH

ACCESSION NR: AP4046477

S/0032/64/030/010/1276/1278

AUTHOR: Pichugin, I. G.; Tairov, Yu. M.; Yas'kov, D. A.

TITLE: Laboratory vacuum furnace with automatic control for growing  
silicon carbide crystals 6

SOURCE: Zavodskaya laboratoriya, v. 30, no. 10, 1964, 1276-1278

TOPIC TAGS: silicon carbide crystal, single crystal growth, electric  
vacuum furnace, automatic temperature control, heat insulation cor-  
rection, semiconductor silicon carbide

ABSTRACT: Automatic temperature control and a procedure for correction  
of heat insulation and for changing the temperature gradient in the  
electric vacuum furnace have been developed to secure growth of per-  
fect silicon carbide crystals for semiconductor devices. The furnace  
was described by the authors in Pribory\*i tekhnika eksperimenta, no.  
4, 1963. The automatic temperature control was based on measure-  
ment of the ratio of the luminous flux from the heater to that from  
a calibrated source. The filtered light signals from both sources

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L 12000-65

ACCESSION NR: AP4046477

were received on an antimony-cesium photoelectric cell and then amplified and detected in the same circuit. Different signals from two sources set in motion a mechanism which automatically changes the input voltage and hence resets the temperature of the heater to a predetermined value. Deviation from the predetermined value in the 2300-2600C range was plus or minus 3C maximum. The temperature gradient in the furnace was improved by 1) changing the number and location of horizontal heat-insulating shields and 2) varying the current input according to the changing temperature profile of the heater. Correction of heat insulation was achieved by solving the differential equation describing the distribution of heat flow in the furnace on an electric network. The n-type crystals, 5-7 mm in diameter, were grown on a graphite diaphragm. Orig. art. has: 3 figures and 8 formulas.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut (Leningrad Electrotechnical Institute)

SUBMITTED: 00

ATD PRESS: 3120

ENCL: 00

SUB CODE: IE, SS  
Card 2/2

NO REF SOV: 001

OTHER: 001

L 00014-66 EWT(1)/T/EWA(h) IJP(c) AT  
ACCESSION NR: AP5021366

UR/0120/65/000/004/0213/0216  
536.587

49  
46  
B

AUTHOR: Kal'nin, A. A.; Tairov, Yu. M.; Yas'kov, D. A. / 55,44 55,44 57,44

TITLE: An automatic temperature control system for the growth of crystals of high temperature resistant semiconductor materials

SOURCE: Pribory i tekhnika eksperimenta, no. 4, 1965, 213-216 . 21,44,55

TOPIC TAGS: silicon single crystal, automatic temperature control, crystal structure, automatic control system, crystal growth, semiconductor single crystal, single crystal growing

ABSTRACT: An automatic temperature control system for a 30 kw device intended for the growth of silicon carbide crystals is discussed. The instrumental error is reduced by a) the use of electron multiplication which reduces the intensity of photocathode illumination with simultaneous retention of a good signal-to-noise ratio; b) the illumination of the photocathode by short pulses with the subsequent restitution of the spectrum of the favorable signal; and c) by thermostatic control of the receiver, automatic brightness control, and uniform illumination of the photocathode. The range of temperature control is between 2400 and 2600C but this may be changed by an appropriate choice of the obtuator filter, the dynamic error  
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L 00014-66

ACCESSION NR: AP5021366

3

of the control does not exceed  $\pm 3C$ , and the transient process (when operating with a computer) is reduced 88 to 90% compared to operation with commercial linear regulators. The influence of the thermostatic control of the growth zone on the perfection of the structure of the resulting crystals is also discussed. Orig. art. has: 3 formulas and 3 figures.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut (Leningrad Electrical Engineering Institute)

SUBMITTED: 21Dec64

*44, 55*

ENCL: 00

SUB CODE: IE, SS

NO REF SOV: 002

OTHER: 001

Card

*MR*  
2/2

ACC NR: AT6002250 SOURCE CODE: UR/2564/65/006/000/0199/0202

AUTHOR: Tairov, Yu. M.

ORG: None

TITLE: Study of the effect of various factors on the growth of silicon carbide crystals  
[Paper presented at the Third Conference on Crystal Growing held in Moscow from 18 to 25 November, 1963]

SOURCE: AN SSSR. Institut kristallografii. Rost kristallov, v. 6, 1965, 199-202

TOPIC TAGS: silicon carbide, crystal growing

ABSTRACT: A high-temperature unit the design of which is described was built for studying the growth of SiC crystals. Particular attention was given to the study of the thermal field in the crucible in order to produce the optimum temperature distribution. The optimum pattern obtained for the thermal field in the crucible is shown in Fig. 1. SiC crystals were grown with the temperature of the heater at 2450C.

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159a7-6b

ACC NR: AT6002250

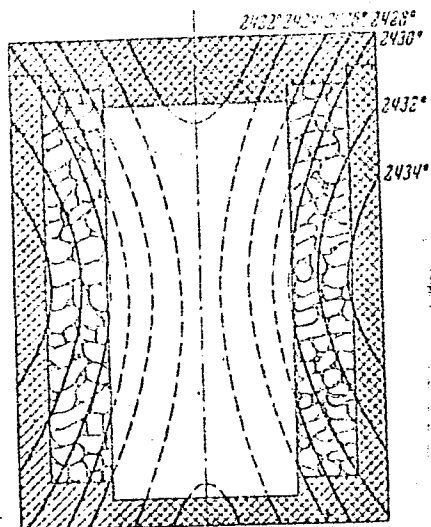


Fig. 1. Optimum pattern of thermal field in crucible.

The optimum supersaturation of the vapor above the growing crystals was calculated to be about 2%. The formation of nucleation centers can take place at supersaturations of Card 2/3

15987-66

ACC NR: AT6002250

of 25 to 50%. X-ray structural analysis showed that SiC crystals of two polytypic forms grow under these conditions: the 6H modification at temperatures not above 2450C, and predominantly the 6H modification at higher temperatures. A mixture of 6H and 15R is obtained if the temperature fluctuates. The resistivity of the crystals varies with the temperature at which they are grown, owing to the changing solubility of impurities, particularly nitrogen, in SiC. Orig. art. has: 3 figures and 3 formulas.

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 003

Card 3/3

L 25460-66 EWT(1)/EWT(m)/ETC(f)/EWG(m)/EWP(e) IJP(c) AT/WH/JD/JG

ACC NR: AP6009691

SOURCE CODE: UR/0181/66/008/003/0948/0951

AUTHOR: Kal'nin, A. A.; Tairov, Yu. M.; Yas'kov, D. A.ORG: Leningrad Electrotechnical Institute im. V. I. Ul'yanov-Lenin (Leningradskiy elektrotekhnicheskiy institut)TITLE: Luminescence of silicon carbide with beryllium impurity

SOURCE: Fizika tverdogo tela, v. 8, no. 3, 1966, 948-951

TOPIC TAGS: silicon carbide, beryllium, semiconductor impurity, luminescence, luminescence center, activated crystal, pn junction, volt ampere characteristic, electroluminescence

ABSTRACT: The purpose of the investigation was to confirm experimentally that it is possible to use certain elements of group II as luminescence activators in silicon carbide crystals. Some of the advantages of using beryllium as the doping impurity are briefly discussed. Luminescent p-n junctions were produced by introducing beryllium in silicon carbide containing  $8 \times 10^{17}$ -- $5 \times 10^{18}$  cm<sup>-3</sup> nitrogen as the luminescence coactivator. The procedure and apparatus for preparing the junctions are briefly described. The resultant junctions had a volt-ampere characteristic featuring a large drop in the forward direction. In addition to the volt-ampere characteristic, the electroluminescence spectra and the lumen-ampere characteristics of the junction are presented. The results show that the electroluminescence of the obtained p-n junctions cannot be connected with the presence of boron, and can be attributed to

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L 25460-66

ACC NR: AF6009691

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the activating action of beryllium in the silicon carbide. Evidence in favor of the foregoing statement is presented. Orig. art. has: 4 figures.

SUB CODE: 20/    SUBM DATE: 20Jun65/    ORIG REF: 003/    OTH REF: 001.

Card 2/2 CC

L 34044-66 EWT(1)/EWT(m)/T/EWP(t)/ETI IJP(c) JD/GG/GD

ACC NR: AT6013568

(N)

SOURCE CODE: UR/0000/65/000/000/0309/0314

AUTHOR: Pichugin, I. G.; Smirnova, N. A.; Tairov, Yu. M.; Yas'kov, D. A.

ORG: Leningrad Electrotechnical Institute im. <sup>V. I. (LENIN)</sup> Ul'yanov (Leningradskiy elektrotekhni-  
cheskiy institut) 51

TITLE: The effect of certain factors on growth and formation of SiC crystals 8+1

SOURCE: AN UkrSSR. Institut problem materialovedeniya. Vysokotemperaturnyye neorga-  
nicheskiye soedineniya (High temperature inorganic compounds). Kiev, Naukova dumka,  
1965, 309-314

TOPIC TAGS: silicon carbide, single crystal growth, ~~single crystal~~ crystal growing

ABSTRACT: The <sup>2</sup>growing process of SiC crystals was studied in the <sup>2</sup>2350°-2500°C range in  
an argon atmosphere. Before sublimation, the SiC raw material was degassed at 200°C  
and  $1 \cdot 10^{-5}$  mm Hg. The crystal growing duration was 6-12 hours. Best quality SiC crys-  
tals were obtained using a two-diaphragm crucible. The distance between diaphragms  
could be varied from 0.5 to 6 mm. It was found that the optimum conditions for growing  
high quality, homogeneous SiC crystals 6-8 mm in diameter (with an average defect den-  
sity of  $200 \text{ cm}^{-2}$  and with a large proportion of crystals with defect density less than  
 $30 \text{ cm}^{-2}$ ) are: an axial and radial temperature variation in the crucible maximum  $\pm 50^\circ\text{C}$ ,  
heating from 2000°C to the desired process temperature at a rate not lower than  $20^\circ/\text{min}$

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L 09218-67 EWT(m)/EWP(t)/ETI IJP(c) JD/JG  
ACC NR: AP6033560 SOURCE CODE: UR/0181/66/008/010/2982/2985 74

AUTHOR: Kal'nin, A. A.; Pasyukov, V. V.; Tairov, Yu. M.; Yas'kov, D. A.

ORG: Leningrad Electrotechnical Institute im. V. I. Ul'yanov (Lenin) (Leningrad-skiy elektrotekhnicheskiy institut)

TITLE: Photoluminescence of silicon carbide containing a beryllium impurity

SOURCE: Fizika tverdogo tela, v. 8, no. 10, 1966, 2982-2985

TOPIC TAGS: photoluminescence, silicon carbide, beryllium, impurity, luminescence extinction, electron hole, luminescence

ABSTRACT: Beryllium when added to silicon carbide is shown to render the latter luminescent. Both electron- and p-type silicon carbide samples were found to luminesce. At the same time, the spectral radiation composition was found to vary. The activation energy required for the extinction of luminescence for electron- and p-type silicon carbide samples is about the same (approximately 0.32 ev). Electro-luminescent light sources were prepared in which electrons were injected into luminescent p-type silicon carbide samples. Orig. art. has: 3 figures. [Authors' abstract]

SUB CODE: 20/SUBM DATE: 16Mar66/ORIG REF: 005/OTH REF: 006/  
Card 1/1

TALHA, A. I. and BALABADDE, L. I.

"The Ecology of the Aquatic Phases of the Yellow Fever Mosquito (*Aedes Aegypti* L.)",  
Med. Paraz. i Paraz. Bolez., Vol. 17, No. 2, pp 237-47, 1948.

USSR/Zooparasitology - Mites and Insects as Disease Vectors.

G-3

Abs Jour : Ref Zhur - Biol., No 10, 1958, 43448

Author : Tairova, A.I.

Inst : "

Title : Survival of Mosquitoes *Anopheles Maculipennis* up to the Epidemiologically Dangerous Age in the Region of Stalinirsk.

Orig Pub : Byul. N.-1. in-t malyarii i med. parazitol. GruzSSR, 1956, No 2, (26), 50-56.

Abstract : The climate, breeding places, phenological data, seasonal course of numbers, and age differences of *A. maculipennis* population in the environs of Liakhvi-Iorsk mountain-plain landscape. Females of epidemiologically dangerous age are found here beginning in the second half of June. Their maximum number is noted at the end of June. The wintering females live until the sporogonic cycle is completed but, because of their small number, they are not of

Card 1/2

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TAIROVA, A.I.

Determining the time between the departure of *A. maculipennis* from daytime haunts after digesting blood and the next bloodsucking. Med.paraz. i paraz.bol.supplement to no.1:32-33 '57. (MIRA 11:1)

1. Iz entomologicheskogo otdeleniya Institute malyarii i meditsinskoy parazitologii imeni S.S.Virsaladze Ministerstva zdravookhraneniya Gruzinskoy SSR.

(MOSQUITOES AS CARRIERS OF DISEASE)

TAIROVA, A.I.

Occurrence of *Anopheles bifurcatus* in bodies of rain water. Med.  
praz. i paraz.bol. 27 no.1:68-69 Ja-F '58. (MIRA 11:4)

1. Iz entomologicheskogo otdeleniya Instituta malyarii i meditsin-  
skoy parazitologii imeni S.S.Virsaladze Ministerstva zdravookhrane-  
niya Gruzinskoy SSR (dir. instituta - prof. G.M.Maruashvili, zav.  
otdeleniyem - prof. G.I.Kanchaveli)  
(MOSQUITOES)

ORLOV, Sergey Panteleymonovich; TAIROVA, A.L., red.; CHERNOVA, Z.I.,  
tekhn.red.

[Batch measuring devices] Doziruiushchie ustroistva. Izd.2-e,  
perer. i dop. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.  
lit-ry, 1960. 237 p. (MIRA 13:10)  
(Measuring instruments)

YALOVA, A.V., 1971, 1972

Treatment of resistant forms of gonorrhea in women and children with antibiotics combined with damped light therapy. Trudy SMI no. 10:130-132 (1971). (SIRA 107)

1. Iz kafedry koshnykh i venericheskikh bolezney trav. kafedry prof. G.A. Starostin'syan (deceased) Balneokosmologicheskogo meditsinskogo instituta.

POLYAKOV, Z.A.; TAIROVA, A.V.

Methods for determining scheduled costs of drilling operations.  
Azərbaycan nefti. 35 no.2:29-31 F '56. (MLRA 9:10)

(Oil well drilling--Prices)

S/146/62/005/001/001/011  
0234/0304

AUTHORS: Manoylov, V.Ye. and Tairova, D.A.  
TITLE: Electrostatic focusing of electron beams by electrets  
PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye,  
v. 5, no. 1, 1962, 3-8

TEXT: A short description of the properties of electrets is given. Use of electret discs with an opening in the center is studied; such a disc is found to be analogous to an ordinary electrostatic lens. It is stated that approximate theoretical calculations show that a set of electret discs with alternating polarity could conduct stable electron beams up to several amperes. It was found by experiments that electrets made of ceramic material T-150 (calcium titanate with an admixture of zirconium dioxide) are the most suitable for focusing purposes. A.N. Gubkin is mentioned for his contributions in the field. There are 5 figures and 3 references: 1 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: M. Eguchi, On the permanent electret. Phil.

Card 1/2

Electrostatic focusing of ...

S/146/62/005/001/001/C11  
D234/D304

Mag., 1925, 49, 178; B. Gross, L.F. Denard, On permanent charges in solid dielectrics, Phys.Rev. 1945, 67, 8, 253-259.

ASSOCIATION: Leningradskiy elektrotekhnicheskii institut im. V.I. Ul'yanova (Lenina) (Leningrad Institute of Electrical Engineering im. V. I. Ul'yanov (Lenin)

SUBMITTED: July 26, 1961

Card 2/2

ACCESSION NR: AP4013538

S/0181/64/006/002/0642/0644

AUTHORS: Kharlamova, T. Ye.; Tairova, D. A.

TITLE: The effect of radioactive radiation on the properties of silicon carbide p-n junctions

SOURCE: Fizika tverdogo tela, v. 6, no. 2, 1964, 642-644

TOPIC TAGS: radioactive radiation, silicon carbide, p n junction, volt ampere characteristic, transitional photoelectric effect, photosensitivity, impurity, impurity concentration

ABSTRACT: The authors used electron-type samples of SiC (with alpha modification) with impurity concentrations on the order of  $5 \cdot 10^{17} \text{cm}^{-3}$ . The p-n junctions were prepared by a technique previously described by T. Ye. Kharlamova (Izv. LETI im. V. I. Ul'yanova (Lenina), vy\*p. XLIII, 135, 1960; and T. Ye. Kharlamova, G. F. Kholuyanov. FTT, 2, 426, 1960). Each crystal was cut into two plates, only one being exposed to radiation for control. Radiation, varied from 3000 to 28 000 roentgens seemed to effect only insignificantly quantitative changes in the characteristics of the p-n junctions in SiC. Radiation of all p-n junctions

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ACCESSION NR: APL013538

by gamma rays or beta quanta produced definite patterns of changes in the volt-ampere characteristics. These patterns are shown in Fig. 1. in the Enclosure. Mixed radiation led to the appearance of a transitional photoelectric effect. The p-n junctions in SiC after such irradiation become sensitive to the visible part of the spectrum. The photosensitivity of the p-n junctions was shifted toward the longer wavelengths. This shift may be due to metastable energy levels in the SiC due to the action of gamma rays plus neutrons. Orig. art. has: 1 figure.

ASSOCIATION: Leningradskiy elektrotekhnicheskii institut im. V. I. Ul'yanova-Lenina (Leningrad Institute of Electrical Engineering)

SUBMITTED: 28Sep63

DATE ACQ: 03Mar64

ENCL: 01

SUB CODE: PH

NO REF SOV: 006

OTHER: 001

Card 2/3

ACCESSION NR: AP4043345

S/0181/64/006/008/2301/2306

AUTHORS: Bogoroditskiy, N. P.; Tairova, D. A.; Sorokin, V. S.

TITLE: Role of free carriers in the formation of the electret state in polycrystalline dielectrics

SOURCE: Fizika tverdogo tela, v. 6, no. 8, 1964, 2301-2306

TOPIC TAGS: barium titanate, polycrystal, electret, dielectric material, ceramic dielectric, polarization, energy level

ABSTRACT: To explain the formation of the electret state in non-polar materials, an investigation was made of several phenomena occurring in ceramic materials polarized in a field of high intensity and at high temperature. The materials investigated were T-1700 (the fundamental crystalline phase of  $\text{BaTiO}_3$ ), Sm-1 ( $\text{BaTiO}_3$ ), T-150 ( $\text{CaTiO}_3$ ), T-80 ( $\text{TiO}_2$ ), and T-900 ( $\text{SrTiO}_3$ ), all with different elec-

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ACCESSION NR: AP4043345

tric properties. The materials were in the form of discs 33 mm in diameter and 3 mm thick; the electric field intensity, the maximum temperature, and the time of exposure to the field were variable. The magnitude and sign of the surface charge were measured by the electrostatic induction method. The role of the free carriers in the formation of a stable homogeneous charge of ceramic electrets was investigated. The dependence of the coloring of the samples on the magnitude of the polarizing field, maximum temperature, and polarization time was studied, with particular attention to the double coloring of some of the materials (T-1700 and SM-1), which is found to be due to the injection of electrons and holes from the electrodes into the dielectric with subsequent localization on Schottky defects. A new model of the electret state in nonpolar dielectrics is formulated. According to this model, the homogeneous charge is produced and exists independently of the presence of polar groups in the dielectrics, which depends on the technological polarization factors and on the surface properties such as concentration

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ACCESSION NR: AP4043345

and depth of local levels. This homogeneous charge forms a residual field having the same direction as the external polarizing field. The field of the homogeneous charges tends to maintain the polarization effects produced by all other polarization mechanisms. Orig. art. has: 1 figure and 2 tables.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut im. V. I. Ul'yanova-Lenina (Leningrad Electrotechnical Institute)

SUBMITTED: 11Feb64

ENCL: 00

SUB CODE: SS, EM

NR REF SOV: 001

OTHER: 001

Card 3/3

[The main body of the document is extremely faint and illegible. It appears to contain several lines of text, possibly including a header, a main paragraph, and a footer. Some faint words like "electronic" and "MIRA 1846" are visible.]

1953, p. 8.

Dissertation: "Design Methods for a Pneumatic Joint on the Basis of Experimental Data on Long Life." *Trudy Vsesoyuznogo Nauchno-Issledovatskogo Instituta Prikladnoi Mekhaniki*, Moscow, 1953. *Konstruktivnyy Zhurnal--Mekhanika*, Moscow, Vol. 10.

See: *SLM* No. 350, 15 Jan 1955

TAIROVA, T.A., dotsent.

Methods of computing gas lift on the basis of experimental data in deep  
lifts. Trudy Azerb.ind.inst. no.8:42-64 '54. (MLRA 9:10)  
(Oil wells--Gas lift)

TAIROVA, T.

Matter of great national importance. Sov.profssoiuzy 3 no.8:27-  
29 Ag'55. (MLRA 8:10)

1. Predsedatel' Azerbaydzhanskogo respublikanskogo soveta prof-  
soyuzov  
(Azerbaijan--Agricultural machinery industry)



ALIKHANOV, E.N.; ARUSHANOV, N.A.; AKHUNDOV, V.Yu.; ALIZADE, M.A.; AZIZBEYOV, Sh.A.; BAGIROV, M.A.; VEZIROV, S.A.; VOLOBUYEV, V.R.; VEKILOV, F.M.; GADZHIYEV, N.M.; GUSEYNOV, D.M.; GUSEYNOV, I.A.; DADASHEV, K.K.; DADASHZADE, M.A.; DALIN, M.A.; ISKENDEROV, M.A.; YAZIYEV, M.A.; KARAYEV, A.I.; KASHKAY, M.S.; KEL'DYSH, M.V.; KERIMOV, A.G.; LEMBERANSKIY, A.D.; MAMEDOV, G.K.; MEKHTIYEV, M.R.; MIRZOYEV, S.A.; NAGIYEV, M.F.; NASRULLAYEV, N.I.; OGUDZHEV, A.K.; RADZHABOV, R.A.; RUDNEV, K.N.; SADYKHOV, R.N.; SEMENOV, N.N.; TOPCHIYEV, A.V.; TOPCHIBASHEV, M.A.; TAIROVA, T.A.; KHALILOV, Z.I.; EFENDIYEV, G.Kh.; SHUKYUROVA, Z.Z.

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(MIRA 15:5)  
(Mamedaliev, IUsif Geidarovich, 1905-1961)

ALIFBAYEV, M.M.; ARSHADY, M.A.; AFRUDOV, V.YU.; AKHIEV, M.A.; ALIZBEROV,  
S.M.; ALIYEV, M.A.; VEZIROV, S.A.; VOLOBUYEV, V.R.; BARILOV, F.M.;  
GADZHIYEV, M.M.; GUSHYNOV, D.M.; GUSHYNOV, I.A.; DADASHIEV, I.I.;  
DADASHZADE, M.A.; DALIN, M.A.; ISMENDROV, M.A.; KAZIYEV, M.A.;  
FARAYEV, A.I.; KASHEVAY, M.S.; KEL'DYSH, M.V.; KERIMOV, A.G.;  
EMBERGANSKIY, A.D.; MAMEDOV, G.F.; MERHIYEV, M.R.; MIRZAYEV, S.A.;  
NAGIYEV, M.F.; NESRULLAYEV, N.I.; ORUDZHEV, A.I.; RAZZHABOV, K.A.;  
RUDNEV, K.N.; SADIYKOV, R.N.; SEMENOV, M.M.; TOFSHIYEV, A.V.;  
TOPCHIRASHEV, M.A.; TAIROVA, T.A.; HPAHILIOV, Z.I.; SPENDIYEV, G.Ah.;  
SPUFYUROVA, Z.Z.

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Powerful tool in the struggle for technical progress; fortieth anniversary of "Azerbaidzhanskoe neftianoe khoziaistvo." Azerb. neft.khoz. 40 no.12:6-8 D '61. (MIRA 15:8)  
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normal, for. 117, 1949, p. 64-71.

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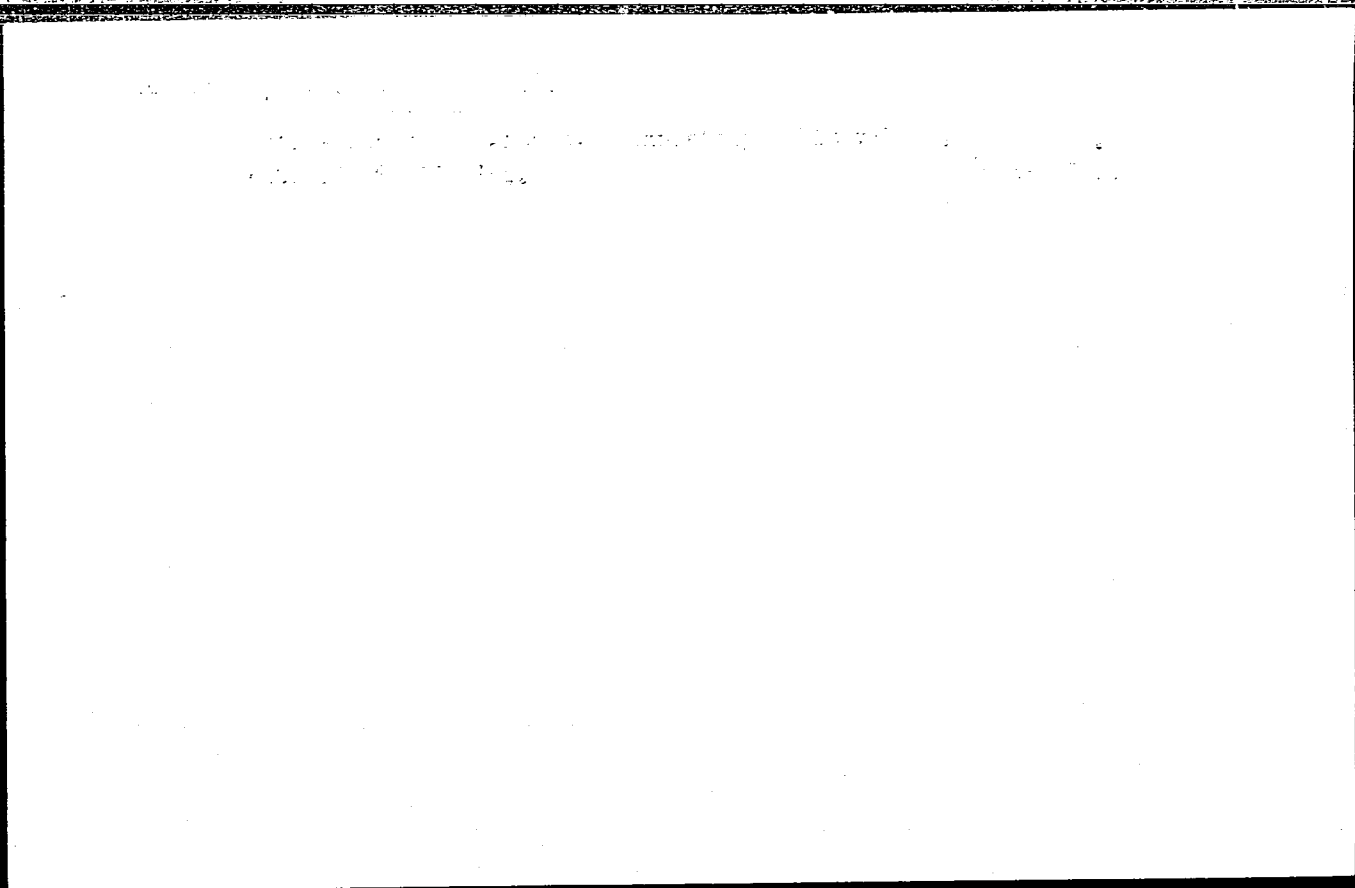
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TABLE VI, 4.4.

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[Experience of potato farmers] Opyt kartofelevodov;  
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AKOPYUNYAN, Asbet Sarkisovich, doktor sel'khoz. nauk, i. n. s.;  
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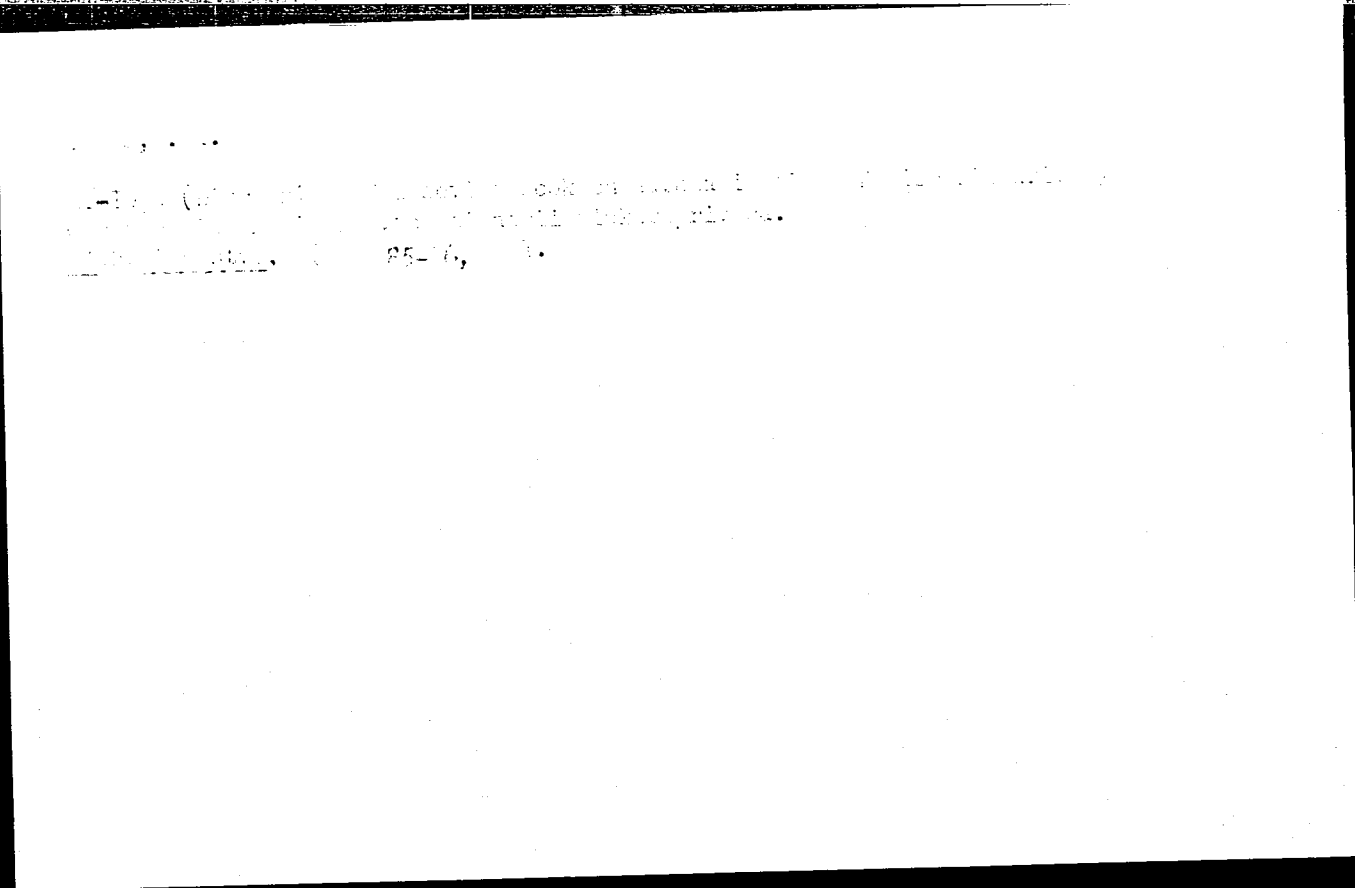
KARSKA, Zora; FAISL, Ladislav

New international decimal classification in geodesy,  
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of Geodesy, Topography and Cartography, Prague.

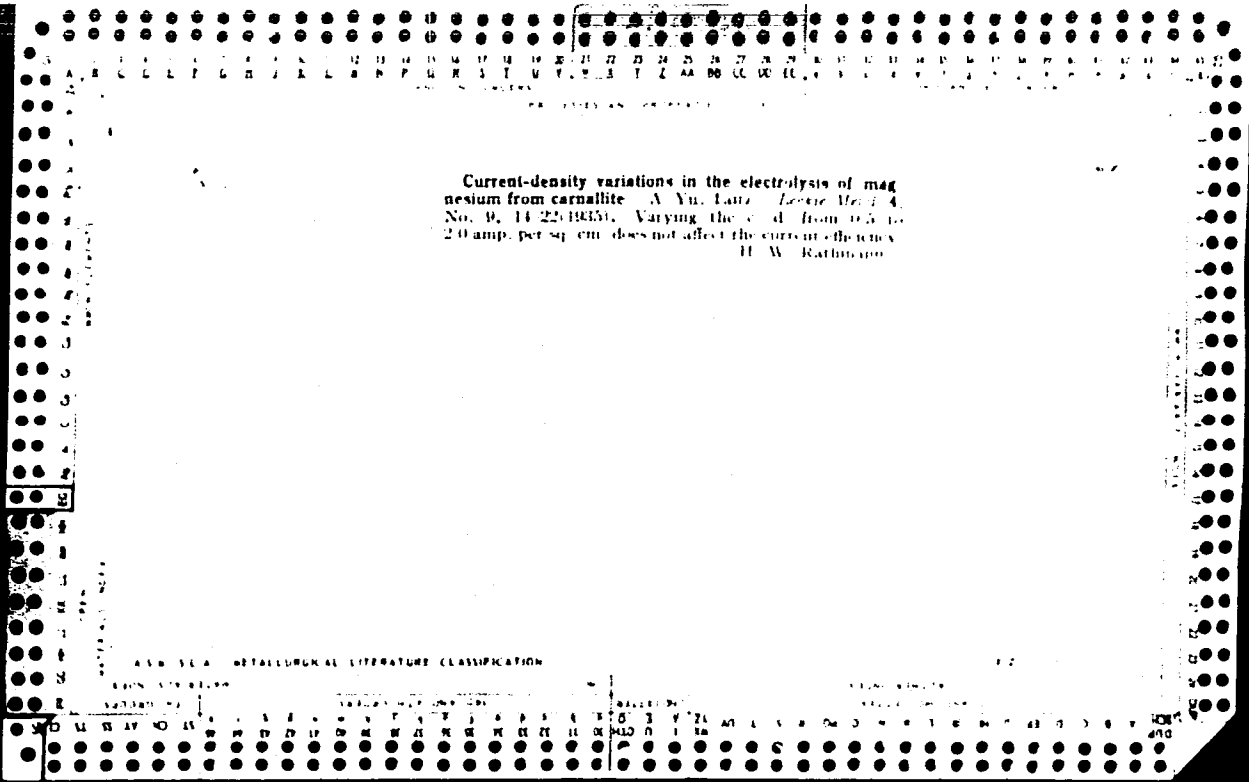






TAITS, A.A., kand. tekhn. nauk

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(Electric engineering--Safety measures--Congresses)



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PROCESSES AND PATENTED MATH

**ADDITION OF BARIUM AND CALCIUM CHLORIDES IN THE ELEC-**

trolysis of fused magnesium chloride - A. Yu. Lants and  
 A. M. Zhogina, *Lecky Metal*, 6, No. 3, 25 (1971)  
 The addition of 20% BaCl<sub>2</sub> or CaCl<sub>2</sub> to the electrolyte containing

MgCl<sub>2</sub>, 32 H<sub>2</sub>O, KCl, NaCl, 8.7% and CaF<sub>2</sub> 0.1% increases  
 the current efficiency 12% H. W. Rathmann

A 50-55 A METALLURGICAL LITERATURE CLASSIFICATION

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MATERIALS INDEX

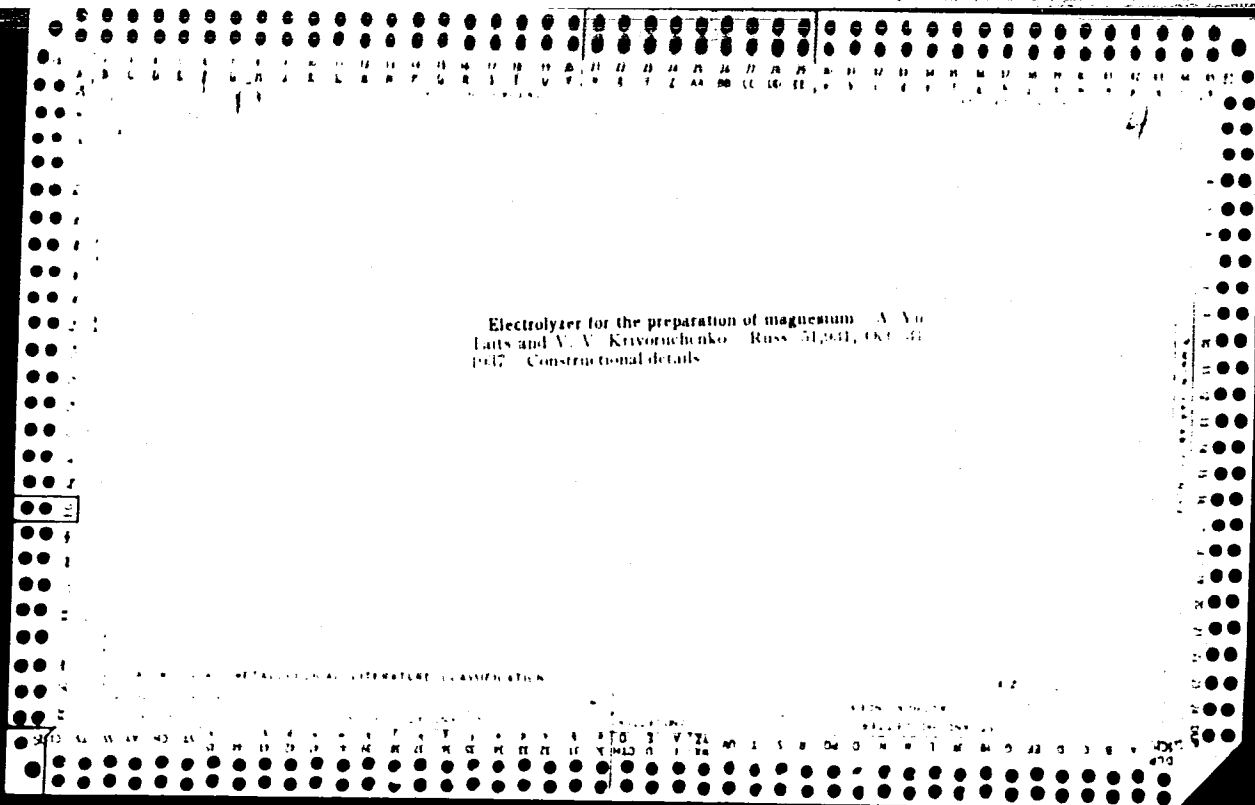
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1970 02-17

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A.P.I. In.

191-0. (1964-1965) ... (The Metallurgy of Magnesia)  
E. I. ... , V. I. ... , ... , ... , ...  
... Technical Publishing House for Literature on  
... Metallurgy, Moscow, U.S.S.R.

... characteristics of the raw material used for obtaining magnesia,  
theoretical aspects of the extractive technology of its production by  
electrolytic and thermal methods. (023, 021 13)

... source clipping



VEDROV, V. S., V. P. GORSKII and M. A. TAITIS.

Sravnenie rezul'tatov ispytanií plati samoletov v trube i v polete.  
(TSAGI. Trudy, 1935, no. 214, p. 5-17, diagrs.)

Summary in English.

Title tr.: Comparative results obtained by wind tunnel and flight tests  
of five airplanes.

DA011.865 no. 214

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of  
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TAITS, M. A.

Metodika opredeleniia poliar'y samoleta v polete. (TSAM. Trudy, 1935, no. 21h, p. 40-62, diagrs.)

Summary in English.

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A.

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Letnye ispytaniia samoletov. Dopushcheno v kachestve uchebnogo posobiia dlia aviatsionnykh vuzov. Moskva, Oborongiz, 1951. 483 p., tables, diags.

Bibliography: p. 478.

Title tr.: Flight tests of aircraft. Approved as a textbook for schools of advanced aeronautical studies.

TL710.V38

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

TAITS, N. Tu.

Author: Taits, N. Tu.

Title: The technology of steel heating. (Tekhnologiya nagreva stali.)

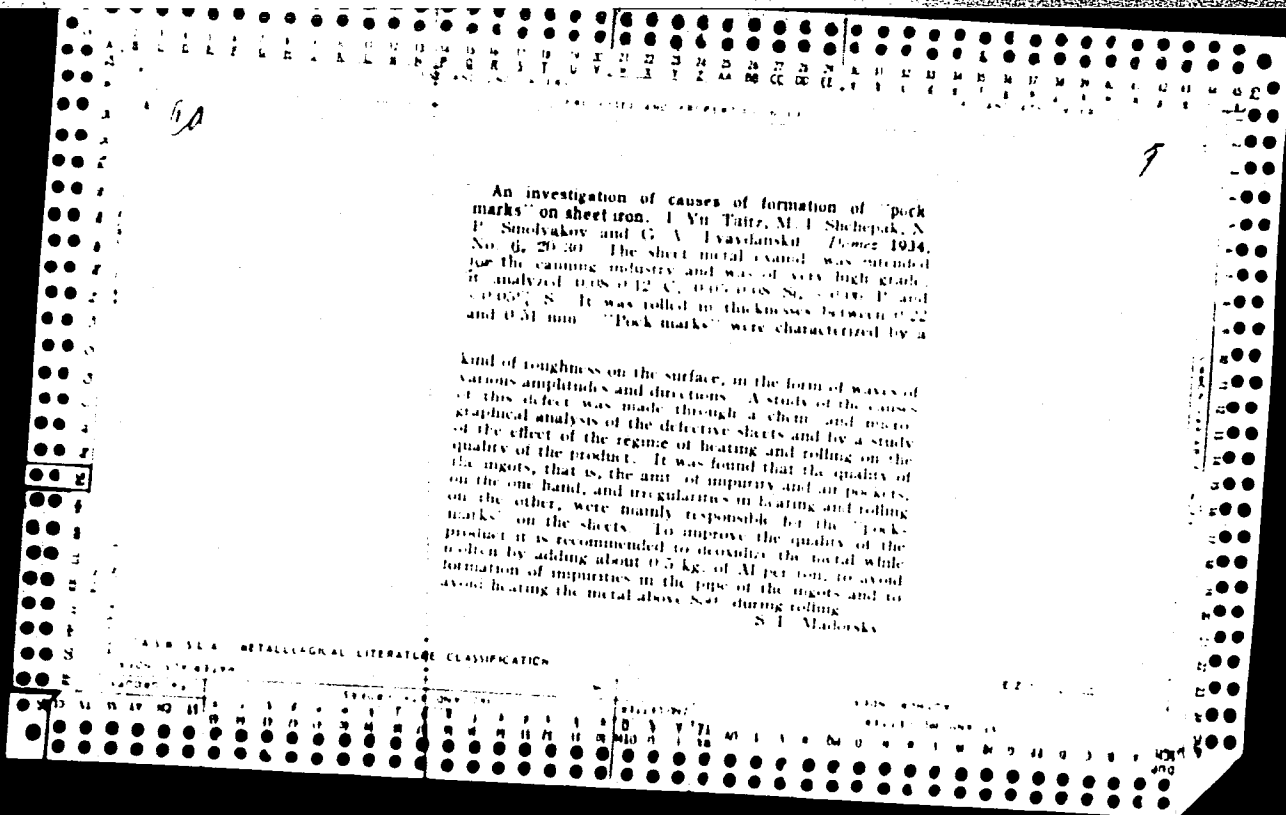
City: Moscow

Publisher: State Scientific and Technical Publication pertaining to  
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Date: 1950

Available: Library of Congress

Source: Monthly List of Russian Accessions, Vol. 4, No. 1, p. 28



10/14/72 U.S. Alaska

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... diseases of the ...  
... 165.

1ST AND 2ND ORDERS  
PROCESSES AND PROPERTIES INDEX

**Loss in burning during steel heating. N. Y. TAITZ (J. Res. Met. Soc., 1929, Mem., 288-326).**  
Data concerning surface oxidation during heating, rolling, and cooling are compared. A reducing atmosphere in the heating furnace does not appreciably decrease the loss. The metal should remain for a minimal time in the hottest zone; a magnesite bottom is recommended.

CHEMICAL ABSTRACTS.

A 58-31A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

1ST AND 2ND ORDERS

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100  
 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z AA BB CC DD EE FF GG HH II JJ KK LL MM NN OO PP QQ RR SS TT UU VV WW XX YY ZZ

Heating steel alloys. N. Yu. Taitz. *Dokl. Akad. Nauk SSSR* 1935, No. 1, 41-43.—The problem of heating Fe alloys is complicated by their great variety in compn. and mech. and phys.-chem. properties. Analysis of data found in the literature and those obtained experimentally, in the case of Cr-Mo and stainless steels, leads to the following conclusions. Heat cond. of Fe alloys decreases inversely with amts. of alloying elements and with temp.; it also depends on structure of the alloys. Sp. heat and sp. gr. are less affected by chem. compn than heat cond. Internal stresses during heating depend on temp. gradient through the alloy, its coeff. of expansion and plasticity. A sharp change in coeff. of expansion was observed in Cr-Mo steel at 350-400° and in stainless steel at 450-500°. Fifty-three references.  
 S. L. Madorsky

AS A S L A METALLURGICAL LITERATURE CLASSIFICATION

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100  
 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z AA BB CC DD EE FF GG HH II JJ KK LL MM NN OO PP QQ RR SS TT UU VV WW XX YY ZZ



The heating of heat resistant steels. N. Yu. Lashin, *Prakt. Met.* No 2, 40-8, 1937, cf. *CA* 29, 4312. The steels had the following compn: (I) C 0.15, Si 0.28, Mn 0.5, S 0.02, P 0.01, Cr 18.3 and Ni 0.1%; (II) C 0.12, Si 0.74, Mn 0.30, S 0.000, P 0.000, Cr 17.0 and Ni 0.16%. I. At 600-800° there was a sepn. of carbides with an accompanying decrease in plastic properties and in resistance to corrosion. The carbides begin to coagulate after 900°. The sepn. of carbides is not decreased by an increase in the speed of heating. At 1000°, the previously sepd. carbides dissolve, and at 1100°, grains begin to grow which become quite noticeable at 1200°. A decrease in the speed of heating will result in larger grains. A speed up should also be avoided because of the soln. of the carbides. Hardened and rolled steels showed the same structural changes during the heating, those of the former were more sharply expressed. At 1100° and 1200° they showed no difference at all. II. This steel was rolled and it consisted of iron and carbides spread out chiefly on the grain boundaries. Heating up to 600° at various speeds had no effect upon the structure. At this temp. the plasticity is greatest. At 600-1000° there is no change in phase compn. However, the carbides become coagulated, and the plasticity rises up to 950°. At 1100-1200°, the  $\delta(\alpha)$  phase increases as well as the size of its grains. These changes vary inversely as the speed of heating. The total period of heating for both steels should be 140-160 min. The heating should not be speeded up or decreased in the sep. temp. intervals where structural changes occur.

B. Z. Kamich

ca

10

Catalytic hydrogenation of azines. V. Hydrogenation of ketazines. Determination of affinity capacities of methyl and ethyl groups. K. A. LAIPALM AND P. V. LUKACHUK. *J. Russ. Phys. Chem. Soc.* **62**, 1241 (1930); *cf. C. A.* **20**, 1282. The speed of the reaction of catalytic hydrogenation of alidazines makes possible an estimation of the relative consumption of affinity by various radicals at the C atom in the azimethylene grouping of alidazines (*C. A.* **19**, 3478). If the affinity capacity of the Me group is 100, the relative values of the affinity capacity of hydrocarbon radicals and the H atom for this C atom can be deduced, as follows: H 12, Me 100, Et 1.5, Et 2.0, iso Pr 3.55, iso Bu 7.00, Ph 100. Other investigators, detg. the affinity capacity of radicals in relation to C, found that the Me group absorbs a greater amt. of affinity than the Et group. Therefore it is desirable to compare the affinity capacities of Me and Et groups in another example than that previously obtained by hydrogenation of the alidazines of AcH and PrH. The following ketazines are considered: bis(di-methyl)azimethylene, Me<sub>2</sub>C:NN:CMes (I), bis(methylethyl)azimethylene, (II), bis(isoethyl)azimethylene, (III). From the speed of hydrogenation of I and II, and of II and III, we are able to study the different influences of Me and Et groups on the speed of addn. of H to the azimethylene group >C:NN:C<, and from that of I and III the difference in the influence of 2 Me and 2 Et groups, the resulting relations of speeds of hydrogenation enabling us to make an estimate of the relative values of affinity capacities of these 2 radicals. The expts. show that the speeds of hydrogenation of II and I in the presence of Pt black are to each other as 1 to 1.3, those of III and II as 1 to 1.7, and those of III and I as 1 to 2.0; i. e., an azimethylene group joined with Et groups combines with H less readily than the one joined with Me groups. Considering that the speed of hydrogenation of a double bond depends on the magnitude of the residual affinity of the atoms constituting this bond, and that the magnitude of the residual affinity in turn depends on the degree of consumption of the affinity by the radicals combined with these atoms, the conclusion is made that the Et group possesses a higher affinity capacity than the Me group. Having previously assumed the affinity capacity of Me as 100, that of Et then is 140, which corresponds with the value of 135 derived from the speeds of hydrogenation of the alidazines (*cf. Kindler, C. A.* **21**, 1453).

OVER

CARD NO 1

...  
 salt of the base, m. 57-57.5°. Azo- $\alpha$ -ethylpropane, obtained by oxidation of the hydr  
 azo compd. with HgO in Et<sub>2</sub>O, b<sub>m</sub> 182°, b<sub>1</sub> 70°. Amylhydrazine 2 HCl, Et<sub>5</sub>CH  
 NHNH<sub>2</sub> 2HCl, was obtained by the action of HCl on the azo compd. or hydrazone in  
 Et<sub>2</sub>O, the mono HCl salt is formed on heating the di HCl salt at 60-70°. Dibenzoyl  
 amyldiazine, Et<sub>5</sub>CHNHNH<sub>2</sub> b<sub>m</sub> prepd. by heating the azo compd. in Et<sub>2</sub>O with an excess  
 of BaCl<sub>2</sub>, m. 100.5-200°. Amylmalcarbazide, NH<sub>2</sub>CONAmNH<sub>2</sub>, prepd. from a concd  
 soln. of HCl salt of the primary hydrazine on heating with an excess of KCN, m. 107-8°

CHAR. BLANC  
 A few derivatives of propylene glycol. A. DEWART. *Bull. Soc. Chim. Belg.* 30,  
 305-401 (1930). The following new compds. have been prepd. CH<sub>2</sub>CH(OH)Me,  
 obtained by methylation of CH<sub>2</sub>CH(OH)Me (I) with Me<sub>2</sub>SO<sub>4</sub>, b. 103-4°, d<sub>4</sub><sup>20</sup> 1.009,  
 n<sub>D</sub><sup>20</sup> 1.41372. CH<sub>2</sub>CH(OEt)Me, prepd. by ethylation of I with Et<sub>2</sub>SO<sub>4</sub>, b. 117°,  
 d<sub>4</sub><sup>20</sup> 0.99015, n<sub>D</sub><sup>20</sup> 1.41902. The dehydration of I by H<sub>2</sub>SO<sub>4</sub> gives (CH<sub>2</sub>CHMe)<sub>2</sub>O  
 b<sub>m</sub> 187-8°, d<sub>4</sub><sup>20</sup> 1.103, n<sub>D</sub><sup>20</sup> 1.45046, which reacts with KOAc and HOAc to give (CHMe  
 CH(OAc))<sub>2</sub>O, b<sub>m</sub> 248°, d<sub>4</sub><sup>20</sup> 1.050, n<sub>D</sub><sup>20</sup> 1.42654. EtOCH<sub>2</sub>CH(OH)Me, obtained from  
 alc. and propylene oxide with 2 drops of H<sub>2</sub>SO<sub>4</sub>, b. 130°, d<sub>4</sub><sup>20</sup> 0.9028, n<sub>D</sub><sup>20</sup> 1.4. EtOCH<sub>2</sub>  
 CHMeOAc b. 158-60°, d<sub>4</sub><sup>20</sup> 0.9461, n<sub>D</sub><sup>20</sup> 1.40068. CH<sub>2</sub>(OH)CH(OEt)Me, obtained  
 from I through the acrin, b<sub>m</sub> 140-1°, d<sub>4</sub><sup>20</sup> 0.9044, n<sub>D</sub><sup>20</sup> 1.4. CH<sub>2</sub>(OMe)CH(OH)Me b.  
 126-7°, d<sub>4</sub><sup>20</sup> 0.9200, n<sub>D</sub><sup>20</sup> 1.40096, is obtained from MeOH and propylene oxide, with  
 H<sub>2</sub>SO<sub>4</sub>. MeOCH<sub>2</sub>CH(OAc)Me b<sub>m</sub> 147°, d<sub>4</sub><sup>20</sup> 0.9700, n<sub>D</sub><sup>20</sup> 1.40449. Me<sub>2</sub>CHOCH<sub>2</sub>  
 CH(OH)Me, b<sub>m</sub> 142-3°, d<sub>4</sub><sup>20</sup> 0.9059. The condensation of HOCH<sub>2</sub>CHClMe and  
 propylene oxide with H<sub>2</sub>SO<sub>4</sub> gives MeCHClCH<sub>2</sub>OCH<sub>2</sub>CH(OH)Me, b<sub>m</sub> 204-5°, d<sub>4</sub><sup>20</sup>  
 1.059. CH<sub>2</sub>(OCOPr)CHClMe b<sub>m</sub> 184°, d<sub>4</sub><sup>20</sup> 1.031, n<sub>D</sub><sup>20</sup> 1.42875. AcOCH<sub>2</sub>CH(OAc)Me

CONT ON  
 CARD NO 2

The catalytic hydrogenation of azines. VI. Comparative hydrogenation of the ketazines of camphor and carvomenthone. K. A. Talpale, M. A. Gunter and E. K. Remiz. *J. Gen. Chem. (U. S. S. R.)* 7, 1378-80 (1937); cf. *C. A.* 25, 2415.—The ketazine of carvomenthone is hydrogenated 5 times faster than that of camphor over Pt black. Thus, the formation of the camphane bridge strongly raises the affinity capacity of the alkylic ring. The hydrogenation products are the symmetrically disubstituted hydrazines. Camphor ketazine gives 2-hydrato-camphane (I) m. 135-6°. In air, this partly oxidizes to azocamphane (II), but the latter is better prepd. by oxidizing I with  $KMnO_4$  or  $H_2O_2$ . I forms a *monohydrochloride*, m. 235° (decompn.), and a *mono-Bz deriv.* m. 137-8°. II, m. 148-9°,  $[\alpha]_D^{25} = -59.44^\circ$ , is isomerized by HCl to  $C_{15}H_{21}NHN:C_{15}H_{21} \cdot HCl$ , m. 200° (decompn.). More vigorous treatment with HCl gives camphor and bornylhydrazine. Attempts to isolate the free base lead to tar formation. H. M. Leicester

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

ETONI STV BILWA

GROUPS

Q	U	W	V	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR	CS	CT	CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE	DF	DG	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	DS	DT	DU	DV	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP	EQ	ER	ES	ET	EU	EV	EW	EX	EY	EZ	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP	FQ	FR	FS	FT	FU	FV	FW	FX	FY	FZ	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GA	GB	GC	GD	GE	
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RAKOS, Rezső, Dr.; TAJBER, Tamás, Dr.

New data on the etiology of embryopathies; successful surgery of a case of congenital atresia of the small intestine. Orv. hetil. 99 no.31: 1076-1077 3 Aug 58.

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G U I J K L M N O P Q R S T U V W X Y Z AA AB AC AD AE AF AG AH AI AJ AK AL AM AN AO AP AQ AR AS AT AU AV AW AX AY AZ BA BB BC BD BE BF BG BH BI BJ BK BL BM BN BO BP BQ BR BS BT BU BV BW BX BY BZ CA CB CC CD CE CF CG CH CI CJ CK CL CM CN CO CP CQ CR CS CT CU CV CW CX CY CZ DA DB DC DD DE DF DG DH DI DJ DK DL DM DN DO DP DQ DR DS DT DU DV DW DX DY DZ EA EB EC ED EE EF EG EH EI EJ EK EL EM EN EO EP EQ ER ES ET EU EV EW EX EY EZ FA FB FC FD FE FF FG FH FI FJ FK FL FM FN FO FP FQ FR FS FT FU FV FW FX FY FZ GA GB GC GD GE GF GG GH GI GJ GK GL GM GN GO GP GQ GR GS GT GU GV GW GX GY GZ HA HB HC HD HE HF HG HH HI HJ HK HL HM HN HO HP HQ HR HS HT HU HV HW HX HY HZ IA IB IC ID IE IF IG IH II IJ IK IL IM IN IO IP IQ IR IS IT IU IV IW IX IY IZ JA JB JC JD JE JF JG JH JI JJ JK JL JM JN JO JP JQ JR JS JT JU JV JW JX JY JZ KA KB KC KD KE KF KG KH KI KJ KL KM KN KO KP KQ KR KS KT KU KV KW KX KY KZ LA LB LC LD LE LF LG LH LI LJ LK LM LN LO LP LQ LR LS LT LU LV LW LX LY LZ MA MB MC MD ME MF MG MH MI MJ MK ML MN MO MP MQ MR MS MT MU MV MW MX MY MZ NA NB NC ND NE NF NG NH NI NJ NK NL NO NP NQ NR NS NT NU NV NW NX NY NZ OA OB OC OD OE OF OG OH OI OJ OK OL OM ON OP OQ OR OS OT OU OV OW OX OY OZ PA PB PC PD PE PF PG PH PI PJ PK PL PM PN PO PP PQ PR PS PT PU PV PW PX PY PZ QA QB QC QD QE QF QG QH QI QJ QK QL QM QN QO QP QQ QR QS QT QU QV QW QX QY QZ RA RB RC RD RE RF RG RH RI RJ RK RL RM RN RO RP RQ RR RS RT RU RV RW RX RY RZ SA SB SC SD SE SF SG SH SI SJ SK SL SM SN SO SP SQ SR SS ST SU SV SW SX SY SZ TA TB TC TD TE TF TG TH TI TJ TK TL TM TN TO TP TQ TR TS TT TU TV TW TX TY TZ UA UB UC UD UE UF UG UH UI UJ UK UL UM UN UO UP UQ UR US UT UU UV UW UX UY UZ VA VB VC VD VE VF VG VH VI VJ VK VL VM VN VO VP VQ VR VS VT VU VW VX VY VZ WA WB WC WD WE WF WG WH WI WJ WK WL WM WN WO WP WQ WR WS WT WU WV WW WX WY WZ XA XB XC XD XE XF XG XH XI XJ XK XL XM XN XO XP XQ XR XS XT XU XV XW XX XY XZ YA YB YC YD YE YF YG YH YI YJ YK YL YM YN YO YP YQ YR YS YT YU YV YW YX YY YZ ZA ZB ZC ZD ZE ZF ZG ZH ZI ZJ ZK ZL ZM ZN ZO ZP ZQ ZR ZS ZT ZU ZV ZW ZX ZY ZZ

CA

Zinc blende from Ljubija at Prijedor Miroslav  
 Tajler. *Bull. intern. acad. yougoslave sci. beaux-arts*,  
*Classe sci. math. nat.* 29-30, 132 (1934); *Chem. Zentr.*  
 1934, II, 1385. A description of a Zn blende having the  
 compn.: Zn 63.34, Fe 3.39 and S 32.78%; d<sub>4</sub> is 4.082  
 M. G. Moore

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PROCESSES AND PRESENTS UNIT

Clinchlore from Dobro Polje Miroslav Lapac.  
 Vsrnk Geol. Inst. Jugoslavije 6, 255 S. 1938 (in Croatian  
 with German summary); *Mineralog. Abstracts* 7, 359-  
 00(1939).- Green scales of clinchlore form veins in  
 serpentine; analysis: SiO<sub>2</sub> 30.62, Al<sub>2</sub>O<sub>3</sub> 17.51, Fe<sub>2</sub>O<sub>3</sub>  
 1.60, FeO 3.62, MnO 0.35, MgO 22.35, H<sub>2</sub>O + 12.62,  
 H<sub>2</sub>O - 1.54;  $\mu$  (mean of  $\alpha$  and  $\beta$ ) 1.581,  $\gamma - \alpha$  0.0088.  
 C. A. Silberrad

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

1324 634104

1324 634104





Arsoite from Kravichi Kamen and latite from Tumba  
 M. Lapan, *Rad Jugosl. Ak. Znan. i Umjetn.* 207  
 S. 112 (1940), *Novos Jelsk. Mineral. Geol. Ref. II, 1940.*  
 794. Analyses of the arsoite and latite were, resp.  
 SiO<sub>2</sub>, 57.01, 57.87; TiO<sub>2</sub>, 0.70, 0.82; Al<sub>2</sub>O<sub>3</sub>, 18.55, 18.41;  
 Fe<sub>2</sub>O<sub>3</sub>, 2.45, 3.44; FeO, 2.30, 1.69; MnO, 0.07, 0.05;  
 MgO, 2.12, 1.62; CaO, 5.37, 5.52; BaO, 0.21, 0.19;  
 Na<sub>2</sub>O, 4.28, 3.90; K<sub>2</sub>O, 6.22, 4.84; P<sub>2</sub>O<sub>5</sub>, 0.22, 0.26;  
 SO<sub>3</sub>, 0.03, . . . . . ZrO<sub>2</sub>, 0.06, . . . . . H<sub>2</sub>O+, 0.56, 0.88;  
 H<sub>2</sub>O - 0.11, 0.31 G. W. Avers

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✓The pegmatites of Marikovo, Macedonia. Miroslav  
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(English summary).—Optical data and partial chem. analyses  
are given of microcline and 2 albites. M. Fleischer

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Tajder, Miroslav. Petrografija i geologija. Mapisali Miroslav Tajder  
(i) Milan Herak. Zagreb, Skolska knjiga, 1951. 231 p. (Petrography and  
geology. Bibl., inter.)

39: Monthly List of East European Accessions, Library of Congress, Vol. 2,  
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170 DOK, 171

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Biotite dacite from Sase near Srebrenica, Bosnia. Miroslav Tajder, *Geol. Vjesnik* 5-7, 63-72 (1951-53) Pub. 1954 (German summary).—Petrographic data and a chemical analysis of the rock are given. Michael Fleischer