

LADYZHENSKIY, Boris Nikolayevich; BASHMAKOV, Aleksandr Dmitriyevich;
POZDNYAKOVA, G.L., red. izd-va; VENETSKIY, S.I., red. izd-va;
OBUKHOVSKAYA, G.P., tekhn. red.

[Treatment of liquid metals by powder in a gas stream] Obrabotka
zhidkogo metalla poroshkami v strue gaza. Moskva, Gos. nauchno-
tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1961. 115 p.
(MIRA 14:12)

(Powder metallurgy) (Liquid metals)

KOMAROV, N.G., nauchnyy sotrudnik; FOKIN, A.D., nauchnyy sotrudnik;
BASHMAKOV, A.I., nauchnyy sotrudnik; HUDAKOVA, A.G., nauchnyy
sotrudnik; MOSKALETS, Ye.S., nauchnyy sotrudnik; HEDEL'SKIY,
V.I., red.; PORFIR'YEV, B.A., red.; SKLYAROVA, Ye.I., tekhn.red.

[City of Kirov; reference book] Gorod Kirov; spravochnik. Kirov,
Kirovskoe knizhnoe izd-vo, 1957. 150 p. (MIRA 13:8)

1. Kirovskiy oblastnoy krayevedcheskiy muzey (for Komarov, Fokin,
Bashmakov, Rudakova, Moskalets). 2. Direktor Kirovskogo oblastnogo
krayevedcheskogo muzeya (for Hedel'skiy).
(Kirov)

KOMAROV, N.G.; SOBOLEV, V.A.; BASHMAKOV, A.I.; EMMAUSSKII, A.V., kand.
istor.nauk; HUDAKOVA, A.G.; MOSKALETS, Ye.S.; KUSHNEREV, K.Ya.;
MOSHCHAKOV, V.A.; KARDAKOVA, Ye.A., red.; SKLYAROVA, Ye.I.,
tekh.n.red.

[City of Kirov; a reference book] Gorod Kirov; spravochnik.
Kirov, Kirovskoe knizhnoe izd-vo, 1959. 166 p.

(Kirov--Guidebooks)

(MIRA 13:6)

31234

26.11/81
10.3200

S/145/61/000/011/002/004
D221/D303

AUTHORS: Polyayev, V. M., Candidate of Technical Sciences,
Docent, and Bashmakov, Engineer

TITLE: Calculating the turbulent boundary layer during
coolant feeding through a porous wall

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Mashino-
stroyeniye, no 11, 1961, 118-128

TEXT: The authors consider a plane plate situated in a
stream of compressed gas. It is assumed that a film is maintained
along the whole length of the plate. The authors quote the equa-
tions of the steady turbulent flow which are solved under the
following assumptions: The speed of the liquid film with respect
to the wall is neglected; the temperature of the film is equal to
the boiling temperature of the coolant; the losses due to heat
transfer are small, and the heat is used for raising the temperature
and evaporation of the coolant; the thermal capacity of the bound-

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Calculating the turbulent boundary ...

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ary layer is constant; chemical interaction and secondary effects are disregarded, and it is assumed that $Pr=1$. The authors reduce the problem to analysis of a dynamic boundary layer. After mathematical manipulation a relationship is deduced which allows the dimensionless speed for a known Reynolds number to be determined. The numerical computations demonstrate that this equation is well approximated by a linear relationship. The latter is a function of the wall temperature, and to a lesser extent of the flow speed. X

$$Re_{x', w} = \frac{1}{xC_0} \left[\frac{2}{1} - \frac{2(x\psi_1 J_0 - 1)}{(xJ_0)^2} e^{x\psi_1 J_0} \right] \quad (28)$$

permits also evaluation of changes in the dimensionless speed ψ_1 during the variation of J_0 at constant speed u_∞ . The total flow of the coolant is considered when it is fed through a porous element

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Calculating the turbulent boundary ...

of length ℓ , and for a total length of plate L. This results in

$$G = \frac{Ab\mu_w S}{x C_0} e^{x \frac{\lg Re_{x,w} - 1,29}{0,2065}} \quad (33)$$

where the coefficient of dynamic viscosity can be determined from an approximate formula due to Stepanov,

$$\mu_w = \left[\sum_{i=1}^n \frac{c_i}{\mu_i} \sqrt{\frac{m}{m_i}} \right]^{-1}$$

By the assumption of $b = \pi D$,

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3123h

Calculating the turbulent boundary ...

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$$G = 2,75A \cdot b \mu_w^{1,935} \lg Re_{x,w} - 1,29 \quad (34)$$

can be used for pipes. Curves illustrating the relationship between the specific flow of coolant and the Reynolds numbers as well as experimental results of Kinney and Abramson are plotted. The comparison reveals a good agreement, although for higher intensity of feed there is an increase of discrepancies in the above. There are 2 figures and 4 references: 3 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: G. Kinney, E. Abramson and G. Sloop, NACA Rep. 1087, 1952

ASSOCIATION: MVTU im. N. E. Bauman (MVTU imeni N. E. Bauman)

Card 4/4

BASHMAKOV, Aleksandr Mikhaylovich; KOZLOV, Aleksey Ivanovich;
SUKHOV, I.V., red.; TELYASHOV, R.Kh., red.izd-va; GVIRTS, V.L.,
tekhn. red.

[Lifting-capacity limiter for jib cranes. Self-gripping
catch for sheet materials] Ogranichitel' gruzopod'emnosti
dlia strelovykh pod'emnykh kranov. Samozashimnoi sakhvat dlia
listovogo materiala. Leningrad, 1963. 17 p. (Leningradskii
dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom
Seria: Mekhanicheskaiia obrabotka metallov, no.12)

(MIRA 16:10)

(Cranes, derricks, etc.--Safety appliances)
(Materials handling--Equipment and supplies)

BASHMAKOV, Boris Aleksandrovich; KHOROSHAVINA, A.G., red.; VORONTSOVA,
Z.Z., tekhn. red.

[Sugar beets for the fields of Udmurtia] Sakharnuiu sveklu -
na polia Udmurtii. Izhevsk, Udmurtskoe knizhnoe izd-vo, 1961.
17 p. (MIRA 16:2)

1. Glavnyy agronom sovkhosa Yazhbakhtinskiy Kiyasovskogo rayona
(for Bashmakov).

(Udmurt A.S.S.R.—Sugar beets)

BASHMAKOV, G., inzhener-stroitel'.

Educational training grounds for builders are needed.
Prog. -tekhn. obr. 13 no.8:16 Ag '56.

(MLRA 9:10)

(Building trades--Study and teaching)

BASHMAKOV, G.A., kapitan meditsinskoy slushby

Indications of pathogenic microorganisms in objects of the external environment by the haptochrome flocculation reaction. Voen.-med. zhur. no.5:69-72 My '60. (MIRA 13:7)
(SERUM DIAGNOSIS)

BASHMAKOV, G.A., kapitan meditsinskoy sluzhby

Surface indication of dysentery bacteria by means of the
phage titer growth reaction. Voen.-med. zhur. no.4:39-42,
Ap '61. (MIRA 15:6)

(BACTERIOPHAGE).
(SHIGELLA PARADYSENERIAE)

BASHMAKOV, G.A.; TARASOV, V.V.

Use of polyethylene vessels for the production and transportation of tissue cultures. Vop. virus 8 no.5:628-629 8-0'63

(MIRA 17:1)

1. Virusnaya nauchno-issledovatel'skaya laboratoriya i kafedra mikrobiologii Voenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.

SINITSKIY, A .A., prof.; TARASOV, V.N.; GOREV, N.Ye.; BASHMAKOV, G.A.,
mayor meditsinskoy sluzhby

Ways of improving the methods of virological studies; a review
of the literature. Voen. med. zhur. no.10:39-42 0 '65.

(MIRA 18:11)

ACC NR: AP6028731 (N) SOURCE CODE: UR/0402/66/000/004/0492/0497

AUTHOR: Tarasov, V. N.; Bashmakov, G. A.

ORG. Virus Scientific Research Laboratory, Military Medical Order of Lenin Academy im. S. M. Kirov, Leningrad (Virusnaya nauchno-issledovatel'skaya laboratoriya Voenno-meditsinskoy akademii); Microbiology Department, Military Medical Order of Lenin Academy im. S. M. Kirov, Leningrad (Kafedra mikrobiologii Voenno-meditsinskoy akademii)

TITLE: Cell culture on the surface of high-molecular polymers

SOURCE: Voprosy virusologii, no. 4, 1966, 492-497

TOPIC TAGS: cell culture, high polymer, polymethylmethacrylate, polystyrene, cellulose nitrate, pentoplast, fluoroplast, virus, cell monolayer method, *cytology*

ABSTRACT:

Cell monolayers were grown on various plastics. As shown by the table, the plastics had little or no biological activity and are suggested for use in tissue culture. The best growth occurred on polymethylmethacrylate, polystyrene, cellulose-nitrate, pentoplast, and fluoroplast surfaces. Plastic versions of various types of vessels

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UDC: 578.005.23.670.7

ACC NR: AP6028731

commonly used in virus studies were tested and found suitable and convenient for laboratory use. [WA-50; CBE No.11]

SUB CODE: 06/ SUBM DATE: 15Jun64/ ORIG REF: 001/ OTH REF: 011/
[WA-50; CBE No. 11]

Card 2/2

ACC NR: AP6027250

SOURCE CODE: UR/0177/66/000/007/0044/0049

AUTHOR: Bashmakov, G. A. (Major; Medical corps); Topleninova, K. A.

ORG: none

TITLE: Using fluorescent antibodies to detect tick-borne and Japanese encephalitis virus

SOURCE: Voyenno-meditsinskiy zhurnal, no. 7, 1966, 44-49

TOPIC TAGS: fluorescent antibody technique, disease diagnosis, diagnostic method, Japanese encephalitis, tick borne encephalitis, virus, virus disease, antibody, encephalitis, fluorescence

ABSTRACT:

The fluorescent-antibody technique was applied to various types of cells infected with tick-borne encephalitis virus to determine its value as a diagnostic method. This method reveals viruses in 18-48 hr depending on the types of cells studied. Virus was detected in the medium after 24 hr, making this the fastest available method. [WA-50; CBE No. 11]

SUB CODE: 06/ SUBM DATE: none

Card 1/1

UDC: 576.858.25.093.3

BASEMAKOV, Georgiy Stepanovich

[Legal control of the internal order of collective farms]
Pravovoe regulirovanie vnutrennego rasporiadka v kolkhozakh.
Moskva, Gosjurisdats, 1960. 157 p.

(MIRA 14:2)

(Collective farms)

BASHMAKOVA, I.G.

Ancient mathematics in the early part of our era. Ist. mat.
issl. No.14:473-490 '61. (MIRA 16:10)

(Mathematics, Ancient)

BASHMAKOV, I.K.

Device for the continuous cooking of hemicellulose. Bum.
prom. 36 no.10:27-28 0 '61. (MIRA 15:1)
(United States—Papermaking machinery)
(Hemicellulose)

POLYAYEV, V.M., kand.tekhn.nauk, dotsent; BASHMAKOV, I.V., inzh.

Calculating turbulent boundary layer in supplying coolant through
a porous wall. Izv.vys.ucheb.zav.; mashinostr. no.11:118-128 '61.
(MIRA 14:12)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche im. N.E.Baumana.
(Boundary layer)

BASHMAKOV, K.I., kand.med.nauk, podpolkovnik meditsinskoy sluzhby

Expert evaluation of dry perforations of the tympanic membrane. Voen.-
med.zhur. no.9:74-76 S '59. (MIRA 13:1)
(TYMPANIC MEMBRANE, dis.)
(JURISPRUDENCE)

BASHMAKOV, K.I., kand.med.nauk (Moskva)

Unusual etiology of perichondritis of the pinna. Vest.
otorin. 21 no.3:86-88 My-Je '59. (MIRA 12:9)
(MAR, EXTERNAL, dis.
perichondritis of pinna (Rus))

BASHMAKOV, K.I., kand.med.nauk (Moskva)

Cement plug in the external auditory canal. Vest.otorin. 21 no.5:
91-92 S-0 '59.

(MIRA 13:1)

(EAR, EXTERNAL, for.bodies)

BASHMAKOV, K.I., kandidat meditsinskikh nauk, podpolkovnik meditsinskoy sluzhby

Clinical aspects and expert testimony in granulous myringitis.
Voen.-med. zhur. no.5:54-57 My '60. (MIRA 13:7)
(TYMPANIC MEMBRANE DISEASES)

BASHMAKOV, K.I., podpolkovnik meditsinskoy sluzhby, kand.med.nauk

Leading personalities of our hospital. Voen.-med. zhur, no.8:12-15
Ag '61. (MIRA 15:2)

(HOSPITALS, MILITARY)

BASHMAKOV, K.I., kand.med.nauk

What causes loss of the voice? Zdorov'e 7 no. 4:30 Ap '61.
(MIRA 14:4)

(LARYNX--DISEASES)

BASHMAKOV, K.I., kand.med.nauk

Itching ears. Zdrov'e 7 no.7:31 J1 '61.
(EAR—DISEASES)

(MIRA 14:6)

BASHMAKOV, K.I., kand.med.nauk (Moskva)

Classification of chronic suppurative otitis media and problems
in expert examination. Vest. otorin. 23 no.1:46-51 Ja-F '61.

(MIRA 14:2)

(EAR--DISEASES)

(DISABILITY EVALUATION)

BASHMAKOV, K.I., kand.med.nauk

Believe in life's victory. Zdorov'e 8 no.2:16-17 F '62.

(MIRA 15:4)

(INVALIDS)

BASHMAKOV, K., kand.med.nauk

Quincy is an insidious illness. Sov.profsotruzy 19 no.3:30
F '63.

(MIRA 1642)

(TONSILS—DISEASES)

BASHMAKOV, K.I., kand.med.nauk

Children's angina and tonsillitis. *Zdorov'e* 9 no.3:18-19 Mr '63.
(MIRA 16:5)

(TONSILS--DISEASES)

16(1)

AUTHORS: Bashmakov, M.I., and Faddeyev, D.K. SOV/43-59-19-4/14

TITLE: On the Simultaneous Representation of Zero by a Pair of Quadratic Forms of Four Variables

PERIODICAL: Vestnik Leningradskogo universiteta, Seriya matematiki, mekhaniki i astronomii, 1959, Nr 19(4), pp 43-46 (USSR)

ABSTRACT: Theorem: Let

$$(1) \begin{cases} F_1 = a_1 x_1^2 + a_2 x_2^2 + a_3 x_3^2 + a_4 x_4^2 = 0 \\ F_2 = b_1 x_1^2 + b_2 x_2^2 + b_3 x_3^2 + b_4 x_4^2 = 0 \end{cases}$$

be a curve of genus 1 in the projective space over the field k , the characteristic of which is different from 2 and 3. In order that on (1) there exist a rational point it is necessary and sufficient that on the surface

$$(2) (a_1 + b_1 t)x_1^2 + (a_2 + b_2 t)x_2^2 + (a_3 + b_3 t)x_3^2 + (a_4 + b_4 t)x_4^2 = 0$$

in the projective space over the field $K_0 = k_0(t, s)$ there exist a rational point; here t is transcendent over k_0 and

$$s^2 = (a_1 + b_1 t)(a_2 + b_2 t)(a_3 + b_3 t)(a_4 + b_4 t).$$

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On the Simultaneous Representation of Zero by a Pair of Quadratic Forms of Four Variables SOV/43-59-19-4/14

A rational point on an algebraic manifold in the projective space over the field is a point the coordinates of which belong to this field.

The authors mention I.R.Shafarevich.

There are 2 Soviet references.

SUBMITTED: July 1, 1958

Card 2/2

1902-6) EPR(8)-2/EWT(8)/EPT(6)/EWP(1)/T Pc-4/Pr-4/Pt-7 RN

"APPROVED FOR RELEASE: 06/06/2000

CIA-RDP86-00513R000203820017-8

1. 2000, 2001

APPROVED FOR RELEASE: 06/06/2000

CIA-RDP86-00513R000203820017-8"

1. BASHMAKOV N.

2/ USSR (600)

4. Snow

7. Mechanization of snow retention work, Kolkh proizv 13 no.1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, unclass.

BASMAKOV, N.A., inshener; GRISYUK, F.F., inshener.

**Experience with using the T-165 vibrating machines. Mekh.
stroi. 13 no.8:25-29 Ag '56. (MLRA 9:10)**

(Concrete)

ALEKSEYEV, G.P.; ANDON'YEV, V.S.; ARNGOL'D, A.V.; BASKIN, S.M.;
~~BASHMAKOV, N.A.~~; BEREZIN, V.D.; BERMAN, V.A.; BIYANOV, T.F.;
GORBACHEV, V.N.; GRECHKO, I.A.; GRINBUKH, G.S.; GROMOV, M.F.;
GUSEV, A.I.; DEMENT'YEV, N.S.; DMITRIYEV, V.P.; DUL'KIN, V.Ya.;
ZVANSKIY, M.I.; ZENKEVICH, D.K.; IVANOV, B.V.; INYAKIN, A.Ya.;
ISAYENKO, P.I.; KIPRIYANOV, I.A.; KITASHOV, I.S.; KOZHEVNIKOV,
N.N.; KORMYAGIN, B.V.; KROKHIN, S.A.; KUDOYAROV, L.I.;
KUDRYAVTSEV, G.N.; LARIN, S.G.; LEBEDEV, V.P.; LEVCHENKOV,
P.N.; LEMZIKOV, A.K.; LIPGART, B.K.; LOPAREV, A.T.; MALYGIN,
G.F.; MILOVIDOVA, S.A.; MIRONOV, P.I.; MIKHAYLOV, B.V., kand.
tekhn. nauk; MUSTAFIN, Kh.Sh., kand. tekhn. nauk; NAZIMOV, A.D.;
NEFEDOV, D.Ye.; NIKIFOROV, I.V.; NIKULIN, I.A.; OKOROCHKOV, V.P.;
PAVLENKO, I.M.; PODROBINNIK, G.M.; POLYAKOV, G.Ya.; PUTILIN, V.S.;
RUDNIK, A.G.; RUMYANTSEV, Yu.S.; SAZONOV, N.N.; SAZONOV, N.F.;
SAULIDI, I.P.; SDOENIKOV, D.V.; SEMENOV, N.A.; SKRIPCHINSKIY, I.I.;
SOKOLOV, N.F.; STEPANOV, P.P.; TARAKANOV, V.S.; TREGUBOV, A.I.;
TRIGER, N.L.; TROITSKIY, A.D.; POKIN, F.F.; TSAREV, B.F.; TSETSULIN,
N.A.; CHUBOV, V.Ye., kand. tekhn. nauk; ENGEL', F.F.; YUROVSKIY,
Ya.G.; YAKUBOVSKIY, B.Ya., prof.; YASTREBOV, M.P.; KAMZIN, I.V., prof.,
glav. red.; MALYSHEV, N.A., zam. glav. red.; MEL'NIKOV, A.M., zam.
glav. red.; RAZIN, N.V., zam. glav. red. i red. toma; VARPAKHOVICH,
A.F., red.; PETROV, G.D., red.; SARKISOV, M.A., prof., red.;
SARUKHANOV, G.L., red.; SEVAST'YANOV, V.I., red.; SMIRNOV, K.I.,
red.; GOTMAN, T.P., red.; BUL'DYAYEV, N.A., tekhn. red.

(Continued on next card)

ALEKSEYEV, G.P.---(continued). Card 2.

[Volga Hydroelectric Power Station; a technical report on the design and construction of the Volga Hydroelectric Power Station (Lenin), 1950-1958] Volzhskaya gidroelektrostantsiya; tekhnicheskii otchet o proektirovani i stroitel'stve Volzhskoi GES imeni V.I.Lenina, 1950-1958 gg. V dvukh tomakh. Moskva, Gosenergoizdat. Vol.2.[Organization and execution of construction and assembly work] Organizatsiia i proizvodstvo stroitel'no-montazhnykh rabot. Red. toma: N.V.Razin, A.V.Arnol'd, N.L.Triger. 1962. 591 p. (MIRA 16:2)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR (for Razin).

(Volga Hydroelectric Power Station (Lenin)--Design and construction)

BASHMAKOV, N.I., kand.sel'skokhoz.nauk

Farming practices in West Kazakhstan Province. Zemledelie 7 no.5:
12-17 May '59. (MIRA 12:7)

1. Zapadno-Kazakhstanskaya gosudarstvennaya sel'skokhozyaystvennaya
opyt'naya stentsiya.
(West Kazakhstan Province--Agriculture)

ZHOLOBOVA, M. (Rostov-na-Donu); SHCHEGOLEV, N. (Rostov-na-Donu); BRODSKIY, A. (Kiyev); BARANENKO, S.; SUBBOTIN, G.; BASHMAKOV, V.; KOVALEVA, M.; GERMER, V.; YEGOR'YEVA, A., kand.geograf.nauk; PUZYR', V.; GOL'D, M. (g.Baku)

Readers' letters. NTO 4 no.1:26,27,29,41,50,56 Ja '62.

(MIRA 15:1)

1. Predsedatel' s'veta nauchno-tehnicheskogo obshchestva Ukrainskogo filiala Vsesoyuznogo nauchno-issledovatel'skogo instituta gazovoy promyshlennosti (for Baranenko). 2. Direktor Omskogo Doma tekhniki nauchno-tehnicheskikh obshchestv (for Subbotin). 3. Uchenyy sekretar' Leningradskogo oblastnogo pravleniya nauchno-tehnicheskogo obshchestva energeticheskoy promyshlennosti (for Germer). 4. Zamestitel' predsedatelya Leningradskogo oblastnogo pravleniya nauchno-tehnicheskogo gornogo obshchestva (for Yegor'yeva). 5. Zamestitel' predsedatelya Latviyskogo basseynovogo pravleniya Nauchno-tehnicheskogo obshchestva vodnogo transporta (for Puzyr').
(Technological innovations)

BASHMAKOV, V.A.; SMIRNOV, N.M., starshiy dorozhnyy master

Speed up the **elimination of defects**. Put' i put.khoz. 6
no.5:18 '62. (MIRA 15:4)

1. Nachal'nik Murmanskoy distantzii Oktyabr'skoy dorogi (for
Bashmakov).
(Railroads--Maintenance and repair)

24.7500

75998
SOV/70-4-5-20/36

AUTHORS: Kosevich, V. M., Bashmakov, V. I.

TITLE: Study of the ~~Elastic~~ Stages of Twinning in Metal Monocrystals

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 5, pp 749-755 (USSR)

ABSTRACT: Polysynthetic or single bands of "twins," possibly formed due to glide and partially or completely vanishing after the crystals are released of load, were found to develop as the result of plastic deformations in bismuth, antimony, tin, and zinc crystals. Flat crystal fragments, 4 x 3 x 1.2 mm, were bent by a device placed on the stage of a microscope MIM-6. Applying load P_1 to the device they produced a "twin" band parallel to (111) cleavage plane, or "twin" bands, whose width, b_1 , was measured under microscope with an accuracy of $\pm 0.3 \mu$. Then, taking the load off, the reduced width, b_{01} , was measured again. The

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Metal Monocrystals

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difference $b_1 - b_{01} = \delta_{e1}$ represents the width of the elastic part of the "twin" band. Applying loads $P_2, P_3 \dots, \delta_{e1_2}, \delta_{e1_3} \dots$ were obtained. δ_{e1} proved to increase with the increasing P , until δ_{max} was reached, which then remained constant despite larger P applied in the course of further tests. δ_{max} was proportional to the length of the "twin" band, l_{max} . For instance in Bi: $\delta_{max} = (1.1 \times 10^{-3} l_{max} \pm 0.05 \times 10^{-3})$ mm. In other words $\frac{\delta_{max}}{l_{max}} \approx C$ is a constant for a given orientation of

"twin" bands in a given crystal. In the case of (111) position of "twins," C is about 1.1×10^{-3} in bismuth, 1.37×10^{-3} in antimony, and 0.11×10^{-3} in zinc. Generally, C is a function of the elastic limit.

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Metal Monocrystals

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Since, however, crystals resist the structural re-arrangements necessary for the disappearance of elastic "twins" after taking off the load, the experimental

$\frac{\delta_{\max}}{\ell_{\max}}$ ratio is always lower than that calculated

theoretically. The bending of a readily "twinned" crystal in the opposite direction leads to a gradual disappearance of "twin" bands. In the case of reversed bending $\delta_{\max II}$ is larger than $\delta_{\max I}$ of the preceding direct bending. If the bending direction is reversed once more, $\delta_{\max III} > \delta_{\max II} > \delta_{\max I}$. This points to the increased resistivity of crystals after each elastic deformation. Having bent the crystals alternately in reversed directions, the resistivities could be increased to a stage at which the "twin" bands became completely elastic; i. e., they disappeared when a load was applied, and appeared again when the

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Metal Monocrystals

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load was taken off. Relaxation between the two successive deformations reduced the elasticity of bands. The elasticity of "twin" bands is higher in those crystals whose critical shear stresses are higher. Sn crystals, whose elasticity is high, had completely elastic "twins" even after first bending, while Bi and Zn crystals required several reversed deformations to achieve the same kind elastic "twins." There are 6 figures; and 7 references, 5 Soviet, 1 U.S., 1 U.K. The U.S. and U.K. references are: J. J. Gilman, Acta Metallurgica, 3, 209-211 (1955); R. W. Cahn, Advances Phys., 3, 363-445 (1954).

ASSOCIATION: Khar'kov Polytechnic Institute imeni V. I. Lenin
(Khar'kovskiy politekhnicheskiy institut imeni V. I. Lenina)

SUBMITTED: September 31, 1958;

Card 4/4

KOSEVICH, V.M.; MOROZ, N.G.; BASHMAKOV, V.I.

Effect of inclusions on the twinning of zinc crystals. Kristallografiia 5 no.3:426-431 My-Je '60. (MIRA 13:8)

1. Khar'kovskiy politekhnicheskii institut im. V.I.Lenina.
(Zinc crystals)

68632

18.9200

S/126/60/009/02/022/033

AUTHORS: Kosevich, V.M. and Bashmakov, V.I.

E111/8335

TITLE: Investigation of Twinning of Metallic Crystals Using a Concentrated Load

PERIODICAL: Fizika metallov i metallovedeniye, 1960, Vol 9, Nr 2, pp 288 - 293 (USSR)

ABSTRACT: A concentrated load was used to give a quantitative estimate of twinning in monocrystals of bismuth, antimony, and bismuth-based alloys. The loading used was a microhardness tester PMT-3 with a diamond pyramid. The type of impression obtained is shown in Figure 1. It is shown that the length of the twinned band (l) and the diagonal of the impression (d) are related by the equation $l = a + \alpha d$ (Figure 2b, 4). The coefficient α can be used as a quantitative estimate of the intensity of twinning of a given crystal. With homogeneous bismuth-antimony alloys, the value of α markedly increases with increase in antimony content. The increase is similar to that for microhardness. Figure 5 shows α (continuous line) and hardness (dotted line) against antimony content. In alloys containing over 1% Sb twinning begins with the

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S/126/60/009/02/022/033

Investigation of Twinning of Metallic Crystals Using a Concentrated Load ^{E111/E335}

formation of elastic twinning interlayers and proceeds as intensively as it does in pure antimony. In bismuth-lead and bismuth-tin alloys, with increase in alloying element α at first slightly increases and then remains constant. This is again similar to the behaviour of microhardness with respect to alloying concentration (Figure 6). There are 6 figures and 8 references, 2 of which are English and 6 Soviet.

ASSOCIATION: Khar'kovskiy politekhnicheskii institut
(Khar'kov Polytechnical Institute)

SUBMITTED: July 15, 1959

Card 2/2

KOSEVICH, V.M.; BASHMAKOV, V.I.

Studying the relaxation of twinned single crystals. Fiz.
met. i metalloved. 11 no. 1:100-107 Ja '61. (MIRA 14:2)

1. Khar'kovskiy politekhnicheskii institut im. V.I. Lenina.
(Metal crystals)

BASHMAKOV, V.I.; SOLDATOV, V.P.

Certain properties of the boundaries of residual twinning streaks.
Fiz. met. i metalloved. 16 no.5:768-775. N '63. (MIRA 17:2)

1. Fiziko-tekhnicheskii institut nizkikh temperatur AN UkrSSR.

BASHMAKOV, V. N.

Bashmakov, V. N. "Biology of the muksun of the Obá River,"
Trudy Barabin. otd-niya Vsesoyuz. nauch.-issled. in-ta ozer-
nogo i rech. ryb. khoz-va, Vol. III, 1949, p. 91-108

SO: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 14, 1949).

PHASE I BOOK EXPLOITATION

SOV/4837

Bashmakov, Viktor Petrovich, and Aleksandr Dmitriyevich Dubinin

Raschet i proyektirovaniye remennykh i tsepykh peredach (Calculation and Design of Belt and Chain Drives) Kiyev, Mashgiz, [1959] 127 p.
17,000 copies printed. (Series: Biblioteka konstruktora)

Sponsoring Agency: Nauchno-tehnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Kiyevskaya oblastnaya organizatsiya.

Reviewer: V. N. Levinson, Doctor of Technical Sciences, Professor;
Ed.: V. S. Radchik, Candidate of Technical Sciences, Docent;
Chief Ed. (Southern Department, Mashgiz): V. K. Serdyuk, Engineer;
Ed. of Publishing House: G. D. Tynyanyy.

PURPOSE: This book is intended for junior designers.

~~Card 2/4~~

BASHMAKOV, V. V.

Cand Tech Sci - (diss) "Theory and design of radio engineering semiconductor reversible thermostats." Moscow, 1961. 14 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow Order of Lenin and Order of Labor Red Banner Higher Technical College imeni N. E. Bauman); 200 copies; price not given; (KL, 7-61 sup, 232)

BASHMAKOV, Ya.

Road construction in Mozdok District. Avt.dor. 23 no.1:28
Ja '60. (MIRA 13:5)

1. Zaveduyushchiy Mozdokskim dorozhnym otdelom.
(Mozdok District--Road construction)

BASHMAKOV, Yu.I.

Progressive method of manufacturing metal structures for a
sulfate plant. Avtom. svar. 17 no.12:72-75 D '64
(MIRA 18:2)

1. Ministerstvo montazhnykh i spetsial'nykh stroitel'nykh
rabot UkrSSR.

BASHMAKOV, Yu. I., inzh.

Assembling elements of the main building of a sulfate plant by
the continuous production method. Prom. stroi. 42 no.12:15-17
D '64. (MIRA 18:3)

1. Minmontazhspestroy UkrSSR.

24.7100

28016

S/081/61/000/015/005/139

B101/B110

AUTHORS: Abdullayev, G. B., Aliyev, M. I., Bashshaliyev, A. A.,
Aliyev, G.M.

TITLE: Effect of halide impurities on the physical properties of
selenium

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 15, 1961, 29-30, abstract
15B196 (Sb. "Vopr. metallurgii i fiz. poluprovodnikov", M.,
AN SSSR, 1959, 80-88)

TEXT: The authors studied the effect of halide impurities on the
crystallization rate, electrical, thermal, and optical properties of Se.
X-ray analysis showed that at annealing temperatures from 60 - 80°C iodine
impurities accelerate Se crystallization. In the presence of I and Br, Se
begins to crystallize at 60°C, while pure Se begins to crystallize only
at 80°C. Halide impurities increase the electrical conductivity of Se by
several hundred times. The dependence of the hole mobility on the

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B101/B110

Effect of halide impurities on the ...

impurity concentrations shows a maximum. With rising temperature the hole mobility in pure Se and in Se with iodine impurities increases, while their concentration decreases. This phenomenon is explained by structural peculiarities of Se which is a polymer, and by the effect of the inter-crystalline amorphous layers acting as potential barriers. On transition from the amorphous to the crystalline modification, thermal conductivity of Se increases from $3.13 \cdot 10^{-3}$ to $7.01 \cdot 10^{-3}$ cal/cm·sec·deg (25°C). In this case specific heat decreases. At $640 \text{ m}\mu$ the forbidden-band width of the amorphous Se is 1.94 ev, that of crystalline Se (at $680 \text{ m}\mu$) is 1.83 ev. [Abstracter's note: Complete translation.]

CH

Card 2/2

BASHMAKOVA, A. Ya.

Bashmakova, A. Ya. "Variation in the species composition of the fish of the Toma River within the boundaries of the Tomsk fish factory," Trudy Barabin. otd-niya Vsesoyuz. nauch.-issled. in-ta ozernogo i rech. ryb. khoz-va, Vol. III, 1949, p. 109-13

SO: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 14, 1949).

BASHMAKOVA, I.B.; STORCHAK, L.I.; DOBROTIN, R.B.

History of the natural sciences in Russia. Vcl. 2. Ed. by
N.A.Figurovskii and others. Reviewed by I.B.Bashmakova, L. I.
Storchak, R. B. Dobrotin. Vest. AN SSSR 32 no.5:133-137 My
'62. (MIRA 15:5)
(Bibliography—Natural history) (Figurovskii, N.A.)

"APPROVED FOR RELEASE: 06/06/2000

CIA-RDP86-00513R000203820017-8

APPROVED FOR RELEASE: 06/06/2000

CIA-RDP86-00513R000203820017-8"

BASHMAKOVA, I.G.

Bashmakova, I.G. - "The arithmetical books of Euclid's 'Elements", In the collection: Ist.-matem. issledovaniya, Issue 1, Moscow, 1948, p. 296-238.

SO:U-3042, 11 March 53, (Letopis 'nykh Statey, No. 9, 1949)

BASHMAKOVA, I. G.

37141. Obosnovaiye teorii delimosti v trudakh ye, i. Zolotareva. B. sb:
ist-matem, issledovaniya. Vyp. 2, M,-L 1949, s. 2330351

SO: Letois' Zhurnal'nykh Statey, Vol. 7, 1949.

BASHMAKOVA, I.G.

**Method of differentials in the works of Archimedes. Ist.-mat. issl.
no.6:609-658 '53. (MLRA 7:9)
(Geometry--Early works to 1800)**

BASHMAKOVA, I. G.

USSR/Mathematics - Methodology

Jan/Feb 53

"The 21 Oct 52 Joint Session of the Moscow Mathematical Society with the Seminar on Marxist-Leninist Methodology of Mathematics of the Mechaeco-Mathematical Faculty of Moscow State University" (reports)

Uspekhi Matemat Nauk, Vol VIII, No 1(53), p 176

I. G. Bashmakova reported on the project for programming a course on the history of mathematics. In the ensuing discussing the following participated: P. S. Aleksandrov, S. A. Yanovskaya, S. V. Fomin, L. A. Tumarkin, A. G. Kurosh, B. I. Segal, A. P. Yushkevich, and A. S. Parkhomenko.

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BASHMAKOVA, I.G. (Moscow); YUSHKEVICH, A.P. (Moscow)

Leonard Euler. Ist.-mat. issl. no. 7:453-512 '54. (MIRA 8:6)
(Euler, Leonard, 1707-1783)

BASHMAKOVA, I. G.

Call Nr: AF 1108825

Transactions of the Third All-union Mathematical Congress (Cont.) Moscow
Jun-Jul '56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp.
Turkin, V. K. (Moscow). Mathematical Methods in the
Theory of Isotopes Separation. 226

Khokhlov, R. V. (Moscow). Certain Problems in the
Synchronization Theory of Auto-oscillating Systems. 226

Mention is made of Krylov, N. M. and Bogolyubov, N. N. 226

Yanenko, N. N. (Moscow). Asymptotic Formulas for the
Functionals of the Solutions of Thomas-Fermi Equations. 226-227

Section of the History of Mathematics 228-237

Reports by the following personalities are included:

Bashmakova, I. G. (Moscow). Interpretation by Ancient
Greek Mathematics of Some Problems of Mathematical Analysis. 228-229

Card 76/80

SOV/124-58-1-23

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 1, p 4 (USSR)

AUTHOR: Bashmakova, I. G.

TITLE: ~~The Archimedean~~ Treatise "On the Buoyancy of Bodies" (Traktat Arkhimeda " O plavayushchikh telakh")

PERIODICAL: V sb.: Istoriko-matem. issledovaniya. Nr 9. Moscow, Gostekhteoretizdat, 1956, pp 759-788

ABSTRACT: The author characterizes briefly the first book of the treatise of Archimedes and then focuses his attention entirely on the second book in an attempt to clarify just what methods Archimedes used in finding the position of equilibrium and to what extent these methods approach those used to date. It is pointed out that Archimedes does not provide a determination of the position of stable equilibrium of a buoyant body, but it is apparent from his demonstrations that he considered as stable that position of equilibrium toward which a body would return after finite disturbances not exceeding a specified limit; Archimedes did not introduce any concept of unstable equilibrium whatsoever. Well-known propositions are reproduced relative to the necessary and sufficient conditions for the stability of the equilibrium of a buoyant

Card 1/3

SOV/124-58-1-23

The Archimedean Treatise "On the Buoyancy of Bodies"

body, which are currently used on the basis of the works of C. Dupin (1814) and A. Yu. Davidov (1848). Thereupon it is asserted that Archimedes' postulates may be applied to all buoyant bodies the surface of the centers of which is a surface of revolution having its center of gravity on its axis. Archimedes' demonstrations relative to the position of equilibrium of a segment of a paraboloid of revolution is translated into the language of analytical geometry. Thereupon the author shows that Archimedes' demonstration may be turned into a method, with the aid of which, according to the author, Archimedes found the position of equilibrium; the author also shows that that method is equivalent to the determination of all possible normals drawn from the center of gravity of the segment of the paraboloid to the surface of the centers. The author points out that in the first part of the second book Archimedes did not employ explicitly the surface of the centers, but that in proposition 10 of that book he does explicitly examine a certain modification of the surface of the centers, which he then employs for the determination of the position of equilibrium. Having examined all possible positions of stable equilibrium of a segment of a paraboloid of revolution for those cases in which the base of the segment touches the liquid surface or is partly submerged, Archimedes carries out all further discussion relative to the intersection of the paraboloid with a plane passing through the axis. In connection therewith he constructs two auxiliary parabolas,
Card 2/3

SOV/124-58-1-23

The Archimedean Treatise "On the Buoyancy of Bodies"

one of which is the geometric locus of the centers of gravity of segments of the basic parabola cut off by chords that pass through the point of tangency of the base of the segment with the liquid surface. The author concludes therefrom that the question of the presence in Archimedes' thought of a surface of centers (even though in a somewhat different sense than that employed today) must be answered in the affirmative; however, no explicit use by Archimedes of the concept of a metacenter can be found. In his conclusion the author points out, and not without foundation, that the prevailing view on the science of antiquity in terms of a sharp division into theoretical, "pure", and applied sectors, between which there are virtually no points of contact, appears unjust. To substantiate this view the author adduces a number of additional examples of the close tie between theory and problems of mechanics and astronomy with reference to the third and second century B. C.

A. K. Nikitin

Card 3/3

BASH MAKOVA I.G.
~~BASHMAKOVA, I.G.~~

Proof of the basic theorem of algebra. Ist.-mat. issl. no.10:257-304
'57. (MIRA 11:1)

(Algebra)

KOLMAN, E

p 4

16(1) PHASE I BOOK EXPLOITATION SOV/1366

Istoriko-matematicheskiye issledovaniya, vyp. 11 (Research in Mathematical History, Nr 11) Moscow, Fizmatgiz, 1958. 792 p. 3,000 copies printed.

Eds. (Title page): Rytkin, G.F. and Yushkevich, A.F.; Ed. (Inside book): Konoplyankin, A.A.; Tech. Ed.: Murashova, N. Ya.

PURPOSE: This book is intended for mathematicians and others interested in the history of mathematics, and may serve as the basis for a suitable university text on the history of mathematics, thereby filling the most serious gap in Soviet mathematical literature.

COVERAGE: This book contains reports made by members of the section on the history of mathematics at the Third All-Union Mathematical Congress which discussed problems of the history of mathematics and various articles on the significance of the history of mathematics

Card 1/8

Murashova, I.G. (Moscow). Lectures on the History of Mathematics in Ancient Greece

225

BASHMAKOVA, I.G.; RYBNIKOV, K.A.; YUSHKEVICH, A.P.; YANOVSKAYA, S.A.

Program for the course in the history of mathematics at Moscow
State University. Ist.-mat.issl. no.11:185-192 '58.
(MIRA 12:1)

(Mathematics)

~~BASHMAKOVA, I.G. (Moskva)~~

Lectures on the history of mathematics of ancient Greece.
Int.-mat.issl. no.11:225-438 '58. (MIRA 12:1)
(Mathematics, Greek)

KUKARKIN, Boris Vasil'yevich, prof.; **RYBNIKOV**, Konstantin Alekseyevich, prof.; **BASMAKOVA**, Izabella Grigor'yevna; **YUSHKEVICH**, Adol'f Pavlovich; **YANOVSKAYA**, Sof'ya Aleksandrovna; **SPASSKIY**, Boris Ivanovich, dotsent; **MIKHAYLOV**, Glab Konstantinovich, starshiy nauchnyy sotrudnik; **MATYNOV**, D.Ya., prof., otv.red.; **GORDEYEV**, D.I., prof., red.; **IVANENKO**, D.D., prof., red.; **KUDRYAVTSEV**, P.S., prof., red.; **KULIKOVSKIY**, P.G., dotsent, red.; **KHRGIAN**, A.Kh., prof., red.; **SHEVTSOV**, N.S., prof., red.; **VERKHUNOV**, V.M., assistant, red.; **KONONKOV**, A.F., red.; **YERMAKOV**, M.S., tekhn.red.

[Programs of courses on the history of the physicomathematical sciences] Programmy po istorii fiziko-matematicheskikh nauk. Moskva, 1959. 40 p. (MIRA 12:12)

1. Moscow. Universitet. 2. Orgkomitet Vsesoyuznoy mezhvuzovskoy konferentsii po istorii fiziko-matematicheskikh nauk (for Kukarkin, Rybnikov, Spasskiy, Gordeyev, Ivanenko, Kudryavtsev, Kulikovskiy, Mikhaylov, Khrgian, Shevtsov, Verkhunov, Kononkov).

(Physics--Study and teaching)

(Mathematics--Study and teaching)

BASHMAKOVA, I.G.

One problem in the theory of algebraic equations in the works
of J. Newton and E. Waring. Ist.-mat. issl. no.12;431-456 159.
(Equations, Theory of) (MIRA 13:11)

BASHMAKOVA, I.G.

Review of B.L. Van der Varden's book "An awakening science;
mathematics of ancient Egypt, Babylon and Greece [translated
from the Dutch]. Reviewed by I.G. Bashmakova. Usp. mat. nauk
15 no.2:253-257 Mr-Apr '60. (MIRA 13:9)
(Mathematics, Ancient)

BASHMAKOVA, I.G.; SOROKINA, L.A.

Interuniversity Conference on the history of the Physical and
Mathematical Sciences. Usp. mat. nauk: 15 no. 6:205-214

N-D '60.

(NIRA 14:2)

(Physics)

(Mathematics)

BASHMAKOVA, I. G.

Doc Phys-Math Sci - (diss) "Cycle of studies on the history of ancient mathematics." Moscow, 1961. 24 pp; (Moscow Order of Lenin and Order of Labor Red Banner State Univ imeni M. V. Lomonosov); number of copies not given; price not given; bibliography at end of text (41 entries); (KL, 5-61 sup, 190)

BASHMAKOVA, I. N. Cand Med Sci -- (diss) "Certain biochemical indicators of the blood serum of hypertension patients and their ^{changes} ~~variations~~ in the process of treatment." Dnepropetrovsk, 1959. 14 pp (Min of Health UkSSR. Dnepropetrovsk State Med Inst), 200 ~~1~~ copies (KL, 46-59, 139)

57
~~58~~

BASHMAKOVA, I.N.

Some biochemical indexes of the blood serum in hypertension patients and their changes during treatment. Vrach.delo no.7: 20-22 JI '60. (MIRA 13:7)

1. Pervaya gorodskaya bol'nitsa, g. Dnepropetrovsk.
(HYPERTENSION) (SERUM)

BASHMAKOVA, I.N.

Clinical aspects of electrophoretic investigation of serum proteins
in the blood of patients with hypertension. Terap.arkh. 32 no.8:72-
75 Ag '60. (MIRA 13:11)

1. Iz terapevticheskogo otdeleniya 1-y gorodskoy bol'nitsy Dnepro-
petrovska (nauchnyy rukovoditel' - dotsent V.N. Dayak).
(HYPERTENSION) (BLOOD PROTEINS)

DZYAK, V.N., dotsent; KUSHNEREVA, A.G., kand.med.nauk; BASHMAKOVA, I.N.

Clinical significance of some biochemical indexes in hypertension.
Vrach. delo no.4:140 Ap '61. (MIRA 14:6)

1. Kafedra fakul'tetskoy terapii (zav. - prof. B.A.Zalkind)
Dnepropetrovskogo meditsinskogo instituta.
(HYPERTENSION)

BASHMAKOVA, I.N., kand.med.nauk

Characteristics of lipid metabolism in patients with hypertension.
Sov. med. 25 no.5:96-100 My '61. (MIRA 14:6)

1. Iz terapevticheskogo otdeleniya I Gorodskoy bol'nitsy (nauchnyy
rukovoditel' - doktor meditsinskikh nauk V.N.Dzyak), Dnepropetrovsk.
(HYPERTENSION) (LIPIDS)

BASHMAKOVA, M. A.

"Experimental and Clinico-Bacteriological Data on the Raising of the Resistance of Flexner Dysentery Bacteria to Levomycetin." Min Public Health USSR, First Leningrad Med Inst imeni Academician I. P. Leningrad, 1955
(Dissertation for the Degree of Candidate of Medical Sciences)

SO: Knizhnaya Letopis', No. 32, 6 Aug 55

STARKOVA, T.G., SHUVALOVA, Ye.P., dots.. BASHMAKOVA, M.A.

Increase in the resistance of dysentery bacteria to synthomycin
and levomycetin. Trudy LMI 2:258-266 '55 (MIRA 11:8)

1. Kafedra mikrobiologii (sav. - prof. V.N. Kosmodamianskiy)
i Kafedra infektsionnykh bolezney (sav. - prof. K.T. Glukhov
[deceased]) Pervogo Leningradskogo meditsinskogo instituta imeni
akademika I.P. Pavlova.

(SHIGELLA PARADYSENERIAE)
(CHLOROMYCETIN)

TOSKIN, K.D., kand.med.nauk; BASHMAKOVA, M.A., kand.med.nauk (Kalinin)

Problem of nonspecific immunological reactivity in patients
with suppurative surgical diseases. Klin.med. 38 no.11:61-67
N '60. (MIRA 13:12)

1. Iz kafedry obshchey khirurgii (zav. - prof. I.V. Danilov)
i kafedry mikrobiologii (zav. - prof. S.A. Elinkin) Kalinin-
skogo meditsinskogo instituta.
(SUPPURATION) (COMPLEMENTS (IMMUNITY) (PHAGOCYTOSIS)

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1/2

ACCESSION NR: AP4041757

S/0076/64/038/006/1606/1608

AUTHOR: Mitskevich, P. K.; Bashmakova, M. I.

TITLE: Changes in the electrical conductivity of certain organic semiconductors on melting

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 6, 1964, 1606-1608

TOPIC TAGS: organic semiconductor, electrical conductivity

ABSTRACT: A study has been made of the temperature dependence of the electrical conductivity of naphthalene, anthracene, phenanthrene, acridine, phenazine, α - and β -naphthoquinoline, o-phenanthroline, and benzanthrone in the solid and the liquid states. This research was done because of the paucity of data on the conductivity of simple organic compounds in the vicinity of the melting point. In the vicinity of the melting point, the dependence of $\log(\text{conductivity})$ ($\log \sigma$) of the compounds in the solid and the liquid state was a linear function of reciprocal absolute temperature. On melting, σ jumped by more than one order of magnitude. The activation energy

Cord 1/2

ACCESSION NR: AP4041757

for conduction in the vicinity of the melting point for the solid and liquid states was determined. The logarithm of the ratio of conductivities in the liquid and the solid states at the melting point was a linear function of the melting point. On cooling of the compounds after superheating 20—40C above the melting point, conductivity changed irreversibly. This irreversible change corresponds to the region of supercooling. The results are interpreted in terms of changes in the energy spectrum of the compounds and in terms of the Ya. I. Frenkel' theory of the mechanism of melting (Ya. I. Frenkel', Kineticheskaya teoriya zhidkostey (Kinetic Theory of Liquids), Izd-vo AN SSSR, 1945). This work was done at the Dnepropetrovsk Construction Engineering Institute. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Dnepropetrovskiy inzhenerno-stroitel'nyy institut (Dnepropetrovsk Construction Engineering Institute)

SUBMITTED: 25Feb63

ATD PRESS: 3066

ENCL: 00

SUB CODE: 88, EM

NO REF SOV: 004

OTHER: 003

Card 2/2

L 8565-66 SWT(1)/SWT(m)/SWT(g) SWT(n) T SWT(o) SWT(p)

ACCESSION NR: AP5021183

UR/0139/65/000/004/0151/0155

AUTHOR: Mitskevich, P. K.; Bashmakova, M. I.

TITLE: Investigation of the electrical conductivity of organic semiconductors on melting

SOURCE: IVUZ. Fizika, no. 4, 1965, 151-155

TOPIC TAGS: electric conductivity, organic semiconductor, temperature dependence, activation energy, absorption spectrum

ABSTRACT: The electrical conductivity of fifteen organic compounds has been studied at their melting point. The temperature variation of the electrical conductivity was exponential for all the compounds in both the solid and liquid state. The activation energy of the conductivity and the pre-exponential factor were determined for both states. The semiconductor nature of the conductivity was observed in both states. A comparison of the calculated values of the thermal energy of activation of solid naphthalene, anthracene, phenanthrene, and benzanthrone with the long-wavelength fall-off of the absorption spectra indicates the singlet excited states of their molecules take part in the dark conductivity. It is shown that introduction of heteroatoms of nitrogen, the methyl radical, and the OH group which gives rise to hydrogen bonding into an aromatic molecule increases the con-

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ACCESSION NR: AP5021183

ductivity at room temperature and decreases the activation energy. The transition from the solid to the liquid state is accompanied by a jump-like increase in the conductivity. A linear relation has been established between the logarithm of the conductivity jump and the melting points of all the investigated compounds. A linear relation was observed between the thermal activation energy and the pre-exponential factor for the conductivity of organic compounds having conductivities in the range of 10^{-19} -- 10^{-15} ohm⁻¹cm⁻¹. "The authors thank I. D. Rozenshteyn for useful directions." Orig. art. has: 2 figures and 1 table. 4

ASSOCIATION: Dnepropetrovskiy inzhenerno-stroitel'nyy institut (Dnepropetrovsk Construction Engineering Institute) 44.25

SUBMITTED: 28 Jan 64

ENCL: 00

SUB CODE: 88

NR REF SOV: 006

OTHER: 007

jw

Card 2/2

Dielectric properties of organic semiconductors. Izv. vya. ucheb. zav.;
155-157 '65. (MIRA 18:9)

1. Dnepropetrovskiy inzhenerno-stroitel'nyy institut.

"APPROVED FOR RELEASE: 06/06/2000

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"APPROVED FOR RELEASE: 06/06/2000

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Page 77

APPROVED FOR RELEASE: 06/06/2000

CIA-RDP86-00513R000203820017-8"

NO REF SOV: DIO

OTHER: 0008

ACC NO: 0001000

SOURCE CODE: CR/0304/00/002/006/0700/0703

AUTHOR: Bashmakova, M. I.; Mitskevich, P. K.

ORG: Dnepropetrovsk Engineering and Construction Institute (Dnepropetrovskiy inzhenerno-stroitel'nyy institut)

44
B

TITLE: Electrical conductivity and intermolecular interaction in organic compounds

SOURCE: Elektrokimiya, v. 2, no. 6, 1966, 700-703

TOPIC TAGS: electric conductivity, intermolecular force, naphthalene, organic azo compound

ABSTRACT: Data on the relationship between the structure of naphthalene derivatives (α -naphthol, β -naphthol, β -methylnaphthalene) and organic azo dyes of the naphthalene series and their electric properties were obtained by studying their optical absorption spectra, recorded in benzene solutions with an SF-4 spectrophotometer. The electro-

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of intramolecular hydrogen bonds, which weaken the intermolecular interaction. Orig.
art. has: 2 figures and 1 table.

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