

USSR

UDC 621.372.5

PEREFELYATNIK, P. A., KLIMENTOV, P. P., GLUSHKO, K. P.

"Cascade Inclusion of Active Quadripoles"

Tr. Mosk. in-ta elektron. mashinostr. (Works of Moscow Institute of Electronic Machine Building), 1970, vyp. 13, pp 88-99 (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 4A156)

Translation: In the case of cascade inclusion of identical active nonmutual quadripoles the input and output impedances of the quadripole turn out to be equal to its iterative resistances. The coefficient K_+ characterizing the ratio of the increment of the input impedance of the quadripole to the increment of the load resistance at the point where the load resistance is equal to the iterative resistance is introduced. The coefficient K_+ is used to construct a unique definition of the input and output iterative resistances and the transmission coefficient of quadripoles when operating on iterative resistances.

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Polymers and Polymerization

USSR

UDC 666.113/117

KLIMENTOVA, YU. P., KIRICHENKO, L. F., ASLANOVA, M. S.,
MYASHNIKOV, A. A., CHERTOV, V. M., VYSOTSKIY, Z. A., Institute of
Physical Chemistry, imeni L. V. Pisarzhhevskiy, Ukr. Academy of
Sciences; and All-Union Scientific-Research Institute of Fiber-
glass and Fibers

"Effect of Hydrothermal Treatment on the Texture of Silicon
Fibers"

Leningrad, Zhurnal Prikladnoy Khimii, Vol 44, No 8, 1971,
pp 1725-1730

Abstract: The texture of glass fibers strongly depends on their
origin natural or basaltic glass. The texture of silicon glass
is dealt with here, as it is affected by hydrothermal processing.
A number of physical features are taken into account.

It is shown that with hydrothermal processing of fine-pore silicon
fibers at 100-300°C, and autoclaving for 3-24 hours, increase in
either of these factors will secure a substantial reduction in
the size of micropores and in the specific surface of the fiber,
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KLIMENTOVA, YU. P., et al, Zhurnal Prikladnoy Khimii, Vol 44,
No 8, 1971, pp 1725-1730

which means also that the volume of sorption space falls off. Hydrothermal processing at 200°C will produce a good number of ultrapores in silicon fibers, and these will be accessible to the water molecules, though not to those of benzene.

Precise data on textural characteristics of silicon fibers accompany the paper.

2/2

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1/2 008 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--SYNERESIS AND ISOELECTRIC POINT OF ACID HYDROGELS OF POLYSILICIC
ACID -U-
AUTHOR-(03)-KLIMENTOVA, YU.P., KIRICHENKO, L.F., VYSOTSKIY, Z.Z.
COUNTRY OF INFO--USSR
SOURCE--UKR. KHIM. ZH. 1970, 36(1), 56-8
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--GEL, SILICA, HYDROGEN ION CONCENTRATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1999/1827 STEP NO--UR/0073/70/036/001/0056/0058
CIRC ACCESSION NO--AP0123616
UNCLASSIFIED

2/2 008

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0123616

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RATE OF SYNERESIS OF POLYSILICIC ACID HYDROGELS AT PH 1-3.7 AND FOR SIO SUB2 CONCNS. OF 1.09-1.78 MOLES PER L. AT 26.6DEGREES WAS DETD. AND IS SHOWN IN GRAPHS. FOR ALL CONCNS., THE RATE IS MIN. AT A PH OF SIMILAR TO 1.7. FACILITY: INST. FIZ. KHIM. IM. PISARZHEVSKOGO, KIEV, USSR.

UNCLASSIFIED

USSR

UDC 669.71.472

ANTIPIN, L. N., VOLINSKIY, V. V., MANSKIY, Ye. G., CHUB, V. Ya., and
KLIMENYUK, V. A.

"The Anode Effect During Electrolysis of Oxyfluorotitanium Fusions"

Moscow, Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya
Publishing House, Vol VI, 1970, pp 77-81

Translation: The reasons for the appearance of the anode effect during electrolysis of oxyfluorotitanium fusions on a carbon-graphite anode are investigated. It is demonstrated that the anode effect arises as a result of the formation of non-conducting oxides of the COF_2 type on the surface. The formation of such compounds is accompanied by a worsening in wettability and leads to passivation of the anode. Study of the critical density of current in the oxyfluorotitanium fusion was done on an automatic device for recording volt-ampere dependencies. It was demonstrated that the concentration of TiO_2 in the electrolyte exerts the primary influence on the size of critical current density. Experimental results are given which show the influence of TiO_2 concentration on the value of critical current density. Four illustrations and 14 bibliographic entries.

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1/2 018 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--ROLE OF ASPARTIC ACID IN BIOSYNTHESIS OF NICOTIN AND ANABASINE -U-
AUTHOR--(03)-LOVKOVA, M.YA., ILIN, G.S., KLIMENTYEVA, N.I.
COUNTRY OF INFO--USSR
SOURCE--~~FIZIOLOGIYA~~ RASTENIY, 1970, VOL 17, NR 2, PP 409-416
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--BIOSYNTHESIS, PLANT PHYSIOLOGY, ASPARTIC ACID, ALKALOID,
PYRIDINE, PYRROLIDINE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1982/1579 STEP NO--UR/0326/70/017/002/0409/0416
CIRC ACCESSION NO--AP0052781
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0052781

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FOR INVESTIGATION OF BIOSYNTHESIS OF NICOTIN AND ANABASINE C PRIME14-N PRIME15 ASPARTIC ACID WAS INTRODUCED INTO N. TABACUM SEEDLINGS AND N. GLAUCA SHOOTS AS PRECURSOR OF ALKALOIDS. AFTER TERMINATION OF THE EXPERIMENT NICOTIN AND ANABASINE PREPARATIONS WERE ISOLATED FROM THE PLANT MATERIAL AND THEIR OXIDATIVE DECOMPOSITION INTO NICOTINIC ACID WAS CARRIED OUT. IT IS SHOWN THAT ASPARTIC ACID IS A PRECURSOR OF NICOTIN AND ANABASINE BUT ITS ROLE IN BIOSYNTHESIS OF THESE ALKALOIDS IS NOT THE SAME. THUS, ON INCORPORATION INTO NICOTIN THE NITROGEN OF ASPARTIC ACID IS MAINLY USED FOR BIOSYNTHESIS OF THE PYRIDINE RING AND THE CARBON ATOMS PARTICIPATE IN FORMATION OF BOTH THE PYRIDINE AND PYRROLIDINE RINGS OF THE ALKALOID. ON THE CONTRARY, IN BIOSYNTHESIS OF ANABASINE, ASPARTIC ACID MAINLY PARTICIPATES IN FORMATION OF THE PIPERIDINE RING OF THE ALKALOID AND IS INCORPORATED INTO THE PYRIDINE HETEROCYCLE TO A MUCH SMALLER DEGREE. PATHS OF PARTICIPATION OF ASPARTIC ACID IN BIOSYNTHESIS OF NICOTIN AND ANABASINE ARE DISCUSSED.

UNCLASSIFIED

USSR

UDC 669.295.472

ANTIPIN, L. N., BOLYNSKIY, V. V., MANSKIY, Ye. G., CHUB, V. Ya., and
KLIMENYUK, V. A.

"Anode Effect During Electrolysis of Oxyfluorotitanate Melts"

Sb. tr. Vses. n.-i. i proyekt. in-t titana / [Collected works of All-Union Scientific-Research and Planning Institute for Titanium], 6, 1970, 77-81, (Translated from Referativnyy Zhurnal-Metallurgiya, No. 1, 1971, Abstract No. 1 G193 by the authors).

Translation: The causes for the formation of the anode effect during electrolysis of oxyfluorotitanate melts on a carbon-graphite anode are studied. The anode effect arises as a result of formation of non-conducting oxides such as COF_2 on the surface. The formation of these compounds is accompanied by worsening of wetability and leads to passivation of the anode. Study of the critical D in oxyfluorotitanate melts was performed on an automatic installation recording the volt-ampere functions. Primary influence on the value of critical D is that of the concentration of TiO_2 in the electrolyte. Experimental results are presented demonstrating the influence of TiO_2 concentration on critical D. 4 figures; 14 biblio. refs.

1/1

1/2 022 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--FEATURES SPECIFIC TO THE INTRAUTERINE DEVELOPMENT OF RATS UNDER THE
EFFECT OF HOMOLOGOUS PLACENTAL CYTOTOXIC SERUM -U-
AUTHOR--KLIMETS, I.S.

COUNTRY OF INFO--USSR *K*

SOURCE--BYULLETEN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 49,
NR 6, PP 81-83
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--EMBRYOLOGY, PLACENTA, SERUM PROTEIN, TOXIN, RAT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3004/0569

STEP NO--UR/0219/70/049/006/0081/0083

CIRC ACCESSION NO--AP0131192

UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0131192

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SINGLE INTRAPERITONEAL INJECTION OF HOMOLOGOUS PLACENTAL CYTOTOXIC SERUM TO ALBINO RATS VERY OFTEN LEADS TO DISTURBANCE OF FURTHER DEVELOPMENT OF PREGNANCE ASSOCIATED WITH IMPAIRMENT OF PROCESSES OF PLACENTATION (DEATH OF FETUSES, RESORPTION OF AMNIA). THE PATHOGENIC EFFECT WAS MOST MARKED WHEN THE ANTISERUM WAS INTRODUCED ON THE EIGHTH DAY OF PREGNANCY. FACILITY: LABORATORY OF IMMUNOHEMATOLOGY OF THE INSTITUTE OF OBSTETRICS AND GYNECOLOGY OF THE ACADEMY OF MEDICAL SCIENCES OF THE USSR, Leningrad.

UNCLASSIFIED

USSR

UDC: 51:621.391

KIPSHIDZE, Z. Sh., ~~KLINIASHVILI, M. A.~~, FAYN, S. B.

"On Polynomial Error-Correcting Codes"

Tr. Vychisl. tsentra AN GruzSSR (Works of the Computing Center of the Academy of Sciences of the Georgian SSR), 1972, 11, No 1, pp 80-86 (from RZh-Kibernetika, No 8, Aug 72, Abstract No 8V497)

Translation: By "polynomial code", the authors mean the set of solutions of the system

$$\sum_{i=1}^n a_{ij} \alpha_i(x) = b_j(x),$$

where $\alpha_i(x) = \sum_{s=0}^{n-1} \alpha_{is} x^s$, $i = 1, 2, \dots, n$; $b_j(x) = \sum_{l=0}^{n-1} \beta_{jl} x^l$, $j = 1, 2, \dots, l$.

To correct t -fold error groups, it is proposed that the coefficients a_{ij} be selected in the form

$$a_{ij} = g^{l(i-1)}; \quad l = 2t.$$

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KIPSHIDZE, Z. Sh. et al., Tr. Vychisl. tsentra AN GruzSSR,
1972, 11, No 1, pp 80-86

A tk -fold mixed-degree asymmetric error in a polynomial code is understood to mean asymmetric distortions of the symbols of a code word which take place in conjunction with the same degrees of x in the sequence $(\alpha_1(x), \alpha_2(x), \dots, \alpha_t(x))$ which is a solution of the initial system in no more than t cases. A method is given for constructing polynomial codes for correcting mixed-degree asymmetric errors.

In addition, a special code is proposed for correcting symmetric errors in two adjacent polynomials over the field $GF(2)$. This last code is a solution of the system of equations

$$\sum_{i=1}^n \alpha_i(x) = a(x) \pmod{5}, \quad \sum_{i=1}^n S_i \alpha_i(x) = b(x) \pmod{p},$$

where $S_i = \frac{i(i+1)}{2}$, $(p, S_i) = 1$, $p > 2(n+1)$, $i = 1, 2, \dots$. V. Dyn'kin.

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USSR

UDC 621.385.292/52

SOLTAMOV, U.B., ALEKSANDROV, I.R., DUNAYEVSKAYA, N.V., KLIMIN, A.I., LEPILIN, V.A., SMIRNOV, V.I.

"Use Of Silicon Multiplier Elements In Photoelectron Devices"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektronoluch. i fotoelektr. pribory
(Electronics Technology. Scientific-Technical Collections. Electron Beam And Photo-
electric Devices), 1970, Issue 1(15), pp 58-61 (from RZh--Elektronika i yeye
primeneniye, No 2, February 1971, Abstract No 2A243)

Translation: The phenomenon is investigated of cathode amplification in silicon p-n structures developed for hybrid photomultipliers. The phenomenon consists of the fact that during bombardment of a crystal with a shallow lying p-n junction by an electron stream with a power $U_a \cdot I_a$ in the circuit of a backward-biased junction, the current $I = aI_a$ ($a \gg 1$) appears. The diffusion p-n structures with the depth of occurrence < 1 micrometer is investigated, as well as junctions obtained by the method of ion implantation which are characterized by better reproducibility

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SOLTAMOV, U. B., et al. Elektron. tekhnika. Nauchno-tekhn. sb. Elektronoluch. i fotoelektr. pribory, 1970, Issue 1(15), pp 58-61

of results. The dependences obtained for $\alpha(U_a)$ are presented. At a number of diffusion junctions the anomalous effect is detected of cathode amplification with the coefficient "a" considerably exceeding the limit which is determined by the theory of impact ionization. Using as an example models of a photomultiplier with silicon photomultiplier elements, the use of this phenomenon in photoelectron devices is shown. 6 ill. 8 ref. N.S.

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UDC 629.76/.78.015:533.6

USSR

KLIMIN, A. V., YAROSHEVSKIY, V. A.

"Control of the Entry of a Space Craft Upon Entry Into the Atmosphere With Hyperbolic Velocity"

V sb. Upravleniye v kosmose. T. 1 (Control in Space. Vol 1 -- Collection of Works), Moscow, "Nauka", 1972, pp 237-248 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3B350)

Translation: Problems of the control of a spacecraft entering the earth's atmosphere with hyperbolic velocity are discussed. Control is achieved by a change in the angle of roll. 11 ref. Authors' abstract.

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1/2 035 UNCLASSIFIED PROCESSING DATE--27NOV70
 TITLE--TRAJECTORY CONTROL AT HYPERBOLIC ENTRY -U-
 AUTHOR--(02)-KLIMIN, A.V., YAROSHEVSKY, V.A.
 COUNTRY OF INFO--USSR
 SOURCE--AUTOMATIC CONTROL IN SPACE, 3RD I F A C SYMPOSIUM, TOULOUSE,
 FRANCE, MARCH 2ND-6TH, 1970.
 DATE PUBLISHED----MAR70

SUBJECT AREAS--SPACE TECHNOLOGY, BEHAVIORAL AND SOCIAL SCIENCES
 TOPIC TAGS--REENTRY TRAJECTORY, SPACECRAFT CONTROL, SPACECRAFT REENTRY
 CONTROL, SYMPOSIUM, AUTOMATIC CONTROL CONFERENCE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRAE--3006/1666

STEP NO--FR/0000/TO/000/000/0000/0000

CIRC ACCESSION NO--AT0135273

UNCLASSIFIED

2/2 035

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AT0135273

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HYPERBOLIC ENTRY TRAJECTORIES OF LIFTING SPACE VEHICLES ARE CONSIDERED. THE PROBLEM OF THE EXISTENCE AND DEPTH OF THE ENTRY CORRIDOR FOR GIVEN VALUES OF REENTRY VELOCITY, LIFT DRAG RATIO AND FEASIBLE ACCELERATION IS STUDIED. THE APPROXIMATE FORMULAE ARE OBTAINED WHICH DETERMINE THE ENTRY CORRIDOR DEPTH AND CRITICAL ENTRY SPEED AT WHICH THIS DEPTH VANISHES. IT IS ASSUMED THAT THE TRAJECTORY CONTROL IS BASED ON THE TERMINAL MISS PREDICTION AND THE ROLL ANGLE VARIATION. LONG RANGE TRAJECTORIES INCLUDING THE INTERMEDIATE PORTION OF THE SKIP OUT OF THE ATMOSPHERE ARE EMPHASIZED. THE MOST DIFFICULT PROBLEM IS CONTROL DURING THE FIRST SINK INTO THE ATMOSPHERE. IN SELECTING POSSIBLE TRAJECTORIES ALLOWANCES MUST BE MADE FOR THE LIMITATIONS ON THE FEASIBLE VALUE OF ACCELERATION AS WELL AS FOR THE REQUIREMENTS OF THE MINIMUM EFFECT OF PERTURBATIONS AND INSTRUMENTAL ERRORS ON THE LANDING POINT MISS. SPECIFICALLY, MINIMIZATION OF THE INSTRUMENTAL ERROR EFFECT IS EQUIVALENT TO THE SKIP OUT ANGLE MINIMIZATION FOR A GIVEN LIMITATION ON THE FEASIBLE ACCELERATION. THE TRAJECTORY STRUCTURE VARIES WITH REENTRY CONDITIONS, FIRST OF ALL, WITH THE DUMMY PERICENTER ALTITUDE. SIMPLE RELATIONS WHICH PERMIT THE ESTIMATION OF THE EFFECT OF INSTRUMENTAL ERRORS ON THE ACCURACY OF LANDING OR LAUNCHING INTO A PLANETARY ORBIT ARE OBTAINED. THE EFFECT OF ATMOSPHERE DENSITY DEVIATIONS ON THE CONTROLLED MOTION IS CONSIDERED. IN PARTICULAR, THE DEVIATIONS WHICH VARY ALONG THE FLIGHT TRAJECTORY ARE STUDIED.

UNCLASSIFIED

1/2 024 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--RECOMBINATION OF HOT ELECTRONS AT NICKEL AND GERMANIUM ATOMS --U--
AUTHOR--(021)-KLIMKA, L.A., GLINCHUK, K.D.
COUNTRY OF INFO--USSR *K*
SOURCE--FIZIKA I TEKHNIKA POLUPROVODNIKOV, VOL. 4, APR. 1970, P. 673-678
DATE PUBLISHED--70

SUBJECT AREAS--PHYSICS, MATERIALS

TOPIC TAGS--NICKEL, GERMANIUM PN JUNCTION, BIBLIOGRAPHY, DOPED ALLOY,
ELECTRON RECOMBINATION, ELECTRON CAPTURE, ELECTRIC FIELD

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAKE--3001/0379 STEP NO--UR/0449/70/004/000/0673/0678
CIRC ACCESSION NO--AP0126134
UNCLASSIFIED

2/2 024

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0126134

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPERIMENTAL INVESTIGATION OF THE RECOMBINATION CHARACTERISTICS OF NICKEL DOPED AND P AND N TYPE GERMANIUM IN STRONG ELECTRIC FIELDS. PARTICULAR ATTENTION IS GIVEN TO THE INFLUENCE OF THE ELECTRIC FIELD STRENGTH ON THE ELECTRON CAPTURE CROSS SECTION AT NEUTRAL AND REPULSING CENTERS OF NICKEL IN GERMANIUM. IT IS FOUND THAT THE COEFFICIENT OF ELECTRON CAPTURE AT REPULSING NICKEL IONS INCREASES APPRECIABLY WITH THE FIELD, WHILE THE COEFFICIENT OF ELECTRON CAPTURE AT NEUTRAL NICKEL ATOMS IS INDEPENDENT OF THE FIELD.

FACILITY: AKADEMIIA NAUK LITOVSKOI SSR, INSTITUT FIZIKI

POLUPROVODNIKOV, VILNYUS, LITHUANIAN SSR.

FACILITY: AKADEMIIA

NAUK UKRAINSKOI SSR, INSTITUT POLUPROVODNIKOV, KIEV, UKRAINIAN SSR.

UNCLASSIFIED

1/2 039

UNCLASSIFIED

PROCESSING DATE--16OCT70

TITLE--CURRENT INSTABILITY OF N GERMANIUM WITH A NICKEL IMPURITY IN STRONG
ELECTRIC FIELDS -U-

AUTHOR--(031)-KLIMKA, L., KALVENAS, S., POZHELA, YU.K.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TEKH. POLUPROV. 1970, 4(2), 407-9

DATE PUBLISHED-----70

K

SUBJECT AREAS--PHYSICS

TOPIC TAGS--SEMICONDUCTOR IMPURITY, NICKEL, ANTIMONY, GERMANIUM
SEMICONDUCTOR, VOLT AMPERE CHARACTERISTIC, CARRIER DENSITY,
PHOTOCONDUCTIVITY, ELECTRIC FIELD, RECOMBINATION COEFFICIENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1988/0076

STEP NO--UR/0449/70/040/002/0407/0409

CIRC ACCESSION NO--APO105167

UNCLASSIFIED

2/2 039
CIRC ACCESSION NO--AP0105167

UNCLASSIFIED

PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CRYSTALS OF N TYPE GE DOPED WITH NI TO A CONC. OF (1-2) TIMES 10^{15} -CM⁻³ EXHIBIT SUBLINEAR CURRENT-VOLTAGE CHARACTERISTICS AT 77PERCENT, BEGINNING AT FIELDS OF SIMILAR TO 20 V-CM, USING SB AS THE COMPENSATING IMPURITY. THE RATIO OF THE CONC. OF NI TO SB ATOMS IS SUCH THAT $2N_{SUBNI}$ IS GREATER THAN N_{SUBSB} IS GREATER THAN N_{SUBNI} , SO THAT THE SPECIMENS EXHIBIT INCOMPLETE COMPENSATION OF THE UPPER NI LEVEL, $E_{SUBC-E_{SUB2}}$ EQUALS 0.3 EV, AND ON REDUCING THE TEMP., THE CONC. OF EQUIL. CARRIERS FALLS EXPONENTIALLY. AT 77DEGREES, MONOPOLAR ELECTRONIC PHOTOCOND. IS OBSD., AND IN THIS CASE THE RELAXATION TIME FOR NONEQUIL. PHOTOCOND. IS DETED. BY THE LIFETIME OF THE ELECTRONS RECOMBINING AT THE SINGLY CHARGED NEG. NI IONS, WHICH ARE PRESENT IN MUCH HIGHER CONC. THAN THE ELECTRONS IN THE BAND ARISING FROM IRRADN. IN THE REGION OF CHARACTERISTIC EQUIL. LIGHT ABSORPTION. THE COEFF. OF RECOMBINATION IN A FIELD OF 100 V-CM INCREASES ON THE AV. BY A FACTOR OF 2 COMPARED WITH OTHER DEEP RECOMBINATION CENTERS, FOR EXAMPLE THE SINGLY CHARGED AU CENTER IN GE. THE DIFFERENTIAL COND. CAN BE WRITTEN IN THE FORM σ_{SUBD} EQUALS $E_N \mu (L \text{ PLUS } (D \text{ LN } N \mu - D \text{ LN } E))$, WHERE μ IS THE CARRIER MOBILITY. IF THE CARRIER CONC. DECREASES SUFFICIENTLY RAPIDLY ON INCREASING THE FIELD INTENSITY, THE RIGHT HAND SIDE OF THE ABOVE EQUATION BECOMES NEG. BEGINNING AT FIELDS OF SIMILAR TO 10 V-CM, CURRENT OSCILLATIONS IN THE EXTERNAL CIRCUIT RESULTING FROM THE MOTION OF DOMAINS ARE OBSD., WHILE THE MAX. CURRENT CORRESPONDS TO THE MOMENT OF DISAPPEARANCE OF THE MOVING DOMAIN AT THE CONTACT.

FACILITY: INST. FIZ. POLURPV., VILNIUS, USSR.

UNCLASSIFIED

1/2 026

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--CURRENT INSTABILITY OF N TYPE GERMANIUM CONTAINING NICKEL IMPURITY
IN STRONG ELECTRIC FIELDS -U-

AUTHOR--(03)--KLIMKA, L.S., KALVENAS, S.P., POZHELA, YU.K.

COUNTRY OF INFO--USSR

K

SOURCE--FIZIKA I TEKHN. POUPROV., FEB. 1970, 4 (2), 407-409

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--GERMANIUM SEMICONDUCTOR, ELECTRIC FIELD, CURRENT
STABILIZATION, VOLT AMPERE CHARACTERISTIC, TEMPERATURE DEPENDENCE,
ELECTRON MOBILITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--2000/1285

STEP NO--UR/0449/70/004/002/0407/0409

CIRC ACCESSION NO--AP0124936

UNCLASSIFIED

2/2 026

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124936

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MECHANISM RESPONSIBLE FOR THE DEVELOPMENT OF CURRENT INSTABILITIES IN N TYPE GE CONTG. TRACES OF NI IN STRONG ELECTRIC FIELDS (E.G., 100 V-CM) IS DISCUSSED IN THE LIGHT OF EXISTING DATA AND NEW EXPERIMENTAL INVESTIGATIONS. THE ELECTRIC FIELD HEATS THE CARRIERS (THIS IS SHOWN BY THE FACT THAT THE MOBILITY AND LIFE TIME OF THE LATTER VARY WITH APPLIED FIELD) AND MAY LEAD TO THE DEVELOPMENT OF NEGATIVE DIFFERENTIAL CONDUCTIVITY. THUS THE V-A CHARACTERISTIC BECOMES NONLINEAR AT FIELDS OF 20 V-CM AND OVER AT 77DEGREEK. 11 REF.

UNCLASSIFIED

USSR

K

UDC 621.373:530.145.6

GOLUBEV, V. A., KLIMKIN, V. F.

"Investigation of the Parameters of a High-Temperature Source at High Pressures"

V sb. Primeneniye plazmatrona v spektroskopii (Use of the Plasmatron in Spectroscopy-- collection of works), Frunze, "Ilim", 1970, pp 70-75 (from RZh-Radiotekhnika, No 10, Oct 70, Abstract No 10D217)

Translation: An experimental investigation is made of the electric and heat parameters of an electric arc in argon at high pressure. Data are given on the emission intensity of argon at pressures of 10-150 atmospheres. The average electrical conductivity of the plasma with respect to the cross section of the arc column is estimated. Three illustrations, bibliography of eight titles. Resumé.

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USSR

UDC 666.768:621.387

BOKHAN, P. A., KLIMKIN, V. M.

"Investigation of the Properties of High-Temperature Gas-Discharge Tubes"

Moscow, Zhurnal Prikladnoy Spektroskopii, Vol 19, No 3, Sep 73, pp 414-418

Abstract: The authors investigate the spectroscopic, electrical, vacuum, and chemical properties of gas-discharge tubes for producing a nonequilibrium discharge in vapors of elements which are hard to vaporize. It is found that the best compounds for making usable discharge tubes are oxides of beryllium, aluminum, and yttrium. The paper presents particulars on the working parts of tubes made from beryllium ceramic, and high-temperature furnaces for heating them. The tubes are designed for high electrical strength and heat insulation. Highly pure materials are required for making the tubes, since it is almost impossible to remove impurities from finished ceramic parts. The chemical resistance of the tubes to the action of metal vapors is determined chiefly by the departure of chemical reaction products into the gas phase. Chemically stable tubes of yttrium ceramic have been made and tested. Such tubes have made it possible for the first time to obtain a positive discharge column in vapors of rare earth elements

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USSR

BOZHAN, P. A., KLIMKIN, V. M., Zhurnal Prikladnoy Spektroskopii, Vol 19,
No 3, Sep 73, pp 414-418

of the cerium group. These gas-discharge tubes can be used as light
sources in spectroscopy, as active elements in lasers, and in other fields.
Discharges can be produced in all elements with a vaporization point below
1300°C.

2/2

- 67 -

USSR:

UDC 632.95

BLINOVA, V. G., IVANOVA, S. N., KLIMKINA, L. G., SHVETSOV-SHILOVSKIY, N. I.,
and MEL'NIKOV, N. N.

"Method of Preparing 2-Oxo-3-chrysanthemoylhydroxymethylbenzoxazoline or
2-Thio-3-chrysanthemoylhydroxymethylbenzoxazoline"

USSR Authors' Certificate No 259891, filed 2 Aug 68, published 12 May 70
(from RZh-Khimiya, No 1, 10 Jan 71, Abstract No 1N597P)

Translation: Compounds of the general formula $C(=Y)OCH_3(XNCH_2OCOCHMe_2)CHCH$
 $=Me_2$ [I; $C_6H_3(X)$ = substituted o-phenylene; X = H, halogen; Y = O or S]
are obtained by the reaction of benzoxazolinones or benzoxazolinethiones
with acid chloride of chrysanthemumic acid (II) in the presence of an HCl
acceptor, e.g. C_5H_5N , at temperature 0-9° in an organic solvent or without
it. Example. To a suspension of 0.01 mole 3-hydroxymethylbenzoxazoline-
thione in 10 ml anhydrous PhMe are added 0.04 mole C_5H_5N with stirring and
then, dropwise, at temperature 5-9° a solution of 0.01 mole II in 10 ml
PhMe. The reaction mixture is stirred for 5 hr at ~20°, after which
 $C_5H_5N \cdot HCl$ is filtered off. The solution is extracted consecutively with
a 5% HCl acid solution, an $NaHCO_3$ solution, an NaCl solution, and dried
over Na_2SO_4 . The solvent is distilled off in vacuum, and the residue is
1/2.

USSR:

BLINOVA, V. G., et al., USSR Authors' Certificate No 259891, filed 2 Aug 68, published 12 May 70 (from RZh-Khimiya, No 1, 10 Jan 71, Abstract No 1N597P)

crystallized from heptane, to yield 2.9 g I (X=H, Y=S), melting point 91-2°. The following I's are synthesized (indicated here are X, Y, % yields, melting point, °C): H, 0, 90, 85-6 (heptane); 6-Cl, 0, 93, oil; 6-Br, 0, 91, 78-9 (heptane); 6-Br, 95, S, oil. Compounds possess high fungicidal activity.

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USSR

UDC 632.95

GOLYSHIN, I. M., MONOVA, V. I., KLIUKINA, L. P., IVANOVA, S. N., MEL'NIKOV, N. N., KHUSNETDINOVA, F. I., SHVETSOV-SHILOVSKIY, N. I., SAKYSHKINA, M. A., and BOLONINA, YE. I.

"An Antiseptic"

USSR Author's Certificate No 355008, Div B, filed 11 Jan 71, published 13 Nov 72 (from RZh-Khimiya, No 14, 25 Jul 73, abstract No 14N616 P by T. A. Belyayeva)

Translation: It is proposed that 4,5,6-trichlorobenzoxazolinone-2 (I) be used as an antiseptic for nonmetallic materials, and at the same time is a bactericide, which considerably extends the sphere of its action. Compound I is used in a 2-2.5% concentration to control mold, wood-rotting and wood-discoloring fungi.

1/1

USSR

UDC 669.715.018.8

KLEMKO, A. P., and TOLSTOKOZHEVA, G. N., Krasnoyar Institute of Nonferrous Metals imeni M. I. Kalinin

"Effect of Zirconium on the Mechanical Properties and Corrosion Resistance of Alloy AMg6"

L'vov Fiziko-Khimicheskaya Mekhanika Materialov, No 3, 1973, pp 115-116

Abstract: A study was made on the effect of small additions of Zr and tempering temperature on the change in mechanical properties and corrosion resistance of AMg6 type alloys with a developed porosity. These alloys contained (in %): 5.96 Mg, 0.6 Mn, 0.01 Ti, and 0.005 Be. AMg6 alloy with 0.3% Zr was also studied. It was established that development of secondary porosity, occurring at high temperatures, and partial melting of grain boundaries lowers the tensile strength and ductility of the alloy by 2-4 kg/mm² in comparison with the hardened state which were, for TS, YS and elongation, 27.5 kg/mm², 16.3 kg/mm², and 6.6%, respectively, for alloy AMg6 and 38.5, 20.3 kg/mm², and 25% for the alloy with Zr. It was concluded that alloying AMg6 with Zr increases its corrosion resistance in the 80-200°C tempering interval, which proves that Zr promotes development of uniform distribution of second-phase particles

1/2

USSR

KLINKO, A. P., and TOLSTOKOZHEVA, G. N., Fiziko-Khimicheskaya Mekhanika Materialov, No 3, 1973, pp 115-116

in the grain volume and inhibits coalescence and precipitation of the beta-phase along the grain boundaries as well as decreases pore formation. One figure, five bibliographic references.

2/2

USSR

UDC 533.9.08:681.3

ZHDANOV, A.I., KLIMKO, N.P., DEM'YANOV, V.G.

"Complex Application Of Analog And Digital Computers In Investigations Of Plasma Physics"

Vestn. Khar'kov. politekhn. in-ta (Bulletin Of Khar'kov Polytechnical Institute), 1970, No 50(98), pp 57-63 (from RZh--Elektronika i yeye primeneniye, No 1, January 1971, Abstract No 1A237)

Translation: A description is presented of an analog complex assembled on the base of the MN-7 computer series. Problems investigated on such a complex are briefly described. In addition, the possibility is considered of modeling equations in partial derivatives with a combined use of a similar complex and the "Dnepr" controller. The results confirmed the possibility of an investigation of nonlinear processes in plasma which are described with the aid of equations in Euler variables. Instances of the use of such a complex are enumerated. 4 ill. 6 ref. Summary.

1/1

UNCLASSIFIED
TITLE--MODEL OF A COMPLEX ELECTRIC SYSTEM FOR STUDYING TRANSIENT
ELECTROMAGNETIC PROCESSES -U- PROCESSING DATE--13NOV70
AUTHOR--(02)--KAMSHA, M.M., KLIMKOV, A.K.
COUNTRY OF INFO--USSR
SOURCE--ELEKTRICHESTVO (ELECTRICITY), 1970, NO 1, PP 21-26
DATE PUBLISHED-----70
SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.
TOPIC TAGS--ELECTROMAGNETIC PROPERTY, TEST MODEL, TRANSIENT
ELECTROMAGNETIC FIELD, ELECTRIC IMPEDANCE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
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STEP NO--UR/0105/70/000/001/0021/0026
CIRC ACCESSION NO--AP0130990
UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0130990

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STATIC SCHEMES FOR MODELING SYNCHRONOUS AND ASYNCHRONOUS MACHINES IN TRANSIENT PROCESSES ARE EXAMINED. THE SCHEMES ARE CONSTRUCTED IN THE D,Q,D AXES WITH ACCOUNT FOR THE TRANSFORMER EMF AND THE ACTIVE IMPEDANCES OF THE STATOR CIRCUITS. ON THE BASIS OF THE SCHEMES FOR MODELING AND ELECTRICAL MACHINES AND OTHER ELEMENTS OF THE ELECTRICAL SYSTEM, A COMPUTER IS USED TO CONSTRUCT A MODEL OF A COMPLEX ELECTRICAL SYSTEM WHICH IS INTENDED FOR STUDYING THE TRANSIENT ELECTROMAGNETIC PROCESSES FOR THE CASE OF SHORT CIRCUITS IN THE SYSTEM. FACILITY: ALL UNION SCIENTIFIC RESEARCH INSTITUTE OF ELECTROMECHANICS, ISTRABRANCH. FACILITY: ALL UNION SCIENTIFIC RESEARCH INSTITUTE, ISTRABRANCH.

UNCLASSIFIED

USSR

UDC 621.382.2

KLIMKOVA, O.A., KOYFMAN, A.I., NIYAZOVA, O.R.

"Effect Of Radiation-Stimulated Diffusion Of Gold On Stability Of Silicon Diodes"

V sb. Radiats. fiz. nemet. kristallov (Radiation Physics Of Nonmetallic Crystals-Collection Of Works), Vol 3, Part 2, Kiev, "Nauk.dumka," 1971, pp 185-193 (from RZh--Elektronika i yeye primeneniye, No 10, October 1971, abstract No 105563)

Translation: The paper studies diffusion, stimulated by Roentgen and γ -neutron irradiation, of Au into Si doped with P, with a resistivity of 150-200 ohm.cm and 7-20 ohm.cm, and also the change of the parameters of semiconductor devices with the introduction of Au into the volume of the semiconductor. The impurity profile of Au after radiated-stimulated diffusion was established by the γ -radiation of the isotope ^{198}Au (0.411 Mev) on a γ -spectrometer for the successively etched layers of Si. It was found that the stimulated diffusion of Au into Si at a temperature of 20° C ($D = 10^{-12}$ cm²/sec with Roentgen irradiation; $D = 10^{-11}$ -- 10^{-10} with γ -neutron irradiation) corresponds to thermal diffusion at a temperature of 400--500° C. Under the effect of irradiation, semiconductor devices with gold contacts disclose major changes of all characteristics as a result of the combined effect of diffusion and defect formation. 4 ill. 20 ref. I.M. 1/1

Semiconductors and Transistors

USSR

UDC 621.315.592

ZAYKOVSKAYA, M. A., KLIMKOVA, O. A., NIYAZOVA, O. R.

"Low-Temperature Alloying of Semiconductors"

Leningrad, Fizika i Tekhnika Poluprovodnikov, Vol 5, No 5, May 1971, pp 511-914

Abstract: The experimental results of radiation-accelerated introduction of gold and lithium into silicon are presented in this article. The experimental conditions under which low-temperature (150-350°K) diffusion of lithium and gold occurs in silicon are indicated. Under optimal conditions, the low-temperature diffusion rates can be the same as in the case of thermal diffusion or close to them. The electrical properties of the crystals vary identically in the case of both low temperature and high temperature alloying. The low temperature alloying method has definite advantages over thermal diffusion methods, ion bombardment, and so on: the formation of thermal donors and thermal acceptors and radiation disarrangement of the structure are excluded, comparatively simple experimental conditions are required, new possibilities for local alloying arise, and so on.

1/2

USSR

ZAYKOVSKAYA, M. A., et al., Fizika i Tekhnika Poluprovodnikov, Vol 5, No 5, May 1971, pp 911-914

The experimental data on gold diffusion and lithium drift in silicon under radiation effects show that radiation accelerated diffusion (in contrast to high-temperature diffusion) is characterized by temperature relations leading to reduced effective migration energy.

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USSR

UDC 621.382.002

TSYRLIN, A.D., KLIMKOVICH, A.V., LAVRISHCHEV, V.P.

"Use Of A Method Of Determining Luster For Evaluation Of Microprofile Of The Surface Of Photoresist Films Applied In Electrostatic Field"

Elektron.tekhnika. Nauch.-tekhn.sb. Poluprovodn. pribory (Electronic Technics. Scientific-Technical Collection. Semiconductor Devices), 1971, Issue 7(64), pp 35-41 (from RZh:Elektronika i yeye primeneniye, No 5, May 1972, Abstract No 58304)

Translation: A method is considered for evaluating the character of the micro-profile of the surface of films of photoresist obtained by sputtering of its solutions in an electrostatic field, by the magnitude of the luster [black] of the system film--substrate. The connection is shown between the parameters of the microprofile of the film source and the magnitudes of the relative decrease of the luster corresponding to them. Summary.

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USSR

UDC 691.327:621.777

EPSHTEYN, V. L., Candidate of Technical Sciences, ~~KLITSKOVICH, G. M., Engineer~~

"The Influence of Pressing and Vacuuming Upon the Strength and Deformability of Concrete During Compression"

Moscow, Beton i Zhelezobeton, No 1, January 1972, pp 13-15

Abstract: At the Institute of Building and Architecture of the State Construction Office of the Belorussian SSR, three series of experiments were conducted on investigation of the physical and mechanical properties of press-vacuum concrete, and establishment of the optimal regimes of pressing and vacuuming of the concrete mixture. The experimental projects were conducted at the Minsk Home-Building Kombinat. The use of press vacuuming increases concrete strength by a factor of 1.3 to 1.9 (vacuuming increases concrete strength by a factor of 1.2, static pressing by a factor of 1.4). The modulus of elasticity of press-vacuum concrete, for the concrete compositions tested for compression strength at 330-660 kg-force/cm², may be assumed constant and equal to 395,000 kg-force/cm². A formula is given for determining the relative formation of press-vacuum concrete. 4 figures. 1 table. 4 references.

1/1

USSR

UDC 669.71.053.24(088.8)

KHITRIK, S. I., GASIK, M. I., VUKOLOV, YE. A., ~~KLISKOVICE, N. A.~~,
PORADA, A. N., LAGUNOV, YU. V., POLONSKIY, S. M., IORDANOVA,
Z. A., MALYSHEV, V. I., YEMLIN, B. I., KASHKUL', V. V., MASHKOV,
V. P. TSEYMAKH, N. L., YEM, A. P., CHERNYSH, F. I., and KOLNOGU-
ZENKO, V. A., Dnepropetrovsk Metallurgical Institute

"Method of Smelting Abrasive Electrolytically Produced Corundum"

USSR Author's Certificate No 263635, filed 15 Oct 65, published
10 Jun 70 (from RZh-Metallurgiya, No 11, Nov 70, Abstract No 11
G101 P)

Translation: A method is proposed for smelting abrasive elec-
trolytically produced corundum in a thermal furnace which involves
deep fusion of alumina-containing charge with reducing agents.
To increase the abrasive properties of corundum and to obtain
in it a Ti oxide content of $\leq 1\%$, smelting is carried out on
kaolin presintered with Fe-ore additive or scale in the amount
of 20-30 wt % of the charge.

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USSR

UDC 669.71.053.24(02)

GASIK, M. I., YEMLIN, B. I., ~~KLIMKOVICH, N. S.~~, and KHITRIK, S. I.

"Electrosmelting of Aluminosilicates"

Elektroplavka alyumosilikatov (cf. English above), Moscow, "Metallurgiya" (Metallurgy), 1971, 304 pp, ill, 1 r. 5 k. (from RZh-Metallurgiya, No 1, Jan-72, Abstract No 1G114K from summary)

Translation of Abstract: The book summarizes the authors' original theoretical and experimental laboratory and industrial experiments in aluminosilicate processing according to a scheme devised for the purpose of obtaining synthetic corundum, commercial Al_2O_3 , Al alloys, Fe-Si, refractories, and other products. A critical comparative analysis is presented of the published results of the investigations of other authors in the field of aluminosilicate utilization. Sixty-two illustrations. Ninety-two tables. Bibliography with 329 titles.

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USSE

UDC 669.712.4

GASIK, M. I., YEMLIN, B. I., KLIMKOVICH, N. S., and KHITRIK, S. I.

Electric Smelting of Aluminosilicates (Elektroplavka alyumosilikatov),
Moscow, "Metallurgiya" Press, 1971, 304 pages, 62 illustrations, 92 tables,
329 bibliographic references

Translation of Annotation: The book is an attempt to correlate the results of new theoretical and experimental (both laboratory and production-scale) studies performed by the authors on methods for processing aluminosilicates to electrolytic corundum, technical-grade alumina, aluminum alloys, ferro-silicon, refractories, and other materials. A critical comparative analysis of related works (and their results) by other researchers in aluminosilicate applications is presented. The book is intended for the engineering, technical and scientific personnel of nonferrous and ferrous metallurgy, and the chemical and abrasives industries engaged in electrothermics. It may also be useful to students of higher and secondary educational institutions specializing in the field of electrothermics of inorganic materials.

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GASIK, M. I., et al., Electric Smelting of Aluminosilicates (Elektroplavka alyumosilikatov), Moscow, "Metallurgiya" Press, 1971, 304 pages, 62 illustrations, 92 tables, 329 bibliographic references

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GASIK, M. I., et al., Electric Smelting of Aluminosilicates (Elektroplavka alyumosilikatov), Moscow, "Metallurgiya" Press, 1971, 304 pages, 62 illustrations, 92 tables, 329 bibliographic references

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USSR

UDC 669.295.053.2

GASIK, M. I., KLIMKOVICH, N. S., PORADA, A. N., LIBERANT, G. I.

"Problem of Solid Solution of Oxygen Compounds of Titanium in Electrocorundum"

Metallurgiya i koksokhimiya. Mezhd. resp. nauchno-tekhn. sb. (Metallurgy and Coal-Tar Chemistry. Interdepartmental Republic Scientific and Technical Collection), 197, vyp. 21, pp 43-46 (from RZh-Metallurgiya, No 4, Apr 71, Abstract No 4G229)

Translation: The temperature dependence of the solubility of Ti_2O_3 (in mole %) in solid electrocorundum $lg N_{Ti_2O_3} = -4,320/t + 2.56$ is obtained, and it is demonstrated that the limiting possible concentration of Ti_2O_3 in $\alpha-Al_2O_3$ near the melting point of Al_2O_3 is doubly high according to the data of previous experiments. The x-ray method was used to determine the variation of the interplane spacing in the lattice of electrocorundum as a function of the gross content of Ti oxides in it recalculated as TiO_2 . The decomposition of the supersaturated solid solution of Ti_2O_3 in electrocorundum determines the magnitude of anomalous expansion of the normal electrocorundum grain. The article contains 1 illustration, 1 table, and a 9-entry bibliography.

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UDC 669.71.046.44

USSR

LAGUNOV, YU. V., GLADKIKH, V. A., PETRUNOV, V. S., RUDENKO, V. K., VOYTANIK, S. T., KLIKOVICH, N. S., PORADA, A. N., and CHERNYSH, F. I.

"Investigation of the Kaolin Sintering Process"

Metallurgiya i koksokhimiya. Mezhd. resp. nauchno-tekhn. sb. (Metallurgy and Coke Chemistry -- Interdepartmental Republic - Collection of Scientific and Technical Works), 1970, vyp. 21, pp 47-55 (from RZh-Metallurgiya, No 3, Mar 71, Abstract No 3 G143 by authors)

Translation: The authors work out the parameters of the sintering process for kaolins of the Glukhovskoye, Prosyaniya, and Novoseletskoye deposits in a laboratory sintering cup of square section with a sintering area of 0.1 m^2 and with an exhaustor having an efficiency of $0.5 \text{ m}^3/\text{sec}$. Fe concentrate was used as an additive to lower the melting point of the sintering charge. The hygroscopic moisture content of both primary and secondary kaolins intended for sintering should range from 13 to 18%. The sintering of both primary and secondary kaolins is shown to be possible in principle. 5 tables.

1/1

UDC: 621.317.33

USSR

TAL'KO-GRINTSEVICH, P. P., KLIMKOVICH, V. I., ZASLONOVA, N. M.

"Some Problems in the Theory of Resonance Circuits Involving Exact Measurements of the Electromagnetic Characteristics of Materials"

Tr. Sib. NII metrol. (Works of the Siberian Scientific Research Institute of Metrology), 1971, vyp. 12, pp 35-39 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6A303)

Translation: The article is devoted to problems associated with increasing accuracy and improving the resolution of resonance circuits, and the resonance method of measuring the electromagnetic properties of materials. Various sources of errors are considered, and criteria for the use of various formulas are pointed out, in particular in the thin specimen method. Resumé.

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USSR

UDC: 621.317.4

KLIMKOVICH, V. I.

"On a Method of Measuring the Magnetic Characteristics of Materials With the Use of Regenerated Oscillatory Circuits"

Dokl. Vses. nauchno-tekhn. konferentsii po radiotekhn. izmereniyam. T. 1 (Reports of the All-Union Scientific and Technical Conference on Radio Engineering Measurements. Vol. 1), Novosibirsk, 1970, pp 141-143 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1A346)

[No abstract]

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REEL # 13
KHADZHAYEV, R.R.
to
KLIM KOVICH, V.I.