

AA0040727

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Sidorenko, O. A.

Zavod "Zaporozhstal"

19750380

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1/2 019 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--TEMPERATURE DEPENDENCE OF THE MOESSBAUER EFFECT FOR OCTAHEDRAL IRON
ATOMS IN GARNETS -U-
AUTHOR-(03)-LYUBUTIN, I.S., DODOKIN, A.P., BELYAYEV, L.M.
COUNTRY OF INFO--USSR
SOURCE--FIZ. TVERD. TELA 1970, 12(5), 1399-401
DATE PUBLISHED-----70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY, PHYSICS, MATERIALS
TOPIC TAGS--MOSSBAUER EFFECT, IRON, GARNET, DEBYE TEMPERATURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3005/0957

STEP NO--UR/0181/70/012/005/1399/1401

CIRC ACCESSION NO--AP0133043

UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0133043

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AT 77-800DEGREEK, THE MOESSBAUER EFFECT WAS INVESTIGATED FOR OCTAHEDRAL FE ATOMS IN THE GARNETS CA SUB3 FE SUB2 SI SUB3 O SUB12 AND CA SUB3 FE SUB2 GE SUB3 O SUB12. THE TEMP. DEPENDENCE OF THE ISOMER SHIFT IS RELATED MAINLY TO THE TEMP. DEPENDENCE OF THE RELATIVISTIC SHIFT. FROM MEASUREMENTS OF THE PROBABILITY OF THE RESONANCE ABSORPTION, THE "MOESSBAUER" DEBYE TEMP. WAS EVALUATED, WHICH IS LOWER THAN THE CALORIMETRIC DEBYE TEMP. FACILITY: INST. KRISTALLOGR., MOSCOW, USSR.

UNCLASSIFIED

1/2 025 UNCLASSIFIED) PROCESSING DATE--11SEP70
TITLE--MAGNETIC AND ELECTRIC HYPERFINE INTERACTIONS OF FE PRIME57 NUCLEI
IN VANADIUM AND SILICON GARNETS -U-
AUTHOR--LYUBUTIN, I.S., BELYAYEV, L.M., VISHNYAKOV, YU.S., OMITRIYEVA,
T.V., DODKIN, A.P.
COUNTRY OF INFO--USSR

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SOURCE--ZHURNAL EKSPERIMENTAL'NOY I TEORETICHESKOY FIZIKI, 1970, VOL 58,
NR 4, PP 1204-1210
DATE PUBLISHED-----70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY, MATERIALS

TOPIC TAGS--VANADIUM, SILICON, GARNET, MOSSBAUER EFFECT, IRON COMPOUND,
ELECTRIC FIELD, MAGNETIC FIELD

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY RFEL/FRAME--1988/0989

STEP NO--UR/0056/70/058/034/1204/1210

CIRC ACCESSION NO--AP0105853

UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0105853

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MOSSBOUER EFFECTS FOR FE PRIME 57 NUCLEI IN THE SUBSTITUTED GARNET SYSTEMS $Y_{SUB3} MINUS X_{CA} SUBX_{FE} SUB5 MINUS X_{SI} SUBX_{O} SUB12$ WITH $0 < X < 3.0$ AND $Y_{SUB3} MINUS 2X_{CA} SUB2X_{FE} SUB5 MINUS X_{V} SUBX_{O} SUB12$ WITH $0 < X < 1.5$ IS INVESTIGATED AT TEMPERATURES BETWEEN 78 AND 600 DEGREE SK. IT IS FOUND THAT THE EFFECTIVE MAGNETIC FIELDS H_{SUBEFF} IN THE ALPHA-SUBLATTICE OF THE VANADIUM GARNETS IS LOWER THAN THE CORRESPONDING FIELDS IN SILICON GARNETS FOR EQUAL REDUCED TEMPERATURES $T-THETA$. SUBSTITUTION LEADS TO A STRONG GROWTH OF THE ELECTRIC FIELD GRADIENT IN THE ALPHA-SUBLATTICES OF VANADIUM AS WELL AS SILICON GARNETS, THE GROWTH BEING MORE PRONOUNCED IN THE VANADIUM GARNETS. IT IS ALSO FOUND THAT WITH GROWTH OF X THE MAGNITUDE OF THE ISOMER SHIFT IN THE ALPHA-SUBLATTICE DECREASES. THE EFFECTS CAN BE EXPLAINED BY A COVALENCE ADMIXTURE TO THE IONIC CHEMICAL BOND BETWEEN IRON AND OXYGEN IN THE ALPHA-SITES OF THE VANADIUM GARNETS.

UNCLASSIFIED

USSR

UDC 669.715.721.725.295.296.74.26.018.29(033.3

BELOUSOV, N. N., MIKHEYEVA, Ye. N., ZHOLOBOVA, Ye. P., KASHEVNIK, L. Ya.,
DODONOV, A. A., YEGOROVA, V. A., YEVSTRATOV, Yu. A., POPKOVA, V. A., BOTYANOVSKIY,
M. G.

"Aluminum-Based Casting Alloy"

USSR Author's Certificate, No. 253375, Filed, 19/06/67, Published, 8/10/70.
(Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5
I670P).

Translation: The alloy has the following composition (%): Mg 8-9.5, Be 0.03-0.15,
Ti 0.05-0.15, Zr 0.05-0.2, Mn 0.1-0.3, Cr 0.05-0.15, remainder Al. The alloy has
high technological properties, corrosion resistance, and stability of properties.
In the cast state, the alloy, when cast in a sand mold, has σ_b 18-23 kg/mm², δ 0.7
- 2.5%, a_H 0.2-0.4 kgm/cm²; when cast in a chill mold - σ_b 27-33 kg/mm², δ 4 -
12%, a_H 0.4 - 1.2 kgm/cm².

1/1

1/2 012 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--SYNTHESIS AND SOME REACTIONS OF DIETHYL (ALPHA, (TERT-BUTYLPEROXY)
ETHOXY) THALLIUM -U-
AUTHOR--(04)-RAZUVAYEV, G.A., MITROFANOVA, YE.V., DODONOV, A.A., MOLKOVA,
L.N.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (2), 465-6
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--CHEMICAL SYNTHESIS, ALKOXIDE, THALLIUM COMPOUND, PEROXIDE,
CHEMICAL DECOMPOSITION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1997/0841 STEP NO--UR/0062/70/000/002/0465/0466
CIRC ACCESSION NO--AP0119745
UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0119745

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ADDING 1.39 G ME SUB3 COOCHMEOH IN ET SUB2 O TO 3.03 G ET SUB3 TI AT 5DEGREES GAVE C SUB2 H SUB6, AND AFTER 15 MIN, THE MIXT. WAS COOLED TO MINUS 75DEGREES TO PPT. 50-5PERCENT ET SUB2 TIOCHMEODOCME SUB3, M. 10DEGREES. THIS IN DEGASSED C SUB6 H SUB6 HEATED 24 HR AT 50DEGREES GAVE ET SUB2 TIOAC AND ME SUB3 COH. SIMILARLY IN CUMENE THE PEROXIDE DECOMP. AT ROOM TEMP. IN 2.5 DAYS TO YIELD ET SUB2 TIOAC, ME SUB3 COH, DICUMYL, AND ET SUB2 TIOH; A LOW YIELD OF ACH WAS DETECTED ALSO. REACTIONS WITH ISO,PRBR AND ME SUB3 CBR IN C SUB6 H SUB6 GAVE ET SUB2 TIOAC AND ME SUB3 COH. FACILITY: LAB. STABIL. PULIM., GORKI, USSR.

UNCLASSIFIED

USSR

DODONOV, A. G. and FEDOTOV, V. V.

"The Problem of the Maximum Dynamic Flow in a Network"

Gibrid. Vychisl. Tekhn. i Elektronika [Hybrid Computer Equipment and Electronics -- Collection of Works], Kiev, Nauk. Dumka Press, 1972, pp 384-390 (Translated from Referativnyy Zhurnal Kibernetika, No 9, 1973, Abstract No 9V521).

Translation: Oriented network G is studied with source H and sink K , in which each arc (i, j) has not only throughput capacity $c(i, j)$, but time of passage $t(i, j)$. The problem is to find the flow of the maximum quantity of product from the source to the sink over a given number of time periods τ (this flow is called the maximum dynamic flow from H to K in τ periods). This problem is solved in a book of L. R. Ford and D. R. Fulkerson (RZhMat, 1966, 11V249K).

This article is dedicated to discussion of one theorem of Ford and Fulkerson, according to which the maximum dynamic flow from H to K in τ periods can always be generated by stable flow $x_{\tau+1}(i, j)$ from H to K in the initial network, maximized by the linear function

$$(\tau+1)y - \sum_{(i,j)} t(i,j) \cdot x(i,j).$$

1/2

(1)

USSR

Dodonov, A. G. and Fedotov, V. V., Gibrid. Vychisl. Tekhn. i Elektronika, Kiev, Nauk. Dumka Press, 1972, pp 384-390.

where $x(i, j)$ is the stable flow from H to K in network G, y is the value of this flow $x(i, j)$ (here $\text{flor } x(i, j)$), naturally, should not disrupt the condition of throughput capacity $c(i, j)$ of network G).

In the first portion of this article it is affirmed that this theorem "does not indicate what stable flow $x(i, j)$ should be," and a "contradictory example" is constructed, i.e., a network in which stable flow $x(i, j)$ does not generate the maximum dynamic flow. Actually, the authors of the article are confused, since their example involved the maximum stable flow in network G, not flow $x_{\tau+1}(i, j)$, maximizing function (1). As concerns flow $x_{\tau+1}(i, j)$ the statement of the theorem of Ford and Fulkerson is always fulfilled in any network for it.

The second portion of the article actually repeats the method of Ford and Fulkerson for production of the maximum dynamic flow by means of a chain expansion of stable flow $x_{\tau+1}(i, j)$.

Ye. Levner

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USSR

ANTSUT, V. A., DODONOV, A. G. and FEDOTOV, V. V.

"One Method of Solution of the Problem of the Minimum Flow"

Gibrid. Vychisl. Tekhn. i Elektronika [Hybrid Computer Equipment and Electronics -- Collection of Works], Kiev, Nauk. Dumka Press, 1972, pp 445-455
(Translated from Referativnyy Zhurnal Kibernetika, No 2, 1973, Abstract No 9V520).

Translation: The flow of the minimum quantity satisfying the conditions $z(i, j) \geq r(i, j)$ is sought in a fixed oriented network, where $r(i, j)$ represent the fixed throughput capacities of the arc. The method of reduction of this problem to the problem of maximum flow is described in detail. The search for the minimum flow consists of the following three stages: 1. A certain permissible flow is sought, such that $x(i, j) \geq r(i, j)$ in all arcs (i, j) . 2. The residual throughput capacities $\Delta s(i, j) = x(i, j) - r(i, j)$ are calculated and the maximum flow $\bar{x}(i, j)$ is constructed (for example with a Ford-Fulkerson algorithm) such that $x(i, j) \leq \Delta x(i, j)$ on all arcs (i, j) . 3. The desired minimum flow is found as follows $x_{\min}(i, j) = x(i, j) - \bar{x}(i, j)$.
This method agrees with a method presented (in shorter form) in a book of K. Berzha (RZhMat, 1963, 7A314K, pp 88-89).

Ye. Levner

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USSR

UDC: 51

VASIL'YEV, V. V., DODONOV, A. G., LEVINA, A. I.

"On a Method of Solving the Traveling Salesman Problem"

Tr. Seminara po metodam mat. modelir. i teorii elektr. tsepey. In-t kibernet. AN USSR (Works of the Seminar on Methods of Mathematical Modeling and Electric Circuit Theory. Institute of Cybernetics, Academy of Sciences of the Ukrainian SSR), 1971, vyp. 9, pp 58-67 (from RZh-Kibernetika, No 4, Apr 72, Abstract No 4V449)

Translation: A method is outlined for solving the problem of the traveling salesman. The procedure is based on solution of the problem of the shortest path on an expanded graph. Possibilities of reducing the dimensions of an expanded graph are discussed. The method enables simulation of least-dimension problems on type ASOR computers. Authors' abstract.

I/1

USSR

UDC 541.15 547.241

ZAGORETS, P. A., SHOSTENKO, A. G., ~~DODONOV, A. M.~~, Moscow Institute of Chemical Technology imeni D. I. Mendeleev

"Gamma-Initiated Synthesis of β -Chloroalkyldichlorophosphines"

Leningrad, Zhurnal Obshchey Khimii, Vol 41, No 10, 1971, pp 2171-2173

Abstract: A study was made of the products of addition reactions, initiated by gamma-irradiation from Co-60 source, of phosphorus trichloride with straight- and branched-chain olefins containing 4 to 8 carbons in a molecule. The reactions yielded 77 to 95 percent β -chloroalkyldichlorophosphines (I) which are important intermediate products, easily convertible into acids, esters, and amines, because they contain labile chlorine atoms. The maximum yield of (I) was obtained by irradiation, with 1-200 rad/sec. dose, of a mixture of liquid olefin and phosphorus trichloride in 1:4 molar ratio. Almost all preparations produced a mixture of two isomers of the 1:1 adduct with admixtures of the products of radical recombination and disproportionation reactions.

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USSR

ZAGORETS, P. A., et al, Zhurnal Obshchey Khimii, Vol 41, No 10, 1971, pp 2171-2173

A series of pure (I) were separated by vacuum distillation and were identified by elemental analysis and IR spectra. The tabulated analytical data show that one or another isomer of (I) can be obtained in predominant quantity by varying the reaction temperature in the 0-70° range. The elemental analysis data and some physical constants are tabulated for the series of (I) and IR spectra of three (I) compounds are shown. The experimental procedures are described in some detail.

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USSR

UDC 541.15+547.241

ZAGORETS, P. A., SHOSTENKO, A. G., ~~DODONOV, A. M.~~, Moscow Institute
of Chemical Technology imeni D. I. Mendeleev

"Radiochemical Synthesis of Chloroethyldichlorophosphine From
PCl₃ and Ethylene"

Moscow, Khimiya Vysokikh Energii, Vol 5, No 6, Nov-Dec 71,
pp 556-557

Abstract: The authors synthesized chloroethyldichlorophosphine by addition of phosphorus trichloride to ethylene under the action of Co-60 gamma radiation. Elemental analysis and IR spectroscopy were used to identify the reaction product. The kinetics of chloroethyldichlorophosphine accumulation were studied at temperatures of 100, 130, 150, 180 and 195° and absorbed dose rates of $1.5 \cdot 10^{16}$, $2.5 \cdot 10^{16}$, $7.7 \cdot 10^{16}$ and $12.8 \cdot 10^{16}$ ev/ml. It was found that the radiation yield of chloroethyldichlorophosphine increases with use in temperature and a decrease in radiation dose rate.

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USSR

DODONOV, S. B.

"A System for Interpretation of a High-Level Language"

Upravlyayushchiye Sistemy i Mashiny [Control Systems and Machines],
1973, No 1, pp 101-102 (Translated from Referativnyy Zhurnal Kiber-
netika, No 10, 1973, Abstract No 10V681)

Translation: The interpretation system suggested utilizes three lan-
guages (L_{in} is the input language, L_2 and L_4 are internal languages),
and operates in two modes -- debugging and computation. Debugging of
the program is performed using L_{in} and L_2 . The debugged program is
translated from L_2 to L_4 , a lower level language. The use of this sys-
tem allows program debugging time to be saved and provides for a high
interpretation speed.

Author's view

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Acc. Nr.

AP0053762

Abstracting Service:
CHEMICAL ABST.

Ref. Code

UR0366

5/30

110967q Peracylalkyl(aryl) carbonates. VIII. Reactions of some aryloxy radicals with carbon tetrachloride. Razuvaev, G. A.; Starostina, T. I.; Dodonov, V. A. (Gor'k. Gos. Univ. im. Lobachevskogo, Gorki, USSR). *Zh. Org. Khim.* 1976, 6(2), 237-40 (Russ). The thermal decompn. of $BzOOCO_2R$ or $AcOOCO_2R$ (R is iso-Pr, Me, or cyclohexyl) at 60° in CCl_4 gives $RO_2CO\cdot$, $BzO\cdot$ and $AcO\cdot$ which lose CO_2 to give $RO\cdot$, $Ph\cdot$, or $Me\cdot$. $RO\cdot$ react with CCl_4 to give HCl, acetone (HCHO or cyclohexanone) and $Cl_3C\cdot$. $Cl_3C\cdot$ reacts further with HCHO to give $HCCL_3$, CO, and HCl.

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REEL/FRAME
19830825

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Organometallic Compounds

USSR

UDC 542.91 + 541.459 + 547.214

ZUBAYEV, G. A., MITROFANOVA, YE. V., ~~DODONOV, V. A.~~, and MOL'KOVA, L. N., Laboratory of Polymer Stabilization, Academy of Sciences USSR

"Synthesis and Some Reactions of Diethylthalliumethoxy- α -peroxy-tert.-butyl"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 2, Feb 70, pp 465-466.

Abstract: The interaction of triethylthallium with α -hydroxy-tert.-butyl peroxide gives diethylthalliumethoxy- α -peroxy-tert.-butyl. The latter is an organometallic peroxide compound which decomposes on heating in benzene, cumene, isopropyl bromide and tert.-butyl bromide with cleavage of the oxygen-oxygen bond to give diethylthallium acetate and tert.-butyl alcohol.

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1/2 009

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--REACTIONS OF ALPHA CHLOROETHYL TERT BUTYL PEROXIDE WITH
ORGANOMAGNESIUM COMPOUNDS -U-

AUTHOR--(03)-RAZUVAYEV, G.A., DODONOV, V.A., ZABURDYAYEVA, S.N.

COUNTRY OF INFO--USSR

SOURCE--ZH. GRG. KHIM. 1970, 6(4), 657-8

D

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHLORINATED ORGANIC COMPOUND, ORGANIC PEROXIDE,
ORGANOMAGNESIUM COMPOUND, CHEMICAL REACTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAHE--2000/2034

STEP NO--UR/0366/70/006/004/0657/0658

CIRC ACCESSION NO--AP0125622

UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125622

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTION OF TERT BUOOCHMECL
WITH RMGCL (R IS ME, BU, CYCLOHEXYL, PHCH SUB2, OR PH) IN ET SUB2 O
SOLN. GAVE 50-5PERCENT TERT BUOOCHMER.

UNCLASSIFIED

USSR

UDC 621.385.632.2

DODONOV, Yu. I.

"Pin Mechanism For Tuning"

USSR Author's Certificate No 272999, filed 6 June 68, published 8 Aug 70 (from RZh--Elektronika i veve primeneniye, No 4, April 1971, Abstract No 4A159P)

Translation: A plunger mechanism is proposed for tuning a magnetron. With the object of increasing the width and slope of the tuning band of the device, each plunger of the mechanism is made in the form of a solid metal bar, the ends of which have a cylindrical cavity with a longitudinal slot for connection with the electromagnetic field of the device and separated from the remaining part of the plunger by a transverse groove.

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1/2 020 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--DETECTION OF ANTIBODY TO ONCOGENIC VIRUSES AND CERTAIN ADENOVIRUSES
IN GREEN MONKEY SERA -U-
AUTHOR--(05)--~~OGDONOVA, N.N.~~, OMELCHENKO, T.N., VASILYEVA, N.N., TSETLIN,
YE.M., ALTSHEYN, A.D.
COUNTRY OF INFO--USSR

SOURCE--VOPROSY VIRUSOLOGII, 1970, NR 3, PP 308-312

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ADINOVIRUS, MONKEY, ANTIBODY, ANTIGEN, HEMAGGLUTININ

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--2000/1844

STEP NO--UR/0402/70/000/003/0308/0312

CIRC ACCESSION NO--AP0125455

UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125455

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SERA OF HEALTHY GREEN MONKEYS FROM ANIMAL HOUSES OF THE MOSCOW INSTITUTES WERE TESTED FOR ANTIBODY TO SOME ONCOGENIC AND NON ONCOGENIC ADENOVIRUSES OF MONKEYS IN NEUTRALIZATION TEST, HI TEST AND CFT. NEUTRALIZING ANTIBODY TO HIGHLY ONCOGENIC ADENOVIRUSES SV20 AND SA7(C8) WAS FOUND IN 16PERCENT OF THE MONKEYS, AND FOR ADENOVIRUSES SA7(C626) AND SA7(B105) IN 2-4PERCENT OF THE MONKEYS. ANTIHEMAGGLUTININS FOR SV23(M2) AND SV32(M3) ADENOVIRUSES WERE FOUND IN 26-28PERCENT, AND FOR SV15(M4), SV37 AND SA7(B105) ADENOVIRUSES IN 10, 15 AND 6PERCENT OF MONKEYS, RESPECTIVELY. ONE MONKEY CAN POSSESS ANTIBODIES IN TWO, THREE, LESS FREQUENTLY FOUR ADENOVIRUSES. COMPLEMENT FIXING ANTIBODY FOR ADENO GROUP SPECIFIC ANTIGEN WAS FOUND IN 16PERCENT OF THE MONKEYS. THESE DATA INDICATE WIDESPREAD DISTRIBUTION OF ONCOGENIC AND NONONCOGENIC VIRUSES IN GREEN MONKEYS. FACILITY: GOSUDARSTVENNYY KONTROL'NYY INSTITUT MEDITSINSKIKH BIOLOGICHESKIKH PREPA4ATOV IMENI L. A. TARASEVICH, MOSKVA.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--A HEMAGGLUTINATING ADENO ASSOCIATED SIMIAN VIRUS -U-
AUTHOR--(05)--KRAVCHENKO, A.T., OMELCHENKO, T.N., DODONOVA, N.N.,
KHETAGUROVA, A.K., ALTSHTEYN, A.D.
COUNTRY OF INFO--USSR
SOURCE--VOPROSY VIRUSOLOGII, 1970, NR 3, PP 301-308
DATE PUBLISHED--70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--ADENOVIRUS, HEMAGGLUTINATION, ANTIBODY, MONKEY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--2000/1469 STEP NO--UR/0402/70/000/003/0301/0308
CIRC ACCESSION NO--AP0125097
UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125097

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A HEMAGGLUTINATING ADENO ASSOCIATED VIRUS (AAV) WAS RECOVERED FROM A STRAIN OF SIMIAN ADENOVIRUS SV15. ITS MORPHOLOGY AND CAPACITY TO BE ACTIVATED BY DIFFERENT SIMIAN ADENOVIRUSES WAS STUDIED. HIGHLY ONCOGENIC SIMIAN ADENOVIRUSES SV20 AND SA7(C8) DID NOT ACTIVATE THE STRAINS OF AAV UNDER STUDY, UNLIKE 14 OTHER SEROTYPES OF SIMIAN ADENOVIRUSES. A METHOD FOR TITRATION OF THE INFECTIOUS ACTIVITY OF AAV WAS DEVELOPED. FORMATION OF AAV HEMAGGLUTININS WAS SHOWN TO BE ONLY PARTIALLY INHIBITED BY 5, IODO, DEOXYURIDIN AND ALMOST COMPLETELY INHIBITED BY 5, FLUCRO, 2, DEOXYRIDINE. PROPERTIES OF HEMAGGLUTININS AND CONDITIONS FOR PERFORMING HA TEST AND HI TEST WITH AAV WERE STUDIED, AS WELL AS PROPERTIES OF HEMAGGLUTINATION INHIBITORS IN MONKEY SERA. SEVENTY FOUR PER CENT OF GREEN MONKEYS IMPORTED TO MOSCOW ANIMAL HOUSES WERE SHOWN TO HAVE ANTIBODY FOR THE HEMAGGLUTINATING AAV STRAIN. NO ANTIBODY FOR AAV WAS FOUND IN HUMAN SERA.


FACILITY: GOSUDARSTVENNYY KONTROLYNYY INSTITUT MEDITSINSKIKH.
 FACILITY: BIOLOGICHESKIKH PREPARATOV IMENI L. A. TARASEVICH, INSTITUT EPIDEMIOLOGII I MIKROBIOLOGII IMENI N. F. GAMALEI, MOSKVA.

UNCLASSIFIED

Oncology

USSR

UDC 616.988.6.092.4

 AL'TSHEYN, A. D., TSETLIN, YE. M., DODONOVA, N. N., SARYCHEVA, O. F., LEVENBUK, I. S., and CHIGIRINSKIY, A. YE., State Control Institute of Biomedical Preparations imeni L. A. Tarasevich

"Tumor Formation in Cells Transformed in vitro by SV40 Virus"

Leningrad, Voprosy Onkologii, No 1, 1970, pp 63-69

Abstract: Mouse and rat embryonic cells transformed by SV40 virus did not form tumors in isologous animals, a phenomenon unrelated to the inability of these cells to produce tumors in vivo. Hamster embryonic and kidney cells readily induced continuous malignant growth in vivo. The fibroblast-like embryonic cells gave rise to sarcomas, while the kidney epithelioid cells induced carcinosarcomas and adenocarcinomas. The hamster tumor cells that developed after the inoculation of transformed hamster cells were readily passaged in vivo and vitro, where they retained the structure of the original cells. The immunofluorescence method revealed changes in the distribution of T-antigen after the transformed kidney cells were passaged in hamsters. There is a clear relationship between the sensitivity

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USSR

AL'TSHTEYN, A. D., et al., Leningrad, Voprosy Onkologii, No 1, 1970,
pp 63-69

of the hamster to the oncogenic action of SV40 virus and the ability
of the transformed cells of this species to induce tumors in iso-
or homologous animals.

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Acc. Nr:

AP0045502

Abstracting Service:
CHEMICAL ABST.

4-70

Ref. Code:
UR 0051

D

84610w Excitation of the luminescence of benzene derivatives by vacuum ultraviolet radiation. Vinogradov, I. P.; Dodonova, N. Ya. (USSR). *Opt. Spektrosk.* 1970, 28(1), 170-2 (Russ). The luminescence of C₆H₆ and its derivs. have been excited with uv radiation of 160, and, in some cases, 120 nm by using a H lamp and a vacuum monochromator. The luminophors were sublimed as thin films on liq.-N-cooled aluminized glass substrates prior to irradiation. The spectra of C₆H₆, PhMe and diphenylmethane have a band at ~300 nm. All spectra except that of C₆H₆ have a clearly defined structure in the 400-500-nm region and have identical intensity distribution. This band appears immediately after the light source is turned on.

Boris H. Tytell

LD

K

REEL/FRAME
19780468

7

USSR

UDC 620.17:669.14.018.298

DOGADAYEVA, V. A., GULYAYEV, A. P., ZIKEYEV, V. N., and FILIPPICHEVA, M. M.,
Central Scientific Research Institute of Ferrous Metallurgy

"The Properties of 18Kh2N4VA Steel Made by Various Methods"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 10, 1970,
pp 2-5

Abstract: This work presents a study of the properties of 18Kh2N4VA steel, melted in an open induction furnace with magnesite lining and after vacuum arc and cathode ray remelting. The vacuum arc remelting was performed on metal made by the open induction method, while cathode ray remelting was performed on metal produced in a vacuum induction furnace. The steel produced by vacuum induction melting with subsequent cathode ray remelting had reduced contents of oxygen and nitrogen, sulfur, tin, arsenic, antimony, and nonmetallic inclusions. The vacuum-arc remelted steel contained lower contents of oxide and sulphide nonmetallic inclusions than ordinary steel. The pure steels have a higher tendency toward grain growth, increasing with higher temperatures. The impact toughness of the vacuum induction + cathode ray remelted steel is approximately 2-3 times higher, although the
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DOGADAYEVA, V. A., et al, Metallovedeniye i Termicheskaya Obrabotka
Metallov, No 10, 1970, pp 2-5

cold brittleness threshold is the same for both types of steel. The increase in impact toughness upon remelting results from an increase in the work of crack development.

2/2

- 46 -

1/2 022 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--EFFECT OF STRUCTURE AND MELTING PRACTICE ON THE TOUGHNESS OF 17GS
STEEL -U-
AUTHOR--DOGADAYEVA, V.A., GEORGIYEV, M.N. *D*
COUNTRY OF INFO--USSR
SOURCE--STAL' 1970, 30(1), 69-71
DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--MANGANESE STEEL, SILICON STEEL, METAL MELTING, TOUGHNESS,
MECHANICAL PROPERTY, METAL CRACKING, RARE EARTH METAL, METAL HEAT
TREATMENT, ALLOY DESIGNATION, METALLURGIC SLAG/(U)17GS MANGANESE STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1987/0156 STEP NO--UR/0133/70/030/001/0069/0071

CIRC ACCESSION NO--AP0103835
UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0103835

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HEATS CONTG. C 0.17-0.22, SI 0.43-0.60, MN 1.17-1.39, NI 0.06-0.36, CR 0.12PERCENT MAX. WERE TESTED FOR MECH. PROPERTIES AT MINUS 100 TO 100DEGREES IN THE HOT ROLLED, NORMALIZED, AND QUENCHED AND TEMPERED STATE, THERMAL TREATMENT FOLLOWING IN CERTAIN CASES THE TREATMENT OF STEEL WITH SLAG IN A LADDLE OR AFTER ADDN. OF RARE EARTH METALS. QUENCHING AND DRAWING AT 600DEGREES RESULTED IN HIGHEST MECH. PROPERTIES IN THE WHOLE RANGE OF TEMP. ALLOYING OR SLAG TREATMENT DID NOT IMPROVE THE RESULTS, THOUGH THE LATTER GREATLY INCREASED THE ENERGY OF INCIPIENT CRACK FORMATION.

UNCLASSIFIED

USSR

UDC 547.341

DOGADINA, A. V., IONIN, B. I., and PETROV, A. A., Leningrad Technological
Institute Imeni Lensovet

"Reaction of Phosphorus Pentachloride With 1,3-Enynes"

Leningrad, Zhurnal Obshchey Khimii, Vol 42 (104), No 9, Sep 72, pp 1919-1925

Abstract: Reaction of phosphorus pentachloride with 1,3-enynes is accompanied by addition of hydrogen chloride, yielding 2,4-dichloro-2-alkenylphosphonic acid dichlorides which upon dehydrochlorination with triethylamine produce 2-chloro-1,3-butadienyl derivatives with the chlorine atom and the phosphorus containing group trans to each other. The structures of individual products were derived from PMR and NMR spectroscopical data.

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USSR

UDC 547.341

DOGADINA, A. V., NECHAYEV, YU. D., IONIN, B. I., and PETROV, A. A., Leningrad Technological Institute imeni Lensovet

"NMR Spectra and Structure of α -Chlorostyrene- β -phosphonate Derivatives"

Leningrad, Zhurnal Obshchey Khimii, Vol 41, No 8, Aug 71, pp 1662-1668

Abstract: The addition of phosphorus pentachloride to phenylacetylene, α -chlorostyrene, acetophenone and α -bromostyrene gives 2-phenyl-2-chlorovinylphosphonic acid dichloride (I). The purpose of the present article was to establish the geometric configuration of I and a series of derivatives obtained from it by comparing parameters of the NMR spectra for these compounds with data for other styrylphosphonic derivatives whose structure was previously established by the authors. It was found that this reaction leads to the formation of products with a cis arrangement of chlorine and the phosphorus-containing group.

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USSR

ДОГАДИНА

DOHADINA, T. V., Chair of Lower Plants Kharkov State University

"Concerning the Utilization of Algae for Purification of Waste Waters Containing Petroleum Products"

Kiev, Ukrainskiy Botanicheskiy Zhurnal, Vol 27, No 3, May/June 70, pp 310-313

Abstract: Experiments were conducted to determine the possibility of utilizing mass cultures of algae for the additional purification of petroleum-containing waste waters after passage through petroleum filters, and to find the concentration of petroleum products in which algae can survive. Purified cultures of *Chlorella vulgaris* Beyer and *Scenedesmus obliquus* (Turp.) Kutz were used. Waste waters were obtained from the Kharkov tractor plant and contained petroleum products used for lubrication of tractor parts. Experiments were carried out in Erlenmeyer flasks illuminated 12 hours a day with a light source of 4,000-6,000 foot-candles. It was established that these algae survive and develop normally in concentrations of petroleum products up to 40 grams a liter. It was also found that waste waters containing petroleum products are purified 95-100 percent by inoculation with mass cultures of algae.

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UNCLASSIFIED

PROCESSING DATE--300CT70

TITLE--VULCANIZATION OF RUBBERS WITH SORBIC ACID SALTS -U-
AUTHOR--(OS)--ZAKHAROVA, YE.S., MIKHLIN, V.E., DONTSOV, A.A., MARKOV, V.V.,
DUGADKIN, B.A.
COUNTRY OF INFO--USSR

D

SOURCE--KAUCH. REZINA, 1970, 29(3), 46

DATE PUBLISHED--70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--VULCANIZATION, PEROXIDE, ORGANOCALCIUM COMPOUND, ORGANONICKEL
COMPOUND, STYRENE, SYNTHETIC RUBBER, VULCANIZATE/(U)SKS30ARK STYRENE
RUBBER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--2000/0833

STEP NO--UR/0138/70/029/003/0046/0046

CIRC ACCESSION NO--AP0124500

UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC. ACCESSION NO--AP0124500

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SKS 30 ARK RUBBER WAS VULCANIZED IN THE PRESENCE OF 10 PARTS (MECH:CHCH:CHCO SUB2) SUB2 CA OR (MECH:CHCH:CHCO SUB2) SUB2 NI AND VARIOUS PEROXIDES. THE VULCANIZATES WITH SUPERIOR PHYSIOMECH. PROPERTIES WERE OBTAINED. FACILITY: MOSK. INST. TONKOI KHIM. TEKHNOL. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 015 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--PREPARATION AND PROPERTIES OF AQUEOUS BUTYL RUBBER DISPERSIONS -U-

AUTHOR--(05)-GUSTOVA, L.P., GELLER, T.L., MAZINA, G.R., SANDMIRSKIY, D.M.,
DOGADKIN, B.A.
COUNTRY OF INFO--USSR

SOURCE--KOLLOIDNYY ZHURNAL, 1970, VOL 32, NR 2, PP 203-206

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--BUTYL RUBBER, EMULSION, PARTICLE SIZE, POLYMER FILM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1993/0400

STEP NO--UR/0069/70/032/002/0203/0206

CIRC ACCESSION NO--AP0113318

UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--15OCT70

CIRC ACCESSION NO--AP0113318

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONDITIONS OF PREPARATION OF BUTYL RUBBER DISPERSIONS BY MILLING HAVE BEEN STUDIED. GREATER RIGIDITY OF POLYMER OR ITS MIXTURES FAVORS DISPERSION. THE COLLOID CHEMICAL PROPERTIES OF DISPERSIONS PREPARED WITH VARIOUS EMULSIFIERS HAVE BEEN EXAMINED. THE SMALLEST PARTICLE SIZE WAS OBTAINED WHEN DISPROPORTIONATED ROSIN WAS USED AS EMULSIFIER. IT HAS BEEN PROVED POSSIBLE TO OBTAIN FILMS FROM BUTYL RUBBER DISPERSIONS. THE PROPERTIES OF THESE FILMS HAVE BEEN ASSESSED. DECREASE IN THE AMOUNT OF EMULSIFIER DURING DISPERSION OR DUE TO SETTLING OF DISPERSIONS SUBSTANTIALLY INCREASES THE FILM STRENGTH.

UNCLASSIFIED

Acc. Nr: **A70036538**

Ref. Code: UR 0069

PRIMARY SOURCE: Kolloidnyy Zhurnal, 1970, Vol 32, Nr 1,
PP 124 - 129

**STUDY OF THE RADIATION CROSS-LINKING OF RUBBER IN
SYNTHETIC LATICES AND ARTIFICIAL AQUEOUS DISPERSIONS**

El'kina, I. A.; Sandomirskiy, D. M.; Dogadkin, B. A.

Summary

The radiolysis of synthetic rubber latices has been studied. The rate of radiation cross-linking of polymer in a latex is much greater than in the bulk. The polymer cross-linking efficiency in a latex depends on the polymer hydrocarbon structure and on the colloid-chemical nature of latices. Stabilizers with a cyclic structure and small globules decrease the cross-linking rate. The radiolysis does not change essentially the colloid-chemical properties of latices.

D. A.

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REEL/FRAME
19721386

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Acc. Nr.

AP0048830

Abstracting Service:

CHEMICAL ABST.

D 5-70

Ref. Code

UR 0459

91289b Vulcanization of rubber with dimethacrylic esters of glycols having molecular chains of different lengths. Novkova, L. A.; Tarasova, Z. N.; Dogadkin, B. A. (Mosk. Inst. Tonko Khim. Tekhnol. im. Lomonosova, Moscow, USSR). *Vysokomol. Soedin., Ser. A* 1970, 12(1), 63-8 (Russ). Butadiene-styrene rubber (Uoprene 1500) (I) was vulcanized with diethylene glycol dimethacrylate (II), triethylene glycol dimethacrylate (III), butylene glycol dimethacrylate, and decamethylene glycol dimethacrylate in the presence of dicumyl peroxide (IV) at 130 and 153°. The reactivity of dimethacrylates (contg. no IV) to initiate crosslinking was inversely proportional to chain length and flexibility. The amt. of dimethacrylate added to I was ~70-80%. The reactivities of ethylene glycol dimethacrylate, II, and III as well as the no. of the crosslinks formed following vulcanization were essentially identical. The tensile strength of I vulcanizates was unaffected by the chain length of the crosslinking agent. A crosslinking mechanism was discussed. CKJR

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REEL/FRAME
19800597

172 030

UNCLASSIFIED

PROCESSING DATE--16OCT70

TITLE--STUDY OF THE PROPERTIES OF VULCANIZATES WITH CROSSLINKS OF DIFFERENT STRUCTURE -U-

AUTHOR--(02)-DOGADKIN, B.A., ANFIMOV, B.N.

D

COUNTRY OF INFO--USSR

SOURCE--KOLLOIDNYY ZHURNAL, 1970, VOL 32, NR 2, PP 207-212

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--VULCANIZATE, POLYMER CROSSLINKING, BUTADIENE, PYRIDINE, CURING AGENT, BROMINATED ORGANIC COMPOUND, ORGANIC PEROXIDE, TENSILE STRENGTH, ELONGATION, FATIGUE STRENGTH

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAHE--1993/0401

STEP NO--UR/0069/70/032/002/0207/0212

CIRC ACCESSION NO--AP0113319

UNCLASSIFIED

2/2 030

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0113319

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDIES HAVE BEEN MADE ON MECHANICAL PROPERTIES OF VULCANIZATES WITH CROSS LINKS OF VARYING LENGTH, OBTAINED BY CURING OF BUTADIENE COPOLYMER CONTAINING 15PERCENT METHYL VINYL PYRIDINE WITH DICUMYL PEROXIDE (DCP), METHYLENE BROMIDE (MB), 1,2,DIBROMOETHANE (DBE), 1,3,DIBROMOPROPANE (DBP), 1,4,DIBROMOBUTANE (DBB), 1,5,DIBROMOPENTANE (DBPN) AND 1,10,DIBROMODECANE (DBD). WITH REFERENCE TO THEIR TENSILE STRENGTH, ELONGATION AND FATIGUE RESISTANCE UNDER REPEATED ELONGATION, THESE VULCANIZATES FORM THE SERIES: DCP SMALLER THAN MB SMALLER THAN DBE LARGER THAN DBP LARGER THAN DBPN LARGER THAN DBD. FATIGUE RESISTANCE UPON TWISTING WITH BENDING DOES NOT DEPEND ON THE LENGTH OF CROSS LINKS AND IS DETERMINED BY INTERNAL FRICTION. THE LENGTH OF CROSS LINKS DOES NOT AFFECT THE TEMPERATURE OF THE ELASTICITY MINIMUM AND ELASTICITY AT POSITIVE TEMPERATURES AS WELL AS THE ABRASION RESISTANCE OF VULCANIZATES.

UNCLASSIFIED

1/2 009

UNCLASSIFIED

PROCESSING DATE--16OCT70

TITLE--EFFECT OF THE TRANSITION LAYER AT THE RUBBER RUBBER INTERFACE ON
THE COHESIVE ENERGY DENSITY AND ADHESION BETWEEN LAYERS OF VULCANIZATES

AUTHOR--(04)-OREKHOV, S.V., ZAKHAROV, N.D., KULEZNEV, V.N., OSBADKIN, B.A.

D

COUNTRY OF INFO--USSR

SOURCE--KOLLOIDNYY ZHURNAL, 1970, VOL 32, NR 2, PP 245-250

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--VULCANIZATE, ADHESION, ELASTOMER COHESION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1993/0397

STEP NO--UR/0069/70/032/002/0245/0250

CIRC ACCESSION NO--AP0113315

UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0113315

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ADHESION BETWEEN RUBBERS HAS BEEN STUDIED FOR A NUMBER OF RUBBERS. ADHESION BETWEEN PLIED UP RUBBERS DEPENDS ON THE RATIO OF THEIR MOLAR COHESIVE ENERGIES AND CAN SERVE AS A QUALITATIVE CHARACTERISTIC OF THE THICKNESS OF THE TRANSITION LAYER FORMED DURING BLENDING OR PLYING UP OF RUBBERS. THE ADHESION BETWEEN VULCANIZATE LAYERS OF PLIED UP RUBBERS HAS BEEN DETERMINED BY STATIC AND DYNAMIC METHODS. THE DYNAMIC TEST RESULTS ARE IN QUALITATIVE AGREEMENT WITH THE DATA ON ADHESION OF UNCURED POLYMERS AND CAN BE USED TO ASSESS THE EFFECT OF THE TRANSITION LAYER ON CU VULCANIZATION OF RUBBERS. THE RELATIONSHIP BETWEEN THE COHESIVE ENERGY DENSITY AND THE COMPONENTS RATIO, DETERMINED FOR A NUMBER OF BLENDS, DEPENDS ON THE TRANSITION LAYER THICKNESS AND ON THE DIFFERENCE IN COHESIVE ENERGIES OF THE BLENDED RUBBERS.

UNCLASSIFIED

1/2 012

UNCLASSIFIED

PROCESSING DATE--13NOV70

TITLE--VULCANIZATION OF UNSATURATED RUBBERS -U-

AUTHOR--(04)-DOGADKIN, B.A., DCNTOV, A.A., LOBACHEVA, G.K., VERSHININA,
N.M.

COUNTRY OF INFO--USSR

D

SOURCE--J.S.S.R. 267,062

REFERENCE--GTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--01APR70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--VULCANIZATION, RUBBER, PYRIDINE, IODINATED ORGANIC COMPOUND,
PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--3002/1411

STEP NO--UK/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128810

UNCLASSIFIED

2/2 012

CIRC ACCESSION NO--AA0128810

UNCLASSIFIED

PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. A VULCANIZING AGENT, SUCH AS ALLYLPYRIDINIUM IODIDE, WAS USED TO VULCANIZE UNSATD. RUBBERS IN THE PRESENCE OF RADICAL INITIATORS. FACILITY: LOMONOSOV, M. V., INSTITUTE OF FINE CHEMICAL TECHNOLOGY, MOSCOW.

UNCLASSIFIED

1/2 021

UNCLASSIFIED

PROCESSING DATE--30DCT70

TITLE--EFFECT OF MICROGEL ON THE MECHANICAL PROPERTIES OF CIS,POLYISOPRENE AND BUTADIENE,STYRENE RUBBERS -U-

AUTHOR--(04)--KULEZNEV, V.N., ELKINA, I.A., VANKOVA, L.N., DOGADKIN, B.A.

COUNTRY OF INFO--USSR

SOURCE--KOLLOIDNYY ZHURNAL, 1970, VOL 32, NR 3, PP 381-387

DATE PUBLISHED--70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--GEL, POLYMER RHEOLOGY, POLYISOPRENE, BUTADIENE STYRENE RESIN, VULCANIZATE, MECHANICAL STRENGTH, RUBBER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--2000/1591

STEP NO--UR/0069/70/032/003/0381/0387

CIRC ACCESSION NO--AP0125213

UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125213

ABSTRACT/EXTRACT--(U) GP-C-

ABSTRACT. THE EFFECT OF MICROGEL ON THE RHEOLOGICAL PROPERTIES OF CIS,POLYISOPRENE AND BUTADIENE, SYTRENE RUBBERS HAS BEEN STUDIED. MICROGEL ENHANCES THE EFFECTIVE VISCOSITY OF MIXES, REDUCES THEIR SHRINKAGE ON DISCHARGE FROM THE VISCOMETER CAPILLARY, INCREASES THE CRITICAL STRESS OF ELASTIC TURBULENCE AND HAS LITTLE EFFECT ON THE STRENGTH PROPERTIES OF VULCANIZATES, PROVIDED THE VULCANIZING SYSTEM IS PROPERLY CHOSEN. FACILITY: INSTITUT TONKOY KHIMICHESKOY TEKHNologii IM. M. V. LOMONOSOVA MOSCOW.

UNCLASSIFIED

1/2 023

UNCLASSIFIED

PROCESSING DATE--23OCT70

TITLE--NATURE OF CROSSLINKS FORMED DURING THE VULCANIZATION OF RUBBERS BY
A THIOUREA HEXACHLOROETHANE COMPLEX IN THE PRESENCE OF SULFUR -U-
AUTHOR-(03)-GLUSHKOV, V.V., SHERSHNEV, V.A., DOGADKIN, B.A.

COUNTRY OF INFO--USSR

SOURCE--KAUCH. REZINA 1970, 29(3), 14-15

D

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--POLYMER CROSSLINKING, VULCANIZATION, THIOUREA, CHLOROETHANE,
COMPLEX COMPOUND, SULFUR, SYNTHETIC RUBBER, STYRENE, STRESS
RELAXATION/(U)SKMS30ARK STYRENE RUBBER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0455

STEP NO--UR/0138/70/029/003/0014/0015

CIRC ACCESSION NO--AP0119391

UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119391

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ADDN. OF 2 WT. PARTS OF THE
TITLE COMPLEX (I) AND 2 WT. PARTS S TO SYNTHETIC RUBBER SKMS-30ARK
DECREASED ITS ELONGATION AT BREAK TO 55PERCENT AND ITS FLEX RESISTANCE
TO 9 TIMES 10 PRIME4 CYCLES AS COMPARED WITH 100PERCENT AND 11 TIMES 10
PRIME4 CYCLES FOR THIS RUBBER VULCANIZED WITH S 2 AND DIPHENYLGUANIDINE
2 PARTS. HOWEVER, I CONSIDERABLY REDUCED THE DYNAMIC STRESS RELAXATION
OF THIS RUBBER. FACILITY: MOSK. INST. TONKOL. IM. LOMONOSOVA,
MOSCOW, USSR.

UNCLASSIFIED

1/2 020

UNCLASSIFIED

PROCESSING DATE--23OCT70

TITLE--RESEARCH CONDUCTED IN THE ELASTOMER PROBLEM LABORATORY IN THE
CHEMISTRY AND PHYSICS OF POLYMERS DEPARTMENT OF THE M. V. LOMONOSOV

AUTHOR--DOGADKIN, B.A.

COUNTRY OF INFO--USSR

SOURCE--KAUCH. REZINA 1970, 29(4), 35-8

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--ELASTOMER, POLYMER RHEOLOGY, POLYMER PHYSICAL PROPERTY,
RUBBER, VULCANIZATE, VULCANIZATION, SCIENTIFIC R AND D

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1997/0533

STEP NO--UR/0138/70/029/004/0035/0038

CIRC ACCESSION NO--AP0119452

UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119452

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. A REVIEW WITH 19 REFS. TOPICS
INCLUDE CHEM. REACTIOS OF RUBBERS, CONNECTIONS BETWEEN STRUCTURE AND
PHYSICOMECH. PROPERTIES OF VULCANIZATES, NEW VULCANIZATION SYSTEMS AND
MODIFICATIONS, SYNTHESIS OF RESINS WITH GIVEN PROPERTIES, AND PROPERTIES
OF MIXTS. OF INCOMPATIBLE ELASTOMERS. FACILITY: MOSK. INST.
TONKUI KHIM. TEKHNOL. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 011 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--INTERACTION OF POLYISOPRENE WITH O, MONOPERPHTHALIC ACID -U-
AUTHOR--(03)-DOGADKIN, B.A., TUTORSKIY, I.A., KHODZHAYEVA, I.D.
COUNTRY OF INFO--USSR **D**
SOURCE--KOLLOIDNYY ZHURNAL, 1970, VOL 32, NR 3, PP 315-320
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ISOPRENE, SQUALENE, NATURAL RUBBER, PHTHALIC ACID, CHEMICAL REACTION

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/0190 STEP NO--UR/0069/70/032/003/0315/0320
CIRC ACCESSION NO--AP0120888
UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120888

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE KINETICS OF THE REACTION OF ORTHO MEONPERPHTHALIC ACID (MPPA) WITH SQUALENE AND NATURAL RUBBER HAVE BEEN STUDIED IN THE TEMPERATURE RANGE FROM NEGATIVE 25 TO 20 DEGREES AT VARYING CONCENTRATIONS AND RATIOS OF REACTANTS. THE REACTION RATE IS DESCRIBED BY A SECOND ORDER EQUATION. THE RATE CONSTANTS AND ACTIVATION ENERGY HAVE BEEN CALCULATED. THE REACTION WITH SQUALENE PROCEEDS IN TWO STEPS CORRESPONDING TO THE INTERACTION WITH THE PERACID OF TERMINAL AND INTERNAL DOUBLE BONDS. THE KINETIC CURVES FOR THE REACTION OF MPPA WITH RUBBER IN A BINARY MIXTURE CCL SUB 4 DIOXANE ARE ANOMALOUS.
FACILITY: MOSKOVSKIY INST. TONKOY KHIMICHESKOY TEKHNologii IM. M. V. LOMONOVOVA.

UNCLASSIFIED

USSR

UDC 547.341

DOGADKINA, A. V., MINGALEVA, K. S., IONIN, B. I., and PETROV, A. A., Leningrad Technological Institute imeni Lensoveta

"Addition of Phosphorus Pentachloride to Acetylenes"

Leningrad, Zhurnal Obshchey Khimii, Vol 42 (104), Vyp 10, 1972, pp 2186-2193

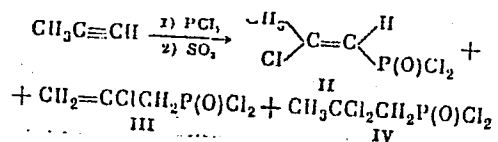
Abstract: Formation of acid chlorides, esters, and phosphine oxides during the reaction of PCl_5 with acetylenic hydrocarbons is described. Oxidative phosphorylation of acetylenic hydrocarbons is also presented for comparison. The reaction of PCl_5 with tert-butylacetylene in benzene takes place at room temperature and after treatment with SO_2 yields the acid dichloride of 3,3-dimethyl-2-chloro-1-Z-butyl-phosphonic acid, (I), $\text{C}_6\text{H}_{10}\text{Cl}_2\text{OP}$, b.p. 110°C

(1 mm). Methylacetylene with PCl_5 under identical reaction conditions yields the acid dichloride of 2-chloro-2-propenylphosphonic acid (II) $\text{C}_3\text{H}_4\text{Cl}_2\text{OP}$, b.p. $72-75^\circ$ (1 mm), d_4^{20} 1.5014, n_D^{20} 1.5120, as well as the allyl isomer (III) and the acid dichloride of 2,2-dichloropropylphosphonic acid (IV)

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USSR

DOGADKINA, A. V., et al., Zhurnal Obshchey Khimii, Vol 42(104), Vyp 10, 1972, pp 2186-2193

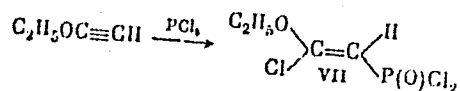
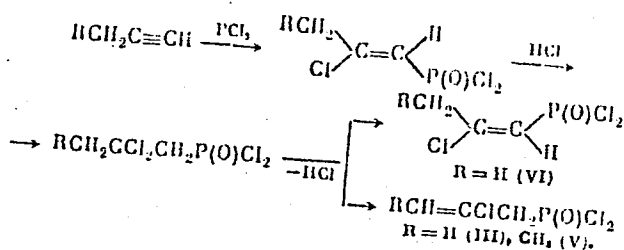


Reaction of PCl_5 with ethylacetylene yields exclusively the acid dichloride of 2-chloro-2-butenylphosphonic acid (V), $\text{C}_4\text{H}_6\text{Cl}_2\text{OP}$, b.p. 95°C (1 mm), d_4^{20} 1.4265, n_D^{20} 1.5132. A noticeable amount of E-isomer (VI) was obtained in the reaction of PCl_5 with methylacetylene. Ethoxyacetylene easily reacts with PCl_5 by forming the acid dichloride of 2-chloro-2-ethoxy-2-vinylphosphonic acid (VII), b.p. $82-83^\circ\text{C}$ (1 mm), d_4^{20} 1.4630, n_D^{20} 1.5140.

2/5

USSR

DOGADKINA, A. V., et al., Zhurnal Obshchey Khimii, Vol 42(104), Vyp 10, 1972, pp 21-86-2193

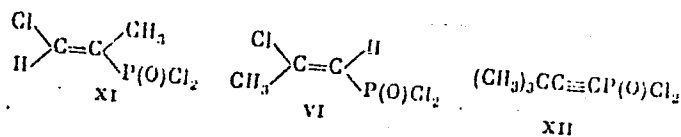
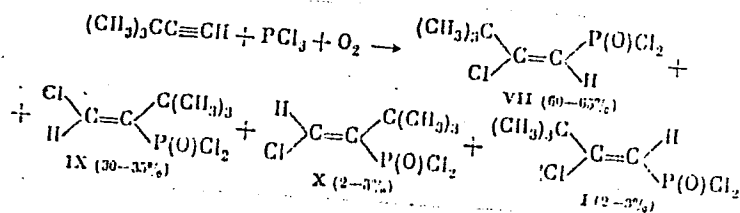


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USSR

DOGADKINA, A. V., et al., Zhurnal Obshchey Khimii, Vol 42(104), Vyp 10, 1972, pp 2186-2193

Other acid dichlorides (VIII-XII) were prepared in the course of the following reactions:



4/5

USSR

DOGADKINA, A. V., et al., Zhurnal Obshchey Khimii, Vol 42(104), Vyp 10, 1972;
pp 2186-2193

Reaction of the obtained acid dichlorides with ethanol in the presence of pyridine yields corresponding diethyl phosphonates. Some acid dichlorides (I-IV), (XII) react with ethylmagnesium bromide yielding 2-chloro-Z-alkenyl and alkynyl phosphine oxides. Properties of all prepared compounds along with their PMR and NMR are given.

5/5

- 26 -

USSR

UDC:621.039.59

NOVOSELOV, G. P., DOGAYEV, YU. D. and PEREVOZCHIKOV, S. A.

"Losses of Uranium and Plutonium from Steel During Thermal Opening of Fuel Elements"

Moscow, Atomnaya Energiya, Vol 36, No 1, Jan 74, pp 69-70

Abstract: The disassembly of highly active fuel assemblies of fast reactors, their opening and separation of steel from fuel are among the most difficult problems in the process of regeneration. The losses of nuclear fuel with the steel must be minimal, so as to allow long-term storage of the steel without additional treatment. This article calculates the rates and times of settling of uranium dioxide particles of various sizes in drops of liquid steel. The calculations indicate that only for particles 10μ or less in diameter will the settling time be over 1 minute. The calculations performed confirm the conclusion drawn earlier that the separation process can be successfully performed in the drop of steel, resulting in the production of steel ingots with less than 1% contamination with fuel and relatively low activity.

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1/2 024

TITLE--INTERACTION OF URANIUM AND ITS ALLOYS WITH ALKALI METAL FLUORIDES
-U- UNCLASSIFIED PROCESSING DATE--30OCT70

AUTHOR--(03)-NOVOSELOV, G.P., KASHCHEYEV, I.N., DOGAYEV, YU.D.

COUNTRY OF INFO--USSR

SOURCE--AT. ENERG. 1970, 28(1), 48

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--URANIUM, CHEMICAL REACTION RATE, NICKEL, IRON, CALCIUM
FLUORIDE, URANIUM COMPOUND, LITHIUM FLUORIDE, POTASSIUM COMPOUND, SODIUM
COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/0487

STEP NO--UR/0089/70/028/001/0048/0048

CIRC ACCESSION NO--AP0121161

UNCLASSIFIED

2/2 024

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0121161

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AT LESS THAN 1723DEGREESK, THE REACTION BETWEEN METALLIC U AND MOLTEN CAF SUB2 IS NEGLIGIBLE, AND CAF SUB2 MAY BE USED AS AN INERT SOLVENT FOR ALKALI METAL FLUORIDES IN THE CONVERSION OF U TO UF SUB4 BY REACTION WITH SUCH FLUORIDES. THUS, AT 1523DEGREESK, THE REACTION RATE BETWEEN U AND SUCH FLUORIDES INCREASES SHARPLY WITH INCREASING ALKALI METAL FLUORIDE CONC. C IN THE CAF SUB2, AND IN THE CASE OF C EQUALS 50 WT.PERCENT, THE RATE OF CONVERSION OF THE U IN LIF, NAF, AND KF SOLNS. IS 4 TIMES 10 NEGATIVE PRIME2, 6 TIMES 10 NEGATIVE PRIME2, AND 12 TIMES 20 NEGATIVE PRIME2 G-(CM PRIME2 MIN), RESP. THE REACTION BETWEEN SUCH FLUORIDE SOLNS. AND METALLIC NI OR FE IS NEGLIGIBLE.

UNCLASSIFIED

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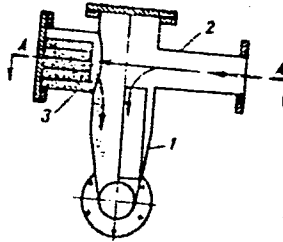
DOGIN

M. K. B. UR 0482

Soviet Inventions Illustrated, Section III Mechanical and General, Derwent, 2-70

243489

TURNING UNIT FOR PNEUMATIC CONVEYING LINE



designed to reduce wear, even when abrasive materials are being conveyed. The unit consists of vertical chamber 1, into the top, cylindrical section of which leads horizontal inlet nozzle 2. Directly opposite the inlet nozzle is nozzle 3, which is closed at one end and is provided with compartments for catching particles of material.

A horizontal outlet nozzle, which can be at an angle of 0-180° to the inlet nozzle, leads out of the lower, conical section of chamber 1. The gas-borne material is fed into chamber 1 from nozzle 2

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and its progress is braked by the greater diameter of chamber 1 and impact in the compartments of nozzle 3. The particles of material drop into precipitation chamber 1 and are swept by the conveying gas out along the outlet pipe.
25.7.64. as 913703/27-11, DOGIN, M. KH. Belorussian Inst. of Railway Engineers. (22.9.69) Bul. 16/5.5.69. Class 81e, Int. Cl. B 65g.

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Belorusskiy Institut Inzhenerov Zheleznodorozhnogo Transporta

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USSR

UDC 617-001.34

DOGLE, N. V., and MALINSKAYA, N. N., Institute of Labor Hygiene and Occupational Diseases, Academy of Medical Sciences USSR, Moscow

"Social and Hygienic Importance of Vibration Sickness and Ways of Preventing It"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 7, Jul 70, pp 8-11

Abstract: Vibration sickness is the third most important (18.8%) chronic occupational disease in the USSR. The highest incidence of the disease in 1968 was found in industrial plants of the nonferrous and ferrous metal industry, power and transportation machine building, coal production, and the automobile industry. The incidence of the disease in tractor and agricultural machinery plants was 1/4 that in the nonferrous industry. Almost 50% of those afflicted were temporarily unable to work. In some cases this figure was as high as 70-95%. Vasomotor disturbances are observed in the early stages of the disease and time off is prescribed. The disease remains a great problem from both the public health and economic standpoints. One of the reasons for its high incidence is the widespread use of high-frequency vibration equipment, which is often built in-house and of inferior quality. Physicians, physiologists, hygienists, and occupational pathologists are concentrating on the

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- 56 -

USSR

DOGLE, N. V. and MALINSKAYA, N. N., Gigiyena Truda i Professional'nyye
Zabolevaniya, No 7, Jul 70, pp 8-11

development of preventive measures, such as periodic medical check-ups of
personnel working with vibration equipment. Engineers and other technical
specialists are developing improved vibration equipment.

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1/2 023

UNCLASSIFIED

PROCESSING DATE--16OCT70

TITLE--THEORY OF ADIABATIC AND NONADIABATIC ELECTROCHEMICAL REACTIONS -U-

AUTHOR--(03)-DOGONADZE, R.R., KUZNETSOV, A.M., VOROTYNTSEV, M.A.

COUNTRY OF INFO--USSR

D

SOURCE--J. ELECTROANAL. CHEM. INTERFACIAL ELECTROCHEM. 1970, 25(2),
17A-19A

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ELECTRODE REACTION, CALCULATION, ELECTRON ENERGY, ADIABATIC
PROCESS, ELECTROCHEMICAL REACTION, NONADIABATIC PROCESS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/1306

STEP NO--NE/0000/70/025/002/0017/0019

CIRC ACCESSION NO--AP0116766

UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0116766

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE PROBABILITY OF ADIABATIC AND NONADIABATIC ELECTRODE REACTIONS IS CALCD. BY TAKING INTO ACCOUNT THE MANY POTENTIAL ENERGY SURFACES (TERMS) IN THE INITIAL AND FINAL STATES, CORRESPONDING TO DIFFERENT POPULATIONS OF THE ELECTRON ENERGY LEVELS IN A METAL. THE TRANSITION PROBABILITY FOR EACH 2 TERMS IS DETD. MATH.

FACILITY: INST. ELECTROCHEM., MOSCOW, USSR.

UNCLASSIFIED

1/2 014 UNCLASSIFIED PROCESSING DATE--0900170
TITLE--THEORY OF HOMOGENEOUS REACTIONS INVOLVING PROTON TRANSFER -U-
AUTHOR--(05)-LEVICH, V.G., DOGONADZE, R.R., GERMAN, E.D., KUZNETSOV, A.R.,
KHARKAIS, YU.I.
COUNTRY OF INFO--USSR
SOURCE--ELECTROCHIM. ACTA 1970, 15(2), 353-67
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--PROTON, QUANTUM MECHANICS, CHEMICAL REACTION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FKAME--1992/1849 STEP NO--UK/0000770/015/00270353/0367
CIRC ACCESSION NO--AP0112833
UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0112833

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A QUANTUM MECH. THEORY FOR PROTON
TRANSFER PROCESSES IN SOLNS. IS GIVEN. THE BRONSTED RULE AND ISOTOPE
EFFECT FOR THESE PROCESSES ARE ALSO DISCUSSED. FACILITY: INST.
ELECTROCHEM., MOSCOW, USSR.

UNCLASSIFIED

89

PHYSICS
Acoustics

USSR

UDC 535.225:534.232.8

GINGIS, A. D., ~~DOKHIKYAN, R. G.~~, KARINSKIY, S. S., and MOROSOV, A. I.

"Measurement of Ultrasonic Wave Attenuation and Photoelastic Constants for Cubic CaF_2 and BaF_2 Crystals"

Moscow, Izvestiya Akademii Nauk SSR, Seriya Fizicheskaya, Vol 35, No 5, May 71, pp 984-986

Abstract: The article describes results of a study of the dependence of longitudinal ultrasonic wave absorption in CaF_2 and BaF_2 crystals on frequency, as well as the photoelastic constants of BaF_2 single crystals. The results indicate the following: 1) BaF_2 and CaF_2 materials are promising for use in ultrasonic devices owing to low ultrasonic wave attenuation and the possibility of fabricating large-size crystals; 2) BaF_2 single crystals can be used as an acoustic line for ultrasonic light modulators over a wide range of light waves.

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Acc. Nr.

AT0027544

Abstracting Service:

CHEMICAL ABST. 3-70

Ref. Code

UR0020

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47828c Contact angles for solid phase wetting by its own melt of some organic compounds. Zadumkin, S. N.; ~~Dokhov, M. P.; Karashaev, A. A. (Kabardino-Balkar, Gos. Univ., Nalchik, USSR). Dokl. Akad. Nauk SSSR 1969, 189(4), 797-9 [Phys Chem] (Russ). The wetting angle θ was detd. by the capillary rise of the liq. phase between 2 plates of the same material. For 11 substances, θ detd. with an error of $\pm 1^{\circ}30'$ varied between 15 and 30° . The relative error in the detn. of the work of adhesion was 1%. GBJR~~

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AP 9047843

CHEMICAL ABST. 11-69

U R 0181

85457t Interaction of vacancies with a prismatic dislocation loop. Dokhner, R. D. (Inst. Fiz., Tbilisi, USSR). *Fiz. Tverd. Tela* 1969, 11(5), 1124-31 (Russ). The microscopic theory of defects and the interat. interaction potential methods, in the form of the Morse function, were used to study the distortion of the at. structure of the f.c.c. region of Cu contg. prismatic dislocation loops formed by collapsing a disk of 7 vacancies and a vacancy close to it (in the (111) plane). Minimization of the energy of this region of the crystal for detn. of the equil. configuration of atoms was carried out by the group relaxation method using a computer. The energy barriers were also calcd. for the migration of a vacancy close to the dislocation loop. The considered dislocation loop has a tendency to capture vacancies (the radius of capture is ~3 times the closest interat. distance) and to grow in its plane and not to transform into a vol. aggregation of vacancies.

A. Libackyj

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USSR

UDC 541.183

~~DOKHOV, M. P.~~, ZADUMKIN, S. N., KARASHAYEV, A. A., Editorial Staff of
"Zhurnal fizicheskoy khimii" AN SSSR

"Contact Wetting Angle for Solid Gallium in its Own Melt"

Krayevoy ugol smachivaniya tverdogo galliya sobstvennym rasplavom (cf. English above), Moscow, 1971, 6 pp, ill, bibliography of 6 titles, No 2978-71 Dep. (from RZh-Khimiya, No 1 (I), Jan 72, Abstract No 1B1263 Dep.)

Translation: the paper describes the procedure and results of measurement of the contact wetting angle θ of solid gallium by liquid gallium at the melting point. A drop of liquid gallium was applied to the surface of solid gallium. The angle θ was measured by comparing photographs of this surface before and after application of the drop, followed by removal of the molten metal. From $\theta (6 \pm 2)^\circ$ and the surface energy of the melt (718 ergs/cm^2) the work of adhesion is calculated (1433 ergs/cm^2). Using the calculated value of 62 ergs/cm^2 for the interphase energy, Neumann's formula gives a value of 744 ergs/cm^2 for the surface energy of solid gallium at the melting point. Resume

1/1

- 10 -

Pesticides

USSR

UDC 631.893.12

BORISOV, V. M., ZHDANOV, Yu. F., DOKHOLOVA, A. N., POPOV, N. P., KONYUKHOVA, Ye. B., KIPRIYANOV, Yu. I., KARTOSHKIN, A. D., and KALASHNIKOV, V. A.

"Production of Granulated Ammophos Using the BGS Apparatus"

Moscow, Khimicheskaya Promyshlennost', No 12, 1973, pp 905-907

Abstract: Industrial experimental results are reported on the production of ammophos from the apathite concentrate. The method used involved evaporation of the pulp in a multiple unit vacuum evaporation apparatus followed by granulation in a BGS unit [Drum granulator-dryer]. Technological parameters are reported for the neutralization of the extracted phosphoric acid with ammonia, evaporation of the ammonized pulp, drying and granulation of ammophos.

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1/2 009 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--USE OF UREA TO DYE BLUE COTTON FIBERS -U-

AUTHOR--(04)-DANSHINA, M.I., DOKIN, K.A., SLADKOPEVTSEVA, G.E., SHUMARINA,
A.V.

COUNTRY OF INFO--USSR

SOURCE--TEKST. PROM. (MOSCOW) 1970, 30(3), 73

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--UREA, DYE, NATURAL FIBER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1262

STEP NO--UR/0342/76/030/003/0073/0073

CIRC ACCESSION NO--AP0128678

UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0128678

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. UREA (I) CAN BE USED AS AN
ADDITIVE (INSTEAD OF (NH SUB4) SUB2 SO SUB4) DURING BATCH AND CONTINUOUS
DYEING OF COTTON FIBERS. ADDN. OF 2-3 G-L. I TO THE DYEING MIXT.
IMPROVED THE SELECTIVITY AND REDUCED THE CONSUMPTION OF DYES BY SIMILAR
TO 10PERCENT. FACILITY: IVANOV. MELANZHEVYI KOMB. IM. FRULOVA,
IVANGVO, USSR.

UNCLASSIFIED

USSR

PEGEL', V. A., DOKSHINA, G. A., and DEMENT'YEVA, T. A., Scientific Research Institute of Biology and Biophysics, Tomsk

"Changes in the Content of Thiol Groups in the Mitochondria and Hyaloplasm of the Liver and Myocardium of Rats After High-Energy Irradiation"

Novosibirsk, Izvestiya Sibirskogo Otdeleniya Akademii Nauk SSSR, Seriya Biologicheskikh Nauk, No 5, Apr 71, pp 108-113

Abstract: The content of total, protein, and non-protein thiol groups in the mitochondria and hyaloplasm of the liver and myocardium of rats was determined 10, 30 min, 1, 2, 4, 6, 24, 48, and 72 hrs after irradiation of the animals with gamma-rays of an energy \approx 25 Mev in a dose of 1,000 rad on a betatron. The content of SH groups in the mitochondria of the liver and the myocardium decreased. This decrease was due principally to a reduction of the content of protein SH groups; the change in the content of non-protein SH groups was insignificant. Changes in the content of SH groups in the hyaloplasm of the liver and myocardium were of a phasic type. The decrease in the content of SH groups in the mitochondria was accompanied by an increase of the content of these groups in the hyaloplasm. The decrease in the content of SH groups in the mitochondria was presumably due to the inhibition of oxidative phosphoryla-
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USSR

PEGEL', V. A., et al., Izvestiya Sibirskogo Otdeleniya Akademii Nauk SSSR, Seriya Biologicheskikh Nauk, No 5, Apr 71, pp 108-113

tion in them that was established in earlier work. The increase of the content of SH groups in the hyaloplasm was apparently associated with a release of thiol enzymes by mitochondria because of structural damage to mitochondria membranes.

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- 24 -

1/2 034 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--COMPARATIVE EFFECTS OF HIGH ENERGY RADIATION OF A 25-MEV BETATRON
AND PRIME60 CO ON THE FUNCTIONAL STATE OF CERTAIN GLANDS OF INTERNAL
AUTHOR--(03)--PEGEL, V.A., DOKSHINA, G.A., POTAPOVA, A.I.

COUNTRY OF INFO--USSR

SOURCE--RADIOBIOLOGIYA; 10: 49-53 (JAN-FEB 1970)

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BETATRON, BREMSSTRAHLUNG, GAMMA RADIATION, COBALT ISOTOPE,
RADIATION BIOLOGIC EFFECT, RADIATION DOSAGE, EPINEPHRINE, INSULIN,
CORTICOSTEROID, LIVER FUNCTION, GLYCOGEN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--3001/1845

STEP NO--UR/0205/70/010/000/0049/0053

CIRC ACCESSION NO--AP0127255

UNCLASSIFIED

2/2 034

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0127255

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RESULTS OF IRRADIATION OF RATS WITH A 25 MEV BETATRON AND WITH PRIME60 CO AT AN EQUIVALENT DOSE OF 1000 RAD ARE PRESENTED FOR THE CHANGE IN THE CONTENT OF ADRENALINE LIKE SUBSTANCES IN THE BLOOD AND URINE, 11, HYDROXYCORTICOSTEROIDS, INSULIN LIKE ACTIVITY OF THE PLASMA, AND 17, HYDROXYCORTICOSTEROIDS OF THE URINE, AS WELL AS THE LIVER SUGAR AND GLYCOGEN. DATA ON THE HIGH RBE FOR BETARCN BREMSSTRAHLUNG WERE OBTAINED. THE MORE SIGNIFICANT EFFECT OBTAINED IN THE ACCELERATOR IRRADIATED ANIMALS IS ATTRIBUTED TO THE LARGER ABSORBED DOSE CREATED IN THE ORGANS AND TISSUES.
FACILITY: TOMSK UNIV., USSR.

UNCLASSIFIED

USSR

UDC:622.7:321.9.004

AKOPOVA, K. S., DOKSHINA, I. D., TYUTYUNNIK, N. D., YAKUBOVICH, I. A.,
ZADOROZHNYI, V. G., BELOGAY, P. D., DEGTYARENKO, A. V., TISHCHENKO, A. G.

"Use of Ultrasound in Enrichment of Titanium-Zirconium Deposits"

Moscow, Tsvetnyye Metally, No. 11, Nov 70, pp. 86-89

Abstract: A method has been developed for application of acoustical oscillations to minerals to change their surface properties before enrichment. This article presents results of an investigation of the influence of ultrasonics on the minerals in titanium-zirconium placer deposits. It has been established that 1-3 minutes action of ultrasound at 20 Khz and an intensity of 3.8 W/cm² greatly activates the flotation of minerals by the flotation oil. The yield of minerals in the foam product increases as follows: zirconium from 18.6 to 98.9%, rutile from 3.0 to 97.5%, ilmenite from 0 to 94%, staurolite from 0 to 90%. The expenditure of collectors is also reduced and the flotation properties of minerals from different deposits are made more similar.

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USSR

UDC 629.7.036.3:536.46

LEBEDEV, B. P. and DOKTOR, I. YU.

"Stabilization of the Flame of Inhomogeneous Mixtures"

Moscow, Gorennye i Vzryv--Sbornik (Combustion and Explosion--Collection of Works), Nauka, 1972, pp 361-364 (from Referativnyy Zhurnal--Aviatsionnyye i Raketnyye Dvigateli, No 2, 1973, Abstract No 2.34.29. Resume)

Translation: An experimental investigation is conducted of the process of stabilization of the flame of an inhomogeneous kerosene-air mixture (in the vapor phase, speed $W=100-180$ m/sec, pressure $p_0 = 0.2-0.6$ absolute atmosphere, gas temperature 650°C). It is established that the flame-stabilization mechanism of an inhomogeneous mixture behind a poorly streamlined body does not differ in principle from the flame-stabilization mechanism of a homogeneous mixture. The value which determines the boundaries of the stable-combustion region of an inhomogeneous mixture is the air-excess coefficient in the circulation zone behind the stabilizer α_{st} . The boundary characteristics of the stable-combustion region are generalized by the relationship $\frac{W}{dp_0} = f(\alpha_{st})$

(d is the characteristic dimension of the stabilizer). 2 figures.
2 references.

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USSR

UDC 519.281

DOKTOROV, B. Z.

"Two Problems from the Theory of Discriminant Analysis"

Teoriya Veroyatnostey i Mat. Statist. Mezhved. Nauchn. Sb. [Theory of Probabilities and Mathematical Statistics, Interdepartmental Scientific Collection], No 3, 1970, pp 50-55, (Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 VI60 by Ye. Barzilovich).

Translation: In analyzing two n-dimensional normal distributions with identical covariation matrices B and means difference $d = \mu_1 - \mu_2$, a method is known for producing the coefficients of the linear discriminant function (l.d.f.)

$$z = b^T x \quad (1)$$

from the condition of determination of the maximum with respect to b of the expression

$$(b^T d)^2 / b^T B b. \quad (2)$$

It is also known that the solution of this problem is the vector

$$b_{\text{opt}}^T = (d_1, \dots, d_n)^T B^{-1}, \quad (3)$$

determining the coefficients of the l.d.f. (Fisher R. A. The use of multiple
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DOKTOROV, B. Z., Teoriya Veroyatnostey i Mat. Statist. Mezhd. Nauchn. Sb., No 3, 1970, pp 50-55.

UDC 519.281

measurements in taxonomic problems, Ann. Eugen., 1936, No 7, pp 179-188). The maximum value of (2) defines the distance between the sets

$$\Delta_{\pi} = b^T d = d^T B^{-1} d. \tag{4}$$

This article suggests that the problem of classification of observations be solved using not the optimal rule (3), but rather a certain vector

$$b_1^T = d_1^T B_1^{-1}, \tag{5}$$

so that the value of the fraction in (2) is

$$\Delta = \frac{\{d_1 B_1^{-1} d\}^2}{d_1^T B_1^{-1} B B_1^{-1} d_1}$$

and the value of

$$\alpha = \Delta_{\pi} - \Delta > 0 \tag{6}$$

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USSR

DOKTOROV, B. Z., Teoriya Veroyatnostey i Mat. Statist. Mezhd. Nauchn. Sb.,
No 3, 1970, pp 50-55.

UDC 519.281

Mat. Statist. Mezhd. Nauchn. Sb.,

will indicate the degree by which rule (5) differs from the optimal rule. The author introduces the concept of the linear dependence of the decision rules studied (in this case $b = fb_1$, where f is a scalar); then from (2) and (6) we find that $a = 0$ only when the decision rules $z = b^T x$ and $z_1 = b_1^T x$ are linearly dependent. The problem of selection of characteristics for construction of the l.d.f. is further formulated and solved.

1/2 037

UNCLASSIFIED

PROCESSING DATE--04DEC70

TITLE--ENERGIZING AND LIFE OF CATHODELESS CIRCULAR FLASH LAMPS -U-

AUTHOR--(02)-ZHILTSOV, V.P., DOKTOROU, YU.A.

COUNTRY OF INFO--USSR

SOURCE--SVETOTEKHNIKA (USSR), NO. 2, P. 14-15, 1970

DATE PUBLISHED-----70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR, ELECTRONICS AND ELECTRICAL ENGR.
TOPIC TAGS--FLASH LAMP, TRIGGER CIRCUIT, SIGNAL TRANSMISSION, SPARK GAP, THYRATRON, IGNITRON

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3007/1736

STEP NO--UR/0311/70/000/002/0014/0015

CIRC ACCESSION NO--AP0136977

UNCLASSIFIED

2/2 037

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0136977
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE USE OF CIRCULAR IMPULSE LAMPS
IN AUTOMATIC SIGNALLING AND COMMUNICATION REQUIRES RELIABLE TRIGGERING
SYSTEMS WHOSE SERVICE LIFE WOULD MATCH THAT OF THE LAMP ITSELF. THE
PAPER CONSIDERS POSSIBILITY OF APPLICATION OF THREE TYPES OF TRIGGERING:
SPARK GAP, IGNITRON AND THYRATRON; IT PROVIDES ANALYSIS OPERATION OF
THE DEVICES AND DISCUSSES THEIR FREQUENCY AND POWER LIMITATION.

UNCLASSIFIED

USSR

UDC 629.19:533.6

BORODINA, R. M., DOKUCHAYEV, L. V., YEFIMENKO, G. G.

"Three-Dimensional Motion of a Two-Body Packet in Orbit"

V sb. Konf. po kolebaniyam mekh. sistem. Tezisy dokl. (Conference on Oscillations of Mechanical Systems. Abstracts of the Reports), Kiev, "Nauk. dumka", 1971, p 12 (from RZh-Mekhanika, No 10, Oct 71, Abstract No 10B260)

Translation: The authors consider the three-dimensional motion of two bodies bound by a flexible connector for the following three cases:

1. The bond is weightless and nonextensible, and the masses of the bodies are concentrated at a point. The center of mass of the system moves in a circular orbit. Gravitational and aerodynamic forces are taken into consideration. The regions of possible motions and the position of stable equilibrium are determined.

2. The bond is heavy, and there are no aerodynamic forces. Small oscillations of the system relative to some undisturbed motion are studied. Modes of oscillations in the plane of the orbit and in the perpendicular plane are determined.

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USSR

BORODINA, R. M. et al., Konf. po kolebaniyam mekh. sistem. Tezisy dokl.,
Kiev, "Nauk. dumka", 1971, p 12

3. The effect of external forces is disregarded, but distribution of the masses of the bodies and the elasticity of the cable are accounted for. It is assumed that the cable is weightless, stretches axially, is free of twist about its axis, and has no bending rigidity. Necessary conditions are found for stability of such rotation.

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USSR

UDC 51.330.115

DOKUCHAYEV, V. M.

"Distribution of Resources and Statement of Local Problems in Hierarchical System"

Mat. Vopr. Formir. Ekon. Modeley [Mathematical Problems of Formation of Economic Models -- Collection of Works], Novosibirsk, 1970, pp 55-80 (Translated from Referativnyy Zhurnal Kibernetika, No. 4, April, 1971, Abstract No. 4 V588).

No Abstract.

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ДОКУМЕНТ УД. 0700

Soviet Inventions Illustrated, Section I Chemical, Derwent, 3/70

236730 GLASS FIBRE MANUFACTURE. This invention relates to a device for charging glass beads automatically into a glass-melting pot, which incorporates a level-indicating gauge in the form of a d.c. amplifier, a controlled admission device and a time relay. To improve the safety and reliability of operation, the control unit on the admission device additionally includes an unsymmetrical multivibrator and the level gauge includes a Schmitt trigger. The electronic circuitry is shown in the diagram. The level gauge section of the circuit consists of the input rectifying bridge M and trigger 1; the control unit is made up of the unsymmetrical multivibrator 2, the relay is connected by the triode P₁ to the d.c amplifier 3 and relay R₁ at the output. The way in which the circuit works when the level of the mass of glass in the furnace changes is described, together with the

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mechanism that comes into operation to add more
glass beads to the furnace to replace that which
has been used in production. 22.8.67. as 1182663/
29-33. V.N DOKUCHAEV et al. (19.6.69.) Bul.7/
3.2.69. Class 32a. Int.Cl C03b.

LD

AUTHORS: Dokuchayev, V. N.; Shepelev, V. L.; Kalynov, Yu. S.

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1/2 023 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--A FRICTION MACHINE, MTK 1, FOR TESTING FRICTION PARIS IN AN
AGGRESSIVE MEDIUM AT HIGH TEMPERATURES -U-
AUTHOR--(03)-VORONKOV, B.D., DOKUCHAYEV, YU.N., TYAZHELNIKOVA, L.N.
COUNTRY OF INFO--USSR
SOURCE--FIZ.-KHIM, MEKHAN. MAT., 1970, 6(1), 72-75 D
DATE PUBLISHED-----70
SUBJECT AREAS--METHODS AND EQUIPMENT, PHYSICS
TOPIC TAGS--PHYSICS LABORATORY INSTRUMENT, TEST METHOD, WEAR RESISTANCE,
FRICTION TEST/(U)MTK1 FRICTION TESTING APPARATUS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3003/0211 STEP NO--UR/0369/70/006/001/0072/0075
CIRC ACCESSION NO--AP0129467
UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0129467

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A GENERAL DESCRIPTION OF A NEW FRICTION MACHINE DESIGNED FOR STUDYING THE BEHAVIOUR OF FRICTION PAIRS FORMED BETWEEN METALS AND VARIOUS OTHER SUBSTANCES IN A CORROSIVE MEDIUM IS PRESENTED. THIS MACHINE FACILITATES THE DETERMINATION OF WEAR EXPRESSED EITHER AS A CHANGE OF DIMENSIONS OR A WEIGHT LOSS, AND IS SUITABLE FOR BOTH METALLIC AND NON METALLIC SAMPLES IN CORROSIVE MEDIA AT TEMP. UP TO 150DEGREESC. VARIOUS OTHER PHENOMENA (E.G. PHASE CHANGES) ACCOMPANYING THE PROCESS OF FRICTION MAY BE STUDIED AT THE SAME TIME.

UNCLASSIFIED

Acc. Nr:

AP0048444

Abstracting Service:

INTERNAT. AEROSPACE ABST.

Ref. Code:

5-76 URO030

A70-25129 # New photographic materials for astronomy and spectroscopy (Novye fotograficheskie materialy dlia astronomii i spektroskopii). P. V. Meiklijar and O. D. Dokuchaeva, *Akademiia Nauk SSSR, Vestnik*, vol. 40, Feb. 1970, pp. 45-48. In Russian.

Discussion of five astronomic films (A-500, A-600, A-660, A-700, and A-700 F) of improved light-sensitivity, produced at the Kazan Chemical Plant. The resolving power of the films is 70 to 80 lines per mm. The films are covered with a mechanically stable antihelo lacquer film. The A-700 F films retain their high light sensitivity beyond the green region of the spectrum. Several new emulsions are also noted.

V.P.

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REEL/FRAME
19800152

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UDC 671.1:620.193.1:621.034

DOKUCHAYEVA, V. A., and BASHKIROV, V. I., Moscow Institute of Steel and Alloys

"Hydroabrasive Erosion of Metals in an Acoustic Field"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Chernaya Metallurgiya, No 7, 1972, pp 135-138

Abstract: A method for calculating the hydroabrasive destruction of metals in an acoustic field is suggested. The method is based on the hypothesis that the energy necessary to erode the sharp edge is equal to the work required for the disruption of bonds between the atoms of the crystalline lattice. The application of the method is demonstrated by using a numerical example showing good agreement between calculated and experimental data. Two figures, thirteen formulas, six bibliographic references.

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USSR

UDC 576.85

SAPEGINA, V. F. and DOKUCHAYEVA, Yu. I., Biological Institute, Siberian Department, Academy of Sciences USSR, Novosibirsk

"Ability of Ixodes pavlovskiy Ticks to Transmit Tick-Borne Encephalitis Virus under Experimental Conditions"

Novosibirsk, Izvestiya Sibirskogo Otdeleniya Akademii Nauk SSSR, Seriya Biologicheskikh Nauk, Vol 10, No 2, Aug 70, p 152

Abstract: Larvae of Ixodes pavlovskiy ticks were attached for feeding to white mice infected with a 10% brain suspension of tick-borne encephalitis virus (Sof'in strain). The feeding was interrupted by the death of the infected animals. On the 1-8th (group 1), 10-12th (group 2), and 13-16th (group 3) days after the interruption, the unsatiated larvae were attached to healthy white mice for additional feeding. Group 1 larvae readily attached themselves to the new hosts; not all of group 2 attached themselves to the new mice, and about 70% of group 3 larvae perished. Examination of the new host mice to which group 1 larvae were attached revealed typical clinical symptoms of tick-borne encephalitis. No such symptoms were detected in the mice to which groups 2 and 3 of the larvae had been attached, although the presence of antibodies to tick-borne

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SAPEGINA, V. F. and DOKUCHAYEVA, Yu. I., Izvestiya Sibirskogo Otdeleniya Akademii Nauk SSSR, Seriya Biologicheskikh Nauk, Vol 10, No 2, Aug 70, p 152

encephalitis virus was established. To determine the transphase ability of ticks to transmit the virus *Ixodes pavlovskyi* larvae were fed on mice with tick-borne encephalitis during viremia and kept through the winter at a temperature of 2°C. In May of the following year, after the larvae was transformed into nymphs, nymphs were attached for feeding to healthy white mice. Subsequent examination of the mice failed to show any symptoms of the disease. Positive results were obtained when, 15-20 days after feeding, suspensions of satiated nymphs were used to infect mice. These results indicate that transphase transmission of the virus occurs.

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