1/2   019   UNCLASSIFIED   PROCESSING DATE--09OCT70
TITLE--RADIOISOTOPE DIAGNOSIS OF DISEASES OF THE GALLBLADDER -U-

AUTHOR--SLAVNOV, V.N.

COUNTRY OF INFO--USSR

SOURCE--MEDITSINSKAYA RADIOLOGIYA, 1970, VOL 15, NR 4, PP 38-43

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--RADIOISOTOPE, DIAGNOSTIC METHODS, DIGESTIVE SYSTEM DISEASE,
  GALLBLADDER, ANATOMY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/0954   STEP NO--UR/0241/70/015/004/0038/0043

CIRC ACCESSION NO--AP0109111
                        UNCLASSIFIED

CIRC ACCESSION NO--AP0109111   UNCLASSIFIED   PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TECHNIQUE OF RADIOISOTOPE
INVESTIGATION OF THE FUNCTIONAL STATE OF THE GALLBLADDER AND STUDY OF
ANATOMO TOPOGRAPHIC PECULIARITIES WITH THE AID OF RADIOIODINE BILIGNOST
AND RADIOIODINE BILITRASE ARE DESCRIBED. INVESTIGATIONS WERE CARRIED
OUT ON A UNIVERSAL RADIODIAGNOSTIC APPARATUS "YPY-64", RADIOISTOPE
SCANNING, ON GAMMATOPOGRAPH GAMMA T-60.   UNDER OBSERVATION WERE TWO
GROUPS: HEALTHY PERSONS (11) AND PATIENTS (40) WITH DIFFERENT DISEASES
OF THE GALLBLADDER. ON THE BASIS OF DIFFERENCES IN THE RESULTS OF
OBSERVATIONS THE AUTHOR PROPOSES CRITERIA FOR THE ASSESSMENT OF THE
FUNCTIONAL STATE OF THE GALLBLADDER.   FACILITY: KAFEDRA
MEDITSINSKOY RADIOLOGII KIEVSKOGO INST. USOVERSHENSTV OVANIYA VRACHEY.

UNCLASSIFIED

1/2   012
UNCLASSIFIED
TITLE—CHROMATOGRAPHIC ANALYSIS OF THE PRODUCTS OF THE CATALYTIC
HYDROGENATION OF ADIPONITRILE -U-
PROCESSING DATE---30OCT70

AUTHOR-(03)-TROFILKINA, V.P., BOBYLEVA, L.I., SLAVNOVA, A.S.

COUNTRY OF INFO--USSR

SOURCE—ZH. ANAL. KHIM. 1970, 25(2), 388-9

DATE PUBLISHED--------70

SUBJECT AREAS—CHEMISTRY

TOPIC TAGS—CHROMATOGRAPHIC ANALYSIS, CATALYTIC HYDROGENATION, ORGANIC
NITRILE COMPOUND, SILICONE, HEXAMETHYLENEDIAMINE/(U)PFMS4 SILICONE OIL

CONTROL MARKING—NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/2175

STEP NO--UR/0015/70/025/002/0388/0389

CIRC ACCESSION NO--AP0125755

UNCLASSIFIED

CIRC ACCESSION NO--AP0125755   UNCLASSIFIED   PROCESSING DATE--30OCT70
ABSTRACT/EXTRACT--(U) GP-0-   ABSTRACT. THE HYDROGENATION PRODUCTS OF
ADIPONITRILE CCNTG. LARGER TAHN 15 WT. PERCENT H SUB2 O CAN BE RAPIDLY
ANALYZED WHEN NONPOROUS TEFLON AS A SOLID SUPPORT AND SILICONE OIL
PFMS-4 AS A STATIONARY LIQ. PHASE ARE USED. A H FLOW OF 78 ML-MIN ON A
COLUMN, 1 M LONG AND 6 MM DIAM., AT 175DEGREES WERE USED.
HEXAMETHYLENIMINE, HEXAMETHYLENEDIAMINE, EPSILON AMINOCAPRONITRILE AND
ACETYLPIPERIDINE WERE FOUND.   FACILITY: STATE SCI.-RES. DES.
INST. NITROGEN IND. PROD. ORG. SYN., MOSCOW, USSR.

UNCLASSIFIED

Steels

USSR

UDC 669.14.018.292

NIKITIN, V. N., LITVINENKO, D. A., D'YAKONOVA, V. S., SHIFRINA, N. P., and SLAVOVA, A. I., Central Scientific Research Institute of Ferrous Metallurgy and the Cherepovets Metallurgical Plant

"Investigation of Steel 23KhG2AFR with a Minimum Yield Strength of 50 kgf/mm²"

Moscow, Stal', No 7, Jul 73, pp 647-649

Abstract: Steel 23KhG2AFR was developed on the basis of steel 16G2AF with a guaranteed yield strength of 45 kgf/mm². This steel was tested without boron (A) and with 0.0027% boron (B) and having the following chemical composition (in %):

	C	Mn	Si	Cr	V	N	S	P
A	0.20	1.40	0.43	0.66	0.086	0.011	0.029	0.024
B	0.17	1.50	0.53	0.50	0.095	0.015	0.020	0.019

In steel 23KhG2AFR the boron is bonded in the carbonitride with a crystal lattice of the type $B(CN)_{0.35}$ or $B(CN)$. Boron, bonding the nitrogen and carbon, evidently refines the grain boundary zones of impurities which previously

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USSR

NIKITIN, V. N., et al., Stal', No 7, Jul 73, pp 647---649

influencex the increase of ductility and impact strength of the steel. After an optimum heat treatment -- normalization at $910^{\circ}C$ and tempering at $700^{\circ}C$ -- steel 23KhG2AFR had the following mechanical properties in 4-mm thick sheet: yield strength -- 50 kgf/mm^2 (min), tensile strength -- 70 kgf/mm^2 (min), elongation -- 18% (min), and impact strength -- 4.0 $kgf\text{-}m/cm^2$ (min) at $-40^{\circ}C$. Steel 23KhG2AFR is sensitive to notching under static and dynamic loads and is characterized by good engineering properties. This steel can be satisfactorily welded with the weld joint having the same strength as the base metal. Four figures, one bibliographic reference.

2/2

USSR

BERMAN, V. M. (Deceased) and SLAVSKAYA, Ye. M., Institute of
Experimental Medicine, Academy of Medical Sciences USSR,
Leningrad.

"Stimulation of Nonspecific Resistance of the Organism With
E. coli Endotoxin," pp 92-106

Abstract: White mice were used to determine the possibility of
stimulating the nonspecific resistance of the organism to
infection with E. coli endotoxin and its harmless derivatives.
The endotoxin used was prepared from E. coli 0-111 strain 8,090.
Its derivative was prepared by adding 150 ml of acetic anhydryde
and 80 ml of anhydrous sodium acetate to 800 mg of the endotoxin,
heating the mixture in a water bath, cooling it, and centrifuging.
The precipitate was washed first with a saline solution and   ,
then with water.   The effect of the endotoxin and its deriva-
tive on the general resistance of the organism to infection was
determined by intraperitoneal injection of preparations in doses
of 0.0025 to 0.005 ml into animals infected with lethal doses
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USSR

BERMAN, V. M. (Deceased) and SLAVSKAYA, Ye. M., "Stimulation
of Nonspecific Resistance of the Organism With E. coli
Endotoxin," pp 92-106

of E. coli strain 8,090. The increased resistance of the
organism to infection was manifested within 24-48 hours, with
most of the animals saved. Further experiments established
that the preparations injected into the pads of the anterior
paws of animals infected with E. coli 0.111 containing 500
million cells increased the barrier function of the lymphatic
system. It was established also that the basis of the increased
resistance of animals to infection is the enhanced ability of
phagocytes to absorb and digest the bacteria. This was estab-
lished by intraperitoneal injection of preparations in a dose of
20 r into animals infected abdominally with E. coli containing
two billion cells. The animals were sacrificed at different
periods, the exudate from the abdominal cavity was examined,
establishing complete phagocytosis and extracellular destruction
of the microbes.

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USSR   UDC   621.372.57:621.372.5.33(088.8)

SLAVSKIY, G. N.

"Comparison and Limiting Possibilities of Some Realizations of Active Filter Elements"

Translation: It is pointed out that active filters are used to miniaturize frequency selector circuits. An estimate is given from general standpoints on the electrical and structural characteristics of some realizations of amplifier and gyrator filters; some circuits are recommended. E. L.

1/1

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USSR   UDC 621.375.147:621.372.57:621.372.533

RODICHEVA, I. N., and SLAVSKIY, G. N.

"Realizing Amplification of Active Filter Elements with Field Transistors"

V sb. Tonkiye magnitn. plenki, vychisl. tekhn. i radiotekhn. T. 1 (Thin Magnetic Films, Computer Technology and Radio Engineering—collection of works. Vol 1), Krasnoyarsk, 1971, pp 130-134 (from RZh-Radiotekhnika, No 11, Nov 71, Abstract No 11D154)

Translation: Circuits are analyzed and computational formulas are presented for active high- and low-frequency filters with field-effect transistors. It is shown that the use of field effect transistors improves the stability of filters with positive feedback assuming acceptable complexity. N. Ch.

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USSR

UDC 539.214;539.374

SLAVSKIY, Yu. I.

"On the Kinetics of the Formation of Beading Around a Conical Impression"

V sb. Issled. i kontrol' mekhanich. svoystv materialov nerazrushayushch. metodami (Studies and the Control of Mechanical Properties of Materials by Nondestructive Methods -- Collection of Works), Volgograd, 1972, pp 34-39 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V480)

Translation: Experiments on armco steel (HB 110) showed that beading is formed around the impression upon the penetration of a cone with $\phi = 90°$ at the base in the process of the penetration of the cone, but ultimately a ridge of the beading is formed after removal of the load. The replica method is used to establish how the height of the beading changes. A paraffin replica was taken under maximum penetration of the cone into the sample. Measurement of the replica under a MIM-7 microscope showed that the height of the beading under the load was equal to 0.125 mm while its height as measured directly on the sample itself after unloading was 0.17 mm. All the experiments described above indicate that the height of the beading, and consequently the diameter of the impression, continue to change after removal of the load. However the character

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USSR

SLAVSKIY, Yu. I., Issled. i kontrol' mekhanich. svoystv materialov nerazrushay-
ushch. metodami, Volgograd, 1972, pp 34-39

of the formation of the roll is different for materials with different physico-
mechanical properties and is a function of the nature of the load.

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USSR

DANILIN, V. I., DROZD, M. S., SLAVSKII, Yu. I.

"Use of Specimenless Method of Testing the Mechanical Properties of Steels
Under Conditions of Metallurgical Production"

Zavodskaya Laboratoriya, No 2, 1972, p 217-221.

Abstract: Results are presented from an industrial test of the reliability
of the method of acceptance testing of the basic mechanical properties of
steel on the basis of hardness. It is demonstrated that hardness testing can
be used to produce a satisfactory evaluation of the suitability of metal as
regards mechanical properties, as determined by the applicable state standard
or technical conditions for various types of steels. The results of the hard-
ness tests are judged reliable due to the fact that in almost all cases, those
batches of metal judged acceptable on the basis of the hardness tests were
also judged acceptable on the basis of more complete mechanical testing of
specimens. Specifically, in only three cases of 100 did the results of tensile
testing disagree with the results of hardness testing.

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1/2   021   UNCLASSIFIED   PROCESSING DATE---13NOV70
TITLE--CHOICE OF INDENTOR CONE ANGLE IN TESTING THE MECHANICAL PROPERTIES
   OF STEELS BY HARDNESS MEASUREMENTS --U-
AUTHOR-(02)-DRUZD, M.S., SLAVSKY, YU.I.

COUNTRY OF INFO--USSR

SOURCE--ZAVOD. LAB., 1970, 36, (1), 80-84

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--MEASUREMENT, STEEL PROPERTY, HARDNESS, TENSILE STRENGTH

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/0242   STEP NO--UR/0032/70/036/001/0080/0084

CIRC ACCESSION NO--AP0124004
                              UNCLASSIFIED

CIRC ACCESSION NO--AP0124004
ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. PROBLEMS ARISING WHEN MONITORING
   THE MECHANICAL CHARACTERISTICS OF STEELS BY REF. TO HARDNESS
   MEASUREMENTS ARE CONSIDERED, WITH SPECIAL REF. TO THE QUESTION OF
   CHOOSING THE OPTIMUM SEMIVERTICAL ANGLE FOR THE INDENTOR. STRICTLY
   THESE CHARACTERISTICS MAY BE DETERMINED WITH THE HELP OF AN INDENTOR
   HAVING ANY ARBITRARY ANGLE; HOWEVER, THERE ARE CERTAIN PRACTICAL
   ADVANTAGES IN ADHERING TO AN INDENTOR WITH AN ANGLE OF 136DEGREES. IN
   THIS CASE THE U.T.X., Y.S., AND STANDARD VICKERS HARDNESS UNDER MAY BE
   DETERMINED WITH A SINGLE INDENTOR.

UNCLASSIFIED

USSR

UDC 8.74

SLAVUTSKIY, YE. I.

"Training Device for Combined Forecasting of the Course of Diseases"

V sb. Teor. kibernetika (Cybernetics Theory--collection of works), Kiev, 1971, pp 161-173 (from RZh-Kibernetika, No 12, Dec 72, Abstract No 12V515)

Translation: A study is made of the synthesis of the algorithm for the functioning of a training device for combined forecasting of the course of diseases and its program simulation on a computer. Here, the class of diseases is represented by a set of states of an ill organism and the possible transitions from one state to another. The state of the patient is described using a set of symptoms. By forecasting the course of a disease we mean indicating a defined sequence of changes in the organism. The basis for the algorithm for the functioning of the training device is the construction of a formal stochastic forecasting system (a C_n-system). The C_n-system is designed to output the sequence of states of the sick organism as a function of the sets of treatment measures considering the individual nature of the specific patient. The basic part of the C_n-system is its memory which is a finite oriented graph G without curves each apex of which is compared to the state of the sick organism. Two apexes i and j of the graph G are joined by an arc only when transition from

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USSR

SLAVUTSKIY, YE. I., Teor. kibernetika, Kiev, 1971, pp 161-173

state i to state j is possible. Each apex x of the graph G has a finite ordered sequence of treatments y_1, y_2, ..., y_k characterized by the corresponding effectiveness C_j. Accordingly, a linear function is compiled which must have an extremum for defined restrictions since each treatment can be characterized by indexes, the degree of risk, the preceding treatment, individual peculiarities of the patient, and so on. By using the method of integral programming, the optimal treatment is found on the basis of which the future course of the disease is forecasted for one step.

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USSR   UDC: 518.5.681.3.06

SLAVUTSKIY, Ye. I.

"Stochastic Prognosis Systems for Predicting the Course of Illnesses With Consideration to Selected Treatment"

V sb. Neyrobionika (Neurobionics--collection of works), Kiev, 1970, pp 265-268 (from RZh-Kibernetika, No 11, Nov 71, Abstract No 11V855)

Translation: A mathematical model is presented for a stochastic system which predicts the course of illnesses depending on treatment selection with regard to the individual peculiarities of the patient. In accordance with this model, the problem of selecting curative measures reduces to the general problem of whole-number linear programming. It is required to find the maximum (or minimum) function of k whole-number variables when certain restrictions are imposed on these variables. V. Mikheyev.

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USSR

UDC: 518.5:681.3.06

VARENIK, Yu. R., SLAVUTSKIY, Ye. I.

"Preparation of Initial Information for Stochastic Prognosis Systems"

V sb. Neyrobionika (Neurobionics—collection of works), Kiev, 1970, pp 236-240 (from RZh-Kibernetika, No 11, Nov 71, Abstract No 11V856)

Translation: The paper deals with a mathematical model for accommodation of initial information in the memory of a stochastic prognosis system as illustrated by a medical diagnosis system. The memory of the prognosis system is modeled by a finite graph G, each of whose vertices is put into a one--to-one correspondence with some state of the patient and treatment complex. Two vertices are joined when and only when a transition is possible from the state corresponding to one vertex to that corresponding to the other. A procedure is given for calculating the statistical characteristics and the transitions from state to state. The digital computer program realization is based on construction of a vector whose components are graph vertices which map the course of the illness for the given patient.
V. Mikheyev.

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USSR

VARENIK, Yu. R., SLAVUTSKIY, Ye. I.

UDC: 518.5:681.3.06

"Preparation of Initial Data for Stochastic Prognosis Systems"

V sb. Neyrobionika (Neurobionics--collection of works), Kiev, 1970, pp 236-240 (from RZh-Matematika, No 11, Nov 71, Abstract No 11V856)

Translation: A mathematical model is considered for accommodation of the initial data in the memory of a stochastic prognosis system. A system of medical diagnosis is taken as an example. The memory of the system is modeled by a finite graph G in which each vertex corresponds to some state of the patient and a set of treatment methods which are used, two vertices being connected by an arc if and only if a transition is possible from a state corresponding to one vertex into a state corresponding to another. The procedure for calculating the statistical characteristics and transitions from state to state is presented. Digital computer programmed realization is based on construction of a vector whose components are graph vertices reflecting the course of an illness of a given patient. V. Mikheyev.

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USSR

UDC: 518.5:681.3.06

SLAVUTSKIY, Ye. I.

"Statistical Prognosis Systems for Predicting the Course of Illnesses With Regard to a Selected Treatment"

V sb. Neyrobionika (Neurobionics--collection of works), Kiev, 1970, pp 265-268 (from RZh-Matematika, No 11, Nov 71, Abstract No 11V355)

Translation: The paper presents a mathematical model of a stochastic prognosis system for the development of illnesses as a function of a given treatment with regard to the individualities of the patient. In accordance with this model, the problem of selecting a therapeutic measure reduces to the common problem of integral linear programming. It is required to find the maximum (or minimum) linear function of k whole-number variables for the case of certain limitations imposed on these variables. V. Mikheyev.

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UDC: 8.74

USSR

ZASLAVSKIY, S. Ya., SLAVUTSKIY, Ye. I.

"A General Approach to a Theory of Resolving Systems"

Translation: An automatic system is considered which is capable of re-
sponding to a physician's questions with information on the course of
an illness and necessary procedures for treating the patient. Authors'
abstract.

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USSR

UDC: 53.07/08+53.001.5

FEDOROV, G. A., SLAVYAGIN, P. D., MOISEYEV, I. F., ANTONOV, V. A., TSUR-
GANOV, S. V.

"Using the Geometry of Linear and Spiral Scanning in Human Radiation Spec-
trometers"

V sb. Vopr. dozimetrii i zashchity ot izluch. (Problems of Dosimetry and
Radiation Shielding--collection of works), vyp. 12, Moscow, Atomizdat,
1971, pp 173-178 (from RZh-Fizika, No 4, Apr 72, Abstract No 4A714)

Translation: A study was made of the spatial effectiveness of registra-
tion of gamma quanta by a human radiation spectrometer as a function of
the energy of the isotopes utilized by the detector, the length and height
(or radius) of scanning, and the region of the recorded spectrum for line-
ar and spiral scanning geometries. M. L.

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USSR

UDC 681.327.11

MIRANOVSKIY, L. A., and SLAYEV, V. A., Leningrad Institute of Aviation
Instrumentation

"Device for Recording and Reproducing Information on a Tape"

USSR Author's Certificate No 339922, kl G 06 k 7/00, filed 10 Dec 69, published
3 Jul 72 (from RZh Avtomatika Telemekhanika i Vychislitel'naya Tekhnika, No
11, Nov 73, Abstract No 11 A433P)

Translation: A device is proposed for recording and reproducing information
on a tape, containing two tape driving mechanisms and recording and reading
units corresponding to them. To improve the reliability of the apparatus, it
includes switches and a linear conversion unit containing adders; the inputs of
these are connected through the switches to the reading units of one tape drive,
while the outputs are connected to switches to the recording units of the other
tape drive. One illustration.

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USSR

IVANOV, V. N., SLEDKOV, V. A.

"Multiconductor Line With Round Conductors Arranged in a Circle"

Translation: To use the method of multiconductor lines for computing stub delay systems coiled into a ring, it is necessary to know the parameters of the multiconductor lines with the conductors arranged periodically in a circle. Computation of the parameters of such lines with round conductors reduces to the problem of a line with conductors of the same form arranged periodically along a straightway. Similarly a transforming function is found which establishes a connection between a multiconductor line with conductors of rectangular form and with the conductor cross sections limited by the lengths of the radius and by circular arcs. 1 ill. 6 ref.   G.B.

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USSR

UDC: 539.5

Drozd, N. P., Ivashchenko, R. K., Maksimovich, G. G., Mil'man, Yu. V.,
Slenzak, G. Ye., Trefilov, V. I., Kiev-L'vov

"Studies of Stability of the Structure and Mechanical Properties of Molybdenum
Under Long-term Temperature and Stress"

Kiev, Problemy Prochnosty, No 4, Apr 72, pp 68-75.

Abstract: The influence of long-term application of temperature and stress on the
structural stability and mechanical properties of molybdenum-based low alloys with
preliminary formation of cellular structure is studied. It is shown that changes
in mechanical properties of deformed molybdenum alloy during annealing under load
are determined basically by the annealing temperature, not by the load or holding
time at the temperature, within the temperature range studied (800-1000°C). The
action of the load during annealing of deformed molybdenum causes no significant
increase in temperature of transition to the brittle state. The introduction of
dispersed second phase particles allows reliable stabilization of the cellular
structure in molybdenum at 1000°C with significant loads over long periods of time.
If annealing of deformed molybdenum is performed in the temperature interval in
which primary recrystallization occurs, additional application of loads during
annealing can slightly increase the recrystallization rate and decrease strength
characteristics.
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POLAND

SLEDZINSKI, Bohdan, CIESLAKOWA, Ludwika, MALINOWSKI, Romuald;
Institute of Organic Industry, Warsaw

"The Synthesis of New N,N,N',N'-Tetraalkyldiamides
of O-1-Chlorophenyl-2-Chlorovinylphosphoric Acids"

Abstract: In previous papers the authors have described the
synthesis of new N,N-dialkylamides of O-1-chlorophenyl-2,2-
dichlorovinylphosphoric acids (1) and N,N-dialkylamides of
O-1-chlorophenoxy-2,2-dichlorovinylphosphoric acids(2). The
alkoxy group in compounds 1 and 2 was replaced by an amide
group. Positive results were obtained only in the case of the
derivatives of compound 1, and 20 N,N,N',N'-tetraalkyldiamides
of O-1-chlorophenyl-2-chlorovinylphosphoric acids were obtained
in Perkow's reaction, which have not yet been described in the
literature. The raw materials used were N,N,N',N'-tetraalkyl-
diamides of O-alkylphosphorous acids and chlorides of chloro-
phenacylidenes or chlorophenacylidines. The methods of prepa-
ration and the physical characteristics of the obtained com-
pounds are given.

1/1

Inorganic Compounds

STABROVSKIY, A. I., and SLEPCHENKO, I. G.

"Electrochemical Reduction of Uranium (VI) to Uranium (IV) in Sulfate Solutions"

Abstract: Processes were investigated which occur during electrolysis on the electrodes and in the solution as well as the conditions at which practically complete reduction of uranium (VI) to uranium (IV) occurred. During the electro-chemical reduction of uranyl ion on a lead electrode in sulfate solutions con-taining sufficient amount of free sulfuric acid the reactions occuring at the cathode and in the solution are very rapid. The slowest stage of the cathode process, which is therefore rate determining, is the diffusion of the ions being reduced towards the surface of the electrode; therefore the cathode potential depends considerably on the concentration polarization. The potential of lead anode depends on the overcharge of oxygen during its liberation. Polarization curves were plotted for the process showing that depending on the magnitude of cathode potential the formation of U(IV) in solution may occur via the re-duction of U(VI) to U(IV) on the cathode, or as a result of the disproportiona-tion of U(V), or by the reaction of U(IV) with U(III) in the solution itself.

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1/2   024
UNCLASSIFIED
PROCESSING DATE--23OCT70
TITLE--APPARATUS FOR DETERMINING THE SPECIFIC HEAT OF LIQUID SUBSTANCES BY
A PULSED ADIABATIC METHOD -U-

AUTHOR-(04)-YEGOROV, B.N., KILESSO, V.S., KOMAROV, A.G., SLEPCHENKO, V.I.

COUNTRY OF INFO--USSR

SOURCE--TEPLOENERGETIKA 1970, 17(3), 84-6

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--CALORIMETER, THERMAL ANALYSIS, SPECIFIC HEAT, HEATING,
ADIABATIC PROCESS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/0387
STEP NO--UR/0096/70/017/003/0084/0086

CIRC ACCESSION NO--AP0111580
UNCLASSIFIED

2/2   024
CIRC ACCESSION NO--AP0111580
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A PULSE ADIABATIC CALORIMETER
FOLLOWING THE AUTHORS' CONCEPTS (1968) WAS CONSTRUCTED FOR MEASURING
HEAT CAPACITIES C SUBP AND C SUBV OF LIQS. AT 90-600DEGREESK AND IS
SMALLER THAN OR EQUAL TO 300 ATM. THE INNER PART OF THE CALORIMETER
CONSISTS OF SEVERAL CELLS WHICH ARE SIMULTANEOUSLY HEATED FOR SIMILAR TO
1.5 SEC AND THE TEMP. (T) OF THE CENTRAL CELL IS RECORDED. A SINGLE RUN
LASTS IS SIMILAR TO 20 SEC. THE MAX. POSSIBLE ERROR WAS ESTD. AS PLUS
OR MINUS 1.5PERCENT. THE DIFFERENTIAL EQUATIONS FOR DETG. THE TIME
DEPENDENCE OF T WERE SOLVED.

PROCESSING DATE--30OCT70

UNCLASSIFIED

1/2   026

TITLE--ON THE PHYSIOLOGICAL MECHANISMS OF POLYPNOEA OCCURANCE -U-

AUTHOR--SLEPCHUK, N.A.

CCUNTRY OF INFO--USSR

SOURCE--FIZIOLOGICHESKIY ZHURNAL SSSR IMENI I. M. SECHENOVA, 1970, VOL 56, NR 5, PP 771-774

DATE PUBLISHED------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BRAIN, BODY TEMPERATURE, BREATHING, SELF REGULATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/1602

STEP NO--UR/0239/70/056/005/0771/0774

ACCESSICN NO--AP0127093

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0127093
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CUTANEOUS AND HYPOTHALAMIC
TEMPERATURE EFFECT ON BREATHING RATE WAS STUDIED IN THE UNANESTHETIZED
RABBIT. PANTING OCCURRED AFTER THE HYPOTHALAMIC AND RECTAL TEMPERATURE
INCREASED BY 0.27DEGREES C AND 0.25DEGREES C. THE CUTANEOUS TEMPERATURE
BEFORE THE ONSET OF PANTING WAS AT A CONSTANTLY HIGHER LEVEL. THE
INCREASE OF HYPOTHAALAMIC AND RECTAL TEMPERATURE MAY BE ASSUMED AS A
MAIN MECHANISM FOR THE THERMAL PANTING IN RABBITS. IT IS POSSIBLE THAT
THE SKIN TEMPERATURE ONLY INCREASES SENSITIVITY OF THE THERMOREGULATION
CENTER TO ITS OWN TEMPERATURE.

UNCLASSIFIED

1/2   012   UNCLASSIFIED   PROCESSING DATE--02OCT70
TITLE--REGULARITIES IN THE STRENGTH DECREASE OF ZEOLITE PELLETS UNDER
   ACTION OF WATER AND BENZENE VAPORS -U-
AUTHOR-(05)-SLEPNEVA, A.T., LIPKIND, B.A., DUKAREVICH, M.V., KONTOROVICH,
   S.I., SHCHUKIN, YE.D.
COUNTRY OF INFO--USSR

SOURCE--KOLLOIDNYY ZHURNAL, 1970, VOL 32, NR 2, PP 251-254

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ZEOLITE, WATER, BENZENE, ADSORPTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/1553   STEP NO--UR/0069/70/032/002/0251/0254

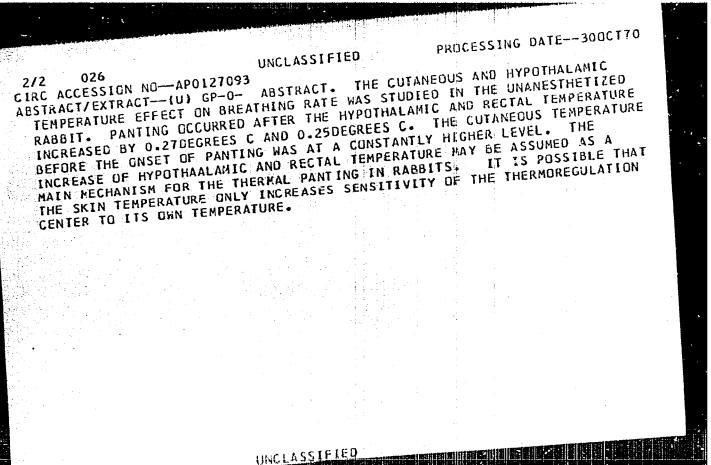CIRC ACCESSION NO--AP0112547
                        UNCLASSIFIED

CIRC ACCESSION NO--AP0112547

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF MOISTENING BY WATER
AND BENZENE VAPORS ON THE STRENGTH OF THE SAMPLES OF KAOLINITE CLAY AND
ZEOLITES NAA AND NAX, CONTAINING 20PERCENT CLAY AS BINDING AGENT, HAS
BEEN STUDIED. MOISTENING OF CLAY AND ZEOLITE SAMPLES INVOLVES A
STRENGTH DECREASE ASSOCIATED WITH THE LOWERING OF THE FREE SURFACE
ENERGY DURING ADSORPTION. THE SORPTION OF WATER AND BENZENE MOLECULES
BY INTERNAL CAVITIES OF ZEOLITE CRYSTALS REDUCES THE STRENGTH DECREASE
IF THE LIQUID CONTENT DOES NOT EXCEED 10-20PERCENT OF THE ADSORPTION
CAPACITY OF ZEOLITES.

1/2   006   UNCLASSIFIED   PROCESSING DATE--18SEP70
TITLE--LEVEL OF PRODUCT STANDARDIZATION ESTIMATED -U-

AUTHOR-(02)-LYAKIN, V.N., SLEPOV, A.A.

COUNTRY OF INFO--USSR

SOURCE--STANDARTY I KACHESTVO, 1970, NR 2, PP 46-48

DATE PUBLISHED-------70

SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES

TOPIC TAGS--INDUSTRIAL STANDARD, INDUSTRIAL PRODUCTION, INDEX

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1984/2015   STEP NO--UR/0422/70/000/002/0046/0048

CIRC ACCESSION NO--AP0100580
                        UNCLASSIFIED

CIRC ACCESSION NO--AP0100580
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE KNOWN METHODS FOR ESTIMATION
OF STANDARDIZATION LEVELS OF INDUSTRIAL PRODUCTS ARE USED AS A BASIS FOR
FINALIZATION AND COMPLETION OF INDICES EMPLOYED IN THIS ESTIMATION.

89

1/2   018   UNCLASSIFIED   PROCESSING DATE--27NOV70
TITLE--CALCIUM CHROMATE PRODUCTION -U-

AUTHOR-(05)-TEPLYAKOV, B.V., DUBROVIN, A.S., SLEPOVA, L.V., GREKOV, S.O.,
   KUZNETSON, V.L.
COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 264,379
REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970, 47(9)
DATE PUBLISHED--03MAR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CALCIUM COMPOUND, CHROMATE, CHEMICAL PATENT, CHEMICAL
   PRODUCTION, METALLURGIC RESEARCH FACILITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/1449   STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0126980
                    UNCLASSIFIED

UNCLASSIFIED

2/2   018
CIRC ACCESSION NO--AA0126980
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CA CHROMATE IS PREPD. BY 1ST
PURIFYING A SOLN. OF NA DICHROMATE WITH CACRO SUB4, CACL SUB2, OR THEIR
MIXT. IN A QUANTITY 100-200PERCENT OF THAT THEORETICALLY NECESSARY TO
PPT. CASO SUB4. THE SOLN. OF NA DICHROMATE AFTER SEPN. OF THE PPTD.
CASO SUB4 IS ACIDIFIED WITH CRO SUB3 OR HCL UNTIL THE SOLN. PH IS
0.0-1.0. THE FILTRATE IS TREATED 1ST BY HEATING WITH MILK OF LIME UNTIL
65-80PERCENT PPTN. OF CRCRO SUB4, AND AFTER SEPN. OF THE CACRO SUB4
PPT., WITH CACL SUB2.   FACILITY: CHELYABINSKIY
NAUCHNO-ISSLEDOVATEL'SKIY INSTITUT METALLURGII.

UNCLASSIFIED

USSR

S

DUBROVIN, A. S., SLEPOVA, L. V., KUZNETSOV, V. L.

UDC: 536.46+662.215.3

"Influence of Density of Aluminothermic Compounds on Their Combustion"

Novosibirsk, Fizika Goreniya i Vzryva, No. 6, March 1970, pp 64-71

Abstract: The combustion rate was studied as a function of density in charges of aluminothermic mixtures of the oxides of chromium and iron. The maximum combustion temperature was calculated on the basis of the condition of complete reduction of the oxides and absence of thermal losses during the process. The density of the compositions was changed by pressing the charges in magnesite crucibles. The combustion of compositions with aluminum grain sizes varying from 1.0 to <0.16 mm were studied. Iron ore was used with a grain size of <0.6 mm (averaging 0.08 mm). The results indicated a signifi-cant increase in heat conductivity of compositions with increasing density. Heat conductivity also increased when aluminum powder was added. The principal forms of heat transfer for the composition studied are conduct heat transfer and radiation.

1/1

USSR

SLEPTSOV, A. I.

UDC: 621.396.6:621.315.6

"Effect of an Electric Field on the Dielectric Constant of SbSI"

Uch. zap. Ul'yanovsk. gos. ped. in-t (Scientific Notes, Ul'yanovsk State Pedagogical Institute) 1970, 24, No. 3, Part 1, pp 285-288 (from RZh-Radiotekhnika, No. 3, March 71, Abstract No. 3V604)

Translation: The investigation was done on monocrystals of SbSI, with small additions of Bi, grown from the vapor phase; specific resistivity, about 10^8 ohms cm. It was established that polarization by a constant electric field of up to 1 kW/cm at 13-14° C substantially reduces the value of ε in the course of several hours and separates the maximum temperature dependence of ε into two identical peaks. In stronger fields or at a higher temperature, there is no such separation. Two illustrations, bibliography of six. N. S.

1/1

VERNOV, S. N., Y'EGOROV, T. A., Y'EFIMOV, N. N., KOLOSOV, V. A., KORYAKIN, V. D., KRASIL'NIKOV, D. D., KUZ'MIN, A. I., KULAKOVSKAYA, V. P., MAKSIMOV, S. V., NESTEROVA, N. M., NIKOL'SKIY, S. I., ORLOV, V. A., SLEPTSOV, I. YE., SIZOV, V. V., KHRISTIANSEN, G. B., and SHAMSUTDINOVA, F. K.

"Preliminary Results of Recording Extensive Showers on a Recording Array in Yakutsk"

Abstract: Experiments are described in which attempts were made at determining the energy spectrum, composition, and anisotropy of cosmic rays within the range of energy 10^{17} to 10^{18} ev. It is desired to extend the range to cover 10^{19} ev and above. Of a particular interest are the following problems: do the rays originate within the Galaxy or in metagalactic regions, what is the direction from which they arrive, and how Cerenkov radiation produced by them is distributed within the atmosphere. The test equipment consists of 13 recording points distributed over an area of 3 km², with a central time con-trol point. The output spectrum was measured over a period of 29.5 hours. 82 showers were noted during that period, with the axes falling within the 1/3

USSR

VERNOV, S. N., et al., Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol 35, No 10, Oct 71, pp 2098-2101

array area. The orientation of the axis was found by the "triangulation" method, comparing the time of arrival of the showers at different recording points. An analytic expression is given in the paper for the integral output spectrum of extensive showers at sea level for the interval of N between 2×10^7 and 2×10^8. The intensity, determined with this formula, appears to be 2 to 3 times as great as recorded elsewhere. Distribution of Cerenkov light with respect to the shower axis was determined by observations conducted on clear, moonless nights. It was found to be similar to that of the primary gamma quanta, but it decayed with the distance from the axis more slowly than the amount of charged particles ($R^{-2.5}$ as against $R^{-3.3}$ for charged particles). Examination of the energy spectrum of primary particles lead to the conclusion that the electromagnetic component is responsible for 80% of it. Dependence of primary energy on the output N was established, and on the basis of this relation the integral spectrum was computed. The coefficient connecting these two magnitudes was found to be twice as high as the one previously accepted elsewhere.

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USSR

YEFREMOV, I.S., ZAGAYNOV, N.A., NIKOL'SKIY, I.K., BEZRUKOV, G.I., SLEPTSOV,M.A., CHIRVINSKIY, V.M. [Mosk. energ.in-t--Moscow Power Institute]

UDC 621.317.799:621.382.2

"Method Of Continuous Measurement Of The Temperature Of A P-N Junction Of A Rectifier"

USSR Author's Certificate No 275256, filed 26 July 67, published 22 Oct 70 (from Rzh--Elektronika i yeye primeneniye, No 4, April 1971, Abstract No 4B598P)

Translation: A method is proposed for continuous measurement of the temperature of the p-n junction of a rectifier, mainly under operational conditions. With the object of increasing the utilization factor of the rectifier power, the temperature of the rectifier case and the current of the loaded rectifier are measured simultaneously, proportional conversions of the parameters measured into uniform signals are performed, these signals are summed and by the magnitude of these sums the temperature of the rectifier's p-n junction is judged.
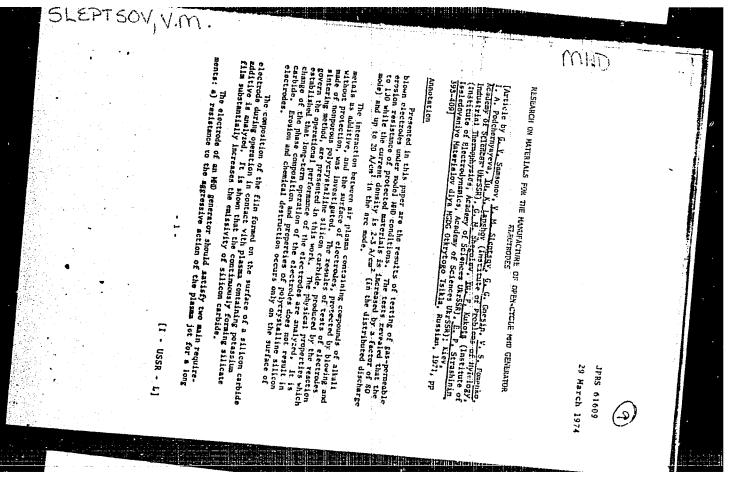
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USSR

VERNOV, S. N., et al., Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol 35, No 10, Oct 71, pp 2008-2019

In the final analysis, variation of Čerenkov light at the primary particle energy of 3.6×10^{16} ev and the output (intensity) of 1.5×10^7 particles at sea level is given, as well as the expected distribution of the nuclear components of primary rays.

3/3

SLEPTSOV, V.M.

MHD

RESEARCH ON MATERIALS FOR THE MANUFACTURE OF OPEN-CYCLE MHD GENERATOR ELECTRODES

[Article by G. V. Samsonov, Yu. A. Landshov, V. M. Sleptsov, G. G. Gnesin, V. S. Fomenko, Industrial Thermophysics, UkrSSR), G. N. Sheeliy, (Institute of Problems of Hydrology, (Institute of Electrodynamics), Academy of Sciences, UkrSSR), Iu. P. Kukota (Institute of Isledovaniye Materialov dlya MGDG Otkrytogo Tsikla, Russian, 1971, pp 395-409]

Annotation

Presented in this paper are the results of testing of gas-permeable blown electrodes under model MHD conditions. The tests revealed that the erosion resistance of protected materials is increased by a factor of 80 to 130 while the current density is 2-3 A/cm^2 (in the distributed discharge mode) and up to 30 A/cm^2 in the arc are made.

The interaction between air plasma containing compounds of alkali metals as additive, and the surface of electrodes, protected by blowing and without protection, was investigated. The results of tests of electrodes made of nonporous polycrystalline silicon carbide, produced by the reaction sintering method, are presented in this work. The physical properties of electrodes govern the operational performance of the electrode are analyzed. It is established that long-term operation of the electrodes does not result in change of the phase composition of the electrodes which carbide. Erosion and chemical destruction of polycrystalline silicon electrodes.

The composition of the film formed on the surface of a silicon carbide electrode during operation in contact with plasma containing potassium additive is analyzed. It is shown that the continuously forming potassium film substantially increases the emissivity of silicon carbide.

The electrode of an MHD generator should satisfy two main require-
ments: a) resistance to the aggressive action of the plasma jet for a long-

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USSR

UDC 621.762.669.018.44

SLEPTSOV, V. M. and KOSOLPAPOVA, T. YA.

"Technology of Production and Properties of Refractory Materials for High-Temperature Equipment"

Sovrem. probl. poroshk. metallurgii [Modern Problems of Powder Metallurgy -- collection of works], Kiev, Nauk. dumka Press, 1970, pp. 224-242, (Translated from Referativnyy Zhurnal-Metallurgiya, No. 1, 1971, Abstract No.1 G481 by the authors).

Translation: A phenomenological representation of the structure of materials is suggested, based on the idea of separation of valence electrons into localized and nonlocalized portions. Methods are described for producing high-temperature refractory compounds, as well as the technology of manufacture of products from these compounds. 5 figures; 1 table; 17 biblio. refs.

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USSR

UDC 621.762.001

SLEPTSOV, V. M., SHCHEGOLEV, G. M., KUKOTA, YU. P., and PRSHEDROMIRSKAYA, YE. M.

"Decreasing the Erosive Wear of Refractory Joints in Plasma Fluxes by Means of Thermochemical Protection"

V sb. Tugoplavk. karbidy (The Refractory Carbides -- Collection of Works), Kiev, "Nauk. Dumka," 1970, pp 231-233 (from RZh-Metallurgiya, No 3, Mar 71, Abstract No 3G372 by authors)

Translation: The article considers the effectiveness of using thermochemical portection to decrease corrosive and erosive wear of refractory joints in high-temperature fluxes. The technology of producing porous materials is described. A device has been created for testing the resistance of materials in plasma fluxes. The authors present profiles of the concentration above the porous channel wall during the injection of carbon dioxide into the air-stream. Two illustrations.

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USSR   UDC 620.018

SAMSONOV, G. V., BOYKO, P. A., MOTYAZHEV, V. I., BONDARENKO, V. P., and
SLEPTSOV, V. M., Kiev

"Solubility and Solid Phase Reaction of Carbides of Transition Metals
With Nickel and Copper"

Abstract: The solubility and solid phase reactions of carbides of Ti, Zr,
Hf, V, Nb, Ta, Cr, Mo, and W with Ni and Cu were investigated by X-ray
graphic, X-ray microspectral, and metallographic analytical methods. It
was found that the solubility and the width of the diffusion band in re-
actions of these carbides with nickel increase with the transition of
carbides of group IV metals to group VI metals and are practically absent
in the case of copper. The results are discussed from the standpoint of
a model of a contour localization of valent electrons in atoms of reacting
components. It is demonstrated that carbides of transition metals are
effective hardeners of copper and less effective hardeners of nickel in
dispersion-hardened composite materials.

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Acc. Nr.

ATO045638   Abstracting Service: Ref. Code
CHEMICAL ABST.   *UR 0020*

89718x Preparation of methyl methacrylate from meth-
acrylonitrile. Mekhtiev, S. I.; Dalin, M. A.; Guseinov, A. G.;
Sleptsova, O. M.; Lukina, E. M.; Polchaev, R. A. (USSR).
Dokl. Akad. Nauk SSSR 1970, 190(1), 108-9 [Chem] (Russ).
Me methacrylate (I) was prepd. in 86.2% yield in a continuous
reactor by heating equimolar amts. of methacrylonitrile and 84%
H_2SO_4 30 min at 100°, followed by heating the intermediate
methacrylamide with 2 moles MeOH 2 hr at 95°. I (87.8%) was
also obtained when the process was run in a 60-l. exchange
reactor.   DBJR

REEL/FRAME
197780624   7

USSR

SLEPUSHKIN, A., Doctor of Medical Sciences

"Influenza -- Out of the Workshop"

Moscow, Moskovskaya Pravda, 3 Feb 71, p 4

Translation: The inexorable statistics indicate: the most frequent causes of incapacitation among workers in industrial enterprises are acute diseases of the respiratory passages. This forces us to take a closer look at the methods we use to combat these ailments. In many industrial workshops, air temperature and humidity are quite high throughout the day. Due to this microclimate with almost no air movement, many workers become accustomed to and dependent on a stable external environment. As a result, they become susceptible to rapid changes in temperature and easily catch a cold. Characteristically, in places where the microclimate is more labile (for example, in metal plants) and the workers are constantly exposed to temperature fluctuations, their skin receptors become more sensitive and their bodies develop a greater immunity to cold. Medical examinations have shown that workers who often become ill with influenza usually have a chronic disease of the nose, pharynx, larynx, or bronchi. Therefore, they are predisposed to develop acute diseases of the

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USSR

SLEPUSHKIN, A., Moskovskaya Pravda, 3 Feb 71, p 4

respiratory passages. It is often enough to eliminate -- prior to a seasonal outbreak -- these smoldering foci of infection in order to reduce the subsequent number of influenza cases. The first requirement to prevent the spread of influenza in industry is to enforce strict sanitary and hygienic conditions in workshops. We are referring to temperature, humidity, adequate air circulation, rapid removal of harmful contaminants, and elimination of crafts (by means of air curtains at the doors, warm lobbies, and so on). At the GPZ-1 plant, scientists kept a watch on one production area located directly at the entrance. The frequency of acute respiratory diseases and tonsillitis cases in that area was reduced by a factor of 1.7 only after the entrance was screened to prevent blasts of cold air from the street. These measures are simple and effective. In plants where they have been implemented, and where the trade union and sanitation aktiv immediately points out any violation of the regulations, influenza and similar diseases are not serious. A hardy person resists a cold better and succumbs to it less frequently. At the Plant imeni Vladimir Il'ica, workers who had frequently had flu and chronic diseases of the nose, throat, and ears, began to be ill 4-5 times less frequently after implementation of planned therapeutic measures. Our fight against influenza

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USSR

SLEPUSHKIN, A., Moskovskaya Pravda, 3 Feb 71, p 4

will be more successful when the current shortcomings in work facilities are
eliminated. It is useful to subdivide production areas (at least during a
seasonal outbreak) with temporary screens. The relative air humidity should
be maintained at not less than 40%. Other effective preventive measures are
washing the facilities twice a day with a 0.5% solution of calcium hypochloride
and irradiating the workshops with ultraviolet rays.

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USSR

VITKINA, B. S., RUSSINA, A. Ye., BOBYLEVA, T. K., GRINEBERG, I. R., SOKOLOVA, N. N., DREYZIN, R. S., and SLEPUSHKIN, A. N., Smolenskaya Oblast Sanitary Epidemiological Station, and Institute of Virology imeni D. I. Ivanovskiy, USSR Academy of Medical Sciences

"Etiology and Epidemiology of the 1969 Influenza Outbreak in Smolensk"

Moscow, Voprosy Virusologii, No 4, Jul/Aug 71, p 494

Translation: The paper presents results of a study of the 1969 influenza outbreak in Smolensk, where almost one-half of the inhabitants had received live influenza vaccines during the preceding five autumn and winter seasons. The disease developed more gradually than during the two previous epidemics (1965 and 1967). Influenza virus was isolated from 127 out of 355 patients. A study of the antigenic structure of 20 strains revealed that all strains were neutralized by 1/68 Hong Kong serum either completely or to one-half of the homologous titer. No essential differences were found between strains obtained from vaccinated and nonvaccinated individuals. All strains were highly sensitive to the inhibitors present in normal guinea pig or horse serum. Serological shifts in the patients coincided with the epidemic influenza curve. The frequency of influenza diagnosed among 235 clinic patients was compared with that of 304

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USSR

VITKINA, B. S., et al, Voprosy Virusologii, No 4, Jul/Aug 71, p. 494

hospitalized patients. Serological confirmation of the diagnosis was 8% greater among the hospitalized group. However, at the end of the epidemic, when morbidity returned to almost normal level, influenza was twice as frequent in clinic than in hospitalized patients. Comparison of the frequency of influenza and of other acute respiratory diseases recorded during the interepidemic year of 1968 and during the epidemic in 1969 revealed that the frequency of parainfluenza and of adenoviral infections was approximately the same during both periods.

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USSR

BOBYLEVA, T. K., SLEPUSHKIN, A. N., RUSSINA, A. Ye., VITKINA, B. S., GRINEBERG,
I. R., TARASOV, A. A., LIVERGAND, M. I., and ZHDANOV, V. M., Institute of
Virology imeni Ivanovskiy, Academy of Sciences USSR, and Smolenskaya Oblast
Sanitary Epidemiological Station

UDC 616.988.75-084.47 "1969"

"Evaluation of the Efficacy of Mass Vaccinations Against Influenza" Report III

Abstract: Double vaccination of approximately 50% of the population of the
city of Smolensk with live influenza vaccine in 1968 proved to be effective
in controlling the disease even during the 1969 epidemic caused by a new
antigenic variant of type A influenza virus. Almost half as many contracted
the disease as in the nearby cities of Vitebsk and Kaluga, where the population
was not vaccinated — 28.8, 54.3 and 48.7%, respectively. The difference
between the adult sick rates was even greater -- 17.9, 38.1, and 41.2%,
respectively. The side effects of the vaccine were minimal. The results of a
similar mass vaccination program in Yartsevo were poor mainly because vaccine
from the same strain had been used for three successive years and most of the
people had become immune to it. Hence the vaccine strains should be changed
periodically (once every 2 or 3 years).
1/1

USSR

SLEPUSHKIN, A. N.

UDC 911.3.616.921.5

"The Possible Role of Endemic Foci of Animal Influenza Viruses in Origin of Type "A" Influenza Pandemics in People"

V sb. Virusn. bolezni s.-kh. zhivotnykh. Ch. 2 (Virus Diseases of Farm Animals -- collection of works. Part 2), Moscow, 1970, pp 198-199 (from RZh-Meditsinskaya Geografiya, No 4, Apr 71, Abstract No 4.36.77)

Translation: The article proposes that the appearance of influenza pandemics among people is caused by bringing animal influenza virus into human society during active epizootics; this occurs every 30-50 years. It is proposed that two enzootic animal influenza foci exist, as pandemic viruses for 1889-1890 and 1918-1919 were not identical, although similar. This apparently explains the return of the very same influenza virus variant type A into the human collective. Farm animal influenza viruses apparently have an anthroponotic origin.

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USSR

SLEPYAN, E. I., and GUREVICH, L. S., Botanical Institute imeni V. L. Komarova, USSR Academy of Sciences, Leningrad

UDC 547.02:632.4:633.15:582.282.285.12

"Dicarboxylic and Tricarboxylic Acids of Zea mays and Their Possible Role in the Pathogenesis of Ustilago maydis (DC.) CDA-Induced Common Corn Smut"

Abstract: Studies made on the concentrations of the organic acids involved in the Krebs cycle in corn infected with Ustilago maydis showed that the concentrations of the acids (malic, aconitic, citric, glyceric, succinic) differed in affected and unaffected tissues. During teratogenesis the acids do not accumulate in the rapidly dividing cells since they are rapidly mobilized for the synthesis of amino acids and proteins. In the normal tissues cell division had ceased, protein synthesis is limited, and the metabolites of the Krebs cycle can accumulate. Furthermore, the normal tissues surrounding a focus of pathologic neoplasia may serve as a depot from which the di- and tricarboxylic acids may be withdrawn for the benefit of the proliferating tissues.

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Plant Pathology

USSR

SLEPYAN, E. I., and LANDSBERG, G. S., Institute of Botany imeni V. L. Komarov, Academy of Sciences USSR, Leningrad

UDC 581.2

"The DNA Content in Nuclei of Epidermis Cells of Leaves of Zea mays L. Plants Infected With Ustilago Maydis in Relation to the Problem of Reactivity of the Epidermis"

Moscow, Doklady Akademii Nauk SSSR, Vol 206, No 3, 1972, pp 755-758

Abstract: The DNA content was determined in nuclei of the epidermis of galls forming on leaves of corn plants (Zea mays) during smut caused by experimental infection with Ustilago maydii. It was established that the content of DNA in these nuclei was increased by a factor of 3-4 vs. that of nuclei of the uninfected leaf epidermis, and that the increase in DNA content was accompanied by a pathological hypertrophy of the nuclei. The increase in DNA content and hypertrophy were due to a reactive polyploidization, in which the number of chromosome sets was increased by an estimated factor ≈ 10-15. The variation of the affected nuclei with respect to the DNA content was greater than that of nuclei of normal epidermis and reached its highest level during growth and differentiation of the epidermis cells.

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USSR

SLEPYAN, E. I., VILKOVA, N. A., and SHAPIRO, I. D., Botanical Institute imeni V. L. Komarov, Academy of Sciences USSR

UDC 581.1:595.7

"Pathological Changes in the Structure of Developing Grains of Triticum aestivum Infested With Eurygaster integriceps, In Connection With Special Features of Its Nutritional Regimen in the Process of Ontogenesis"

Abstract: The stink bug, Eurygaster integriceps, is one of the most dangerous pests of wheat. It damages the husk, endosperm, and starch; causes anomalies in the nuclei; and produces chemical damage by the action of its abenteric enzymes. The worst damage occurs if the wheat is infested while it is still in the early stages of development, when the following pathological changes may be observed in the five or six layers of cells immediately surrounding the puncture made by the insect: 1) starch is not formed in the cells of the first three layers, and part of these cells hypertrophy, which leads to aniso-cytosis; 2) the cells of these layers are characterized by saturation of the cytoplasm and insignificant vacuolization; 3) the nuclei of the cells deprived of starch and of the cells with saturated cytoplasm are deformed; they assume

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USSR

SLEPYAN, E. I., et al., Izvestiya Akademii Nauk SSSR, Seriya Biologicheskaya, No 2, Mar/Apr 72, pp 258-262

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a lobe-shaped form and are often fragmented and hypertrophied; 4) the percentage of fine-grained starch in the cells of the third to fifth layers increases, thus destroying the endosperm mosaic characteristic of this kind of wheat.

2/2

- 2 -

USSR

SLEPYAN, L. I.

UDC: 534.2

"Nonstationary Elastic Waves"

Nestatsionarnyye uprugiye volny (cf. English above), Leningrad, "Sudostro-
yeniye", 1972, 374 pp, ill. 2 r. 49 k. (from RZh-Fizika, No 6, Jun 72, Ab-
stract No 6Zh541 K)

Translation: Contents: Editor's Foreword; From the Author; Introduction;
Chapter I. Equations of Dynamics of an Elastic Medium; Chapter II. Integral
Transforms in Problems of Wave Propagation; Chapter III. Some General Prop-
erties of Solutions of Nonstationary Problems; Chapter IV. Waves in an In-
finite Medium and in a Half-Space; Chapter V. Nonstationary Waves in Struc-
tural Elements; Chapter VI. Waves in Bodies Immersed in a Fluid; Chapter
VII. Effect of Moving Loads and Resonance Wave Phenomena. Bibliography of
143 titles.

1/1

USSR

UDC 547.245

ORLOV, N. F., SLESAR', L. N., and SOROKIN, M. S., Leningrad Institute of the Textile and Light Industries imeni S. M. Kirov

"Thermal Conversions of Certain Triorganosilyl Derivatives of Phosphorous Acid"

Abstract: The synthesis of triorganosilyl derivatives of phosphorous acid of type $(R_3'SiO)_n(RO)_{3-n}P$ (n = 1-3) (I) is accompanied by side reactions, especially thermal conversions, which make the interpretation of data difficult.

The authors studied experimentally the thermal conversion of ethyltriethyl-silyl phosphites.

It was found that with heating of diethyl triethylsilylphosphite at 160°, decomposition, disproportionation, isomerization and oxidation take place. On heating ethyl bis(triethylsilyl) phosphite, disproportionation and isomerization are observed. It was shown that under the experimental

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USSR

ORLOV, N. F., et al., Zhurnal Obshchey Khimii, Vol XL, No 12, Dec 70, pp 2585-2589

conditions ethyl bis(triethylsilyl) phosphite is more resistant to thermal isomerization, but still more subject to isomerization than is diethyl triethylsilyl phosphite. Finally, in the process of heating tris(tri-organosilyl) phosphites of the type $(R_3SiO)_k(R_3'SiO)_{3-k}P$, containing various different radicals and a silicon atom, disproportionation takes place in the triorganosiloxy groups.

2/2

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USSR

RVACHEV, V. L., SLESARENKO, A. P., Khar'kov Polytechnical Institute imeni
V. I. Lenin, Khar'kov State Scientific Research Institute of Metrology

UDC 517.946

"Concerning the Solution of Some Nonlinear Boundary Value Problems for
Regions of Complex Shape by a Structural Method"

Minsk, Differentsial'nyye Uravneniya, Vol 9, No 4, Apr 73, pp 771-773

Abstract: The authors synthesize the structure of the solution of a non-
linear boundary value problem for the multiply connected region

$$\Delta u = -F,$$

$$u|_{\Gamma_i} = f_i; \quad \left[\frac{\partial u}{\partial v_j} + \beta_j(u) \frac{\partial u}{\partial t_j} + t_j(u) \right]\Big|_{\Gamma_j} = 0;$$

where $(i = 1, 2, \ldots, m_1, j = m_1 + 1, \ldots, m_2);$ Γ_i, Γ_j are parts of the boundary $\Gamma \quad \bigcup_{b=1}^{m_2} \Gamma_p$
of the considered region Ω; v_j and t_j are the directions of the internal nor-
mal to the tangent to the boundary Γ_j; F is a continuous function given in
$\Omega + \Gamma$ which has piecewise-continuous first derivatives; $f_i, \beta_j(u), \beta_j(u)$ are some
continuous functions given on sections Γ_i and Γ_j of boundary Γ.

1/1

- 10 -

USSR

UDC 536.2

RVACHOV, V. L., Corresponding Member of the Academy of Sciences Ukrainian SSR, and SLESARENKO, A. P., Khar'kov Polytechnic Institute, Khar'kov Scientific Research Institute of Metrology

"ON Obtaining the Solution for the Nonlinear Boundary-Value Problem of a Heat-Radiating Body of Complex Shape"

Abstract: The article obtains the solution for the nonlinear boundary-value problem of a multiply connected body:

$$\Delta u = -F;$$

$$u\big|_{S_i} = f_i; \quad \frac{\partial u}{\partial v_i}\Big|_{S_i} = q_i; \quad \left(\frac{\partial u}{\partial v_k} + h_k u^4\right)\Big|_{S_k} = \delta_k . \quad (2)$$

(1)

The solution for problem (1), (2) takes the form

1/2

USSR

RVACHOV, V. L., and SLESARENKO, A. P., Dopovidi Akademii Nauk Ukrainskoi, RSR, Seriya, Fizyko-Tekhnichni ta Matematychni Nauki, No 1, 1973, pp 77-80

$$u = \frac{\sum\limits_{l=1}^{m_1} f_l \tau_l}{\sum\limits_{l=1}^{m_1} \tau_l + \sum\limits_{j=1}^{m_2} \tau_j^2 + \sum\limits_{k=1}^{m_3} \tau_k^2} + \frac{\sum\limits_{j=1}^{m_2} q_j \tau_j + \sum\limits_{k=1}^{m_3} \delta_k \tau_k}{\sum\limits_{l=1}^{m_1} \tau_l + \sum\limits_{j=1}^{m_2} \tau_j^2 + \sum\limits_{k=1}^{m_3} \tau_k^q} +$$

$$+ \frac{\Phi \sum\limits_{k=1}^{m_3} \tau_k}{\sum\limits_{l=1}^{m_1} \tau_l + \sum\limits_{j=1}^{m_2} \tau_k} - \frac{\sum\limits_{j=1}^{m_2} D_1^{(j)} \Phi_3 \tau_j + \sum\limits_{k=1}^{m_3} (\Phi^1 h_k + D_1^{(h)} \Phi_3) \tau_k}{\sum\limits_{l=1}^{m_1} \tau_l + \sum\limits_{j=1}^{m_2} \tau_j^2 + \sum\limits_{k=1}^{m_3} \tau_k^2} .$$

This solution satisfies all boundary conditions (2) with arbitrary continuous differentiation   in $\Omega + S$ irrespective of the shape of the given body.

2/2

- 3 -

USSR

UDC: 621.396.6.017.7

RVACHEV, V. L., SLESARENKO, A. P., KRAVCHENKO, V. F.

"On Calculating Heat Fields of Radio Electronic Devices by the Method of R-Functions. Part 1"

Translation: It is shown that R-functions can be used for calculating the heat fields of radio electronic equipment comprised of separate components arbitrarily located in space, where the profiles of these components can be represented by piecewise-smooth sections of known surfaces. Resumé.

1/1

- 37 -

USSR

UDC: 621.396.6.017.7

RVACHEV, V. L., SLESARENKO, A. P., KRAVCHENKO, V. F., LYSOV, V. P.

"On the Theory of Automating the Calculation of Heat Fields in Designing Radio Electronic Devices"

Translation: A number of relationships are derived which can be used as convenient algorithms in calculating the heat fields of radio electronic equipment on computers. Consideration is given to the possibility of automatic computer design of radio electronic equipment since computers are a component part of the fundamental equipment for electronic design. Bibliography of two titles. Resumé.

1/1

· USSR

UDC 621.396.6:536.1.001.2

KRAVCHENKO, V. P., SLESARENKO, A. P., and RVACHOV, V. L.,
Khar'kov Polytechnic Institute

"On the Theory of Calculating Thermal Fields of Complexly Shaped
Electronic Equipment"

Abstract: Generally the calculation of the thermal fields of
electronic equipment reduces to the solution of boundary-value
problems with combined boundary conditions, which include con-
ditions of the first, second, third kind and mixed boundary
conditions for equipment parts arbitrarily located in the equip-
ment module. The article proposes a method for the solution of
this class of boundary-value problems. Through the use of R-
functions the profiles of the parts can be given by piecewise
smooth sectors of known surfaces. The relation

1/2

- 10 -

USSR

KRAVCHENKO, V. P., et al., Dopovidi Akademii Nauk Ukrains'koi RSR, Seriya A -- Fizyko-Tekhnichni ta Matematychni Nauky, No 12, Dec 70, pp 1116-1119

$$u = \Phi_0 + \left[\frac{\sum_{i=1}^{m} [\Psi_{3i-1} \tau_{3i-1} + (\Psi_{3i-2} - \delta_{3i-2} \Phi) \cdot \tau_{3i-2}]}{\sum_{i=1}^{m} [\tau_{3i-1} + \tau_{3i-2}]} - D_1 \Phi_0 \right] \cdot \omega$$

is given, which can be used as a convenient algorithm for the computer-aided solution of such problems (the authors used a Minsk-22).

2/2

USSR

SLESARENKO, V. N., Far Eastern Polytechnical Institute imeni V. V. Kuybyshev

UDC 628.165.04

"Improvement of the Heat Exchange Conditions in the Evaporators"

Moscow, Vodosnabzheniye i Sanitarnaya Tekhnika, No 7, 1973, pp 8-11

Abstract: Two methods of intensification of heat exchange were analyzed: artificial shunt and a thin film stream flow along the internal vertical surface. The effect of the heat flux q1 on the heat exchange during the reflux period, as well as of the density of condensation G, evaporation density G_v, pressure p, salt concentration b on the rate of stream flow v have been established experimentally. It was established that the optimal value of the coefficient of heat exchange during the reflux under such conditions is higher by a factor of 2-3 than in case of large volume sea water boiling.

1/1

USSR   UDC 616.981.42-036.22-022.39

SLESARENKO, V. V., SEREBRENNIKOVA, S. S., and GRINFEL'D, L. A., Republic Sanitary Epidemiological Station, Ukrainian SSR, and Odesskaya Oblast Sanitary Epidemiological Station

"An Outbreak of Brucellosis Associated With the Importation of Sick Animals"

Abstract: The danger of epidemic outbreaks of brucellosis which may develop when young cattle are brought from brucellosis-infested areas into brucellosis-free territory is noted. It is imperative that veterinary and sanitation specialists conduct various saftey measures aimed at the prevention, timely discovery, and rapid elimination of the focus of infection. These measures include thorough examination of livestock for brucellosis at the time of entry and one month later, using serological and allergic methods. Depending on the results of the examination, the entire herd may have to be kept under guarantine until the first litter is born at which time all aborted animals should be examined bacteriologically. Clinical and anamnestic examination of all farm workers should be carried out routinely.

1/1

USSR

UDC: 911.3.616.9-022.39(470)

KOMPANTSEV, N. F., SLESARENKO, V. V., MERNKOVA, A. M.

"Long-range Plans for Eradicating Individual Zoonotic Infections (Brucellosis, Anthrax, and Tularemia) in USSR Territory"

V sb. Materialy XV Vses. S'ezda Epidemiologov, Mikrobiologov i infektsionov, tezisy dokl. Ch. I (Proceedings of the 15th All Union Conference of Epidemiologists, Microbiologists and Specialists in Infectious Disease, Thesis Report Part I -- collection of works) Moscow, 1970, pp 114-115 (from RZh-Meditsinskaya geografiya, No 1, Jan 71, Abstract No 1.36.82)

/No abstract/

1/1

USSR   UDC 546.3-19

SHTERENBERG, L. YE., SLESAREV, V. N., and VERESHCHAGIN, L. F., Institute of
Physics of High Pressures, Acad. Sc. USSR, Moscow

"The Influence of Alloying Elements on the Quantity of Diamonds Synthesized in
Presence of Metal Catalysts"

Abstract: The reasons behind the influence of alloying elements on the
quantity of diamonds synthesized in the system metal-carbon were studied. It
was found that in a three compartment system Fe + C + X a 5% addition of
X (Al, Si, Mg, and Ni) gave higher yields of the diamonds. Cr and Mn failed
to increase this yield. In the range of 3-5% sulfur increased the yield, but
when 9% sulfur was added -- the yield dropped. Addition of $CuCl_2$ to nickel
lowered the yield of diamonds, but addition of S to Ni_3C had no inhibitory
effect. It is claimed that the thermodynamic factors determine the effect of
alloying metals on the production of diamonds.

1/1

UDC 632.95.028

USSR

SLESAREV, V. N., and YEREMENKO, N. S., Western Kazakhstan Agricultural Institute

"Aftereffects of Various Doses of Simazine Under the Conditions of Western Kazakhstan"

Moscow, Khimiya v Sel'skom Khozyaystve, No 9, 1971, pp 53-55

Abstract: The results of experiments performed in 1966-1969 on the Frunzenskoye experimental farm of the Western Kazakhstan Agricultural Institute (Ural Oblast) to determine the aftereffects of various doses of simazine are reported. The soil in the test area was dark chestnut, clay loamy with a humus accumulative horizon of 35-40 cm and a humus content of 2.77%. The aftereffects of simazine applied to millet, corn and spring wheat were studied in the presence of weeds calculated to reduce the spring wheat harvest by 16%, the barley harvest by 13%, the millet harvest by 58% and the corn harvest by 73% without the application of herbicides.

Under the given conditions, simazine in doses of 2, 3 and 4 kg/hectare kills weeds for 2 to 3 years. In increased amounts, perennial weeds were killed even in the fourth year after injection. The greatest increase in millet

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USSR

SLESAREV, V. N., and YEREMENKO, N. S., Khimiya v Sel'skom Khozyaystve, No 9, 1971, pp 53-55

grain harvest was obtained with doses of 3 and 4 kg/hectare. The corn fields were most responsive to being cleared of weeds by simazine. When applying simazine in the amount of 1 kg/hectare, the corn yield increased by 21.8% by comparison with the control, and when applying 4 kg/hectare, by 97.6%. The spring wheat sown as an indicator in the third year suffered noticeably from the simazine. No noticeable effect on the wheat was observed in the fourth year, but weeds were still killed.
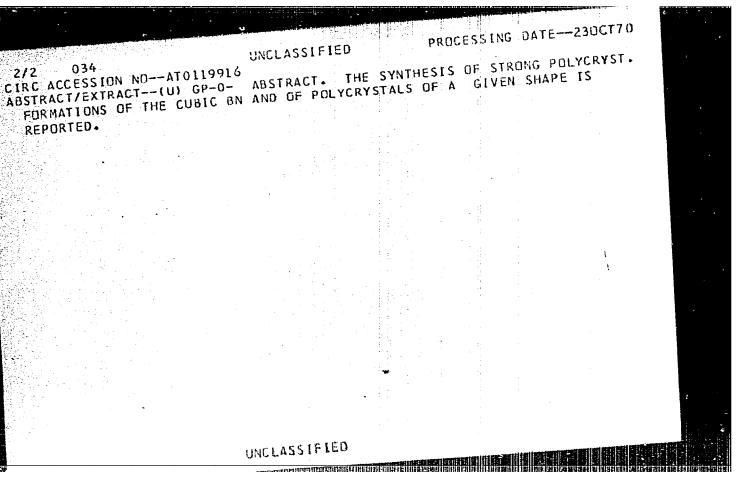
2/2

UNCLASSIFIED

PROCESSING DATE--23OCT70

1/2   034

TITLE--SYNTHESIS OF POLYCRYSTALLINE FORMATIONS OF CUBIC BORON NITRIDE -U-

AUTHOR-(05)-VERESHCHAGIN, L.F., YAKOVLEV, YE.N., SLESAREV, V.N.,
    VORFOLOMEYEVA, T.D., GLADKAYA, I.S.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(2), 345-6

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--BORON NITRIDE, CRYSTALLOGRAPHY, CHEMICAL SYNTHESIS, HIGH
    PRESSURE R AND D

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/1049   STEP NO--UR/0020/70/191/002/0345/0346

CIRC ACCESSION NO--AT0119916
                        UNCLASSIFIED

PROCESSING DATE—23OCT70

UNCLASSIFIED

2/2   034
CIRC ACCESSION NO--AT0119916
ABSTRACT/EXTRACT--(U) GP-0-   ABSTRACT. THE SYNTHESIS OF STRONG POLYCRYST.
FORMATIONS OF THE CUBIC BN AND OF POLYCRYSTALS OF A GIVEN SHAPE IS
REPORTED.

UNCLASSIFIED

UDC 536.424

USSR

VERESHCHAGIN, L. F., Academician, SHTERENBERG, L. YE.,
SLESAREV, V. N., Institute of High-Pressure Physics of the Aca-
demy of Sciences USSR, Post Office: Akademgorodok of the
Podol'sk Region of Moscow Oblast

"On the Role of the Carbide Fe$_3$C in Diamond Synthesis"

Abstract: The various ideas as to the role of carbides in dia-
mond synthesis using such metals as Ta, Fe, Ni, Co and Mn as
catalyst-solvents is discussed. The Fe-C system proposed by
Giardini and Tydings is said to be doubtful, since theoretical
and experimental studies have shown that Fe$_3$C cementite enters a
stable phase under pressure. Since the solubility of cementite
and diamond in the region of diamond synthesis is less than the
solubility of graphite, diamond and cementite will be separated
from a carbon solution in molten iron because the formation of
Fe$_3$C must accompany the synthesis of diamond. The studies de-
scribed here support this hypothesis. It was shown that a car-
bide of Fe$_3$C is formed in the stability region of diamond.

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USSR

Obtaining Fe_3C in the region of diamond growth indicates that its formation is a reaction accompanying diamond synthesis. To obtain diamonds in an iron-graphite system it is not sufficient that the pressure and temperature of the reaction correspond to the region of diamond synthesis; it is necessary that the amount of graphite exceed 25 at. % (relative to iron), corresponding to the stoichiometric composition of cementite. If the amount of graphite is equal to 25 at. %, only cementite is formed in the region of diamond growth. Since cementite enters a stable phase under high pressure, the region of diamond synthesis in the Fe-C system is limited to the left of the melting line of the iron-cementite eutectic under pressure (and not iron-graphite).

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UDC 77

USSR

BORIN, A. V., SLESAREVA, V. I., MOROZOVA, G. G., OLEYNIKOVA, V. I.

"The Effect of Sodium Thiosulfate on Photographic Properties and Storage Life
of Optically Sensitized Emulsion Layers"

Uspekhi nauchn. fotogr. (Advances in Scientific Photography), 1970, Vol. 14,
pp 116-123 (from RZh-Fizika, No 12(I), Dec 70, Abstract No 12D1337)

Translation: The effect of different amounts of sodium thiosulfate (I) introduced
into optically sensitized emulsions on the change in their properties and addi-
tional light sensitivity at the time of introduction when the emulsions stand
in a melted state or when dry layers are kept for an extended period is investi-
gated. The introduction of I before the dyes only slightly affects the sensi-
tivity properties but considerably lowers the additional sensitivity under sub-
sequent optical sensitization (it drops more for more sodium thiosulfate). The
effect of I as the melted emulsion stands is the same and depends on its quantity
and on the dye: a retardation of the drop in the additional sensitivity and its

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USSR

BORIN, A. V., et al., Uspekhi nauchn. fotogr., 1970, Vol. 14, pp 116-123

acceleration or transition from acceleration to retardation are encountered. Similar phenomena were observed under extended storage of dry layers: as in the melted state sodium thiosulfate may also cause a rise in fogging; it is especially considerable in those cases when the emulsion layers contain polyethylene glycol. The different effects of I under different conditions are primarily associated with its two functions: etching of the AgHal surface, by which the bond of the sensitivity centers with the surface is weakened, and the effect of dyes on the rate of discoloration, the products of which can desensitize or fog the emulsion. Displacement of the dye from the AgHal is also possible due to I, and in the presence of polyethylene glycol there is also slow oxidation of I and an intensification of electron-acceptor properties of sensitivity centers. 16 references. Authors abstract.

2/2

1/2   032   UNCLASSIFIED   PROCESSING DATE--27NOV70
TITLE--EFFECT OF FREQUENCY ON THE BRIGHTNESS OF ZNS:CU ELECTROLUMINESCENCE
 -U-
AUTHOR-(03)-VERESHCHAGIN, I.K., KOSYACHENKO, L.A., SLETOV, M.S.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. SPEKTROSK. 1970, 12(4), 707-11

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--ELECTROLUMINESCENCE, CRYSTAL PHOSPHOR, IONIZATION, SINGLE
 CRYSTAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/0102   STEP NO--UR/0368/70/012/004/0707/0711

CIRC ACCESSION NO--AP0127728
                        UNCLASSIFIED

2/2   032
CIRC ACCESSION NO--AP0127728
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE FREQUENCY (SINUSOIDAL VOLTAGE)
DEPENDENCE OF THE BRIGHTNESS OF ELECTROLUMINESCENCE B(F) OF ZNS:CU
PHOSPHORS OF THE EL 510 AND EL 460 TYPE WAS STUDIED BY OBTAINING B (F)
CURVES AT ROOM TEMP., SIMILAR TU 0-16 KHZ, AND 5.6-34 V FOR CONDENSERS
CONSISTING OF POLYCRYST. ZNS CU LAYERS (OF VARIOUS THICKNESS AND AREAS)
COMPRESSED BETWEEN 2 PLATES OF VARIOUS DIELECS. (GLASS, EPOXY RESIN,
METALS) AND FOR CELLS WITH ZNS:CU SINGLE CRYSTALS. THE OBSD. MAX. ON
THE B(F) CURVES SHIFT TOWARD HIGHER FREQUENCIES WITH INCREASING VOLTAGE.
THE FORM OF THE B(F) CURVES IS DETD. MAINLY BY THE PROPERTIES OF THE
PHOSPHOR, BUT THE EFFECTS OF THE NATURE OF THE DIELEC AND THE CELL
STRUCTURE HAVE TO BE TAKEN INTO ACCOUNT. TO EXPLAIN THE FREQUENCY
DEPENDENCE OF THE BRIGHTNESS OF THE ELECTROLUMINESCENCE OF ZNS:CU
PHOSPHORS, THE RATE OF IONIZATION AND THE LIGHT SUM WERE MEASURED AS A
FUNCTION OF THE PULSE DURATION OF THE EXCITATION VOLTAGE. THE FREQUENCY
DEPENDENCE OF THE BRIGHTNESS MAY BE EXPLAINED BY TAKING INTO ACCOUNT THE
TIME DEPENDENCE OF THE IONIZATION PROCESSES AND THE CAPACITANCE
PROPERTIES OF THE BARRIER AREAS.

UNCLASSIFIED

USSR

UDC 539.311

SLEZINGER, I. N., Odessa Structural Engineering Institute

"Toward a Theory of Flexible Elastic Plates"

Kiev, Prikladnaya mekhanika, Vol. VIII, No. 7, Jul 72, pp 47-53

Abstract: The following basic relationships of the geometrically nonlinear theory of plates based on the same assumptions as the theory of T. Karman are derived from the general equations of the nonlinear theory of elasticity. This derivation is said to make it possible to show in greater depth the characteristics of this theory and the validity of the various assumptions, and also to point out the necessity for certain refinements. It is stated that the introduction of such refinements can expand the area of applicability of the nonlinear theory to plates undergoing strong bending. It is shown that it is necessary to add additional terms to the equations for the equilibrium of an element of a plate that are associated with the fact that the mutual position of the element considered and the components of the external load can change greatly during deformation of the plate. A sample calculation is given showing the effect of these terms on the results.

1/1

UNCLASSIFIED

TITLE--CALCULATION OF THIN CIRCULAR CYLINDRICAL PANELS -U-

PROCESSING DATE--11SEP70

AUTHOR--SLEZINGER, I.N.

COUNTRY OF INFO--USSR

SOURCE--PRIKLADNAIA MEKHANIKA, VOL. 6, FEB. 1970, P 43-50

DATE PUBLISHED--------70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--CYLINDRICAL SHELL STRUCTURE, STRUCTURE PANEL, CALCULATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/1326

STEP NO--UR/0198/70/006/000/0043/0050

CIRC ACCESSION NO--AP0106103

UNCLASSIFIED

CIRC ACCESSION NO--AP0106103   UNCLASSIFIED   PROCESSING DATE--11SEP70
ABSTRACT/EXTRACT--(U) GP-0-   ABSTRACT.   DISCUSSION OF A METHOD BY MEANS OF
WHICH THIN CIRCULAR CYLINDRICAL PANELS OF ARBITRARY CURVATURE CAN BE
CALCULATED FOR ANY TYPE OF END SUPPORT AND ANY TYPE OF LOADING AT THE
CONTOUR.   THE METHODS MAKES USE OF THE DIFFERENCE BETWEEN THE INFLUENCE
FUNCTION OF A PANEL WITH ABSOLUTELY RIGID END CONDITIONS AND THAT OF A
PANEL WITH ANY OTHER TYPE OF END CONDITIONS.   THIS DIFFERENCE IS TAKEN
IN THE FORM OF A RAPIDLY CONVERGING SERIES.   THE PROBLEM OF THE
DEFORMATION OF A CYLINDRICAL PANEL RIGIDLY CLAMPED AT THE EDGES IS
SOLVED AS AN EXAMPLE.

UNCLASSIFIED

TITLE--CALCULATION OF THIN CIRCULAR CYLINDRICAL PANELS -U-   UNCLASSIFIED   PROCESSING DATE--11SEP70

AUTHOR--SLEZINGER, I.N.

COUNTRY OF INFO--USSR

SOURCE--PRIKLADNAIA MEKHANIKA, VOL. 6, FEB. 1970, P 43-50

DATE PUBLISHED--------70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--CYLINDRICAL SHELL STRUCTURE, STRUCTURE PANEL, CALCULATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
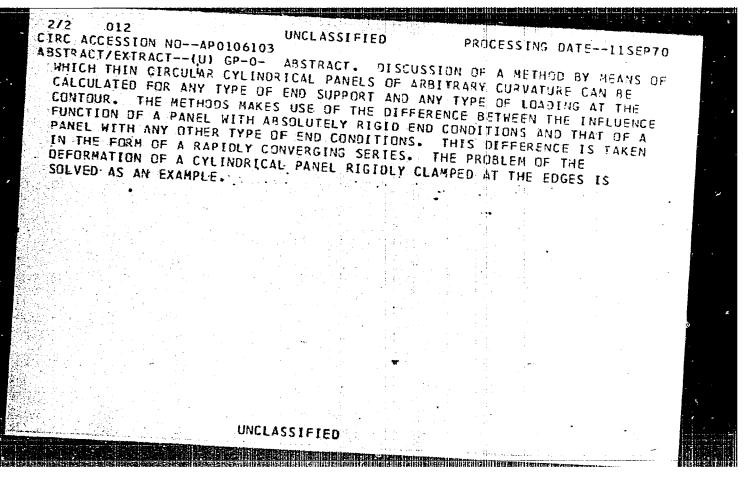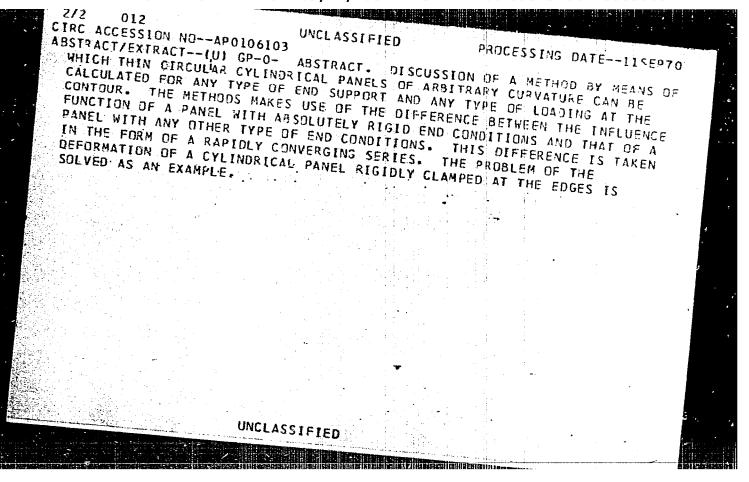PROXY REEL/FRAME--1988/1326
                               STEP NO--UR/0198/70/006/000/0043/0050

CIRC ACCESSION NO--AP0106103
                        UNCLASSIFIED

CIRC ACCESSION NO--AP0106103   UNCLASSIFIED

PROCESSING DATE--11SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DISCUSSION OF A METHOD BY MEANS OF WHICH THIN CIRCULAR CYLINDRICAL PANELS OF ARBITRARY CURVATURE CAN BE CALCULATED FOR ANY TYPE OF END SUPPORT AND ANY TYPE OF LOADING AT THE CONTOUR. THE METHODS MAKES USE OF THE DIFFERENCE BETWEEN THE INFLUENCE FUNCTION OF A PANEL WITH ABSOLUTELY RIGID END CONDITIONS AND THAT OF A PANEL WITH ANY OTHER TYPE OF END CONDITIONS. THIS DIFFERENCE IS TAKEN IN THE FORM OF A RAPIDLY CONVERGING SERIES. THE PROBLEM OF THE DEFORMATION OF A CYLINDRICAL PANEL RIGIDLY CLAMPED AT THE EDGES IS SOLVED AS AN EXAMPLE.

UNCLASSIFIED

USSR

BOGATSKAYA, I. G., KLIMOV, D. M., and SLEZKIN, L. N., Moscow   UDC   531.1

"The Effect of the Ovality of Suspension Elements on the Accuracy of a Gyroscopic Integrator of Linear Accelerations"

Moscow, Izvestiya Akademii Nauk SSSR, Mekhanika Tverdogo Tela, No 4, Jul-Aug 73, pp 68-70

Abstract: The authors study the motion of a gyroscopic integrator of linear acce- lerations in the presence of ellipticity of support elements acting as the sus- pension for the gyroscope housing. The case is considered where the acceleration being integrated by the device is constant and its direction constitutes a con- stant angle with the axis of the external frame of the device, for example where the unit is set on the earth at an angle lamba to the plane of the horizon. A formula is derived for the relative error of indication of a gyrointegrator.

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- 149 -

"Shock Theory of Rough Spheres"

Abstract: The rough spheres considered in this paper are partially elastic and partially rough rather than fully elastic and absolutely rough, as in the idealized case. For such spheres, the shock theory can be used for the derivation of the corresponding generalized integrodifferential equation for the Boltzmann kinetic theory of gases. Four cases are considered: The shock of a material point against a rough, immovable surface; the shock of an incident rough sphere on an immovable, inclined rough surface; the shock of rough and deformable spheres; and the conditional reverse collision of rough spheres. The assumption is made that the contact of the colliding spheres does not for the most part occur at a single point on a line connecting the sphere centers, but at some small area. As a consequence, the shock impulses should be considered as distributed over the contact area.

1/1

172   026

TITLE--USE OF SURFACE ACTIVE SUBSTANCES IN THE DIE EXTRUSION OF HARD
  ALLOYS -U-   UNCLASSIFIED   PROCESSING DATE--13NOV70

AUTHOR-(02)-PLYUSHCH, G.V., SLEZKO, A.I.

COUNTRY OF INFO--USSR

SOURCE--POROSHKOVAYA MET., FEB. 1970, (2), 11-13

DATE PUBLISHED----FEB70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--PLASTICIZER, SURFACE ACTIVE AGENT, METALWORKING LUBRICANT,
  METAL EXTRUSION, HARD ALLOY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0126

CIRC ACCESSION NO--AP0123898   STEP NO--UR/0226/70/000/002/0011/0013

                          UNCLASSIFIED

CIRC ACCESSION NO--AP0123898
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MERITS OF INCORPORATING
SURFACE ACTIVE SUBSTANCES IN THE PLASTICIZERS USED FOR THE DIE EXTRUSION
OF WC-CO AND OTHER HARD ALLOYS ARE CONSIDERED IN THE LIGHT OF PRACTICAL
EXPERIENCE. THUS, THE ADDITION OF 1PERCENT SURFACE ACTIVE SUBSTANCES TO
THE 5PERCENT PARAFFIN CONVENTIONALLY USED AS PLASTICIZER LEADS TO A
MARKED ADSORPTION EFFECT RESULTING IN THE REDUCTION OF THE SPECIFIC
PRESSURE REQUIRED BY SIMILAR TO 100 KG-CM PRIME2. THE SURFACE ACTIVE
SUBSTANCES GREATLY EASE THE PREPARATION OF THE MIXTURE FOR DIE
EXTRUSION.

UNCLASSIFIED

PROCESSING DATE--23OCT70

UNCLASSIFIED

1/2   016
TITLE--USE OF POLAROGRAPHY FOR CONTROLLING THE PRODUCTION OF
4,ACETYLNAPHTHALIC ANHYDRIDE -U-
AUTHOR-(05)-KOTOK, L.A., SHEVCHENKO, E.A., BEZUGLYY, V.D., KRASOVITSKIY,
B.M., SLEZKO, G.F.
COUNTRY OF INFO--USSR

SOURCE--KHIM. PROM. UKR. 1970, (1), 46-8

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--REACTION KINETICS, NAPHTHENE, OXIDATION, POLAROGRAPHIC
ANALYSIS, ANPHTHALENE, CARBOXYLIC ACID

CONTROL MARKING--NO RESTRICTIONS.

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1997/0739   STEP NO--UR/0436/70/000/001/0046/0048

CIRC ACCESSION NO--AP0119646
UNCLASSIFIED

CIRC ACCESSION NO--AP0119646
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE KINETICS OF
4,ACETYLACENAPHTHENE (I) FORMATION AND OF ITS OXIDN. WITH NA SUB2 CR
SUB2 OR SUB7 WERE STUDIED. I WAS DETD. IN THE SYNTHESIS PROCESS BY
POLAROGRAPHIC ANAL. OF A SAMPLE IN A SUPPORTING ELECTROLYTE OF 0.02 N ET
SUB4 NI SOLN. IN 92PERCENT MEOH. THE YIELD OF I DURING ACETYLATION OF
ACENAPHTHENE IN THE PRESENCE OF SNCL SUB2 AT 100 AND 120DEGREES IS GIVEN
AS A FUNCTION OF TIME. TO ANALYZE THE MIST. OF 4,ACETYLNAPHTHALIC AND
1,4,5,NAPHTHALENETRICARBOXYLIC ACIDS RESULTING FROM OXIDN. OF I, THE H
SUB2 O LAYER CONTG. THEIR NA SALTS WAS ACIDIFIED WITH HCL AND EXTD. WITH
C SUB6 H SUB6 AND ANALYZED POLAROGRAPHICALLY IN A SUPPORTING ELECTROLYTE
OF 0.1 N CACL SUB2-ALC. SOLN. CONTG. 0.01 N LIOH.   FACILITY:
RUBEZHAN. KHIM. KOMB., RUBEZHNOE, USSR.

1/2   013
UNCLASSIFIED
TITLE--DETERMINATION OF CALCIUM IN MAGNETIC ALLOYS -U-
PROCESSING DATE--23OCT70

AUTHOR-(04)-CHASHCHINA, O.V., SLEZKO, N.I., OTMAKHOVA, Z.I., ZARUBINA, R.F.

COUNTRY OF INFO--USSR

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CIRC ACCESSION NO--AP0118845   PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A 0.25-G SAMPLE OF ALLOY CONTG.
0.9-0.003PERCENT CA WAS DISSOLVED IN 5 ML 4N HNO SUB3. THE SOLN. WAS
EVAPD. TO A SYRUPY CONSISTENCY AND, AFTER ADDN. OF 20 ML 10N HCL, IT WAS
PASSED THROUGH 11 G OF ANION EXCHANGER AB-17-8 IN THE CL PRIME NEGATIVE
FORM. IN THIS WAY FE, CU, AND CO WERE SEPD. AND CA WAS DETD. IN SOLN.
IN THE PRESENCE OF AL 8, TI 0.5, AND NI 14PERCENT BY EMISSION
SPECTROGRAPHY.   FACILITY: TOMSK. GOS. UNIV. IM. KUIBYSHEVA,
TOMSK, USSR.

UNCLASSIFIED

USSR

ABRAMENKOV, A. D., SERYUGIN, A. L., MARTYNOV, I. S., SLEZOV, V. V., FOGEL',
YA. M., Physicotechnical Institute, Academy of Sciences UkrSSR, Khar'kov

"Formation of Islets From Copper Atoms Diffusing Over a Molybdenum Surface"

Abstract: The results of a direct study of the formation of islets in the
diffusion of copper over molybdenum using optical and electron microscopes are
presented. The theory of the formation of islets from atoms diffusing over
the surface of a substrate was developed by A. D. Abramenkov, et al. Accord-
ing to this theory, based on the assumption that surface defects in the sub-
strate are the locus for the formation of nuclei of islets, the diffusing
material is distributed over the surface of the substrate in three zones if
the diffusion times are sufficiently large. In zone III, which is furthest
from the source of the diffusing material, there occurs only diffusion by
atomic jumps from one adsorption point on the surface of the substrate to
another. In this zone the concentration of diffusing material is still too
low for the formation of nuclei of islets to occur at defects in the substrate
surface. In zone II, where the concentration of diffusing material is higher,

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ABRAMENKOV, A. D., et al, Fizika Tverdogo Tela, No. 12, Dec 71, pp 3496-3500

islets from diffusing atoms are generated at defects in the substrate surface,
and the dimensions of these islets increase with the course of time. In zone
I, which lies next to the boundary of the source of diffusing material, the
dimension of the islets reaches a maximum value which does not change with
the further passage of time. The general conclusions of the theory of the
formation of islets of diffusing material on a substrate surface were verified,
and data were obtained on the formation of copper islets on molybdenum which
agree quantitatively with the results of theoretical calculations. The agree-
ment between experimental and theoretical values of the size of the islets
was good despite certain assumptions made in the calculations. The direct
measurement of the average diameter of the islets gave a value of $\sim 10^{-5}$ cm,
while a theoretical calculation yielded the value $3 \cdot 10^{-6}$ cm.

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