IMANOV, L.M.; ABBASOV, Ya.M.

Dielectric relaxation in propyl alcohols. Izv. AN Azerb. SSR.Ser. fiz.-mat. i tekh.nauk no.3:59-68 '62. (MIRA 15:9)
(Propyl alcohol) (Dipole moments)

IMANOV, L.M.; KADZHAR, Ch.O.

Superhigh-frequency spectrum, rotational constants, and dipole moment of the ethyl alcohol molecule. Izv. AN Azerb.SSR. Ser. fiz.-mat. i tekh. nauk no.4:55-58 '62. (MIRA 16:2)
(Molecular rotation) (Molecular spectra)
(Ethyl alcohol—Dipole moments)

EWT(1)/BDS--AFFTC/ASD/ESD-3--IJP(C)
L 10041-63
ACCESSION NR: AR3000360 S/0058/63/000/004/E052/E052

SOURCE: RZh. Fizika, Abs. 4E349

AUTHOR: Kocharli, K. Sh.; Dmanov, I. M.

TITLE: Investigation of the dielectric properties of the system n Sb sub 2 Se sub 3, n Sb sub 2 S sub 3

CITED SOURCE: Uch. zap. Azerb. un-t. Ser. fiz.-matem. i khim. n., no. 6, 1961, 49-53

TOPIC TAGS: antimony-selenium alloys, dielectric properties, temperature dependence

TRANSLATION: The temperature and frequency dependences of the dielectric constant (Epsilon) and the tangent of the dielectric loss angle (tg Delta) of the following systems were investigated: 25% Sb sub 2 Se sub 3, 75% Sb sub 2 S sub 3 (One), 50% Sb sub 2 Se sub 3, 50% Sb sub 2 S sub 3 (Two), and 75% Sb sub 2 Se sub 3, 25% Sb sub 2 S sub 3 (Three). The investigations were carried out at

Card 1/2

L 10041-63
ACCESSION NR: AR3000360

frequencies 0.5-20 Mcs in the temperature range 20-110° C on specimens pressed at a pressure of 200 kg. per square centimeter. The values of Epsilon of systems One and Two do not depend on the frequency and are equal to 18.75 and 11.83 respectively; the frequency variation of tg Delta indicates that the losses have an ohmic character. With increasing temperature the losses increase; the temperature dependence of tg Delta shows a relaxation maximum which, in the case of system Two is masked by the ohmic losses, and in the case of the system Three is clearly pronounced. The relaxator activation energy calculated from the frequency shift of the temperature peak of the losses of system Three is equal to 0.41 ev. The nature of the relaxator is not made clear. V. Lazovskiy

DATE ACQ: 14May63 ENCL: 00 SUB CODE: EM

cs/ja
Card 2/2

IMANOV, L. M.; ABBASOV, Ya. M.

Dielectric relaxation in butyl alcohols. Izv. AN Azerb. SSR. Ser. fiz.-mat. i tekh. nauk no.2:39-46 '62. (MIRA 15:10)

(Dielectrics) (Butyl alcohol)

IMANOV, L.M.; ZUL'FUGARZADE, K.E.

Temperature dependence of dielectric relaxation in concentrated solutions of certain halogen derivatives of benzene. Izv. AN Azerb. SSR. Ser. fiz.-mat. i tekh. nauk no.6:75-82 '62. (MIRA 16:6)
(Dielectric constant) (Benzene)

S/051/63/014/002/019/026
E039/E120

AUTHORS: Imanov, L.M., and Kadzhar, Ch.O.

TITLE: Super-high-frequency spectra and dipole moments of ethyl alcohol molecules

PERIODICAL: Optika i spektroskopiya, v.14, no.2, 1963, 300-301

TEXT: The SHF spectrum of ethyl alcohol molecules was investigated in the range 20.7 to 31.7 KMc/s with the aid of a radiospectrometer with electric molecular modulation (L.M.Imanov and Ch.O.Kadzhar, Izv. AN Azerb.SSR, 4, 1959, 49). More than a hundred lines were discovered, from which seven transitions were identified corresponding to μ_b the dipole moments. The greatest intensity ($\sim 5 \times 10^{-6}$) is shown by lines of the b_Q branch ($\Delta K_{-1} = 1$, $\Delta K_{+1} = -1$) up to frequencies which were determined by values of A - C = 26755.8 and asymmetry parameter $\chi = 0.909148$. The frequency of transitions in these branches, calculated on a hard asymmetric spin approximation, shows good agreement with measurements (L.M.Imanov and Ch.O. Kadzhar, D. AN Azerb. SSR, 10, 1961, 861). Calculation shows that in the primary

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excitation of the critical-vibration condition with the height of the potential barrier 3.0 kcal/mole significant doublet splitting of the indicated lines can be expected. In the investigated spectra such doublet lines are observed with 3 - 10 Mc/s splitting. The value of A and C was determined from the transition $2_{12} - 3_{03}$ (ν = 28074.8 ± 0.2 Mc/s). Values of the effective rotational constants are equal to A = 34916.6 Mc/s, B = 9376.2 Mc/s and C = 8160.8 Mc/s. The majority of the lines discovered show second order Stark effect while some show first order Stark effect. Dipole moments are determined from the displacement of the Stark component transitions $1_{01} - 1_{10}$; $2_{02} - 2_{11}$ (M = 2) and $3_{03} - 3_{12}$ (M = 2 and M = 3). The calibration field in the waveguide is derived from the $3_{13} - 3_{12}$ (M = 2 and M = 3) transitions in molecules of CH_2O (N.J.Shoolery and A.H. Sharbaugh, Phys.Rev. 82, 1951, 95. R.B. Lawrance and M.W.P. Strandberg, Phys.Rev. 83, 1951, 363). The average value of the dipole moment μ_b was found to be 1.58 ± 0.05 D and makes an angle of 57°16' with the CC axis of the molecules. [Abstractor's note: Complete translation.]

Card 2/2 SUBMITTED: June 12, 1962

IMANOV, L.M.; ZUL'FUGARZADE, K.E.

Dielectric relaxation in some halogen derivatives of benzene.
Zhur.fiz.khim. 37 no.2:366-370 F '63. (MIRA 16:5)

1. Institut fiziki AN AzerbSSR.
(Benzene derivatives) (Dielectric constants)

IMANOV, L.M.; MIRZOYEV, F.G.

Dielectric properties of acetic acid and its solutions in benzene.
Izv. AN Azerb. SSR. Ser. fiz.-mat. i tekh. nauk no.4:37-43 '63.
(MIRA 16:12)

IMANOV, L.M.; ABDURAKHMANOV, A.A.

Microwave spectrum of the CD_3CH_2CN molecule. Izv. AN Azerb. SSR. Ser. fiz.-mat. i tekh. nauk no.6:79-82 '63. (MIRA 17:3)

IMANOV, L.M.; ABBASOV, Ya.M.

Dielectric relaxation in propyl and butyl alcohols. Zhur.fiz.khim. 37 no.7:1510-1514 Jl '63. (MIRA 17:2)

1. Institut fiziki AN AzerbSSR.

L 2096-65 EWT(1)/EPA(s)-2/EWT(m)/EPF(c)/EEC(t)/EEC(b)-2 Pr-4/Pl-10/Pl-4
IJP(c)/ASM(p)-2/ASD(a)-5/SSD/AFMD(t)/AFWL/ESD(dp)/BSD(gs)/ESD(t)/Pa-4/RAEM(t)
ACCESSION NR: AP4044626 GG/RM S/0233/64/000/002/0071/0080

AUTHOR: Imanov, L. M. 53

TITLE: On certain results of an investigation of dielectric relaxation in liquids

SOURCE: AN AzerbSSR. Izvestiya. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk, no. 2, 1964, 71-80

TOPIC TAGS: dielectric property, relaxation time, dielectric constant, dispersion characteristic, alcohol

ABSTRACT: The author measured the dielectric constants ε' and the absorption coefficients ε'' of methyl, ethyl, n-propyl, isopropyl, n-butyl, isobutyl alcohols in the range 3×10^8--10^5 cps at 293K, and also ε' and ε'' of n-propyl, n-butyl, and isobutyl alcohols at seven fixed frequencies in the range 10^5--10^8 cps in the interval from 20 to -160C. The choice of these substances was made to be

Card 1/3

able to obtain new information in the mechanism of the relaxation process and its connection with the structure of the molecule, since these substances cover a range of increasing dimension of the alcohol molecule. The experimental data were used to calculate the microscopic and molecular relaxation times, critical wavelength, and thermodynamic parameters of activation for the dielectric relaxation processes. In addition to the main maximum at high frequencies, the temperature variation of ε" disclosed at low temperatures a clearly pronounced second maximum, observed for the first time. This maximum is regarded as a direct experimental proof of the existence of an additional region of dispersion, which has a relaxation nature, in alcohols. Unlike the main dispersion region, the secondary dispersion region is characterized not by a single relaxation time, but some symmetrical distribution of relaxation times. The relaxation process, as characterized by the dependence of the logarithm of the critical wavelength on the number of carbon atoms in a molecule, is shown to be a linear function of the molecule size. An explana-

L 2096-65
ACCESSION NR: AP4044626

tion is proposed for the existence of several dispersion regions and the dielectric relaxation process is discussed within the framework of the theory of absolute reaction rates. Orig. art. has: 4 figures.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00

SUB CODE: EM NR REF SOV: 009 OTHER: 005

Card 3/3

ACCESSION NR: AP4043026 S/0051/64/017/002/0306/0307

AUTHORS: Imanov, L. M.; Abdurakhmanov, A. A.; Ragimova, R. A.

TITLE: Microwave spectrum and effective rotation constants of the molecule CD_3CH_2OH

SOURCE: Optika i spektroskopiya, v. 17, no. 2, 1964, 306-307

TOPIC TAGS: ethyl alcohol, molecular structure, deuterated compound, microwave spectroscopy, Stark splitting, spectrum line

ABSTRACT: In order to refine the structure of the ethyl alcohol molecule (L. M. Imanov and Ch. O. Kadzhar, Doklady* AN AzerbSSR, v. 10, 861, 1961; Opt. i spektr. v. 14, 300, 1963) the authors investigated the microwave spectrum of the β-trideuteroethyl alcohol molecule using a radiospectrometer with electric molecular modulation (Imanov and Abdurakhimanov, Izv. AN AzerbSSR, 6, 79, 1963) in the 10--33 Gc range. More than 200 lines of the molecule were ob-

Card 1/4

ACCESSION NR: AP4043026

served and measured, and transitions of the Q, R, and P branches were identified by the Stark splitting. The frequencies were also calculated from the effective rotation constants of the molecules and compared with the measured values. The agreement was generally good, and some discrepancies are attributed to centrifugal perturbation and internal rotation. Each identified line had satellites, which could be accurately determined from the corresponding rotation constants. It is assumed that these satellites belong to the first excited vibration state. Orig. art. has: 2 tables.

ASSOCIATION: None

SUBMITTED: 29Dec63 ENCL: 02

SUB CODE: OP NR REF SOV: 003 OTHER: 000

Card 2/4

ACCESSION NR: AP4043026

ENCLOSURE: 01

Frequencies of identified transitions

1 Переход	2 Частота перехода, (мгц)			
	3 основного состояния		4 возбужденного состояния	
	5 измеренная	6 вычисленная	измеренная	вычисленная
$1_{01}-1_{10}$	21405.0	21405.0	21270.0	21270.0
$2_{02}-2_{11}$	22340.0	22348.05	22180.8	22185.8
$3_{03}-3_{12}$	23820.0	23820.0	23616.3	23614.05
$4_{04}-4_{13}$	25884.5	25884.7	25618.2	25610.0
$5_{05}-5_{14}$	28621.2	28622.1	28260.4	28207.2
$6_{06}-6_{15}$	32118.6	32122.0	31658.7	31654.15
$2_{12}-3_{03}$	25527.3	25527.3	25521.7	25521.7
$4_{23}-5_{14}$	19238.7	19239.2	19253.3	19261.4
$5_{23}-6_{16}$	16693.8	16695.7	17201.2	17204.7
$3_{13}-2_{20}$	20377.0	20379.1	20030.1	20031.1
$5_{24}-4_{31}$	20482.5	20485.8	20027.0	20029.4
$6_{24}-5_{33}$	12280.0	12275.1	---	---
$6_{25}-5_{34}$	14644.0	14645.85	14208.0	14209.2

1 - Transition, 2 - transition frequency (Mc), 3 - ground state, 4 - excited state
5 - measured, 6 - calculated

Card 3/4

ACCESSION NR: AP4043026

ENCLOSURE: 02

Effective rotation constants of the CD_3CH_2CH molecule, Mc

1 Постоянные	2 Основного состояния	3 Возбужденного состояния
A	28490.1	28352.1
B	7099.0	7070.4
C	7085.1	7062.1

1 - Constants, 2 - ground state, 3 - excited state

Card 4/4

IMANOV, L.M.; ABDURAKHMANOV, A.A.

bQ-branch of the microwave rotational spectrum of the CD_3CH_2OH molecule. Dokl. AN Azerb. SSR 20 no.7:7-8 '64.

(MIRA 17:11)

1. Institut fiziki AN AzerSSR. Predstavleno akademikom AN AzerSSR Z.I. Khalikovym.

IMANOV, L.M.; ABDURAKHMANOV, A.A.; RAGIMOVA, R.A.

Effective rotation constants for the CH_3CH_2OD molecule.
Dokl. AN Azerb. SSR 20 no.12:7-8 '64. (MIRA 18:4)

1. Institut fiziki AN AzerbSSR.

IMANOV, L.M.

Some results of a study of dielectric relaxation in liquids.
Izv. AN Azerb. SSR. Ser. fiz.-tekh. i mat. nauk no.2:71-80
'64. (MIRA 17:10)

IMANOV, L.M.; ABDURAKHMANOV, A.A.; RAGIMOVA, R.A.

Microwave rotational spectrum of the CH_3CD_2OH molecule. Izv. AN Azerb. SSR.Ser.fiz.-tekh.i mat. nauk no.3:103-106 '64.

(MIRA 17:12)

L 9485-66

ACCESSION NR: AP4043026 S/0051/64/017/002/0306/0307

AUTHORS: Imanov, L. M.; Abdurakhmanov, A. A.; Rasimova, R. A.

TITLE: Microwave spectrum and effective rotation constants of the molecule CD_3CH_2OD

SOURCE: Optika i spektroskopiya, v. 17, no. 2, 1964, 306-307

TOPIC TAGS: ethyl alcohol, molecular structure, deuterated compound, microwave spectroscopy, Stark splitting, spectrum line

ABSTRACT: In order to refine the structure of the ethyl alcohol molecule (L. M. Imanov and Ch. O. Kadzhar, Doklady AN Azerb SSR, v. 10, 661, 1961; Opt. i spektr. v. 14, 300, 1963) the authors investigated the microwave spectrum of the β-trideuteroethyl alcohol molecule using a radiospectrometer with electric molecular modulation (Imanov and Abdurakhimanov, Izv. AN Azerb SSR, 6, 79, 1963) in the 10--33 Gc range. More than 200 lines of the molecule were ob-

Card 1/4

L 9485-66

ACCESSION NR: AP4043026

served and measured, and transitions of the Q, R, and P branches were identified by the Stark splitting. The frequencies were also calculated from the effective rotation constants of the molecules and compared with the measured values. The agreement was generally good, and some discrepancies are attributed to centrifugal perturbation and internal rotation. Each identified line had satellites, which could be accurately determined from the corresponding rotation constants. It is assumed that these satellites belong to the first excited vibration state. Orig. art. has: 2 tables.

ASSOCIATION: None

SUBMITTED: 29Dec63 ENCL: 02

SUB CODE: OP NR REF SOV: 003 OTHER: 000

Card 2/4

L 9485-66

ACCESSION NR: AP4043026 ENCLOSURE: 01

Frequencies of identified transitions

1 Перехол	2 Частота перехода, (мгц)			
	3 основного состояния		4 возбужденного состояния	
	5 наблюдалась	6 вычислена	наблюдалась	вычислена
$1_{01}-1_{10}$	21405.0	21405.0	21270.0	21270.0
$2_{02}-2_{11}$	22349.0	22344.95	22186.8	22186.8
$3_{03}-3_{12}$	23020.0	23020.6	22916.3	22914.95
$4_{04}-4_{13}$	25894.5	25894.7	25818.2	25816.0
$5_{05}-5_{14}$	29821.2	29822.1	29769.4	29767.2
$6_{06}-6_{15}$	32118.6	32122.0	31858.7	31874.15
$2_{11}-3_{03}$	25527.3	25527.3	25521.7	25521.7
$4_{13}-5_{14}$	19238.7	19239.2	19253.3	19251.4
$5_{05}-6_{16}$	16693.8	16695.7	17201.2	17234.7
$3_{12}-2_{20}$	20377.0	20379.1	20030.1	20031.1
$5_{14}-4_{31}$	29482.5	29485.8	29027.0	29029.4
$6_{24}-5_{33}$	12270.0	12275.1	—	—
$6_{24}-5_{33}$	14644.0	14645.85	14208.0	14209.2

1 - Transition, 2 - transition frequency (Mc), 3 - ground state, 4 - excited state
5 - measured, 6 - calculated

Card 3/4

L 9485-65

ACCESSION NR: AP4043026 ENCLOSURE: 02

Effective rotation constants of the CD_3CH_2CH molecule, Mc

1 Постоянная	2 Основное состояние	3 Возбужденное колебательное состояние
A	28430.1	28352.1
B	7999.0	7970.4
C	7085.1	7062.1

1 - Constants, 2 - ground state, 3 - excited state

Card 4/4

IMANOV, L.M.; KADZHAR, Ch.O.; ISAYEV, I.D.

Microwave rotation spectrum of CH_3CH_2OH and CH_3CHDOH. Opt. i spektr. 18 no.2:344-345 F '65. (MIRA 18:4

IMANOV, L.M.; ZUL'FUGARZADE, K.E.

Dielectric properties of the concentrated solutions of monohalo-substituted benzenes in a microwave range. Zhur. fiz. khim. 38 no.10:2437-2440 O '64. (MIRA 18:2)

1. Institut fiziki AN Azerbaydzhanskoy SSR.

IMANOV, I.M.; [illegible], CH$_3$O$_2$; ISAYEV, Dzh.

Microwave band spectrum of CH_3CH_2OH and CH_3CHDOH molecules. Izv. AN Azerb. SSR. Ser. fiz.-tekh. i mat. nauk no.2:62-67 '65. (MIRA 18:8)

L 2527-66

ACCESSION NR: AP5021361 UR/0120/65/000/004/0192/0195
621.317.335.3

AUTHORS: Imanov, L. M.; Zul'fugarzade, K. E. 21 B

TITLE: Measurement of the temperature dependence of complex dielectric permittivity at microwave frequencies

SOURCE: Pribory i tekhnika eksperimenta, no. 4, 1965, 192-195

TOPIC TAGS: dielectric permittivity, dielectric constant, dielectric loss, temperature dependence, microwave frequency

ABSTRACT: Apparatus for measuring the dielectric coefficients in the 8- to 14-cm region is described in detail. The method used is a transformer modification of the short-circuited line method. The effect of parasitic reflections can be separated from the inherent reflection from the sample after determining the characteristics of the transformer, which is formed by adjacent sections of transmission line and to whose output the sample is coupled. Losses do not affect the accuracy of measurement, and measurements of the temperature dependence are greatly simplified. The dielectric coefficients can be measured within an accuracy of 5% with proper selection of sample thickness. As an illustration, the dielectric

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L 2527-66

ACCESSION NR: AP5021361

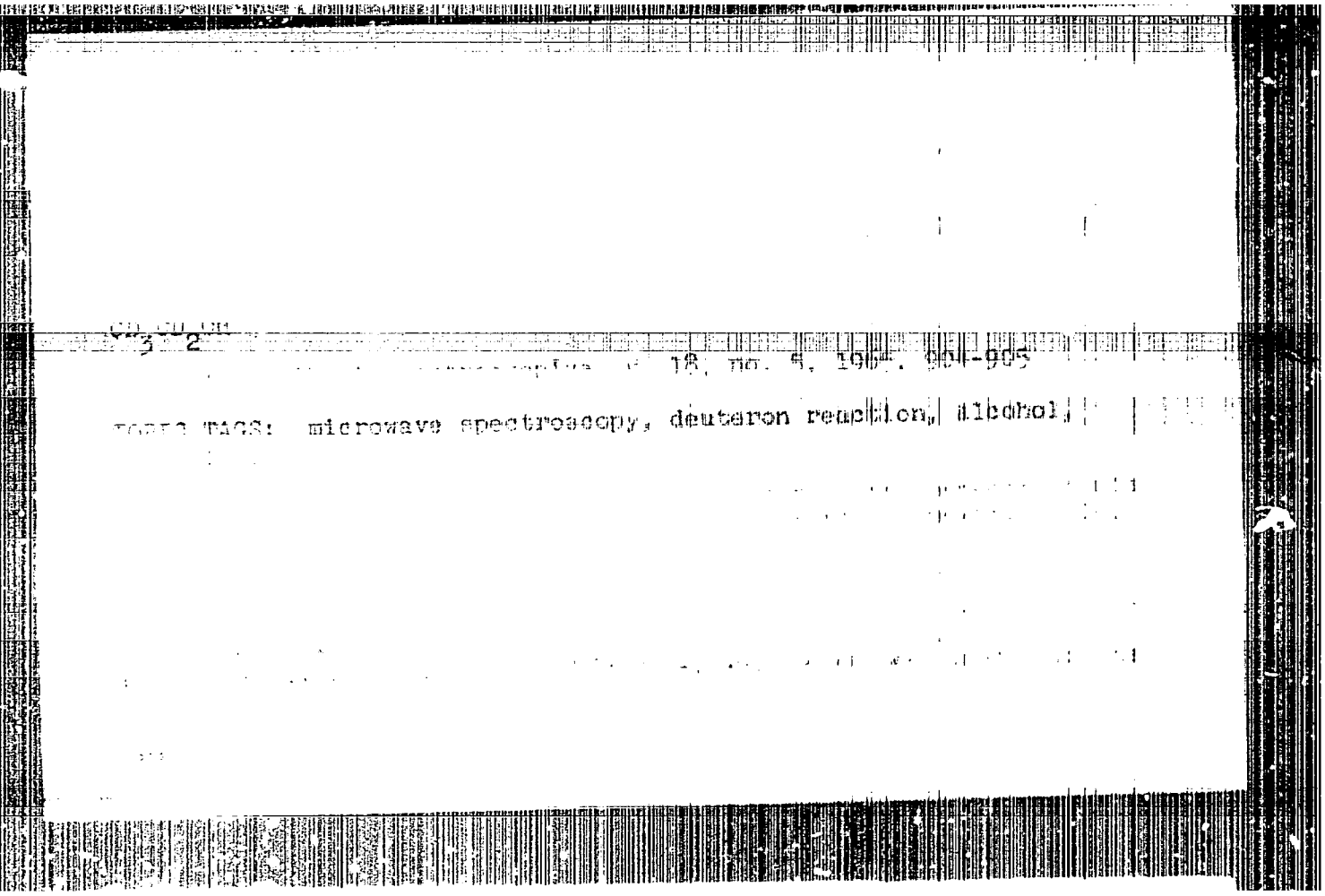
coefficients at 12.80 cm of iodo-benzene—n-hexane solutions are presented for the temperature range -100 to +20C. Orig. art. has: 5 formulas, 5 figures, and 1 table. [04]

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

SUBMITTED: 29May64 ENCL: 00 SUB CODE: EC, EM

NO REF SOV: 004 OTHER: 002 ATD PRESS: 4108

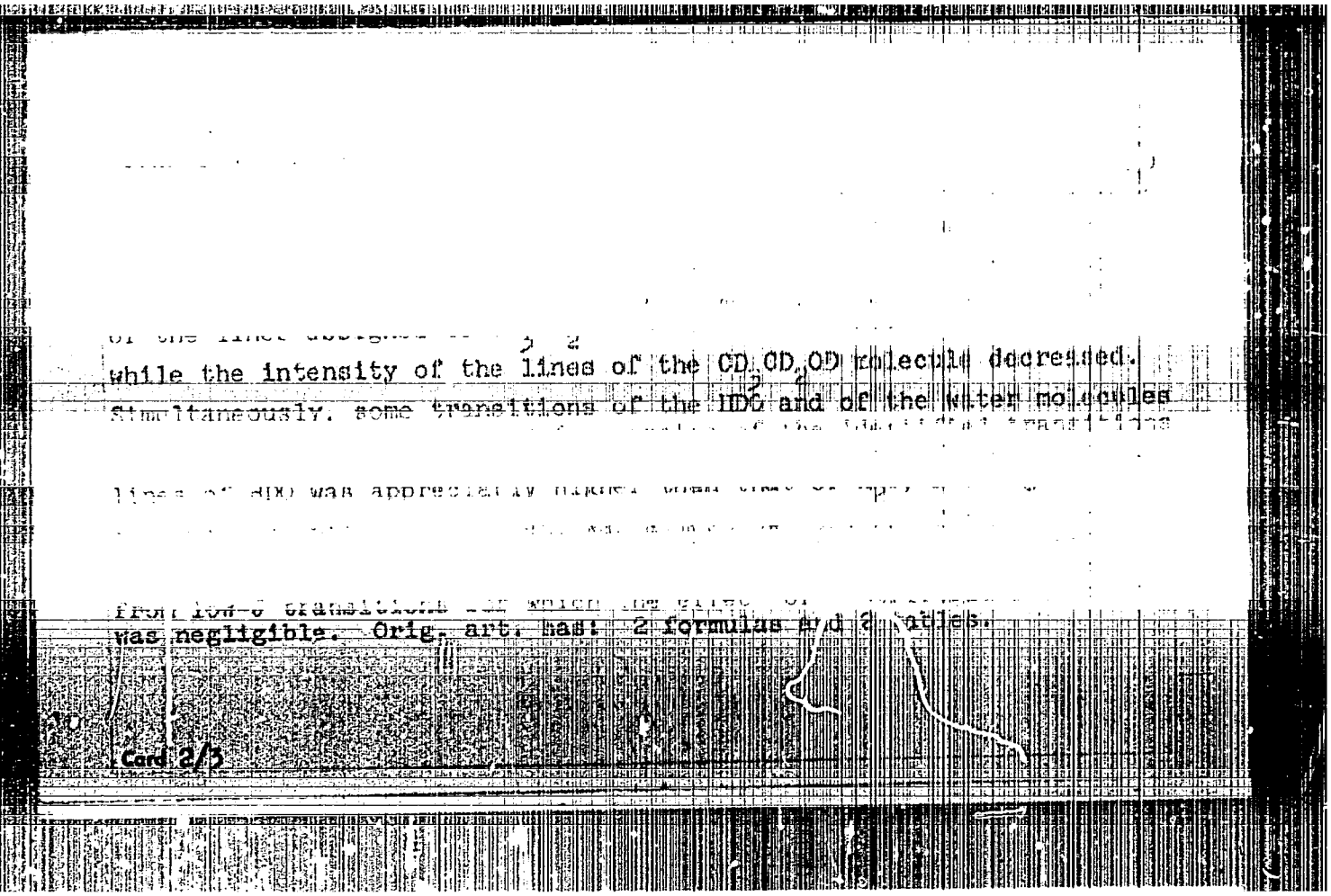
Card 2/2



CH_3CO_2H

18, no. 5, 196[illegible], 901-905

TOPIC TAGS: microwave spectroscopy, deuteron reaction, alcohol



while the intensity of the lines of the CD_3CD_2OD molecule decreased. Simultaneously, some transitions of the HDO and of the water molecules

was negligible. Orig. art. has: 2 formulas and 2 tables.

Card 2/3

IMANOV, I.M.; MIRZOYEV, F.G.; ZUL'FUGARZADE, K.E.

Dielectric properties of some aliphatic alcohols in the microwave range. Zhur. fiz. khim. 39 no.11:2836-2839 N '65.
(MIRA 18:12)

1. Fizicheskiy institut AN Azerb.SSR.

L 45931-66 EWT(1)/EWT(m)/EWP(j) IJP(c) WW/JW/RM

ACC NR: AR6023266 SOURCE CODE: UR/0058/66/000/003/D043/D043

AUTHOR: Imanov, L. M.; Kadzhar, Ch. O.; Abdurakhmanov, A. A.

TITLE: Radiospectroscopic investigation of the molecules CH_3CH_2OH and CD_3CH_2OH

SOURCE: Ref zh. Fizika, Abs. 3D365

REF. SOURCE: Tr. Komis. po spektroskopii. AN SSSR. t. 3, vyp. 1, 1964, 214-220

TOPIC TAGS: microwave spectroscopy, radiospectroscope, molecular spectrum, Stark effect, spectral line, dipole moment, ethyl alcohol

ABSTRACT: With the aid of a radiospectrometer with electric molecular modulation, the authors investigated in the 20.7 — 31.7 Gcs range the microwave spectra of the molecules CH_3CH_2OH and CD_3CH_2OH. Approximately 200 lines were observed, their frequencies measured, and the Stark effect investigated for each of them. A series of transitions of the R, Q, and P branches was identified, the rotational constants were determined, and the components of the dipole moment were found. The structure of the molecule of ethyl alcohol was tentatively determined on the basis of the obtained data. [Translation of abstract]

SUB CODE: 20

Card 1/1 blg

KUMPAN, P.V.; KALININA, G.F.; IMANOV, M.N.; Prinimali uchastiye: NECHAYEV, G.A., inzh.; DOROGOV, N.F., inzh.; GOLMAN, S.M., inzh.; MAL'TSEV, V.I., inzh.; CHERNYSHOVA, L.B., inzh.; VORONINA, T.V., red. izd-va; BRUSINA, L.N., tekhn. red.

[Summer health - resort towns]Letnie kurortnye gorodki. Moskva, Gosstroiizdat, 1962. 142 p. (MIRA 16:1)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut obshchestvennykh zdaniy i sooruzheniy.
(Summer resorts)

IMANOV, M. Ya.

KULIZADE, Kyazym Novruz Ali ogly, dots., kand.tekhn.nauk; IMANOV, M.Ya., red.; GONCHAROV, I.A., red.izd-va

[Electric equipment for drilling oil wells] Elektrooborudovanie dlia bureniia neftianykh skvazhin. Izd. 2-oe, perer. i dop. Baku Azerbaidzhanskoe gos.izd-vo neft. i nauchno-tekhn.lit-ry, 1957. 621 p. (MIRA 11:4)

(Oil well drilling--Equipment and supplies)

IMANOV, N.M., aspirant

Use of lavsan in the weft of semiwool suiting. Tekst.prom. 24 no.1:55-57 Ja '64. (MIRA 17:3)

1. Kafedra tovarovedeniya promyshlennykh tovarov Moskovskogo instituta narodnogo khozyaystva imeni Plekhanova.

IMANOV, N.M., aspirant; KAZIYEV, N.G.

Experience in substituting polyacrylonitrile for viscose fibers in suiting fabrics. Tekst. prom. 25 no 4:29-31 Ap '65.
(MIRA 18:5)

1. Moskovskiy institut narodnogo khozyaystva imeni Plekhanova (for Imanov). 2. Glavnyy inzh. Bakinskogo kamvol'no-sukonnogo kombinata (for Kaziyev).

S/0070/64/009/003/0347/0351

ACCESSION NR: AP4039394

AUTHORS: Pinsker, Z. G.; Imamov, R. M.

TITLE: Electron diffraction investigation of the compound $AgBiTe_2$

SOURCE: Kristallografiya, v. 9, no. 3, 1964, 347-351

TOPIC TAGS: electron diffraction study, telluride compound, thin film, crystal lattice structure

ABSTRACT: Samples were obtained by volatization of fused $AgBiTe_2$ in a vacuum (10^{-4} mm Hg) and deposited in thin films on a fresh cleavage face of rock salt. Slow sputtering on a backing at room temperature gave rise to an amorphous film. A crystalline film was obtained by rapid sputtering, by heating the amorphous film, or by sputtering on hot crystals of NaCl. Electron diffraction patterns were obtained for polycrystalline material, laminated material, and single mosaic crystals. Both cubic and hexagonal modifications were identified. The cubic phase has NaCl structure, with $a = 6.16 \pm 0.02$ Å. The hexagonal phase shows ordered arrangement of Ag and Bi in the space group D_{3d}^5, $a = 4.24$ Å and $c = 20.67$ Å. The twelve atoms of

Card 1/2

ACCESSION NR: AP4035394

the space group are arranged with 3 Ag in the (a) position, 3 Bi in the (b) position, and 6 Te in the (c) position. The diffraction diagrams show that the {10$\bar{1}$4} planes of the hexagonal phase correspond to the {100} planes of the cubic phase. This means that hexagonal crystallites are disposed with the (10$\bar{1}$4) face parallel to the face of the cube. The unit cell dimensions fulfill rather closely the relation $a_{hex} = a_{cub}/\sqrt{2}$ and $c_{hex} = 2a_{cub}/\sqrt{3}$. In this relation the hexagonal [000$\bar{1}$] is parallel to the cubic [$\bar{1}$11], [10$\bar{1}$0] to [$\bar{1}$10], and [01$\bar{1}$0] to [0$\bar{1}$1]. In both ordered and disordered structures the atoms preserve an octahedral coordination, but the ordered structure is accompanied merely by an appropriate distribution (redistribution) of Ag and Bi atoms in the densest cubic packing of Te atoms. Orig. art. has: 4 figures and 1 table.

ASSOCIATION: Institut kristallografii AN SSSR (Institute of Crystallography, AN SSSR)

SUBMITTED: 19Nov63 ENCL: 00

SUB CODE: SS NO REF SOV: 003 OTHER: 002

Card 2/2

IMAMOV, R.M.; PINSKER, Z.G.

Electron diffraction study of the compound $AgTlS_2$. Kristallografiia 10 no.2:199-204 Mr-Ap '65. (MIRA 18:7)

1. Institut kristallografii AN SSSR.

PINSKER, Z.G.; CHZHOU TSZIN-LYAN [Chou Ching-liang]; IAPIDUS, Ye.L.

Determining the crystalline structure of the low-temperature phase of α-Ag_2Se. Kristallografiia 10 no.3:275-283 My-Je '65. (MIRA 18:7)

1. Institut kristallografii AN SSSR.

ACCESSION NR: AP4039402 S/0070/64/009/003/0413/0415

AUTHORS: Pinsker, Z. G.; Imamov, R. M.

TITLE: The growth and investigation of thin cuprous oxide films

SOURCE: Kristallografiya, v. 9, no. 3, 1964, 413-415

TOPIC TAGS: cuprous oxide, thin film, electron diffraction, Fermi level, defective phase

ABSTRACT: The authors grew Cu_2O films by two different methods: 1) by volatisation of Cu wire in a vacuum (10^{-4} mm Hg) with subsequent condensation on fresh cleavage faces of rock salt, the material then being placed in a thermostatically controlled furnace and heated at different temperatures; and 2) by volatization of Cu wire under the same conditions, but with subsequent heating at pressures on the order of 0.5 mm Hg and at a temperature of 200C for 2 hours. Electron diffraction patterns of films obtained by the first method (at a temperature of 125C for 10 minutes) show Cu_2O + Cu. Increase in duration of heating yields pure Cu_2O. Films heated at 160-170C for 20 minutes also yield Cu_2O. On further heating, both Cu_2O and CuO appear. Electron diffraction patterns of films obtained

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ACCESSION NR: AP4043191

there appeared, in addition to the cubic phase, reflections due to the monoclinic modification of Ag_2Te whose intensities increased with annealing temperature, pure Ag_2Te patterns being obtained at 300C. Cubic $AgSbTe_2$ is thus stable in thin films at 100--110C, decomposes at higher temperatures in accordance with

$$2AgSbTe_2 \rightarrow Ag_2Te + SbTe_3,$$

and it can be assumed that the $SbTe_3$ sublimes at 300C. Even a simple analysis of the 40 observed independent $AgSbTe_2$ reflections indicates an NaCl-type structure in which, from space group considerations, the Ag and Sb atoms must be distributed statistically. Structure factors were obtained from the formula

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ACCESSION NR: AP4043191

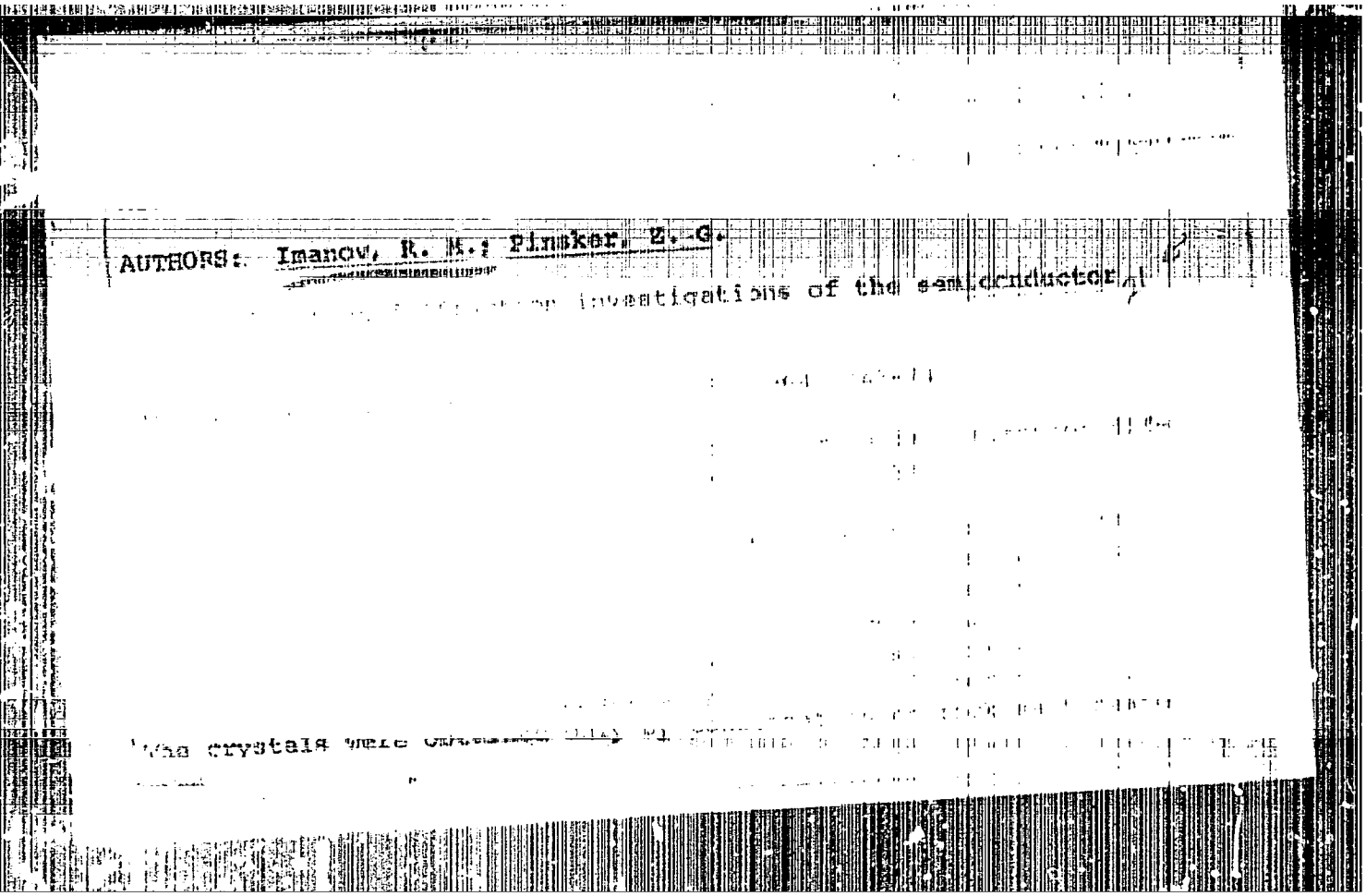
phases. Orig. art. has: 2 formulas.

ASSOCIATION: Institut Kristallografii AN SSSR (Institute of Crystallography, AN SSSR)

SUBMITTED: 18Oct63 ENCL: 00

SUB CODE: SS NR REF SOV: 001 OTHER: 003

Card 1/4



AUTHORS: Imanov, R. M.; Pinsker, Z. G.

investigations of the semiconductor

The crystals were

L 11269-65

ACCESSION NR: AP4046051

different types of electron diffraction

with a structure of a

SUBMITTED: 04Apr64

ENCL: 00

ACCESSION NR: AP5000289 S/0070/64/009/006/0857/0863

AUTHORS: Zav'yalova, A. A.; Imanov, R. M.; Pinsker, Z. G.

[illegible] investigation of the Bi--O system in

[illegible] 1964, [illegible]

[illegible] bismuth inorganic compounds, thin

[illegible] was made of [illegible]

[illegible]

ing metallic bismuth (either analytically or spectrally pure) at
[illegible] the [illegible] face of NaCl. The produced films

ACCESSION NR: AP5000789

were oxidized in air by slow heating in a muffle oven (heating to 450--470C for 5--22 hours). The electron diffraction patterns obtained by the first method were mixtures of phases and difficult to index, but electron diffraction patterns of a single phase could be obtained by the second method. The results show the existence of a tetragonal phase with composition $Bi_2O_{2.7--2.8}$ with lattice periods $a = 3.85 \pm 0.02$, $c = 12.25 \pm 0.05$ Å. The space group is D_{4h}^{17}--I4/mcm. The atoms occupy the following positions: 2Bi$_I$--2(a), 2Bi$_{II}$--4(c) z = 0.32 ; 5.40--8(g), z = 0.125. The electron diffraction dot patterns [illegible] and [illegible] that the $Bi_2O_{2.7--2.8}$ crystals are oriented

[illegible] Institut kristallografii AN SSSR (Institute of

Card 2/2

L 16582-65
ACCESSION NR: AP5000284

Crystallography: AN SSSR)

SUBMITTED: 18May64 ENCL: 00

SUB CODE: SS, MP NR REF SOV: 002 OTHER: 007

Card 3/3

GASANOV, Sh.M., prof. zasluzhennyy deyatel' nauki; IMANOV, S.Kh.; GUSEYNOVA, L.R.; KYAMIL', E.M.; MELIK-ABBASOVA, F.A.; MIRZOYEV, G.

Effectiveness of treating hypertension at the Mardakyan Specialized Neurosomatic Sanatorium. Sbor. trud. Azerb. nauch.-issl. inst. kur. i fiz. metod. lech. no.9:42-48 '63. (MIRA 18:8)

GASANOV, Sh.M., zasl. deyatel' nauki, prof.; IMANOV, S.M.; KRUYNINA, L.B.; VERDIYEV, D.I.

Treatment of diseases of the peripheral nervous system at the Mardakyan Specialized Neurosomatic Sanatorium. Sbor. trud. Azerb. nauch.-issl. inst. kur. i fiz. metod. lech. no.9: 118-121 '63. (MIRA 18:8)

IMANOV, T.Kh.; ABRAROV, O.

Cathodic polarization of tellurium in an acid medium. Uzb. khim. zhur. 9 no.5:53-58 '65. (MIRA 18:12)

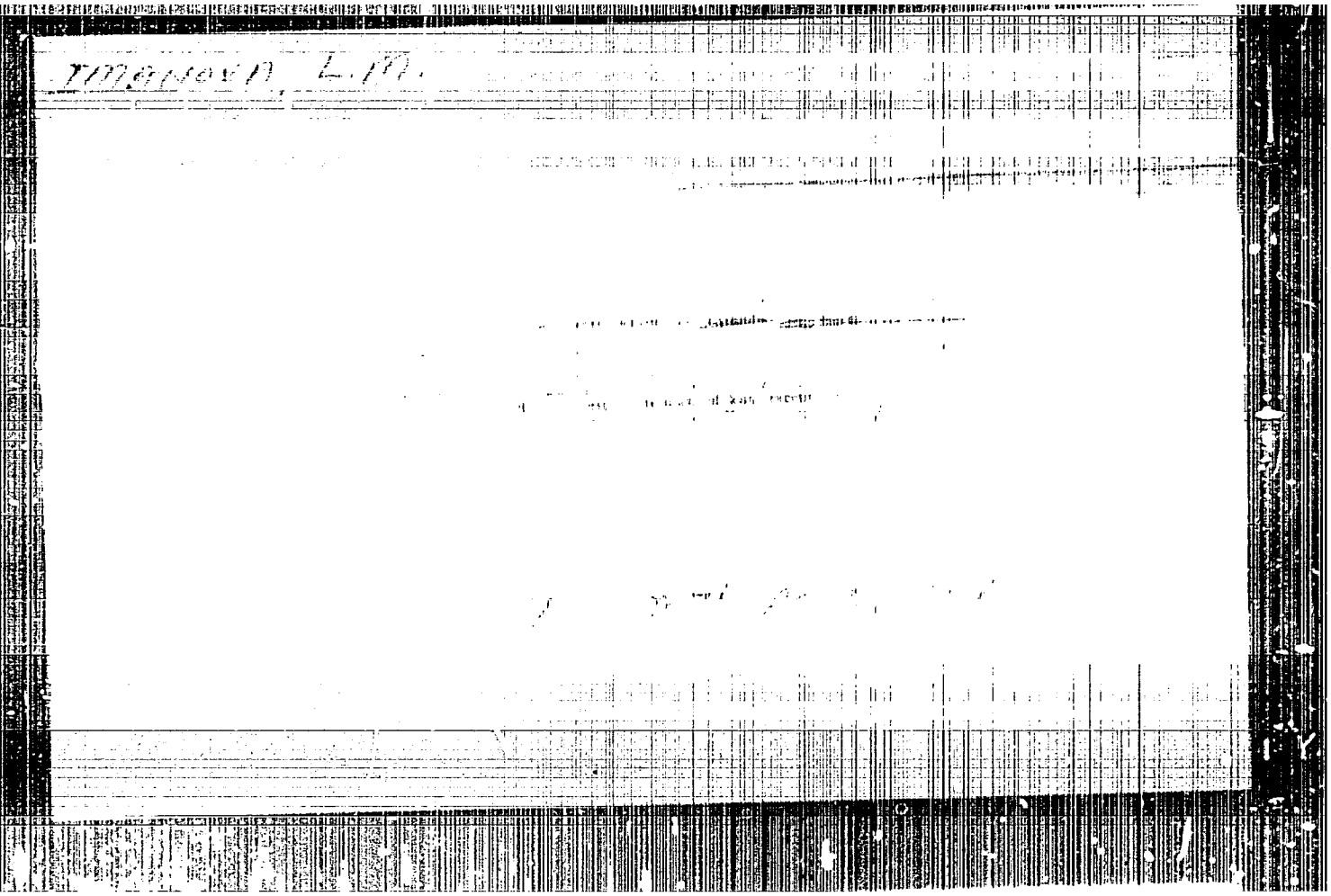
1. Institut yadernoy fiziki AN UzSSR. Submitted Aug. 6, 1964.

IMANOVA, [redacted]

Effect of irrigation on the catechol composition of tea leaves [in Azerbaijani with summary in English]. Dokl. AN Azerb. SSR 15 no.4:335-339 '59. (MIRA 12:6)
(Catechol) (Tea)

IMANOVA, A.A.

Effect of irrigation and mineral fertilizers on the content of tannins in tea leaves. Trudy Inst.gen.i pol.AN Azerb.SSR 2:148-156 '62. (MIRA 16:2)
(Lenkoran Lowland--Tea--Fertilizers and manures)
(Lenkoran Lowland--Tea--Irrigation)
(Tannins)



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Some results of flooding the NKO-3 horison in the Azizbekov oil field. Azerb.neft.khoz. 35 no.5:8-10 My '56. (MLRA 9:10)

(Azizbekov (Azerbaijan)--Oil field flooding)

IMANOVA, S.S.

Vascular asymmetries in transient disorders of the cerebral blood circulation. Zhur. nevr. i psikh. 65 no.10:1447-1453 '65.
(MIRA 18:10)

1. Institut nevrologii (direktor - prof. N.V.Konovalov) AMN SSSR, Moskva.

FEYZULLAYEV, A.V.; IMANOVA, S.S.

Reflex torsion spasm in a patient with brucellosis. Azerb. med. zhur. no.11:53-56 N '61. (MIRA 15:2)

1. Iz kafedry nervnykh bolezney (zav. -zasluzhennyy deyatel' nauki A.V. Feyzullayev) Azerbaydzhanskogo gosudarstvennogo meditsinskogo instituta imeni N.Narimanova).
(BRUCELLOSIS) (SPASMS)

IMANSEITOV, D.; GULYAYEV, Ye.; STESHENKO, M., inzh.

Training specialists. Avt. transp. 42 no.7:50-51 Jl '64.
(MIRA 17:11)

1. Nachal'nik Upravleniya uchebnykh zavedeniy Ministerstva avtomobil'nogo transporta Kazakhskoy SSR.

IMANUILOV, L.A., insh.

Racing of an M50 engine. Sudostroenie 24 no.1:34-38 Ja '58. (MIRA 11:2)

(Marine engines--Testing)

IMAN-ZADE, Raya Nadzhaf kyzy; KULIYEV, S.M., prof., doktor tekhn.nauk, red.; TARAKOV, V.V., red.; BAGDATLISHVILI, D.D., red.izd-va; AGAYEVA, Sh., tekhn.red.

[Basic economic problems in the development of Azerbaijan offshore oil fields] Osnovnye voprosy ekonomiki razrabotki morskikh neftianykh mestorozhdenii Azerbaidzhana. Baku, Izd-vo Akad.nauk Azerbaidzhanskoi SSR, 1958. 199 p. (MIRA 12:12)
(Azerbaijan--Oil well drilling, Submarine--Costs)

IMARALIYEV, A.

DANCHEV, P.S.; CHUKOBAYEV, A.A.; IMARALIYEV, A.

Increasing the size of coal lumps by lowered coefficients of blast hole charges. Izv. AN Kir.SSR no.4:189-201 '57. (MLRA 10:7)

(Coal mines and mining--Explosives)

IMARALIYEV, A.; TERMETCHIKOV, M.K.; AMANOV, A.; TASHIMAYEV, B.

Method of determining the detonation speed of fuse caps and borehole charges using a MPO-2 oscillograph with eight loops. Izv.AN Kir.SSR.Ser.est.i tekh.nauk 2 no.2:91-97 '60. (MIRA 14:10)

(Blasting) (Oscillograph)

29335
S/119/61/000/011/001/005
D209/D301

16.8000

AUTHORS: Imas, A.A., and Rogovskiy, A.Ya., Engineers

TITLE: Extremum indicator

PERIODICAL: Priborostroyeniye, no. 11, 1961, 5-7

TEXT: The authors developed a simple transmitter suitable for determining the extremum of a function converted into the angular velocity of the transmitter. As shown in Fig 1 the transmitter consists of: 1 - shaft; 2 - non-magnetic very light disc fixed on the shaft; 3 - heavy disc, free to rotate, mounted on ball bearings; 4 - arm; 5 - spring (4 and 5 join both discs together); 6 and 7 - permanent magnets fixed to the discs; 8 and 9 - Π-shaped cores mounted in the vicinity of the discs; 10 and 11 - coils; 12 - lever. When the discs rotate, electric signals are induced in the coils. When both angular

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Extremum indicator

velocities are equal the induced signals are in phase. In presence of acceleration, disc 3 lags behind. When the extremum value of the function is reached the signals in the coils coincide in phase. Neglecting friction in the bearing and spring assembly, the acceleration of the shaft ε is -

Eq.(1) $$\varepsilon = \frac{2k}{MR}(\varphi_\delta + \varphi_0),$$

where φ_δ = phase shift between signals; φ_0 - angle of initial spring tension; k - rigidity coefficient of spring; M - mass of disc; R - radius of disc 3. Thus the phase shift between the signals in the coils is the measure of the magnitude of the derivative. The quality of the transmitter depends on its sensitivity (minimum value of derivative which produces the minimum observable phase shift between the signals) and the delay between the instant of coincidence of signals and the one, at which the extremum value of the function is reached. The minimum acceleration is given by Eq.(3)

$$\varepsilon_{min} = \frac{2k}{MR}(\varphi_u + \varphi_0),$$ where φ_u - signal

Card 2/4

Extremum indicator

width. The delay is given by Eq. (4)

$$t_{3an}=\sqrt{\frac{IR}{2k}}\left(\arccos\frac{\varphi_0}{\varphi_0+\varphi_0}\right)$$

From Eqs. (3) and (4) the transmitter parameters can be found. An experimental model of the transmitter was developed by the "Giproniselektroshakht" institute. The transmitter was driven by a d.c. motor, whose speed varied according to a given law. The signal coincidence was measured by a simple solid state coincidence circuit. This transmitter was designed for the use in an automatic device for selecting the optimum operation range of certain extracting machines in the coal industry. The control circuit which received the signals from this transmitter consisted of several transistorized logical and trigger circuits which enabled determination of the maximum of a function of two independent variables. The transmitter was so constructed that it reacted to the positive accelerations only. With a small modification it can be used in the systems of continuous

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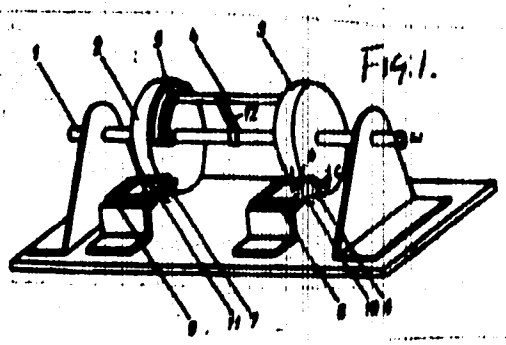
Extremum indicator

search of the extremum. It can also be used in conjunction with logical elements in the systems of automatic control of constant speed and for control and limiting of shaft accelerations. The application of this transmitter can simplify many automatic control devices. The instrument was patented 5.5. 1959 (No. 126633). There are 6 figures.

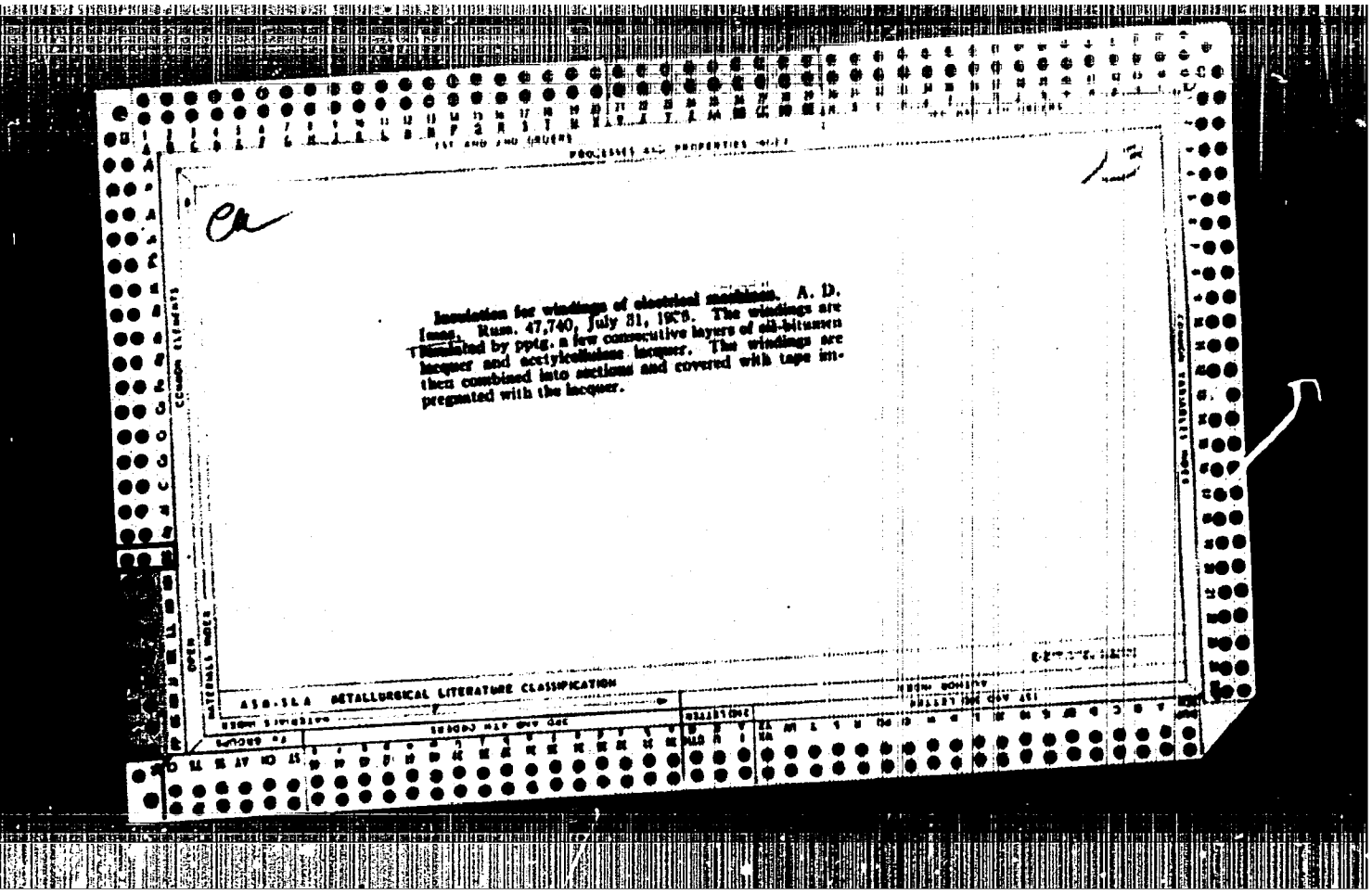


Card 4/4

IMAS, A.A.

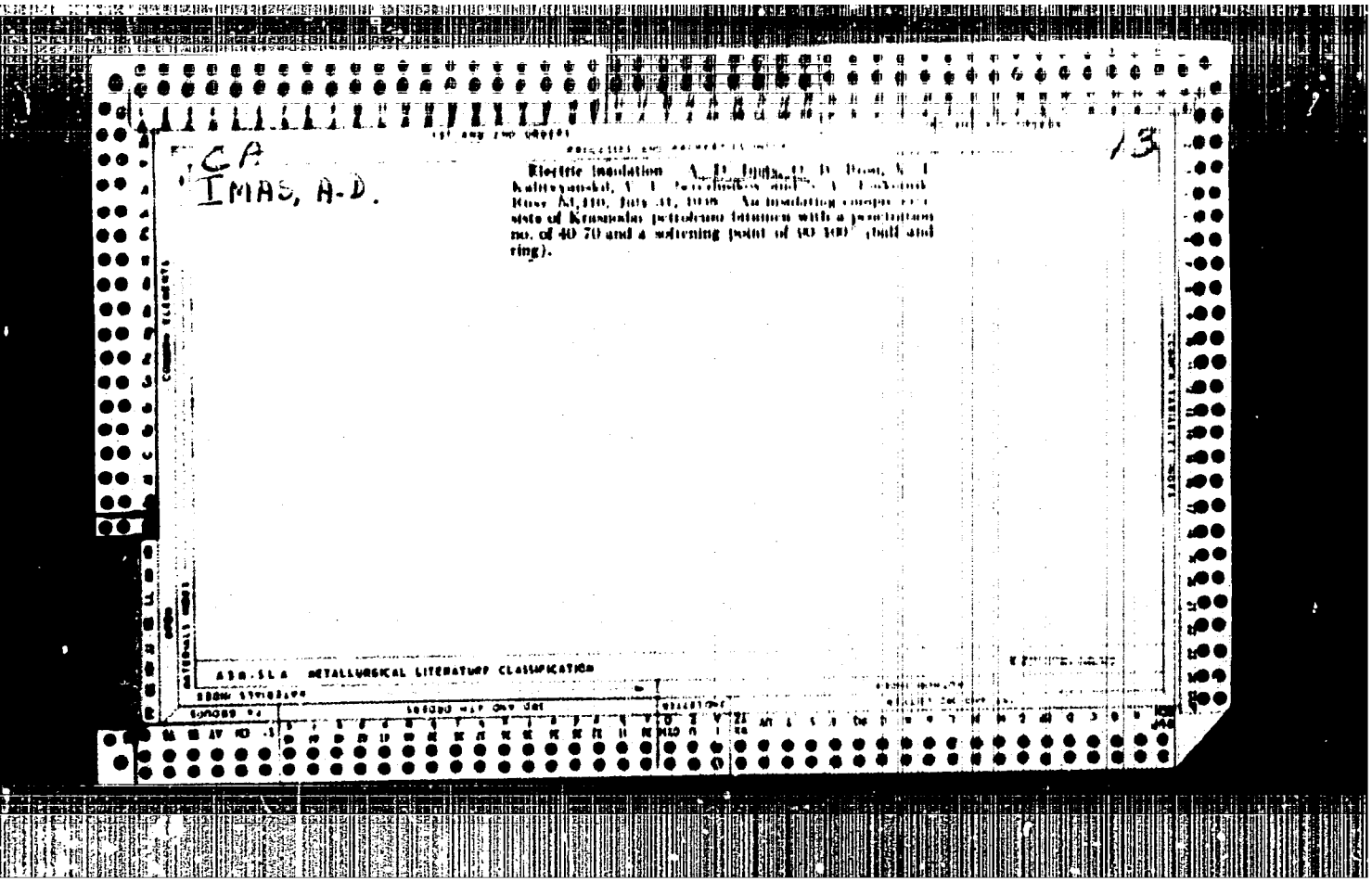
Determining the specific inductive capacitance of a nonhomogeneous dielectric. Izv.AN Uz.SSR.Ser.tekh.nauk 7 no.2:5-16 '63.
(MIRA 16:4)

1. Tashkentskiy politekhnicheskiy institut.
(Dielectric constant)



Insulation for windings of electrical machines. A. D. Imm. Russ. 47,740, July 31, 1936. The windings are insulated by ppts. a few consecutive layers of oil-bitumen lacquer and acetylcellulose lacquer. The windings are then combined into sections and covered with tape impregnated with the lacquer.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



IMAS, A. D.

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So: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 13, 1949)

IMAS, A. PA 32/49T69

USSR/Mining Oct 48
Drilling
Bibliography

"Review of Professor Doctor V. G. Mikhaylov's 'Drilling of Holes,'" A. Imas, Sci Collaborator, "DonUGI," 1½ pp

"Ugol'" No 10

Book is "full of gross technical errors, false statements, erroneous phrases, and confusing data." Published by GNTI, Sverdlovsk-Moscow, 1947, 190 pp, 5,000 copies.

[redacted] 32/49T69

IMAS, A. D.

USSR (600)

Electric Motors, Induction

Remarks on G. I. Shturman's article: "Disconnected squirrel cages in short-circuted asynchronous motors." Elektrichestvo no. 2, 1952. Inzh.

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Coal - Mining Machinery

Remarks on V. N. Berstel's article "Problems concerning the analytical expression of capacity used by a cutting machine in cutting coal." Ugol' no. 6, 1952.

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IMAS, A. D.

(2)

Fuel Abstracts
Vol. XV, No.2
Feb. 1954
Natural Solid
Fuels: Winning

993. DETERMINING EFFICIENCY OF PROCESSES FOR BREAKING DOWN COAL AND ROCK. Imas, A.D. (Ugol (Coal) June 1953, [illegible]). Investigations into the drillability of coal carried out by the Donets Coal Research Institute (DonUGI) have shown that in order to make an objective assessment of the process of breaking down rock and coal and the relative effectiveness of different mining machines it is essential to vary only one of the characteristics of the process for each test. One of these decisive characteristics is axial pressure (advance of the machine). As a result of these tests it is possible to determine the characteristics which enable the process to be applied with a minimum of energy losses. The method of investigation worked out by DonUGI makes it possible to establish the most productive methods of application of different mining machinery with a view to standardization and the development of improved designs. It also facilitates the classification of rock according to its relative solidity. The tests have shown that new drill bits for rotary drilling should have high axial pressure and that the number of revolutions of the drill rod should be variable. The breaking down of very solid rock requires an increased speed of advance and a reduced cutting speed of the drill. These findings are being taken into account in developing new drilling machinery. (L).

N.C.B.

IMAS, A.D.; MIKHEYEV, Yu.A., redaktor; KOROVENKOVA, Z.A., tekhnicheskiy redaktor; ALADOVA, Ye.I., tekhnicheskiy redaktor.

[Testing electric motors used in coal mining] Ispytanie elektrodvigatelei dlia ugol'nykh shakht. Moskva, Ugletekhizdat, 1954. 318 p.
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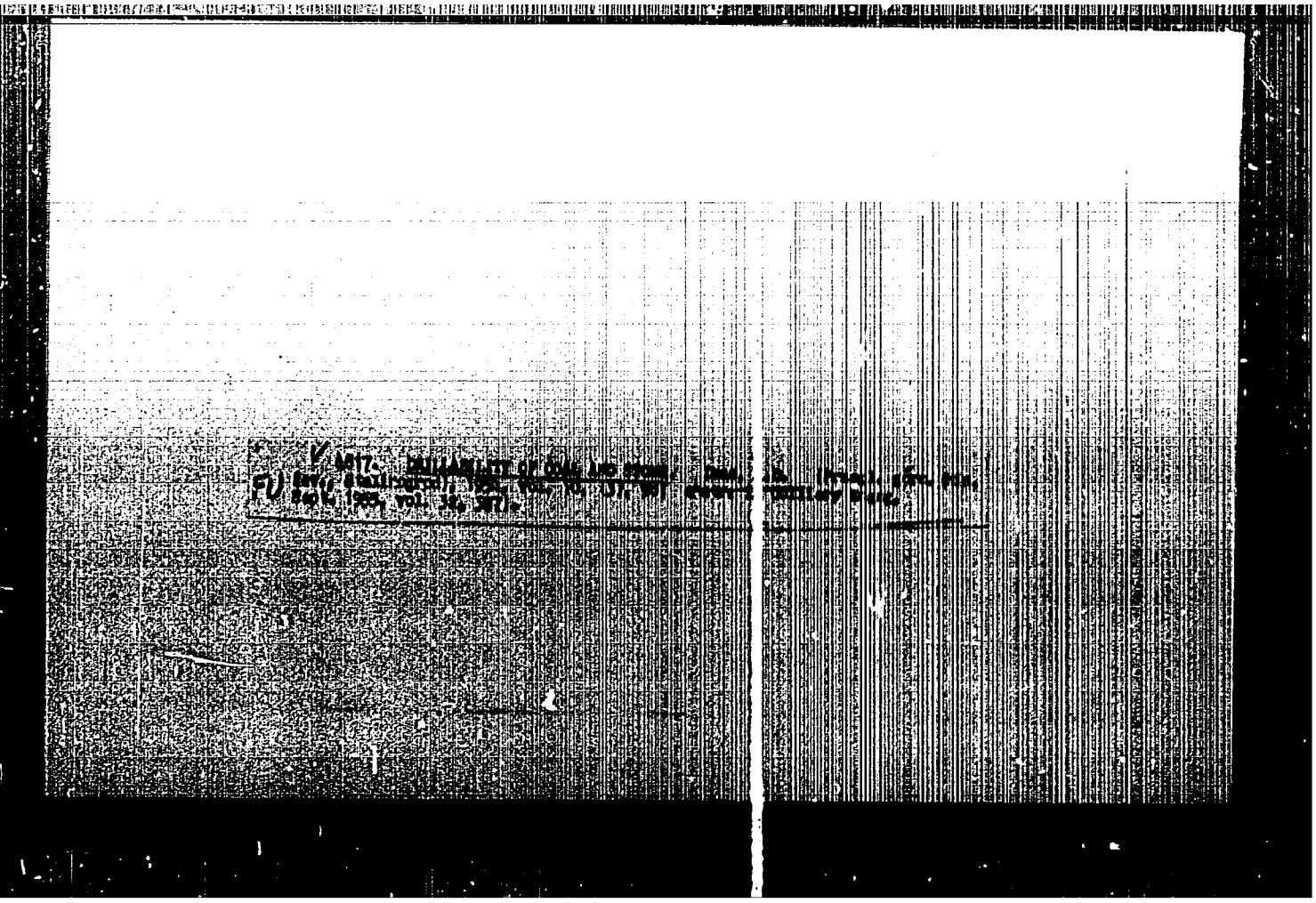

LYAPIN, D.P.; IMAS, A.D.; MOGIL'NIKOV, S.F.; LUDOV, V.N.

New developments in conducting preparatory mine work. Ugol' 29 no.5: 37-40 My '54. (MLRA 7:6)

1. DonUGI. (Coal mines and mining)

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method of suiting the drilling speed and pressure (in rotary) drilling to the
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A 2 to 9.5 fold increase in production and a great reduction of dust are
claimed. (L).

Donets Sci-Res. Coal Inst.

YATSKIKH, Valerian Grigor'yevich, kand.tekhn.nauk; ROZENBERG, Boris Lazarevich, kand.tekhn.nauk; IMAS, Aleksandr Davidovich, inzh.; MAKSIMOV, Vladimir Leonidovich, inzh.; Prinimal uchastiye: SPEKTOR, L.A., inzhener-konstruktor. LADYGIN, A.M., otv.red.; SHOROKHOVA, A.V., red.izd-va; IL'INSKAYA, G.M., tekhn.red.

[Mining machinery] Gornye mashiny. Moskva, Gos.nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1959. 507 p. (MIRA 12:12)

1. Gorlovskiy zavod im. S.M.Kirova (for Spektor).
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Influence of the parameters of a system of rotary drilling in rock on the dispersion of the crushed material. Bor'ba s sil. 3:86-90 '59. (MIRA 12:9)

(BORING) (MINE DUSTS)

IMAS, A.D.

Adequate diameter for explosive charges. Ugol' 35 no.11:45-46 N '60. (MIRA 13:12)

1. Donetskiy ugol'nyy institut.
(Donets Basin—Coal mines and mining—Explosives)

IMAS, A.D., inzh.; KARABANOV, M.G., inzh.

Geometric shapes of cutters for rotary boring and kinematics of their motion. Ugol' Ukr. no.6:21-23 Je '61.
(MIRA 14:7)

(Rock drills)

IMAS, A.D.; SOLOMKO, V.P.

Physical characteristics of the breakage of rocks and coal with the cutting tool. Ugol' 37 no.2:24-28 F '62. (MIRA 15:2)

1. Donetskiy nauchno-issledovatel'skiy ugol'nyy institut.
(Mining engineering)
(Rock drills)

YATSKIKH, Valerian Grigor'yevich, kand. tekhn. nauk; [illegible], Boris Lazarevich, kand. tekhn. nauk; IMAS, Aleksandr Davydovich, inzh.; SPEKTOR, Leonid Abramovich, inzh.; KHORIN, D.N., doktor tekhn. nauk, retsenzent; LOKHANIN, K.I., inzh., retsenzent; FEIGIN, L.M., inzh., retsenzent; ABRAMOV, V.I., inzh., red.izd-va; MINSKER, L.I., tekhn. red.

[Mining machines] Gornye mashiny. [By] V.G.IAtskikh i dr. Moskva, Gosgortekhizdat, 1963. 382 p. (MIRA 16:10)
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IMAS, M.S., ordinator

Case of a breakthrough of a hydatid cyst of the liver into the portal vein. Med.zhur.Uzb. no.10:87 O '58. (MIRA 13:6)

1. Iz khirurgicheskogo otdeleniya (zav. - prof. S.A. Masumov) klinicheskoy bol'nitsy neotloshnoy pomoshchi.
(LIVER--HYDATIDS) (PORTAL VEIN)

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Change in liver function in acute cholecystitis. Khirurgiia 36 no.4:77-80 Ap '60. (MIRA 13:12)
(GALL BLADDER—DISEASES) (LIVER—DISEASES)

IMAS, M. Z., Cand Med Sci, "Functional deviations of the liver and pancreas in acute cholecystitis (before and after operation)." Tashkent, 1961. (Min of Health UzSSR. Tashkent State Med Inst). (KL-DV, 11-61, 228).

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[Thermal stresses in turbomachinery parts; reports] Teplovye napriazheniia v elementakh turbomashin; doklady. Kiev, Izd-vo AN USSR. No.1. 1961. 164 p. (MIRA 15:7)

1. Nauchnoye soveshchaniye po teplovym napryazheniyam v elementakh turbomashin, Kiev, 1960. 2. Akademiya nauk USSR (for Kovalenko).
(Turbomachines) (Thermal stresses)

GORONOVSKIY, Igor' Trefil'yevich; NAZARENKO, Yuriy Pavlovich; NEKRYACH, Yevgeniy Fedorovich; KURILENKO, O.D., doktor khim. nauk, prof., otv. red.; IMAS, R.L., red.; KADASHEVICH, O.A., tekhn. red.

[Concise handbook of chemistry]Kratkii spravochnik po khimii. Kiev, Izd-vo Akad. nauk USSR, 1962. 659 p. (MIRA 16:1)
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(MIRA 16:11)
(Electric measurements)

IVAKHNENKO, Aleksey Grigor'yevich; IMAS, R.L., red.; MONZHERAN, P.F., tekhn. red.

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(Electronic computers)

PARRA, Irina Konstantinovna; PETINA, Nina Vladimirovna; IMAB, R.L., red.; TURBANOVA, N.A., tekhn. red.

[Automatic station for the cathode protection of underground metal pipelines from corrosion] Avtomaticheskaia stantsiia katodnoi zashchity podzemnykh metallicheskikh truboprovodov ot korrozii. Kiev, Izd-vo AN USSR, 1963. 49 p. (MIRA 17:1)

IVAKHNENKO, Aleksey Grigor'yevich; LAPA, Valentin Grigor'yevich; IMAS, R.L., red.

[Cybernetic predictive systems] Kiberneticheskie predskazyvaiushchie ustroistva. Kiev, Naukova dumka, 1965. 213 p. (MIRA 19:1)

IMAS, V.A.; KUDRINA, S.A.; PETROV, M.P.; KURANOV, I.V.; SHIKIN, S.S.

Manufacture of high-voltage porcelain from Uzbekistan raw materials. Report No.1. Izv.AN Uz.SSR.Ser.tekh.nauk no.4: 30-45 '60. (MIRA 13:8)

1. Institut geologii AN UzSSR i Institut energetiki i avtomatiki AN UzSSR.

(Electric insulators and insulation)
(Uzbekistan--Porcelain)