

MEKHTIYEVA, S.I.; ALIYEV, G.M.; ABDINOV, P.Sh.

Newly detected properties of selenium of high purity. Izv. AN Azerb. SSR, Ser. fiz.-tekh. i mat. nauk no. 4:102-108 '64.

(MIRA 18:3)

ABDULLAYEV, G.B.; ABDIROV, D.SR.; ALIYEV, G.M.

Effect of oxygen on transport phenomena in liquid-crystalline solution.  
Dokl. AN Azerb. SSR 21 no.3:18-21 '65. (MIRA 18:7)

1. Institut fiziki AN AzerSSR.

ACCESSION NR: APL039227

S/0249/64/020/002/0027/0031

AUTHORS: Abdinov, D. Sh.; Abdullayev, G. B.; Aliyev, G. M.

TITLE: The effect of antimony admixture on density, heat conductivity, and microhardness of selenium

SOURCE: AN AzerbSSR. Doklady\*, v. 20, no. 2, 1964, 27-31

TOPIC TAGS: antimony, selenium, recrystallization, selenium heat treatment

ABSTRACT: The effect of antimony admixtures on the physical properties of selenium was studied. The samples consisted of antimony and selenium powders mixed in various proportions. These powders were poured into quartz ampules which were evacuated to  $10^{-4}$  mm Hg and sealed. In this state the samples were heated in an oven at 850C for 8 hours and cooled to room temperature. At this stage the samples were amorphous. The measurements of their heat conductivity and density were made before they were replaced in the ampules and allowed to crystallize at 90, 130, and 180C for one hour and at 210C for 60 hours. After each crystallization period the relation between the physical properties of every sample and its antimony content was studied. The variation of the heat conductivity coefficient of selenium with

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ACCESSION NR: AP4039227

respect to antimony concentration at 20-22C is shown in Fig. 1 of the Enclosures, where the conductivity is seen to increase during the transition from the amorphous to the crystalline state. It decreased with the increase in antimony content to 0.125%, beyond which point it started rising. This behavior was explained by the hypothesis of V. N. Lange and A. R. Regel' (FTT, v. 1, no. 4, 1959) which states that small quantities of antimony distort the crystalline lattice of selenium, while larger amounts of antimony have the opposite effect. The variation in the microhardness, thermal conductivity, and density of crystalline selenium with respect to the antimony content is shown in Fig. 2 of the Enclosures. The microhardness minimum also occurred at 0.125% antimony content. In order to check the accuracy of the experimental results, the variation of selenium properties was calculated according to the formula derived by A. V. Ioffe and A. F. Ioffe ("DAN SSSR", 1954, v. 98, No. 5). The theoretical and experimental data correlated closely. Orig. art. has: 1 table, 2 figures, and 3 formulas.

ASSOCIATION: Institut fiziki (Institute of Physics)

SUBMITTED: 19Jul63

DATE AOQ: 05Jun64

ENCL: 02

SUB CODE: SS GC

NO REF SOV: 010

OTHER: 002

Card 2/4

ACCESSION NR: AP4039227

ENCLOSURE: 01

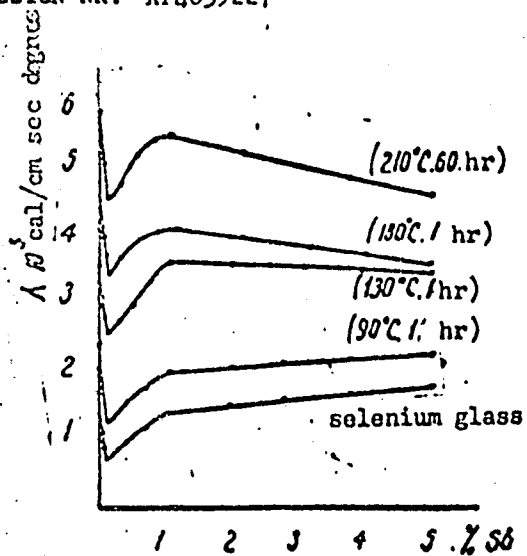


Fig. 1. Relation between heat conductivity of selenium and the antimony content.

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ACCESSION NR: AP4039227

ENCLOSURE: 02

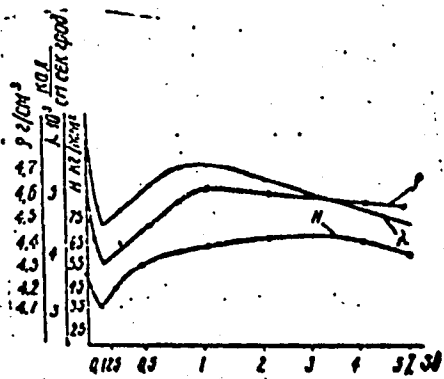


Fig. 2. Relation of microhardness (H), heat conductivity ( $\lambda$ ), and density ( $\rho$ ) of selenium to the antimony

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L 32952-06 ENT(m)/EWP(t)/ETI IJP(c) RDW/WW/JD/JG

ACC NR: AP6017056

(N)

SOURCE CODE: UR/0233/65/000/004/0074/0079

73

AUTHOR: Abdinov, D. Sh.; Aliyev, G. M.

69

ORG: none

21

B

TITLE: Effect of oxygen additions on the electrical properties of selenium

SOURCE: AN AzerbSSR. Izvestiya. Seriya fiziko-tekhnikeskikh i matematicheskikh nauk, no. 4, 1965, 74-79

TOPIC TAGS: selenium, thermal emf, Hall effect, activation energy, Hall mobility, current carrier, electric property

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ABSTRACT: Measurements were made of the effects of Sb additions on the electrical conductivity  $\sigma$  of Se before and after deoxygenation, after oxygenation, as well as of the temperature function of the Hall effect in the solid and liquid states. The work was carried out to fill a gap in the literature. The antimony was added as Sb and  $Sb_2Se_3$  in amounts of 0.05, 0.1, 0.125, 0.25, 0.5, 0.75, 1, 2, and 5 wt %. For ordinary Se (prior to deoxygenation), the  $\sigma$  decreases with increasing content of Sb and at 0.5% it reaches a minimum; with further addition of Sb, it increases. The  $\sigma$  was found to be the same for  $Sb_2Se_3$ . At 20-220°C, the  $\sigma$  practically does not change. At the melting point, the  $\sigma$  drops abruptly. After melting, (starting at 240°C), it rises exponentially with temperature. Activation energies  $\Delta E$ , calculated from the slope of the lg vs

Card 1/2

L 32952-66

ACC NR: AP6017056

4

vs  $1/T$  curve, are affected little by small concentrations; starting at 1% Sb,  $\Delta E$  gradually increases and at 5%, reaches 0.52 eV. In melting pure Se, the concentration of the current carriers decreases from  $2.27 \cdot 10^{14}$  at  $2.6^\circ\text{C}$  to  $3.20 \cdot 10^{13} \text{ cm}^{-3}$  at  $350^\circ\text{C}$  and it continues to decrease with further heating. Measurements of magnetic susceptibility in the solid and liquid states indicate a decrease concentration of holes during melting. Temperature function of the concentration of the current carriers, determined from the Hall effect and the thermal emf, is about the same. At room temperature, the Hall mobility in pure Se is equal to  $10.45 \text{ cm}^2/\text{v}\cdot\text{sec}$  and is in good agreement with literature data. The mobility of holes in pure Se grows insignificantly with temperature in the solid state and in melting it drops abruptly, but in the liquid state, it grows exponentially with temperature. In conclusion the authors thank Professor G. B. Abdullayev for supervising the work and Ya. N. Nasirov, R. Kh. Nani and V. B. Antonov for assistance in measuring the Hall effect. Orig. art. has: 2 tables, 3 figures.

SUB CODE: 20/

SUBM DATE: 06Jun64/

ORIG REF: 029/

OTH REF: 005

Card

2/2



L 3537-56 EPA(s)-2/EWT(m)/EPF(c)/ETC/EPF(n)-2/ENG(m)/EWP(t)/EWP(h) LIP(c)  
ACCESSION NR: AP5015450 RDW/JD/WW/JG UR/0249/65/021/003/0018/0021

AUTHORS: Abdullayev, G. B.; Abdinov, D. Sh.; Aliyev, G. M. 71  
69

TITLE: Effect of oxygen on transport phenomena in selenium of high purity 21 71

SOURCE: AN AzerbSSR. Doklady, v. 21, no. 3, 1965, 18-21

TOPIC TAGS: selenium, selenium rectifier, thermal conductivity, electric conductivity, thermal emf, Hall effect, carrier density, Hall mobility

ABSTRACT: The authors report results of investigations of the influence of antimony impurity, which effectively compensates the acceptor action of oxygen, on the electric properties of crystalline and liquid selenium and on the thermal conductivity of crystalline selenium of purity 99.9999 per cent before and after deoxidation and after oxidation. The deoxidation was by the method of P. T. Kozyrev (FTT v. 1, 113, 1959). The procedure for measuring electric conductivity and the thermal conductivity as functions of the impurities and of the

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L 3537-66

ACCESSION NR: AP5015450

temperature was described earlier (FTT v. 4, 1018, 1964 and elsewhere). The Hall effect was measured with direct current by a compensation method in a magnetic field of 20,000 Oe. The article includes a table of the dependence of the electric conductivity, the thermal conductivity, the Hall density, and the Hall mobility prior to deoxidation, and also of the electric conductivity and thermal conductivity after deoxidation, as functions of the antimony content, and plots of the temperature dependence of the electric conductivity before and after deoxidation. The results show that the antimony has different effects on the electric and thermal conductivities before and after deoxidation, and varies with the antimony content. The jump in the conductivity occurring at the melting point also depends on the oxygen content. The results have a direct bearing on the fact that various mechanical properties of selenium rectifiers and photocells are governed principally by their oxygen content. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: Institut fiziki AN AzerbSSR (Institute of Physics, AN AzerbSSR) 16

Card 2/3

L 3537-66  
ACCESSION NR: AP5015450

SUBMITTED: 14Sep64

ENCL: 00

SUB CODE: SS

NR REF SOV: 013

OTHER: 002

Card

*AM*  
3/3

L 26586-66 EWT(1)/EWT(m)/ETC(f)/EWG(m)/EWP(j) IJP(c) RDW/JD/RM

ACC NR: AP6011427

SOURCE CODE: UR/0020/66/167/004/0782/0784

AUTHOR: Aliyev, G. M.; Abdinov, D. Sh.; Mekhtiyeva, S. I.

ORG: Institute of Physics, Academy of Sciences, AzerbSSR (Institut fiziki Akademii nauk AzerbSSR)

TITLE: Selenium as a polymer semiconductor and the mechanism of its conductivity

SOURCE: AN BSSR. Doklady, v. 167, no. 4, 1966, 782-784

TOPIC TAGS: selenium, polymer structure, semiconductor, <sup>material</sup> semiconductor conductivity, thermoelectric power, Hall effect, liquid state, carrier density, <sup>electric</sup> conductivity

ABSTRACT: In view of the fact that the mechanism of conductivity of selenium has not been fully explained and the experimental data contradictory, that the influence of different impurities, especially oxygen, on the electrical properties of selenium has not been clarified, nor has the melting of selenium and its liquid state been studied, the authors present the results of a comprehensive investigation of the electric conductivity, thermoelectric power, and Hall effect in solid and liquid selenium (from 20 to 450°), including the melting region. The experiments were made with very pure selenium type B<sub>5</sub> (99.99999%) before and after removal of oxygen, and with different degrees of oxidation and with different amounts of oxygen-compensating impurities (Sb, Cd, Mn). The electric conductivity ( $\sigma$ ) of solid and liquid selenium increases with the temperature exponentially, and experiences an abrupt decrease during melting. The carrier density is found to be independent of the temperature ( $\sim 10^{15}$  cm<sup>-3</sup>). The jumplike decrease in  $\sigma$  on melting is due both to the decrease in the

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UDC: 621.315.592.2: 546.23

L 26586-66

ACC NR: AF6011427

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concentration and a decrease in the mobility. The constancy of the carrier density indicates that the crystalline and liquid selenium are impurity semiconductors and all the impurity centers are ionized. Removal of the oxygen decreases the conductivity greatly and eliminates the discontinuity at the melting point. Similarly, elimination of the oxygen eliminates also the Hall effect. It is concluded that the elimination of oxygen is accompanied by a decrease in the carrier density by ~100 times and in the carrier mobility by ~10 times. It is therefore assumed that the oxygen atoms in the polymer chain of selenium produce acceptor centers thus increasing the hole density, and decrease the intermolecular barriers, thus increasing the carrier mobility. It is therefore concluded that selenium, like organic semiconductors, is very sensitive to the method of preparation and heat treatment. The authors are grateful to Professor G. B. Abdullayev for directing the work and Doctor of Physical-Mathematical Sciences M. I. Klinger for valuable advice. This report was presented by Academician V. A. Kargin 23 July 1965. Orig. art. has: 2 figures and 1 formula.

SUB CODE: 20/    SUBM DATE: 23Jul65/    ORIG REF: 015/    OTH REF: 009

Cord 2/2    BLG

L 07250-67 EWI(d)/EWI(m)/EWP(w)/EWP(v)/EWP(t)/ETI/EWP(k)/EWP(h)/EWP(l)  
ACC NR: AF6028918 IJP(c) JD/RH SOURCE CODE: UR/0233/66/000/001/0077/0084

AUTHOR: Abdullayev, G. B.; Mekhtiyeva, S. I.; Abdinov, D. Sh.; Aliyev, G. M.

ORG: none

TITLE: New properties of high purity selenium

SOURCE: AN AzerbSSR. Izvestiya. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk, no. 1, 1966, 77-84

TOPIC TAGS: selenium, chemical purity, oxidation, thermoelectric power, heat conduction, physical diffusion, activation energy, semiconductor conductivity

ABSTRACT: In view of the fact that many properties of selenium are still not understood, the authors have checked on the hypothesis that many of them are due to the presence of oxygen and oxygen complexes in the selenium. The authors have investigated selenium of special high purity (grades B<sub>4</sub> and B<sub>5</sub>, with purity 99.9999 and 99.99999%) before and after de-oxidation, and also after oxidation. The methods for oxidation and measurements are indicated in earlier papers (FTT v. 6, 1020, 1964 and elsewhere). The parameters tested were the electric conductivity, the thermoelectric power, the thermal conduction, the activation energy during self-diffusion, the density, the microhardness after introducing impurities, and the effect of oxygen-compensating impurities (Cd, Sb, Mn, Tl, Na, S). The measurement results are presented in graphic form. Many of the phenomena are explained from the point of view that the oxygen impurities produced in selenium acceptor levels, whereas the addition of the impurities

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L 07250-67

ACC NR: AF6028918

which oxidize easily is equivalent to de-oxidation. The latter makes selenium closer to an intrinsic semiconductor. It is concluded that the p-conductivity of selenium, the fact that the thermal conductivity, the electric conductivity, the density, and the microhardness go through a minimum when impurities are introduced, the anomalously large value of the scattering cross section, the strong decrease in the electric conductivity and thermoelectric power on melting, as well as other factors are connected with the presence of oxygen impurities and its complexes in the selenium. Evidence in favor of this conclusion is drawn from a comparison of numerous experimental data by others. The influence of oxygen on the rectifying properties of selenium is also discussed. Orig. art. has: 6 figures and 1 formula.

SUB CODE: 20/ <sup>11/</sup> SUBM DATE: 00/ ORIG REF: 032/ OTH REF: 017

Card

2/2

*vdh*

ABDINOV, F.R., Cand Agr Sci -- (diss) "Peculiarities  
of <sup>the</sup> embryonic and post-embryonic development of  
buffalo <sup>as a function of rearing</sup> ~~in relation to feeding conditions.~~" Kirovabad,  
1958, 27 pp (Min of Agr USSR. Azerbaydzhan Agr Inst)  
150 copies (KL, 29-58, 134)



USSR / General Biology. Individual Development.

B-4

Abs Jour : Ref Zhur - Biol., No 12, 1958, No 52392

Author : Agabeyli, A.A.; Abdinov, F.R.

Inst : Leningrad University

Title : Development of Internal Organs and Skeleton in Buffalo Embryos.

Orig Pub : V sb.: Probl. sovrem. embriologii. L., Un-t, 1956, 150-153

Abstract : 98 fetuses were studied (52 female and 46 male). A summary of the data on the weight of fetuses after 1-10 months of intra-uterine development showed that the fetuses of the better fed mothers weighed 30-40% more than from mothers on below-average nutrition. A summary is also given of data on the rate of growth of individual organs; during intra-uterine development, there is particularly rapid growth of the cerebrum, esophagus, spleen, and slowest is that of heart, stomach, liver, internal fat and carcass; the

Card 1/2

KULIYEV, S.; YES'MAN, B.; ABDINOV, M.; RASHEVSKAYA, T.A., red.;  
BAGIROVA, S., tekhn. red.

[Problems in the hydraulics of clay and cement drilling  
fluids] Voprosy gidravliki glinistykh i tsementnykh ra-  
stvorov. Baku, Azerbaidzhanskoe gos.izd-vo, 1963. 139 p.  
(MIRA 17:3)

ABDINOV, M. A.

42200: ABDINOV, M. A., KUVSIZADE, S. A. - Primeneniye gravimetro Fil'tra v slubimenn-  
natsnykh skvazhinakh. Azerbayzh. nef't. Khoz-vo, 1948, No. 10, s. 10-11.

SC: Letopis' Zhurnal'nykh Stat'ey, Vol. 47, 1948.

ABDINOV, M.A.

Effect of the rate of rise of cement on the uniformity of the  
hardened cement. Inv. AN Azerb. SSR no. 8:17-23 Ag'55.  
(Oil wells) (Cement) (MIRA 9:1)

ABDINOV, M.A.; YES'MAN, B.I.; MASHLADZE, R.I.

Determining structural viscosity of normal drilling mud solutions  
with standard field viscosimeters (SPV-5). Izv. AN Azerb. SSR no.8:  
23-29 Ag '57. (Oil well drilling fluids) (Viscosity) (MLRA 10:9)

~~ABDINOV, M.A.~~  
GULIYEV, S.M.; ABDINOV, M.A.

Determining hydraulic losses in drilling [in Azerbaijani with  
summary in Russian]. Azerb.neft.khoz. 36 no.8:9-11 Ag '57.

(MIRA 10:11)

(Oil well drilling)

KULIYEV, S.M.; YES'MAN, B.I.; ABDINOV, M.A.

Experimental determination of the length of the initial sector in pipes of annular and eccentric section. Izv. vys. ucheb. zav.; neft' i gaz 2 no.7:87-89 '59. (MIRA 12:12)

1. Azerbaydzhanskiy institut nefti i khimii im. M. Azizbekova i Azerbaydzhanskiy nauchno-issledovatel'skiy institut po dobyche nefti.

(Hydraulics)

KULIYEV, S.M.; AEDINOV, M.A.

Determining specific heat capacity of cement grouts. Izv. AN  
Azerb. SSR. Ser. geol.-geog. nauk no.3:66-71 '63.  
(MIRA 18:9)



KULIYEV, S.M.; YES'MAN, B.I.; ABDINOV, M.A.

Experimental study of fluid flow in annular pipes. *Izv.vys.*  
*ucheb.zav.; neft' i gaz* 2 no.12:109-112 '59. (MIRA 13:5)

1. Azerbaydzhanskiy institut nefti i khimii imeni M. Azizbekova  
i Azerbaydzhanskiy nauchno-issledovatel'skiy institut po dobyche  
nefti.

(Pipe--Hydrodynamics)

KULIYEV, S.M.; ABDINOV, M.A.; YES'MAN, B.I.; SADYKHOV, Yu.V.

Experimental determination of hydraulic losses in bits. Azerb. neft.  
khoz. 38 no.6:12-13 Je '59. (MIRA 12:10)  
(Oil well drilling fluids)

ABDINOV, M.A.; ABDULLAYEV, M.M.

Studying the contact between the cement stone and the well wall.  
Trudy AzNII DN no.10:317-327 '60.

(MIRA 14:4)

(Oil well cementing)

KULIYEV, S.M.; YES'MAN, B.I.; ABDINOV, M.A.

Experimental testing of the principle of loss summation in the  
flow of drilling muds. Dokl.AN Azerb.SSR 16 no.3:245-247 '60.  
(MIRA 13:7)

1. Institut energetiki AN AzerSSR.  
(Oil well drilling fluids)

KULIYEV, S.M.; YES'MAN, B.I.; ABDINOV, M.A.

Pressure loss in turbulent flow in pipes having a circular cross  
section. Neft. khoz. 38 no.11:22-26 N '60. (MIRA 14:4)  
(Turbulence)

ABDINOV, M.A.

Experimental setup to determine the cohesive force between  
concrete and the walls of a well, taking temperature and  
pressure into account. Izv. AN Azerb. SSR. Ser. fiz.-mat.  
i tekh. nauk no.6:155-158 '60. (MIRA 14:8)  
(Oil wells) (Concrete)

ABDINOV, M.A.

Deviation of the actual height of concrete from the calculated  
height. Izv. AN Azerb.SSR. Ser. fiz.-mat. i tekhn. nauk 2:109-114  
'61. (MIRA 14:7)  
(Oil well drilling) (Concrete construction--Estimates)

YES'MAN, B.I.; ABDINOV, M.A.; GABUZOV, G.G.

Conversion formula for differential manometer readings in work  
with clay solutions. Izv. AN Azerb.SSR. Ser. fiz.-mat. i tekhn.  
nauk 2:115-119 '61. (MIRA 14:7)  
(Manometer) (Hydraulics)



KULIYEV, S.M.; AVETISYAN, A.A.; YES'KAN, B.I.; ABDINOV, M.A.; SADYKHOV, Yu.V.

Determining hydraulic losses in EBSH drill pipe joints. Azerb. нефт.  
khoz. 40 no.4:11-13 Ap '61. (MIRA 15:7)  
(Oil well drilling—Equipment and supplies)

ABDINOV, M.A.; YES'MAN, B.I.; KARASHARLY, A.G.; SADYKHOV, Yu.V.

Effect of the flow properties of transported fluid and the eccentricity  
of a useful section on hydraulic losses in the annular space.  
Azerb. neft. khoz 40 no.11:13-15 N '61. (MIRA 15:1)  
(Oil well drilling fluids)

KULIYEV, S.M.; ABOINOV, H.A.; BAKHULIYEV, A.M.

Influence of the temperature variations of the environment on  
the adhesion of cement to a string. Izv. AN Azerb. SSR, Ser.  
geol.--geog. nauk no.4:57-58 '64. (MIRA 17:12)

ABDINOV, M. I., 3rd Agr Sec -- (disc) "Loss<sup>es</sup> of irrig. water  
*in the* ~~irrigation of cotton~~ *the control of them* and ~~the~~ *control of them*."

Revealed, 1959. 21 pp (Min of Agr USSR. Investigation Agr Inst),  
150 copies (MI, 21-59, 115)

- 04 -

GUSEYNOV, G.M., kand.sel'skokhoz.nauk (Baku); ABDINOV, M.M., kand.  
sel'skokhoz.nauk (Baku); ALIYEV, B.M., aspirant (Baku)

Irrigation of cotton with the DDA-100M sprinkler unit in the  
Kura-Aras Lowland. Gidr. i mel. 13 no.12:21-33 D '61.

(MIRA 14:12)

(Kura Lowland--Cotton--Irrigation)

(Sprinkler irrigation)

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S/044/60/000/009/015/021  
C111/C222

16.4500

AUTHOR: Abdinova, A.B.

TITLE: Investigation of Linear Singular Integral Equations in the  $L_2$

PERIODICAL: Referativnyy zhurnal. Matematika, 1960, No.9, p.106  
Abstract No.10462. Nauchn.trudy aspirantov.Azerb.un-t, 1957,  
vyp.1, pp.15-21

TEXT: The author investigates the nonlinear singular integral equation

$$(1) \quad u(x) - \lambda \int_{-\pi}^{+\pi} \phi(x,s,u(s)] \operatorname{ctg} \frac{s-x}{2} ds$$

in the class of functions summable in the square. The existence and uniqueness of a solution in the  $L_2(-\pi, \pi)$  is proved by the application of the principle of the contracting mapping.

[Abstracter's note: The above text is a full translation of the original Soviet abstract.]

Card 1/1

~~ABDINOVA, A.B.~~

Existence and uniqueness theorems for the system of nonlinear  
singular integral equations with Hilbert kernels. Uch.zap. AGU  
no.11:19-37 '57. (MIRA 11:11)  
(Integral equations)

ABDINOVA, A. B. Cand Phys-Math Sci -- (diss) "Study of certain systems of non-linear singular integral equations." Baku, 1959. 7 pp (Min of Higher and Secondary Specialized Education USSR. Azerbaydzhan State Univ im S. M. Kirov), 100 copies. Bibliography at end of text (11 titles) (KL, 52-59, 115)

-2-



89045

S/044/60/000/009/016/021  
C111/C222

16.4560

AUTHOR: Abdinova, A.B.

TITLE: A Generalized System of Nonlinear Singular Integral Equations

PERIODICAL: Referativnyy zhurnal. Matematika, 1960, No.9, pp.106-107  
Abstract No.10464. Uch.zap.Azerb.un-ta.Fiz.-matem.i khim.  
ser., 1959, No.3, pp.25-34

TEXT: The author considers a system of nonlinear one-dimensional singular integral equations being little different from a linear one. It is assumed that in the system there appear not only the unknown functions  $M_k(t_0)$  and their singular integrals but also the functions  $M_k(\alpha_k(t_0))$  and singular integrals for which the denominator  $t-t_0$  is replaced by  $t-\alpha_k(t_0)$ . Here  $\alpha_k(t_0)$  are smooth functions each of which involves a one-to-one mapping of the path of integration  $L$  onto itself with a retention of the orientation. It is admitted that in the equation there appear also the complex-conjugate functions  $\overline{M_k(t)}$ . By replacing the given system by equations resulting from the given equations by the transition to the complex-conjugate terms the author obtains a new system  
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C111/C222

A Generalized System of Nonlinear Singular Integral Equations

which is written as follows:

$$\sum_{\nu=1}^n \left\{ A_{\nu}(t_0) \xi(a_{\nu}(t_0)) + B_{\nu}(t_0) \xi(t_0) + \frac{1}{\pi i} \int_L \frac{K_{\nu}(t_0, t)}{t - a_{\nu}(t_0)} \xi(t) dt + \frac{1}{\pi i} \int_L \frac{H_{\nu}(t_0, t)}{t - t_0} \xi(t) dt \right\} = X$$

$F(t_0)$ . Here  $\xi$  and  $F$  are vectors with the components  $\xi_1, \dots, \xi_n, \overline{\xi_1}, \dots, \overline{\xi_n}$  and  $\phi_1, \dots, \phi_n, \overline{\phi_1}, \dots, \overline{\phi_n}$ , respectively, where the  $\phi_k$  are nonlinear singular integral operators. Furthermore  $A_{\nu}, B_{\nu}, H_{\nu}, K_{\nu}$  are certain matrices depending only on the data of the problem. It is assumed that  $K_{\nu}(t, \alpha_{\nu}(t)) = A_{\nu}(t)$ ,  $H_{\nu}(t, \alpha_{\nu}(t)) = -B_{\nu}(t)$ , and that the determinants of the matrices  $A_{\nu}(t)$  and  $B_{\nu}(t)$  vanish nowhere on  $L$ . The author considers only the case  $n=1$ . Some theorems on the existence and the number of the solutions of the considered system are formulated and proved with the aid of generally known methods.

[Abstracter's note: The above text is a full translation of the original Soviet abstract.]

Card 2/2



KULIYEV, A.M.; ABDINOVA, A.B.

Synthesis of tertiary alkyl derivatives of urea. Uch.zap.AGU no.5:  
47-53 ' 58. (MIRA 12:1)  
(Urea derivatives) (Alkylation)

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11.9700

26198  
S/081/61/000/012/026/028  
B103/B202

AUTHORS: Kuliyeu, A. M., Orudzheva, I. M., Zeynalova, G. A., Atal'yan, A. A., Akhmed-Zade, D. A., Levshina, A. M., Sadykhov, K. I., Abdinova, A. B.

TITLE: Synthesis of organic compounds containing various functional groups and their applications to improve the quality of lubricating oils

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 12, 1961, 530, abstract 12M225. (Tr. 1-y Konferentsii zakavkazsk. un-tov. Baku, Azerb. un-t, 1959, 111-123)

TEXT: The authors present the results of research work which has been conducted for many years in the Azerbaydzhanskaya SSR concerning the synthesis and the choice of additives to lubricating oils. The following compounds were synthesized and their properties were studied: mono-, di-, and trialkyl derivatives of benzene, naphthalene, tetraline, anthracene, and phenanthrene; alkyl benzene-, alkyl naphthalene-, alkyl phenol-, and alkyl tetraline sulfonates of Ca, Ba, Sr, Pb, and Cu; mono- and dialkyl phenols; mono- and

Card 1/2

Synthesis of organic compounds ...

26198  
S/081/61/000/012/026/028  
B103/B202

3/

disulfides of alkyl phenols and their Ba and Ca salts; tri-(alkylphenol)-phosphites and their mono- and disulfide derivatives; mono- and dialkyl ureas; condensation products of urea with aldehydes and alkyl phenols. The depressor АЗНИИ (Azni) (dialkyl naphthalene, in which alkyls originate from chlorinated paraffin) from the year 1947, detergents for motor oils Azni-4 from the year 1949 and Azni-5 (both sulfanates) were industrially used. The multifunctional additives to the motor oils Azni-7 and Azni-8 (both salts of the alkyl phenol sulfides) and an additive stabilizing the mineral oil obtained by condensation of urea with aldehyde and alkyl phenol, were recommended for introduction into industry. [Abstracter's note: Complete translation.]

Card 2/2

KULIYEV, A.M.; ZEYNALOVA, G.A.; ABDINOVA, A.B.

Synthesis of the products of condensation of carbamide and alkyl phenols with formaldehyde and study of their stabilizing action on lubricating oils. Azerb.khim.zhur. no.2:29-38

159.

(MIRA 13:6)

(Urea) (Phenol condensation products) (Formaldehyde)  
(Lubrication and lubricants)

KULIYEV, A.M.; ARDINOVA, A.B.; ZEYKALOVA, G.A.; ORUDZHEVA, I.M.

Effect of urea derivatives on the oxidation resistance of  
lubricating oils. Azorb. khim.zhur. no.4:15-20 '59. (MIRA 14:9)  
(Lubrication and lubricants)  
(Urea)



56933

S/081/62/000/007/025/033

B168/B101

11.9700

AUTHORS: Kuliyeu, A. M., Zeynalova, G. A., Abdinova, A. B.

TITLE: Synthesis and examination of anti-oxidant additives for machine and other oils

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 7, 1962, 548, abstract 7M183 (Sb. "Prisadki k maslam i toplivam". M., Gostoptekhizdat, 1961, 102-109)

TEXT: Using the VTI method, the authors investigated the oxidation resistance of mineral oils (transformer oil MK-6 (MK-6) and MK-8 (MK-8)) containing the following synthetic additives: condensation products (1) of 1 mole urea, of 2 moles  $\text{CH}_2\text{O}$  and of 1 mole p-alkylphenol (alkyls: n- $\text{C}_3\text{H}_7$ , tert- $\text{C}_4\text{H}_9$ , tert- $\text{C}_5\text{H}_{11}$ , sec- $\text{C}_4\text{H}_9$ , sec- $\text{C}_6\text{H}_{13}$ , sec- $\text{C}_8\text{H}_{17}$ , tert- $\text{C}_8\text{H}_{17}$ ,  $\text{C}_9\text{H}_{19}$ , n- $\text{C}_{16}\text{H}_{33}$  of the olefins from the 100-180°C fraction of thermal cracking), condensation products (2) of furfuranide with different alkylphenols and condensation products of acetaldehyde ammonia with various alkylphenols. The first condensation product, obtained from the 100-180°C fraction of Card 1/2

Synthesis and examination of ...

S/081/62/000/007/025/033  
B168/B101

thermal cracking (additive азнии-11 (aznii-11)) proved an effective anti-oxidant (at a concentration of 0.1%); at a test temperature of 120°C this product was equal in effectiveness to ionol and p-hydroxydiphenylamine and at 150 and 170°C was superior to ionol. The second condensation product, obtained from industrial acrylphenol (additive азнии-11φ (aznii-11f)), was also found to be an effective anti-oxidant; it was more effective than ionol (at test temperatures of 120 and 150°C). [Abstracter's note: Complete translation.]

Card 2/2

I. 12401-63  
RM/EH/WW/MW

EWP(j)/EPF(c)/EWT(m)/EDS AFFTC/ASD/APGC Pc-4/Pr-1:

ACCESSION NR: AP3001668

S/0065/63/000/006/0024/0028

AUTHOR: Kuliyev, A. M.; Zeynalova, G. A.; Abdinova, A. B.; Kafarova, U. Ya.; Suleymanova, F. G.; Mamedov, M. A. 77  
75

TITLE: Preparation of multifunctional additive based on condensation products of alkylphenol with formaldehyde 1

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 6, 1963, 24-28

TOPIC TAGS: Fuel additives, physicochemical properties, formaldehyde, alkylphenol

ABSTRACT: The investigation of a multifunctional additive by the condensation reaction of formaldehyde with alkylphenol and its comparison to other existing additives has been completed. In the process of investigation it was established that the use of highly effective multifunctional additives in fuels is more economical and since all the functional groups are concentrated into one molecule, the elimination of these additives is rapid as a result of its chemical interaction with the metals at contact or adsorption to the metal surface. The composition of the synthesized barium salt of the condensation alkylphenol and formaldehyde products (BFK) with other combination additives showed that the BFK additive is more superior to other additives. It prevents corrosion of the

Card 1/2

L 12401-63

ACCESSION NR: AP3001668

diesel fuels containing as much as 1.2% of sulfur in their composition and to a large extent improves its wetting ability. An industrial production of EFK based on the original data has been proposed. Orig. art. has: 5 tables. 2

ASSOCIATION: INKhP AN AzSSR

SUBMITTED: 00

DATE ACQ: 08Jul63

ENCL: 00

SUB CODE: none

NO REF SQV: 000

OTHER: 000

Card 2/2

ABDIRAMANOV, T.B., inzh.

In the Chimbai Oil Mill. Masl.--zhir. prom. 29 no.8:31 Ag '63.  
(MIRA 16:10)

1. Chimbayskiy maslookspellerenny zavod.

AEDIROV, Ch.; MIRAZIZOV, K.D.; RAKHIMOVA, I.V.; SAMSONOV, P.F.;  
KHALTAYEV, Sh.N.

Microflora of intracranial otogenous abscesses. Med.zhur.Uzb.  
no.8:57-62 Ag '62. (MIRA 16:4)

1. Iz kafedry mikrobiologii (zav. - prof. P.F.Samsonov) i  
kafedry bolezney ukha, gorla i nosa (zav. - prof. I.Yu.Laskov)  
Tashkentskogo gosudarstvennogo meditsinskogo instituta.  
(EAR--ABSCESS)

PETROVA, K.G., kand.med.nauk; ABDIYEV, N.; Khabizhanov, B.

Thromboembolism of the large vessels in children with toxic diphtheria of the pharynx and hemorrhagic syndrome. Zdrav. Kazakh. 22 no.6:33-36 '62. (MIFA 15:11)

1. Iz kafedry detskikh infektsionnykh bolezney (zav. - dotsent T.N.Nikonova) Kazakhskogo meditsinskogo instituta i Detskoy klinicheskoy infektsionnoy bol'nitsy No.2 g. Alma-Aty (glavnyy vrach - F.S.Sakova).  
(DIPHTHERIA) (EMBOLISM) (HEMORRHAGE)

ABDIROV, Charzhubay. <sup>Cand</sup> ~~Med~~ Med Sci -- "Description of ~~the~~ <sup>?</sup> saprophytic neoceries  
~~in~~ <sup>of</sup> humans." Tashkent, 1980 (Kazakh State Med Inst). (KL, 1-61, 205)

-355-



PETROVA, K.G., kand. med. nauk; ABDIYEV, N.; KHALIDZHANOV, B.

Thromboembolism of the major vessels in children with toxic diphtheria of the pharynx with hemorrhagic syndrome. Pediatrics 42 no.8:94-95 Ag'63 (MIRA 17:4)

1. Iz kafedry detskikh infektsionnykh bolezney ( zav. -- dotsent T.N. Nikonova) Kazakhskogo meditsinskogo instituta i Detskoy klinicheskoy infektsionnoy Bol'nitsy No.2 (glavnyy vrach F.S. Sakova) , Alma-Ata.

**"APPROVED FOR RELEASE: 04/03/2001**

**CIA-RDP86-00513R000100110016-1**

**APPROVED FOR RELEASE: 04/03/2001**

**CIA-RDP86-00513R000100110016-1"**

**"APPROVED FOR RELEASE: 04/03/2001**

**CIA-RDP86-00513R000100110016-1**

**APPROVED FOR RELEASE: 04/03/2001**

**CIA-RDP86-00513R000100110016-1"**

L 36400-66 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6018779

(A)

SOURCE CODE: UR/0070/66/011/003/0471/0472

AUTHOR: Vergunas, F. I.; Mingazin, T. A.; Smirnova, Ye. M.; Abdiyev, S.

64  
12

ORG: none

TITLE: Texture and electrical conductivity of cadmium sulfide sheets

SOURCE: Kristallografiya, v. 11, no. 3, 1966, 471-472

TOPIC TAGS: cadmium sulfide, electric conductivity, crystal orientation, ~~substrate~~  
~~films~~, temperature dependence, photosensitivity

ABSTRACT: The effect of substrate temperatures on structure formation in photosensitive CdS films was studied and correlations between electrical conductivity and the degree of crystal orientation were obtained. Samples were obtained by vacuum sublimation ( $2 \cdot 10^{-5}$  mm Hg) where the substrate temperature ( $T_p$ ) varied from 75 to 400°C. Cu was added to increase the photosensitivity by treating the surfaces with a Cd-CuCl powder and annealing for one hour in Ar. Indium electrodes were evaporated into the surfaces to measure the electrical conductivity. The structure and grain orientation of the films were determined by x-rays and by a photomethod. All of the films had a grain size of about  $10^{-5}$  cm and were composed of  $\alpha$ -modified CdS. In the temperature interval of 150-400°C, the crystals had their  $c$  axis oriented perpendicular to the plane of the substrate. The activation treatment (Cu addition) resulted in coarser crystals (2 to

Card 1/2

UDC: 548.0 : 537.311

L 36400-66

ACC NR: AP6018779

5  $\mu$ ) and in a decrease in the orientation for all values of  $T_p$  except for 250°C, where the orientation rose sharply. The electrical parameters measured the concentration of current carriers for both dark and light conductivity. In all cases, the greater the orientation the greater was the conductivity, indicating an anisotropic conductivity mechanism; the conductivity was much greater perpendicular to the  $\sigma$  axis than parallel to it. Along the  $\sigma$  axis the barrier potential for current carriers was high, but decreased with exposure to light. The barrier distance was estimated to be below  $10^{-5}$  cm, indicating that the barriers were acting within grains. Orig. art. has: 1 figure.

SUB CODE: 11,09/

SUBM DATE: 05Apr65/

ORIG REF: 001/

OTH REF: 005

Card 2/2/MCP

ABDRAGIMOV, N.M.

Function of the liver in children following toxic infectious jaundice,  
treated with ACTH. Zdrav. Kazakh. 21 no.6:43-45 '61. (MIRA 15:2)

1. Iz kafedry gosspital'noy pediatrii (zav. - professor A.I.Avenirova)  
Kazakhskogo meditsinskogo instituta.  
(WEIL'S DISEASE) (ACTH)

KRYLOV, V.I.; SUKHENKO, N.I.; ABDRAKHMANOV, G.S.; SITNIKOV, G.V.

Excluding intensive circulation-loss zones using a hydraulic-mechanical packer. Burenie no.5:11-12 '64.

(MIRA 18:5)

1. Tatarskiy neftyanoy nauchno-issledovatel'skiy institut, g. Bugul'ma i trest "Al'mat'yevburneft".

KIRYLOV, V.I.; ABDRAKIMANOV, G.S.; SUKHENKO, N.I.

Use of drillable packers to exclude circulation-loss zones and  
cave-ins. Burenie no.7:8-10 '64. (MIRA 18:5)

1. Tatarskiy neftyanoy nauchno-issledovatel'skiy institut, g.  
Bugul'ma.



ABDRAKHIMOV, K. Z.

Abdrakhimov, K. Z. and Borodayeskiy, N. I. "A new finding of auriferous gold in the Southern Ural," Trudy Gorno-geol. in-ta (Akad. nauk SSSR, Ural'skiy filial), Issue 14, 1948, p. 61-63

SC: U-3859, 16 June 53, (Letopis 'Zhurnal 'nykh Statey, No. 5, 1949).

MUSAKULOV, Talip; ABDRAKHMANOV, A., kand.filolog.nauk, red.;  
KOROTOVSKIY, M.P.; AYTMUKHAMBETOVA, S., red.; ROROKIDIA,  
Z.P., tekhn. red.

[Kazakh-Russian dictionary; biology terms] Kazakhsko-russkii  
terminologicheskii slovar'; terminy biologii. [By] Talip Musakulov.  
Pod obshchei red. A.Abrakmanova. Alma-Ata, Izd-vo Akad. nauk  
Kazakhskoi SSR, 1962. 161 p. (MIRA 15:7)

1. Akademiya nauk Kazakhskoy SSR, Alma-Ata. Institut izykoznaniya.  
(Kazakh language--Dictionaries--Russian)  
(Biology--Dictionaries)

ABDRAKHMANOV, A.A., kand.filolog.nauk; DONIDZE, G.I., kand.filolog.nauk;  
KARMYSHEVA, Dzh.Kh., inzh.-kartograf; KONKASHBAYEV, G.K., kand.  
geograf.nauk; ROROKINA, Z.F., tekhn.red.

[Instructions for the Russian transcription of geographical names  
in the Kazakh S.S.R.] Instruktsiia po russkoi peredache geogra-  
ficheskikh nazvanii Kazakhskoi SSR. Alma-Ata, Izd-vo Akad.nauk  
Kazakhskoi SSR, 1959. 13 p. (MIRA 13:2)

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

(Kazakhstan--Names, Geographical)

BEKMUKHAMETOV, Ye.; AMANZHOLOV, S.A., prof., obshchiy red. [deceased]; ABDRAKHMANOV,  
A. ♂ otv. red.; BUKETOV, Ye., otv. red.; KOLICHENKO, V.V., red.;  
AYTMUKHAMBETOVA, S., red.; ROROKINA, Z.P., tekhn. red.

[Russian-Kazakh dictionary of terms] Russko-kazakhskii termino-  
logicheskii slovar'. Alma-Ata. Vol.1. 1959. 222 p. Vol.2.  
1959. 342 p. (MIRA 12:6)

1. Akademiya nauk Kazakhskoy SSR, Alma-Ata. Institut yazyka i literatury.
2. Chlen-korrespondent Akademii nauk Kazakhskoy SSR (for Amansholov).  
(Mineral industries--Dictionaries)  
(Science--Dictionaries)

BAYSALOV, S.; KUDAYBERGENOV, U.; TOMANOV, M., otv.red.; ABDRAKHMANY, A.A.  
otv.red.; ROZENBERG, TS.B., red.; AYTMUKHAMBETOVA, S., red.;  
RCROKINA, Z.P., tekhn.red.

[Russian-Kazakh terminological dictionary] Russko-kazakhskii  
terminologicheskii slovar'. Alma-Ata. Vol.4. 1960. 185 p.  
(MIRA 13:4)

1. Akademiya nauk Kazakhskoy SSR, Alma-Ata. Institut yazyka i  
literatury.

(Russian language--Dictionaries--Kazakh)  
(Law--Dictionaries) (Education--Dictionaries)

KRYLOV, V.I.; SUKHENKO, N.I.; ABDRAKHMANOV, G.S.

Drillable packer with a self-sealing chamber. Burenie no.8:10-11  
'64. (MIRA 18:5)

1. Tatarskiy neftyanoy nauchno-issledovatel'skiy institut, g.  
Bugul'ma.

ABDRAKHMANOV, G.S.; KRYLOV, V.I.; SUKHENKO, N.I.

Hydraulic expander for increasing the diameter of a well.  
Burenie no.4:3-5 '64.

(MIRA 18:5)

1. Tatarskiy neftyanoy nauchno-issledovatel'skiy institut, g.  
Bugul'ma.

KISELEV, L.I.; SEVRYUGIN, N.A.; BESPALOV, V.F.; ABDRAKIMANOV, K.; MOROZOV,  
M.D.; MIKHAYLOV, A.P.; BEKZHANOV, G.O.; LYAPICHEV, G.F.

Resolutions of the Kazakhstan Petrographic Conference. Izv.AN  
Kazakh.SSR.Ser.geol. 22 no.5:98-103 S-O '65.

(MIRA 18:12)



ABDRAKMANOV, K.A.; STROGANOV, A.N.

Dikes in the rare-metal ore deposits of Kara-Oba. Vest. AN  
Kazakh. SSR 14 no.9:82-86 S '58. (MIRA 11:11)  
(Kara-Oba--Dikes (Geology))

ABDRAKIMOV, K.A.; KONDIEVSKIY, V.G.

Pseudoleucites in the Irisu massif (Talas-Ala-Tau). Trudy  
Inst.geol.nauk AN Kazakh. SR no.4:3-11 '61. (MIRA 14:10)  
(Irisu region)--(Pseudoleucite)

ABDRAKHMANOV, K.A.

Genetic characteristics of the alkali intrusion in the Irisu massif  
of the Talas Ala-Tau. Izv.AN Kazakh.SSR.Ser.geol. no.4:36-45 '62.  
(MIRA 15:7)

(Talas Ala-Tau--Rocks, Igneous)

ABDRAKHMANOV, K.A.

Geologic and petrographic features of the alkali intrusion  
in the Irusu Massif of the Talas Ala-Tau. Izv. AN Kazakh,SSR.  
Ser.geol. no.4:31-49 '61. (MIRA 15:3)  
(Talas Ala-Tau--Rocks, Igneous)

ABDRAKHMANOV, K.A.; IVANOV, A.I.; MCNICH, V.K.; MOROKOV, V.D.

Absolute age of alkali rocks in the northwestern part of the  
Talas-Ala-Tau. Izv. AN Kazakh SSR. Ser.geol. no.4:89-91  
'61. (MIRA 15:3)

(Talas-Ala-Tau--Geological time)  
(Talas-Ala-Tau--Rocks, Igneous)

ABDRAKHMANOV, K.A.

Magnesia skarns in the genetic association with alkali basaltic rocks  
in the northwestern part of the Talas Alatau. Izv. AN Kazakh. SSR. Ser.  
geol. nauk no.5:33-34, 1972. (MIRA 17:1)

1. Institut geologicheskikh nauk AN KazSSR, Alma-Ata.

ABDRAKHMANOV, K.A.

Primary and secondary igneous chambers as revealed by the study of alkali basaltoids in the northwestern spurs of the Talas Alatau. Izv. AN SSSR. Ser. geol. 28 no.7:19-31 J1 '63.  
(MIRA 16:12)

1. Institut geologicheskikh nauk AN KazSSR, Alma-Ata.

ABDRAKHMANOV, K.A.; LEONOV, A.V.; LYALIN, Yu.I.; MILLER, Ye.Ye.

Second All-Union Volcanologic Conference. Izv. AN Kazakh. SSR.  
Ser.geol. 22 no.2:79-81 Mr-Apr '65. (MIRA 18:5A)

1. Institut geologicheskikh nauk imeni Satpayeva, Alma-Ata.



ABDRAKHMANOV, K.A.; KOMPANEYTSSEV, V.P.

Geology, petrography, and genesis of alkali effusives in  
Chimkent Province and prospects for practical usage of them.  
Trudy Inst.geol.nauk AN Kazakh.SSR 12:3-24 '65. (MIRA 18:9)

ABDRAKIMANOV, K.A.; GORNYAYEVA, V.S.

Lazulite in the secondary quartzites of the Saranskoye Massif  
in central Kazakhstan. Trudy Inst. geol. nauk AN Kazakh. SSR  
12:162-165 '65. (MIRA 18:9)



BOGOYAVLINSKIY, V.F.; ABDRAKHMANOV, M.I.

Improvement in the Russian FEK-M electrophotocolorimeter for  
the direct "reading" of electrophoregrams. Lab.delo 5 no.2:  
57-58 Mr-Ap '59. (MIRA 12:5)

1. Iz kliniki gosptal'noy terapii No.1 (dir. - prof. A.G.  
Teregulov) Kazanskogo meditsinskogo instituta.  
(COLORIMETERS) (ELECTROPHORESIS)

ABDRAKHMANOV, M.I., inzh.; TROFIMOVSKIY, M.R., inzh.

New type GUF-1 gas analyzer for the continuous determination and registration of the percentage of carbon dioxide in exhaled air.  
Kaz. med. zhur. 41 no.3:91-93 My-Je '60. (MIRA 13:9)

1. Iz Kazanskogo samostoyatel'nogo konstruktorskogo tekhnologicheskogo byuro po proyektirovaniyu meditsinskikh i fiziologicheskikh priborov (SKTB-MFP).

(AIR--ANALYSIS)

SHPAKOV, I.M., red.; ABDRAKHMANOV, M.I., red.; BABICHEV, R.I.,  
inzh., red.; ~~BUJOTAVLENSKIY~~, V.F., red.; VALITOV, Z.G.,  
red.; ROMANOV, Yu.D., red.; SAYFULLIN, S.Sh., red.;  
~~SAYFULLIN, S.Sh.~~, I.K., tekhn. red.

[New devices for making gas analyses and automatically regulat-  
ing the temperature of various media] Novye pribory gazovogo  
analiza i avtomaticheskogo regulirovaniya temperatury razlich-  
nykh sred. Kazan', 1961. 169 p. (MIRA 15:7)

1. Tatar A.S.S.R. Samostoyatel'noye konstruktorsko-tekhnologi-  
cheskoye byuro po proyektirovaniyu meditsinskikh i fiziologi-  
cheskikh priborov. 2. Glavnyy inzhener Samostoyatel'nogo kon-  
struktorsko-tekhnologicheskogo byuro po proyektirovaniyu me-  
ditsinskikh i fiziologicheskikh priborov (for Abdrakhmanov).  
(Scientific apparatus and instruments) (Thermostat)

RAKHLIN, L.M., prof., red.; ABDRAKHMANOV, M.I., zam. red.; ROMANOV, Yu.D., red.; VALITOV, Z.G., red.; SAYFULLIN, S.Sh., red.; ZAYNULLIN, I.Kh., tekhn. red.

[Transactions of the Joint Conference of Designers, Physiologists and Physicians. Dedicated to the Methods of Studying Gas Exchange under Normal and Pathological Conditions] Trudy Sovmestnoy konferentsii konstruktorov, fiziologov i vrachei, posviashchennoi metodam izucheniia gazovogo obmena pri fiziologicheskikh i patologicheskikh sostoianiiakh, 1960. Pod red. L.M.Rakhlina. Kazan', Tatsovnarkhoz, 1961. 183 p. (MIRA 15:7)

1. Sovmestnaya konferentsiya konstruktorov, fiziologov i vrachei, posvyashchennaya metodam izucheniya gazovogo obmena pri fiziologicheskikh i patologicheskikh sostoyaniyakh, 1960. 2. Samotyatel'noye konstruktorsko-tekhnologicheskoye byuro po proyektirovaniyu meditsinskikh i fiziologicheskikh priborov, Kazan' (for Abdrakhmanov). (RESPIRATION)

S/119/62/000/001/008/011  
D201/D302

AUTHORS: Abdrakhmanov, M.I., and Akhmetov, A.G.

TITLE: A two-position dry-air thermostat temperature controller

PERIODICAL: Priborostroyeniye, no. 1, 1962, 26

TEXT: The authors describe temperature controlling circuit using a semi-conductor temperature transducer; the circuit was developed at the SKTB MFP. The sensing element, transforming the temperature into electrical signals is the thermal resistor MMT-4, making one of the arms of a balanced bridge, the two other arms of which are composed of wire-wound resistors  $R_1$  and  $R_2$ , the fourth arm having wire-wound resistors  $R_4$  (coarse) and  $R_3$  (fine adjustment). The bridge supply is 50 c/s mains. The main advantage of the bridge is that it is practically insensitive to supply voltage changes. The output of the bridge, being inadequate to operate the switching relay of the heating system, is amplified in a 4-stage amplifier using Card 1/2



A two-position dry-air thermostat ... S/119/62/000/001/008/011  
D201/D302

pencil-type tubes type 6H2П (6N2P) and 6H1П (6N1P). The HT amplifier power supply has a bridge-type rectifier with type ДГ-Ц24 (DG-Ts24) diodes. The first and third stages of amplification have anode decoupling. The last stage operates as a coincidence circuit, i.e. it amplifies the signal only when both anode and grid are positive. The anode load of the fourth tube is the relay РДЧГ (RDCh G). The arrangement which switches the supply to the heating arrangement and the tubes is the relay PKH(RKN). The power supply unit consists of a transformer, rectifier and filter. The transformer has the primary tapped for 127 and 220 V and secondary for 200; 110; 150; 6.3; 24 and 6 V. The 200 and 150 windings are screened from each other. The laboratory tests of the dry air thermostat Ц-450 (Ts-450) with the new temperature control have shown that while with the described circuit the basic thermostat parameters become simpler, the accuracy increases from  $\pm 0.5$  to  $\pm 0.25^{\circ}\text{C}$  and the sensitivity of the transducer increases to  $\pm 0.1^{\circ}\text{C}$ . The life-time of the controller also increases. The control temperature range is 20 -  $60^{\circ}\text{C}$ . There is 1 figure. [Abstractor's note: Essentially a complete translation].

Card 2/2

TEREGULOV, A.G.; ABDRAHMANOV, M.I.; BOGOYAVLENSKIY, V.F.; LOGVINOV, I.A.

Determination of basal metabolism and the function of the lungs with the AOOZ-M apparatus. Kaz.med.zhur. no.4:94-96 J1-Ag '62'.

(MIRA 15:8)

1. Klinika gospital'noy terapii No.1 (zav. - prof. A.G.Teregulov)  
Kazanskogo meditsinskogo instituta i Samostoyatel'noye konstruktorsko-  
tehnologicheskoye byuro po proyektirovaniyu meditsinskikh i fizio-  
logicheskikh priborov (nachal'nik - I.M.Shpakov).

(RESPIRATORS) (BASAL METABOLISM) (LUNGS)

ZVEREVA, M.N.; ABDRAKHMANTOV, R. Ya.

Separation of zinc and cadmium by means of anion exchangers. Uch.  
zap. LGU no.297:46-52 '60. (MIRA 13:11)  
(Zinc) (Cadmium)

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