

1/2 010 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--CDI SUB2 -MI SYSTEM -U-
AUTHOR--(02)-BELYAYEV, I.N., KESAREV, V.V.
COUNTRY OF INFO--USSR
SOURCE--ZH. NEORG. KHIM. 1970, 15(5), 1434-5
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--PHASE EQUILIBRIUM, IODIDE, CADMIUM COMPOUND, ALKALI METAL
COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3006/1399 STEP NO--UR/0078/70/015/005/1434/1435
CIRC ACCESSION NO--AP0135073
UNCLASSIFIED

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PROCESSING DATE--13NOV70

CIRC ACCESSION NO--A0135073

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ALL INVESTIGATED CDI SUB2 -MI SYSTEMS (M EQUALS LI, NA, K, RB, CS) SHOW A NEG. DEVIATION FROM RAULT'S LAW INCREASING FROM M EQUALS NA TO N EQUALS CS. THE DATA ARE TABULATED. FACILITY: ROSTOV.-NA-DONU GOS. UNIV., ROSTOV-ON-DON, USSR.

UNCLASSIFIED

AA0044231

UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent,

2/70

243742 ANODE-GRID UNIT of gas-discharge rectifier has an anode shutter and a control grid which are both of spherical shape with a common centre. The absence of a field inside the anode reduces the secondary electron emission and the likelihood of backfires. It also makes for a more robust design and has a higher receiving area of the anode to enable it to operate at high impulse loads.

1.6.68 as 1244022/24-7. I.G. KESAEV et al. (3.10.69.)
Bul 17/14.5.69. Class 2lg. Int.Cl. H 01 j.

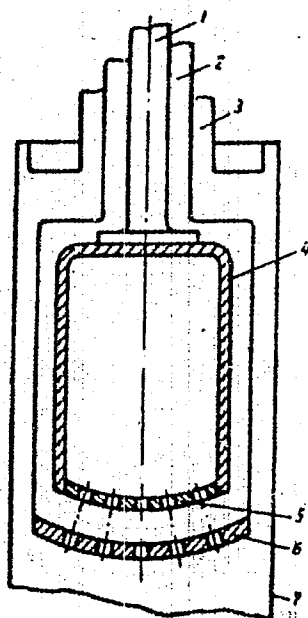
AUTHORS: Kesayev, T. G., Khromoy, Yu. D., Serbinov, A. M.

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USSR

UDC: 519.1

BASENSHPILER, V. Ya., KESEL'MAN, D. Ya.

"On Whitney Theorems Relating to Doubly Isomorphic Graphs"

Irkutsk, Tr. po prikl. mat. i kibernet. Sib. energ. in-t Sib. otd. AN SSSR (Works on Applied Mathematics and Cybernetics. Siberian Power Engineering Institute of the Siberian Department of the Academy of Sciences of the USSR), 1972, pp 43-48, ill., bibl. of 4 titles (manuscript deposited in VINITI 26 Dec 72, No 5285-72 Dep. by the authors)

Translation: Simpler and shorter proofs are given of two theorems of Whitney on isomorphism and double isomorphism of cyclically isomorphic graphs.

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USSR

UDC: 519.1

KESEL'MAN, D. Ya.

"An Application of Colorings of Complete Graphs"

Irkutsk, Tr. po prikl. mat. i kibernet. Sib. energ. in-t Sib. otd. AN SSSR (Works on Applied Mathematics and Cybernetics. Siberian Power Engineering Institute of the Siberian Department of the Academy of Sciences of the USSR), 1972, pp 68-78, bibl. of 8 titles (manuscript deposited in VINITI, 26 Dec 72, No 5285-72 Dep.) (from RZh-Kibernetika, No 5, May 73, abstract No 5V508 DEP by the author)

Translation: The paper discusses colorings of the vertices and edges of an ordinary complete graph S_n with n vertices such as the following: each vertex S_n is assigned "its own" element of some commutative quasigroup (loop, group) of suitable order, and the edge between two vertices is assigned a quasigroup sum of the elements assigned to the vertices. Edges of one color form a pair combination. Some properties of the decomposition into such pair combinations are considered

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USSR

KESEL'MAN, D. Ya., Tr. po prikl. mat. i kibernet. Sib. energ. in-t Sib. otd. AN SSSR, 1972, pp 68-78, 5285-72 Dep.

and a characteristic of parity of the order of a commutative quasigroup is derived from graph considerations. Then, using coloring of S_n by elements of a cyclic group a chain of graphs with n vertices having the greatest connectivity for the given number of edges is constructed. Algorithmic solvability of elementary theories of some plotted classes of graphs is also considered.

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- 45 -

USSR

UDC 612.821+612.826

KESHELAVA-GOGICHADZE, M. V., and ONIANI, T. N., Associate Member of the Academy of Sciences Georgian SSR, Institute of Physiology, Academy of Sciences Georgian SSR

"Behavioral and Electroencephalographic Effects of Electrical Stimulation of the Head of the Caudate Nucleus"

Tbilisi, Soobshcheniya Akademii Nauk Gruzinskoy SSR, Vol 68, No 1, Oct 72, pp 201-204

Abstract: In cats with implanted electrodes, stimulation of the head of the caudate nucleus induces several effects depending on the parameters of the stimulus. A moderate stimulus induces a sleepy state with synchronization of slow potentials in the neocortex and hippocampus and a fall in heart rate. Some animals lie down comfortably and fall asleep. A stronger stimulus wakes a sleeping cat, desynchronizes slow waves, and intensifies theta rhythm in the hippocampus. In a waking cat, it causes a general excitation (pupillary dilation, piloerection, and meowing), intensifies theta rhythm in the hippocampus, but induces no change in the electroneocorticogram. A very strong stimulus precipitates an alarm reaction with intensification of hippocampal theta rhythm and acceleration of heart rate. Next, some animals fall into stupor with
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USSR

KESHELAVA-GOGICHADZE, M. V. and ONIANI, T. N., Soobshcheniya Akademii Nauk
Gruzinskoy SSR, Vol 68, No 1, Oct 72, pp 201-204

inhibition of hippocampal theta rhythm and deceleration of heart rate. Finally, all animals develop motor activity consisting of continuous rotation in the contralateral direction. The findings indicate that the head of the caudate nucleus participates not only in the control of the diurnal waking-sleeping cycle but also in the regulation of complex motivational behavior and associated emotional components.

2/2

Adsorption

USSR

UDC 546.633:543.544.6

SHATSKIY, V. M., KRIVENKO, S. V., KOMISSAROVA, L. N., BEBIKH, G. F.,
PRUTKOVA, N. M., KESLER, YA. A., and TVOROGOV, V. A., Chain of Inorganic
Chemistry

"Synthesis of Novel Phosphorus Containing Sorbents and the Study of the Sorption
of Scandium on Them"

Moscow, Vestnik Moskovskogo Universiteta, Vol 13, No 6, Nov-Dec 72, pp 653-658

Abstract: Optimal conditions for scandium sorption and separation from iron
have been determined on a pilot-plant scale. A specific sorbent was used in the
process. It was the product of the copolymerization of styrene with divinyl-
benzene phosphorylated with PCl_2 and subsequently hydrolyzed with alcoholic
potassium hydroxide solution. The optimal conditions for the separation process
on this sorbent are as follows: the sorption is carried out from a 0.1 N H_2SO_4
solution; a 7% ammonium fluoride solution is used for the desorption; under
these conditions in one "sorption-desorption" cycle the iron is isolated prac-
tically completely. Repetition of the desorption process with a fresh portion
of the desorbent removed 92% of scandium. This sorbent may be used for the con-
centration of scandium out of the solutions with high iron content. In addition
to iron this method also separates all mono- and divalent elements, rare earth
elements and other impurities from scandium.

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USSR

UDC 547.26'118

NESTEROV, L. V., KESSEL', A. Ya., SAMTOV, Yu. Yu., MUSINA, A. A. Institute of Organic and Physical Chemistry imeni A. Ye. Arbuzov, Academy of Sciences USSR, and Kazan State University imeni V. I. Ul'yanov Lenin

"Nucleophilicity of the Phosphoryl and Thiophosphoryl Groups"

Leningrad, Zhurnal Obshchei Khimii, Vol 40, No 6, Jun 70, pp 1237-1241

Abstract: A series of compounds of the form $\text{CH}_2\text{P}(\text{S})\text{XY}$ was synthesized. All were alkylated by equivalent amounts of triethyloxonium borofluoride in methylene chloride. Their chemical shifts of the P-bonded methyl group protons exhibited a critical range beyond which no alkylation reaction took place. It was found that the methyl protons in the methylphosphonic acid derivatives are shielded more than those of the corresponding methylthiophonic acid derivatives, due to the greater tendency of the P=O bond to reverse coordination.

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USSR

UDC 538.27

VINOGRADOV, L. I., SAMITOV, YU. YU., KESSLI, A. YA., NESTEROV, L. V.,
and MARDANOVA, V. B., Kazan' State University, Institute of Organic
and Physical Chemistry imeni A. Ye. Arbuzov, Academy of Sciences USSR,
Kazan'

"Effect of Solvent on Spin-Spin Coupling Constants in PMR Spectra of
Some Organophosphorus Compounds Containing P=O Group. I. Geminal
Constants J_{P-C-H} "

Kiev, Teoreticheskaya i Eksperimental'naya Khimiya, Vol 6, No 1, Jan-
Feb 70, pp 103-107

Abstract: A study was made of the effect of nonaromatic and aromatic
solvents on the geminal spin-spin coupling constant of P^{31} and H^1 nu-
clei in CH_3POCl_2 , $CH_3POClOPh$, $CH_3PO(OPh)_2$, $CH_3POClN(C_2H_5)_2$ and
 $CH_3PON(C_2H_5)_2OPh$. There was found to be a linear decrease in J_{P-C-H}
with an increase in the electric field of the reaction, with the de-
crease being sharper in aromatic solvents. It is concluded that a

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USSR

VINOGRADOV, L. I., et al., Teoreticheskaya i Eksperimental'naya Khimiya, Vol 6, No 1, Jan-Feb 70, pp 103-107

positive sign is likeliest for the spin-spin coupling constant. Two possible mechanisms for the spin-spin interaction through the pi-electron system of the aromatic ring are suggested to explain the increase in J_{P-C-H} as Cl atoms are displaced by CPh:

1. The spin-spin interaction results from the pi-electron current induced by the magnetic moment of the nucleus in the aromatic ring, creating a local field on the second nucleus.

2. The spin-spin interaction occurs through the pi-electron system of the aromatic ring according to the mechanism suggested by H. M. McCONNELL for a long-range proton-proton interaction in aromatic systems. This mechanism is apparently realized in the compounds investigated here.

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USSR

VINOGRADOV, L. I., et al., Teoreticheskaya i Eksperimental'naya Khimiya, Vol 6, No 1, Jan-Feb 70, pp 103-107.

An explanation is given for some peculiarities in the variation of the reactivity of the studied compounds.

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1/2 018 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--SOLVENT EFFECT ON SPIN SPIN COUPLING CONSTANTS IN PMR SPECTRA OF
ORGANOPHOSPHORUS COMPOUNDS CONTAINING A P=O GROUP. I. GEMINAL CONSTANTS
AUTHOR--(05)-VINOGRAOV, L.I., SAMITOV, YU.YU., KESSEL, A.YA., NESTEROV,
L.V., MARDANOVA, V.B.
COUNTRY OF INFO--USSR
SOURCE--TEOR. EKSP. KHIM. 1970, 6(1), 103-7
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--SOLVENT ACTION, MAGNETIC RESONANCE, PROTON, SPECTRUM, ORGANIC
PHOSPHORUS COMPOUND, DIELECTRIC EFFECT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO-----FD70/605013/B04 STEP NO--UR/0379/70/006/001/0103/0107
CIRC ACCESSION NO--AP0140345

UNCLASSIFIED

2/2 018 UNCLASSIFIED PROCESSING DATE--04DEC70
CIRC ACCESSION NO--AP0140345
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. J SUBP-C-H CONSTS. WERE MEASURED
FOR MEPOCL SUB2, MEPOCLOPH, MEPO(OPH) SUB2, MEP(O)CINET SUB2, AND
MEP(O)(NET SUB2)OPH IN 8 ORG. SOLVENTS. CORRELATIONS J SUBP-C-H VS.
(EPSILON MINUS 1)-(EPSILON PLUS N PRIME2-2) ARE DISCUSSED, WHERE EPSILON
EQUALS DIELEC. CONST. OF SOLVENT. FACILITY: KAZAN, GOSUNIV.,
KAZAN, USSR.

UNCLASSIFIED

USSR

UDC 681.327.11

ZLOBIN, Yu. P., KESSEL', Ye. L., State All-Union Central Scientific Research Institute of Large-Scale Automation

"A Device for Recording and Reproducing Information"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, 1970, No 36, Soviet Patent No 288412, class 42, filed 14 Jan 69, published 3 Dec 70, p 154

Translation: This Author's Certificate introduces a device for recording and reproducing information. The device contains modules for recording and reading out cadence pulses and information signals, counters, a coincidence circuit, a delay line, and an adder. As a distinguishing feature of the patent, the accuracy of information reproduction is improved by combining the gaps of the magnetic heads in the units for recording and reading out the cadence pulses and information signals on a single axis. The outputs of the cadence pulse readout units are connected to the reset inputs of the counters, and through a coincidence circuit and delay line to the input of an adder, and the outputs of the information signal readout units are connected to the corresponding counting inputs of the counters, the outputs of the counters being connected by digital place to the inputs of the adder.

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Radar

USSR

UDC 621.397.3.681.326

KABO, I. Ya., KESSEL'MAN, O. L.

"On Using Digital Computers to Synthesize Holograms of Moving Objects"

Moscow, Kvantovaya Elektronika, Sbornik Statey, No 4, "Sovetskoye Radio", 1971, pp 130-134

Abstract: An algorithm is described for machine synthesis of holograms of objects moving in a plane parallel to the plane of the hologram. The process reduces to shifting the initial calculated hologram along the coordinate axes in accordance with changes in the position of the object. Consideration is also given to synthesis of holograms of objects moving arbitrarily in three dimensions. The proposed algorithm is based on the method of hologram synthesis described by L. B. Lesem et al. (*Communications ACM*, 1968, v. 11, p 661). In this method the object is represented as a three-dimensional lattice of point apertures of variable intensity, each radiating a spherical wave. The procedure is based on parabolic approximation of the Fresnel-Kirchhoff integral. For some cases, as in radar, the coordinates of the moving objects can be obtained by primary data processing. Five figures, bibliography of one title.

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1/2 022 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--ANALYSIS OF THE CORRELATIONS BETWEEN GEOLOGICAL AND GEOPHYSICAL
PARAMETERS OF THE EARTH'S CRUST IN SOUTHERN TURKMENISTAN -U-
AUTHOR-(05)-ODEKOV, O.A., ZAKHAROVA, L.T., KESELMAN, S.I., MURADOV, CH.,
YUVSHANOV, A.
COUNTRY OF INFO--USSR

SOURCE--ASHKHABAD, IZVESTIYA AKADEMII NAUK TURKMENSKOY SSR, SERIYA
FIZIKO-TEKHNICHESKIKH, KHIMICHESKIKH I GEOLOGICHESKIKH NAUK, NO 3, 1970,
DATE PUBLISHED-----70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--EARTH CRUST, MOHOROVICIC DISCONTINUITY, GRAVITATION FIELD,
MAGNETIC FIELD

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3008/0396

STEP NO--UR/0202/70/000/003/0083/0090

CIRC ACCESSION NO--AP0137488

UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0137488

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN SOUTHERN TURKMENISTAN THE DEPTH TO THE MOHROVICIC DISCONTINUITY CORRELATES WELL WITH THE GRAVITY FIELD AND AGREES POORLY WITH THE MAGNETIC FIELD; IT AGREES SATISFACTORILY WITH RELIEF OF THE EARTH'S SURFACE. THE BEST CORRELATION WITH DEPTH TO THE MOHO IS WITH THE GRAVITY AND MAGNETIC FIELDS TOGETHER; RELIEF OF THE EARTH'S SURFACE IN COMBINATION WITH THE GRAVITY FIELD ALSO IMPROVES THE CORRELATION, BUT TO A LESSER DEGREE THAN IN THE PRECEDING CASE, BUT IN COMBINATION WITH THE MAGNETIC FIELD THE STANDARD DEVIATION IS BETTER THAN WHEN ONLY THE MAGNETIC FIELD IS TAKEN INTO ACCOUNT. IN A GEOSYNCLINAL REGION THE CLOSEST CORRELATION BETWEEN DEPTH TO THE MOHO IS OBSERVED WITH THE RELIEF OF THE EARTH'S SURFACE. AFTER COMPARING THE MEAN SQUARE ERRORS AND VARIATIONS OF DEPTH TO THE MOHROVICIC DISCONTINUITY ONE CAN NOTE THAT IN THE GEOSYNCLINAL REGION THE DEPTH TO THE MOHO CAN BE PREDICTED FROM RELIEF OF THE EARTH'S SURFACE; IN PLATFORM REGIONS AND IN A ZONE OF DOWNWARPING IT CAN BE PREDICTED FROM THE GRAVITY FIELD. WITH RESPECT TO OPERATORS OBTAINED BY COMBINING GEOPHYSICAL PARAMETERS, IN ALL GEOTECTONIC REGIONS A SATISFACTORY PREDICTION CAN BE MADE WHEN THE GRAVITY AND MAGNETIC FIELDS ARE TAKEN TOGETHER. FACILITY: INSTITUTE OF PHYSICS OF THE EARTH AND ATMOSPHERE.

UNCLASSIFIED

1/2 015 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--CALCULATION OF THE PATHS OF DOPING IONS IN SEMICONDUCTORS -U-

AUTHOR--KESSELMAN, V.S.

COUNTRY OF INFO--USSR

K

SOURCE--FIZ. TEKH. POLUPROV. 1970, 4(1), 228

DATE PUBLISHED-----70

SUBJECT AREAS---PHYSICS

TOPIC TAGS--SEMICONDUCTOR IMPURITY, ION BEAM DOPING, ION MOBILITY,
PARTICLE TRAJECTORY, FREE PATH

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1987/1989

STEP NO--UR/0449/70/004/001/0228/0228

CIRC ACCESSION NO--AP0105063

UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0105063

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. WHEN DOPING SEMICONDUCTORS, IT IS IMPORTANT TO KNOW THE DEPTH OF PENETRATION OF DOPING IONS AT VARIOUS INITIAL ENERGIES, USUALLY SMALLER THAN 100 KEV. THE AV. PROJECTED PATH, I.E. THE PATH OF THE ION IN THE DIRECTION OF ITS INITIAL MOVEMENT, IS OF MAJOR INTEREST IN THESE EXPTS. ANAL. EXPRESSIONS ARE GIVEN FOR THE COMPUTATION OF PROJECTED ION PATHS. THE CALCNS. ARE BASED ON THE THEORY OF LINDHARD, ET AL., AND USE DIMENSIONLESS VARIABLES, RELATED TO ENERGY AND THE ION PATH. A SUMMARY OF BASIC DATA IS PRESENTED, TOGETHER WITH SIMPLER EQUATIONS FOR THE CALCN. OF THE FULL ION PATH WITHIN THE SEMICONDUCTOR.

UNCLASSIFIED

1/2 011 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--STATISTICAL SCATTER OF HEAVY ION RANGES -U-
AUTHOR--(02)--KESSELMAN, V.S., BULGAKOV, YU.V.
COUNTRY OF INFO--USSR
SOURCE--AT. ENERG. 1970, 28(2), 173-4
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--ION DISTRIBUTION, ELASTIC SCATTERING, PARTICLE TRAJECTORY,
GAUSSIAN DISTRIBUTION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--2000/1155 STEP NO--UR/0089/70/028/002/0173/0174
CIRC ACCESSION NO--AP0124810
UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124810

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. A MATH. ANAL. SHOWS THAT THE ASYMMETRY OF RANGE DISTRIBUTION CURVES (FOR HEAVY PARTICLES) IS DUE MAINLY TO SEP. FLUCTUATIONS IN ELASTIC COLLISIONS; WITH INCREASING PARTICLE ENERGY THE SHAPE OF THE CURVE APPROACHES THE GAUSSIAN DISTRIBUTION (BY ASSUMING THAT MULTIPLE SCATTERING IS NEGLECTED).

UNCLASSIFIED

USSR

UDC 547.233

~~KESSLER, YIL M.~~, FOMICHEVA, M. G., ALPATOVA, N. M., and YEMELIN, V. P.,
Electrochemical Institute, Academy of Sciences Institute of Chemical
Mechanical Engineering, Moscow

"Certain Physical and Structural Characteristics of Hexamethylphosphoro-
triamide"

Moscow, Zhurnal Strukturnoy Khimii, Vol 13, No 3, May/June 72, pp 517-519

Abstract: Hexamethylphosphorotriamide (HMPT) (tris(dimethylamino)phosphine
oxide $(CH_3)_2N_3PO$) is an important organic solvent, of special interest due to
its use as a medium for the study of electron behavior in condensed phases.
Three physicochemical properties of the solvent were measured. Using a
pycnometer, the specific gravity was determined to be 1.0202 at 25°C and
1.0327 at 10°. The viscosity, measured with an Ostwald viscosimeter, was
reported as 3.24 centipoise at 25° and 4.50 centipoise at 10°. The dielectric
constant was measured at 200 kilohertz by phase displacement with compensation
for carbon. The results were 30.02 at 25° and 32.6 at 10°. A comparison of
the molecular and molar volumes of several liquids with those of HMPT suggests
a structure other than close packing. Further comparison of the function
inverse times temperature derivative for dielectric constant and specific
gravity implies that HMPT has a labile structure with a dipole character.

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USSR

UDC:661.862(541.444+546.12);541.49

ALPATOVA, N. M., GAVRILENKO, V. V., KESSLER, Yu. M., OSIPOV, O. P., and MASLIN, D. N.

"Complexes of Organometallic, Hydride, and Halide Compounds of Aluminum"

Kompleksy Metalloorganicheskikh, Gidridnykh i Galoidnykh Soyedineniy Alyuminiya [English Version Above], Moscow, Nauka Press, 1970, 296 pages

Annotation: This book deals with the physical and chemical properties and synthesis of complexes of aluminum formed of its organic, hydride, and halide compounds with organic and inorganic addends. Particular attention is given to the molecular structure of the complexes and the strength of bonds in them. The spectral characteristics of complexes and the role of complex formation in the synthesis of compounds of aluminum and their solubility are analyzed. Plans of the dissociation of complexes in the liquid phase are discussed, and the nature of ions is analyzed in detail. Cathode and anode processes

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USSR

UDC:661.862(541.444+546.12);541.49

ALPATOVA, N. M., GAVRILENKO, V. V., KESSLER, Yu. M., GSIPOV, O. P.,
MASLIN, D. N., Kompleksy Metalloorganicheskikh, Gidridnykh i Galoidnykh
Soyedineniy Alyuminiya, Moscow, Nauka Press, 1970, 296 pages

in the electrolysis of melts and solutions and problems of practical
electrodeposition of aluminum and electrochemical synthesis in non-
aqueous media are discussed.

The book is designed for a broad range of persons interested in
general problems of complex formation, chemicals operating with
organic aluminum and hydride compounds, and electrochemists special-
izing in non-aqueous solutions. The broad range of factual material
allows the book to be used as a reference work as well. 94 tables;
45 figures; 1,697 biblio. refs.

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USSR

UDC:661.862(541.444+546.12);541.49

ALPATOVA, N. M., GAVRILENKO, V. V., KESSLER, Yu. M., OSIPOV, O. P.,
MASLIN, D. N., Kompleksy Metalloorganicheskikh, Gidridnykh i
Galoidnykh Soyedineniy Alyuminiya, Moscow, Nauka Press, 1970, 296 pages

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USSR

UDC:661.862(541.444+546.i2);541.49

ALPATOVA, N. M., GAVRILENKO, V. V., KESSLER, Yu. M., OSIPOV, O. P.,
MASLIN, D. N., Kompleksy Metalloorganicheskikh, Gidridnykh i
Galoidnykh Soyedineniy Alyuminiya, Moscow, Nauka Press, 1970, 296 pages

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USSR

UDC:661.862(541.444+546.12);541.49

ALPATOVA, N. M., GAVRILENKO, V. V., KESSLER, Yu. M., OSIPOV, O. P.,
MASLIN, D. N., Kompleksy Metalloorganicheskikh, Gidridnykh i
Galoidnykh Soyedineniy Alyuminiya, Moscow, Nauka Press, 1970, 296 pages

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USSR

UDC:661.862(541.444+546.12);541.49

ALPATOVA, N. M., GAVRILENKO, V. V., KESSLER, Yu. M., OSIPOV, O. P.,
MASLIN, D. N., Kompleksy Metalloorganicheskikh, Gidridnykh i
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USSR

UDC:661.862(541.444+546.12);541.49

ALPATOVA, N. M., GAVRILENKO, V. V., KESSLER, Yu. M., OSIPOV, O. P.,
 MASLIN, D. N., Kompleksy Metalloorganicheskikh, Gidridnykh i Galoidnykh
 Soyedineniy Alyuminiya, Moscow, Nauka Press, 1970, 296 pages

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USSR

UDC:661.862(541.444+546.12);541.49

ALPATOVA, N. M., GAVRILENKO, V. V., KESSLER, Yu. M., OSIPOV, O. P.,
MASLIN, D. N., Kompleksy Metalloorganicheskikh, Gidridnykh i Galoidnykh
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USSR

UDC:661.862(541.444+546.12);541.49

ALPATOVA, N. M., GAVRILENKO, V. V., KESSLER, Yu. M., OSIPOV, O. P.,
MASLIN, D. N., Kompleksy Metalloorganicheskikh, Gidridnykh i Galoidnykh
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USSR

UDC:661.862(541.444+546.12);541.49

ALPATOVA, N. M., GAVRILENKO, V. V., KESSLER, Yu. M., OSIPOV, O. P.,
MASLIN, D. N., Kompleksy Metalloorganicheskikh, Gidridnykh i Galoidnykh
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10/10

2

USSR

UDC 543.422.23:546.1'118

NURETDINOV, I. A., NEGREBETSKIY, V. V., YANKELEVICH, A. Z., KESSENICH, A. V.,
 NIKONOROVA, L. K., and LOGINOVA, E. I., Institute of Organic and Physical
 Chemistry imeni A. Ye. Arbuzov, Academy of Sciences USSR, and Institute of
 Organic Chemistry imeni N. D. Zelenskiy, Academy of Sciences USSR

"NMR- H^1 , NMR- P^{31} and INDOR- H^1 - $\left\{ P^{31} \right\}$ Spectra of Compounds Containing
 $=P(X) - N - P(Y)=$ Group"

$$CH_3$$

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, no 11, Nov 71,
 pp 2589-2591

Abstract: For purposes of studying the spin-spin interaction in compounds with
 fragments of the type $=P(X) - N - P(X)=$ and $=P(X) - N - P(Y)=$, the authors stud-

ied the NMR- H^1 , NMR- P^{31} and INDOR- $H^1 - \left\{ P^{31} \right\}$ spectra of the following compounds:

$(CH_3O)_2P_I(O)N(CH_3)P_{II}(OCH_3)_2$, $(CH_3O)_2P_I(O)N(CH_3)P_{II}(Se)(OCH_3)_2$, $(CH_3O)_2P_I(O)N-$

$(CH_3)P_{II}(Se)(OC_4H_9 - i)_2$, $(CH_3O)_2P_I(S)N(CH_3)P_{II}(Se) \begin{cases} OC_3H_7 - i \\ N(C_2H_5)_2 \end{cases}$. The values and
 1/2


- 80 -

USSR

NURETDINOV, O. A., et al., Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 11, Nov 71, pp 2589-2591

signs of the constants $^2J_{PP}$, $^3J_{PNCH}$ were determined. The series of compounds studied display a decrease in the value of $^2J_{PF}$ with a change in its sign.

2/2

1/3 012 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--DYNAMIC POLARIZATION OF NUCLEAR SPINS IN A CHEMICAL REACTION -U-
AUTHOR-(03)-BUCHACHENKO, A.L., KESSENIKH, A.V., RYKOV, S.V. 
COUNTRY OF INFO--USSR
SOURCE--ZHURNAL EKSPERIMENTAL'NOY I TEORETICHESKOY FIZIKI, 1970, VOL 58,
NR 3, PP 766-777
DATE PUBLISHED--70
SUBJECT AREAS--CHEMISTRY, PHYSICS
TOPIC TAGS--NUCLEAR SPIN, THERMAL DECOMPOSITION, ORGANIC PEROXIDE, NUCLEAR
MAGNETIC MOMENT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1976/2065 STEP NO--UR/0056/70/058/003/0766/0777
CIRC ACCESSION NO--AP0043593
UNCLASSIFIED

2/3 012

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0043593

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. POLARIZATION PROCESSES OF NUCLEAR SPINS IN CHEMICAL REACTIONS OCCURRING IN MAGNETIC FIELDS ARE STUDIED IN THE CASE OF THERMAL DECOMPOSITION OF ORGANIC PEROXIDES. THE DYNAMIC AMPLIFICATION COEFFICIENT OF NUCLEAR POLARIZATION IS ACCEPTED AS THE MAIN QUANTITATIVE CHARACTERISTIC OF THE PROCESS. APPLICATION OF THE METHODS OF OBTAINING AND TREATING THE EXPERIMENTAL DATA AND COMPARISON OF THE MEASURED QUANTITIES WITH THE RESULTS OF SIMPLE MODEL CALCULATIONS AS WELL AS THOSE OF SOME DIRECT EXPERIMENTS INDICATE THAT ORIENTATION OF NUCLEAR SPINS IN CHEMICAL REACTION ACTS IS NOT STATIONARY AND THAT TRANSITION INVOLVING CHANGES OF ORIENTATION ARE APPARENTLY THE CAUSE OF THE POLARIZATION EFFECT OBSERVED. A SIMPLE PHENOMENOLOGICAL THEORY OF THE KINETICS OF NUCLEAR MAGNETIC MOMENTS, IN WHICH DYNAMIC POLARIZATION OF THE NUCLEAR SPIN IN THE CHEMICAL REACTION IS TAKEN INTO ACCOUNT, IS PROPOSED AND CONFIRMED EXPERIMENTALLY. A NEW EXPERIMENTAL METHOD IS SUGGESTED AND REALIZED WHICH CONSISTS IN INVERSION OF THE MAGNETIC MOMENT DURING THE REACTION. SIMPLE WORKING FORMULAS ARE DERIVED WHICH CAN BE EMPLOYED FOR TREATING THE EXPERIMENTAL DATA. POLARIZATION OF NUCLEAR SPINS IN THE DECOMPOSITION PRODUCTS OF ORGANIC PEROXIDES IS INVESTIGATED AND THE DYNAMIC AMPLIFICATION COEFFICIENTS FOR NUCLEAR POLARIZATION, E , ARE MEASURED FOR THE FIRST TIME FOR THERMAL DECOMPOSITION REACTIONS. THE PREDICTIONS OF THE ORIGINAL HYPOTHESES REGARDING CHEMICAL POLARIZATION OF NUCLEI VIA THE NONSTATIONARY OVERHAUSER EFFECT ARE ANALYZED IN DETAIL.

UNCLASSIFIED

3/3 012

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--A00043593

ABSTRACT/EXTRACT--POSSIBLE CONSEQUENCES OF THE ASSUMPTION OF CONSERVATION OF NUCLEAR SPIN ORIENTATION IN CHEMICAL REACTION ACTS ARE CONSIDERED. THEORETICAL LIMITING VALUES OF ϵ UNDER THIS ASSUMPTION ARE OBTAINED. THE DEPENDENCE OF THESE QUANTITIES ON THE CONDITIONS OF THE REACTION IS DISCUSSED. A COMPARISON OF THE MEASURED VALUES OF THE DYNAMIC AMPLIFICATION COEFFICIENT WITH THE THEORETICAL LIMITING VALUES, A STUDY OF THE DEPENDENCE OF THESE QUANTITIES ON VISCOSITY, TEMPERATURE AND CONCENTRATION, AND FINALLY DIRECT EXPERIMENTS ON POLARIZATION IN CHCL SUB3 SHOW THAT THE ASSUMPTION OF CONSERVATION OF NUCLEAR SPIN ORIENTATION IN CHEMICAL REACTIONS IS NOT VALID.

UNCLASSIFIED

1/2 012 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--INDUCING DYNAMIC NUCLEAR POLARIZATION IN CHEMICAL REACTIONS -U-

AUTHOR--(03)--RYKOV, S.V., BUCHACHENKO, A.L., KESSENIKH, A.V.

COUNTRY OF INFO--USSR

SOURCE--SPECTROSC. LETT. 1970, 3(2), 55-8

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--STRONG NUCLEAR INTERACTION, CHEMICAL DECOMPOSITION, BENZOYL PEROXIDE, AZO COMPOUND, CARBONATE, ELECTRON INTERACTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1985

STEP NO--US/0000/70/003/002/0055/0058

CIRC ACCESSION NO--AP0125574

UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0125574

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DYNAMIC NUCLEAR POLARIZATION OF ME
CONTG. PRODUCTS OF DECOMP. OF BENZOYL PEROXIDE IN THE PRESENCE OF MEI
(0.1M) WERE DETD. IN C SUB2 CL SUB4 AT 120DEGREES. SIGNS OF THE
POLARIZATION OF THE PRODUCTS AGREE WITH THOSE OBTAINED FOR THE SAME
PRODUCTS ON DECOMP. OF ME CONTG. PEROXIDES. SIGN OF NUCLEAR
POLARIZATION IS NOT DEPENDENT ON WHETHER RADICALS ARE FORMED AS
INDIVIDUAL SPECIES OR ESCAPE FROM THE RADICAL PAIRS IN CAGES. ON
DECOMP. OF BICYCLOHEXYL PERCARBONATES, PERACETYLISOPROPYL CARBONATE,
AND SOME AZO COMPS., CHCL SUB3 WAS FORMED IN WHICH THE PROTONS WERE
NEG. POLARIZED. NUCLEAR POLARIZATION IS INDUCED IN THE EARLY STAGES OF
CHEM. REACTIONS WHEN STRONG ELECTRON ELECTRON AND ELECTRON NUCLEAR
INTERACTIONS EXIST AND WHEN RECONSTRUCTION OF ELECTRONIC CLOUDS OF
INTERFACING MOLLS. TAKES PLACE. FACILITY: INST. CHEM. PHYS.,
MOSCOW, USSR.

UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0138503

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PRESUMING J SUBH-H (VIC) IS POS. FOR NITROETHYLENE, THE RELATIVE SIGNS OF THE COUPLING CONSTS. WERE OBTAINED. THEY ARE FOR J SUBH-H 14.8 (TRANS), 7.1 (CIS), AND NEGATIVE 1.8 (GEM) AND FOR J SUBH-H PRIME IS NEGATIVE 9.0 (TRANS), NEGATIVE 4.4 (CIS), AND NEGATIVE 4.5 (GEM) GHZ. FACILITY: INST. ORG. KHIM. IM. ZELINSKOGO, MOSCOW, USSR.

UNCLASSIFIED

1/2 023 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--PROPERTIES OF FILLED POLY(VINYL CHLORIDE) -U-

AUTHOR--(03)-POMOGAYLO, A.O., KESTELMAN, N.YA., SHAPOVALOV, YU.I.

COUNTRY OF INFO--USSR

SOURCE--MEKH. POLIM. 1970, 6(1), 124-6

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--POLYVINYL CHLORIDE, HARDNESS, TITANIUM DIOXIDE, FILLER, SILICA GEL, CARBON PRODUCT, MOISTURE MEASUREMENT, PLASTIC MECHANICAL PROPERTY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/0813

STEP NO--UR/0374/70/005/001/0124/0125

CIRC ACCESSION NO--AP0107355

UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0107355

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HARDNESS AND RIGIDITY OF
POLY(VINYL CHLORIDE) (I) SAMPLES FILLED WITH TIO SUB2 POWD. SILICA GEL,
AND ACETYLENE BLACK INCREASE WITH INCREASING AT. RADIUS OF THE FILLER
CENTRAL ATOM, I.E. TI LARGER THAN SI LARGER THAN C. TIO SUB2 FILLED
SAMPLES HAD LOWER ABRASION RESISTANCE THAN THOSE FILLED WITH SIO SUB2 OR
C. THERMOPROCESSING I FILLED WITH C DID NOT SIGNIFICANTLY INFLUENCE THE
AMT. OF ABRASION, BUT WEAR SHARPLY INCREASED FOR SAMPLES FILLED WITH SIO
SUB2 AFTER THERMOPROCESSING IN OIL AND IN WATER. MOISTURE ABSORPTION
WAS GREATEST FOR SAMPLES FILLED WITH TIO SUB2 AND LEAST FOR THOSE FILLED
WITH SIO SUB2.

UNCLASSIFIED

KESTEN BOYM, K.K. S.

RAN / R. 96.0 / 5. 11. 1973
Dec. 1973

(2)

Kestenboym, Kh. S., F. D. Turetskaya,
L. A. Chudov, and Yu. D. Shevlev, Euler and
Lagrange methods for calculations of point
explosions in a heterogeneous atmosphere.

IN: Trudy Sektsii po khimicheskoy metodam v gazovoy
dinamike 2-go Mezhdunarodnogo kolektivnogo po gazodinamike
vzryva i reaktivnykh sistem, 1969, T. 3. Moscow, 1971,
85-100 (RZhZhikh, 5/72, #53238)

A study is made of a strong point explosion in a nonviscous thermally nonconductive gas. It is assumed that the density and pressure of the atmosphere are altitude-dependent according to an exponential law. Motion is considered in the half plane Π ($r \geq 0$), bounded by the axis of symmetry. The equations of unsteady motion are written out in terms of Euler and Lagrange coordinates. Region G_0 , containing the point in which the explosion occurs, is isolated in half plane π . In solving the problem, the boundary $r_0(t)$ of the region is selected in such a manner that within the entire G_0 region, the pressure could be considered constant. The region of difference calculation, G_1 , is bounded by the curve $r_1(t)$, the shock wave front $r_2(t)$, and two segments of the axis of symmetry. The solution of a number of unidimensional problems, including the problem of a point explosion in a homogeneous atmosphere with account taken of counter-pressure, was checked by an applicable method for the verification, good coincidence being obtained with results of the work by D. Ye. Okhotsimskiy, I. L. Kondrashev, Z. P. Vlasov, and R. K. Kazakov (Trudy Matematicheskogo Instituta AN SSSR, 1957, 50, 66, RZhZhikh, 3/58, #2659). Fairly good correspondence is shown in comparison of the results of calculation of the title problem in terms of Euler and Lagrange variables.

USSR

UDC 534.222.2

KESTENBOYM, Kh. S., KUZINA, Z. N., Moscow

"Propagation of Planar Shockwaves in an Exponential Atmosphere"

Mekhanika Zhidkosti i Gaza, No 5, 1971, pp 31-35.

Abstract: A planar explosion is studied in a medium with exponential distribution of density. In contrast to the so-called sector approximation, the flow of energy from the lower area to the upper area is considered; therefore, the solution of the problem at hand produces a more correct qualitative conception of the flow of gas in the last stage of a point explosion in a heterogeneous atmosphere. The numerical solution in both the upper and lower flow areas results in the corresponding limiting self-modeling modes. Calculations are performed until "breakthrough" of the atmosphere. The method of calculation is based on implicit difference approximations.

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USSR

UDC 621.9

KLABUKOV, Senior Instructor, KESTNER, O. Ye., Candidate of Engineering Sciences and Docent, and ZUYEV, A. M., Candidate of Physical and Mathematical Sciences and Docent, Kurgan Machine Building Institute

"Effect of Pressure on Friction and Wear of Alloy VT-14 and Steel 30KhGSA"

Moscow, IzVUZ--Mashinostroyeniye, No 12, 1972, pp 129-132

Abstract: The friction and wear between titanium alloy VT-14 and hardened steel 30KhGSA was studied with and without lubricants. Lubricants used were transformer oil, TSIATIM-201 and machine oil. A slip rate of 0.17 m/sec and pressures from 2.5 to 50 kg/cm² were used in the tests. It was determined that the use of lubricants does not particularly decrease friction and wear between the two metals. The specific wear of VT-14 was lower without the use of a lubricant than with it. The reason given for intensification of wear on alloy VT-14 when a lubricant was used was that the lubricant prevents oxygen and nitrogen from penetrating the friction surface which in turn prevents cold working of the surface; thus the metal never increases in microhardness at the surface layer. 4 figures, 1 table, 11 bibliographic references.

1/1

- 108 -

Acc. Nr.: AP0047040

Ref. Code: UR0122

USSR

UDC 669.715:621.357.8:620.178.162 A

ZARETSKIY, E. M., Candidate of Technical Sciences, KESTNER, O.
E., Candidate of Technical Sciences, KONDRASHINA, M. V., Engineer
and TEMKINA, A. S., Engineer

"Wear Resistance of Hard Anodic Films on Aluminum Alloys"

Moscow, Vestnik Mashinostroyeniya, No 1, 1970, pp 58-59

Abstract: The results are presented of a series of investigations of anodizing conditions, under which an anodic film with increased antifriction properties is obtained on AK4-1 and D16T alloys. The antifriction properties of hard anodic films obtained in the sulfuric acid electrolyte, and also in a mixture of sulfuric and oxalic acids under various anodizing conditions, were obtained on samples made of AK4-1 and D16T alloys.

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AP0047040

D16T samples, anodized in the electrolyte, cooled by dry ice, were tested on a MI-1 test stand in the presence of sliding friction in a MC-20 oil and AMG-10 hydrolysis at 50 kg/cm² pressure, and 0.4 m/sec sliding velocity against steel. The AK4-1 samples were tested under condition of dry friction at 25 kg/cm² pressure during 30 hours. The results are presented in graphs in the form of the dependence of friction coefficient on time for AK4-1 samples in the MC-20 oil, and for D16T samples, anodized under various conditions. These conditions are given in a table. The results show, that hard anodizing in the electrolyte containing sulfuric and oxalic acids, makes it possible to obtain on the AK4-1 alloy, an anodic film of increased wear resistance with low friction coefficient when operating in a fluid medium. Under condition of dry friction a coating of VAP-2 substantially improves the sliding. Original article has 2 figures and 1 table.

2/2

57

19790479

Epidemiology

USSR

UDC 616.988.75-06:616.988.5]-053.8-036

ALEKSEYEVA, A. A., KETILADZE, Ye. S., KNYAZEVA, L. D., KRYLOV, V. F., GRUSHINSKAYA, I. A., ZHILINA, N. N., and STAKHANOVA, V. M., Clinical Department, Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR on the base of Clinical Infectious Disease Hospital No 82, Moscow

"The Course of Mixed Influenza-Adenoviral Infection in Adults"

Moscow, Klinicheskaya Meditsina, No 1, 1973, pp 101-105

Abstract: Of 1055 patients, age 16 to 78 admitted to the authors' hospital with respiratory symptoms during the 1969 and 1970 influenza A2-Hongkong epidemics, 158 (15%) were diagnosed after physical examination and laboratory tests as having a mixed influenza-adenoviral infection. About one-third of these had the clinical symptoms of adenoviral infection (toxicosis, headache, head cold, pain in the throat, cough, pharyngitis) along with the usual symptoms of influenza. In the other two-thirds, the disease proceeded asymptotically in the form of a virus carrier state or subclinically. The average duration of the above symptoms was much longer than in those suffering from influenza or adenoviral infection alone; pharyngitis persisted the longest. Systematic follow-up (2 years) of the patients with chronic adenoviral infection exacerbated by influenza confirmed the continued presence of adenoviruses even though the individuals felt well and exhibited no signs of inflammation of the respiratory tract.

1/1

USSR

UDC 616.988.75(A2)

KETILADZE, YE. S., KNYAZEVA, L. D., KRYLOV, V. F., ALEKSEYEVA, A. A.,
POLYAKOVA, T. G., TSAREVA, R. G., LITVIN, L. L., and SHUL'ZHENKO, T. V.,
Clinical Department, Institute of Virology imeni D. I. Ivanovskiy, Academy
of Medical Sciences, USSR; and Municipal Infectious Disease Hospital No 82

"Clinical Picture and Some Aspects of the Pathogenesis of Influenza Caused
by Virus A2 (Hong-Kong)"

Moscow, Sovetskaya Meditsina, No 7, 71, pp 115-120

Abstract: The article reports findings of a study of 402 influenza patients
between 17 and 84 years of age, observed during the Moscow influenza epidemic
of January and February 1969. The subjects included both those observed in
the clinic and others in military units. The disease showed all the classical
traits of influenza infection: acute beginning; rapid rise in temperature
(39°C and higher in 88% of the civilian and 26% of the military cases); and
swiftly increasing signs of toxicosis. Almost all patients showed headache,
prostration, pains in the limbs, chill, dizziness, and vomiting. More severe
cases showed changes in the vascular and central nervous systems: delirium,
brief loss of consciousness, syncope, convulsions, and meningeal symptoms.
Cyanosis of the lips and oral mucous membranes, microscopic hemorrhages of the
1/2

USSR

KETILADZE, YE. S., et al., Sovetskaya Meditsina, No 7, 71, pp 115-120

soft palate, and nosebleeds were observed in relatively small percentages of cases. A table shows the relative frequency of various symptoms in successive influenza epidemics from 1959 through 1969. However, these figures show no consistent pattern. As is clear from the data presented, the clinical picture of A2 (Hong-Kong) influenza does not differ in the character of individual symptoms from the A2 influenza of previous years. However, in the degree of manifestation of toxicosis and the number of severe cases among patients hospitalized in the clinic, the influenza in 1969 was more severe than in 1967, but less so than in 1959. Patients in military units generally showed a less severe course. Older patients, especially those with chronic respiratory disorders, showed intensification of these conditions.

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USSR

KETILADZE, Ye. S., Professor

"Protect Yourself and Others From Influenza"

Moscow, Zdorov'ye, No 12, Dec 70, p 14

Abstract: The fall of 1970 was damp and cold. As a result, the incidence of parainfluenza and adenovirus infections increased and a general situation conducive to the spread of influenza developed. Influenza virus is always present but constitutes a danger only when the human organism is weakened, particularly by other infections. To prevent respiratory infections that may lead to influenza, it is essential to increase the resistance of the organism, dress warmly, eat adequately (avoiding the fashionable weight-reducing diets), and get an adequate amount of sleep. In the prophylaxis of influenza, good ventilation without drafts, elimination of dust, frequent wet cleaning of places of employment and homes, and prophylactic immunizations are of importance. Influenza usually does not affect a person for longer than a week, but an influenza patient is ordinarily sick for a longer period than that, because virus infections are accompanied by those caused by adenoviruses. People taking care of an influenza patient must take adequate measures to protect themselves from infection (e. g., 1/2

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USSR

KETILADZE, Ye. S., Zdorov'ya, No 12, Dec 70, p 14

they should wear a mask consisting of four layers of gauze). The patient should wear a similar mask. During an influenza epidemic, one must avoid contact with influenza patients and avoid crowds. During an epidemic, persons with diseases of the heart or lungs should not visit polyclinics because of the danger of contracting influenza there. Influenza patients should stay in bed until their recovery is complete. Among the complications associated with influenza are pneumonia caused by bacteria and mycobacteria, inflammations of the nasal sinuses, and otitis. If influenza is followed by persistent coryza, one should consult an otolaryngologist, because the coryza may indicate the presence of conditions that can become chronic and lead to arachnitis.

2/2

1/2 019 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--ELECTRON MICROSCOPIC STUDY OF EPITHELIUM OF THE UPPER RESPIRATORY
WAYS IN PATIENTS WITH ACUTE RESPIRATORY VIRUS INFECTIONS -U-
AUTHOR--(02)--LYARSKAYA, T.YA., KETILADZE, YE.S.

COUNTRY OF INFO--USSR

SOURCE--VOPROSY VIRUSOLOGII, 1970, NR 2, PP 190-196

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ELECTRON MICROSCOPY, RESPIRATORY VIRUS DISEASE, ADENOVIRUS,
INFLUENZA

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/0731

STEP NO--UR/0402/70/000/002/C190/0196

CIRC ACCESSION NO--AP0108937

UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--A0108937

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ELECTRON MICROSCOPIC STUDY WAS CARRIED OUT WITH ULTRATHIN SECTIONS OF MATERIALS OBTAINED BY SMEARS OR IMPRESSIONS FROM THE MUCOUS MEMBRANE OF INFERIOR NASAL CONCHA IN PATIENTS WITH INFLUENZA, PARAINFLUENZA AND ADENOVIRUS DISEASE. DEGENERATIVE CHANGES IN CELLS OF COLUMNAR EPITHELIUM CONSISTING OF CONGLOMERATIONS OF NUCLEAR CHROMATIN, LACK OF DOUBLE CONTOURS OF THE NUCLEAR MEMBRANES, CHANGES IN MITOCHONDRIAL STRUCTURES. IN INFLUENZA AND PARAINFLUENZA INFECTIONS 2 TYPES OF CYTOPLASMIC INCLUSIONS WERE FOUND. ONE WERE ELECTRON DENSE OR GRANULAR STRUCTURES AND WERE PROBABLY DEGENERATING ORGANELLE OF THE CELL; OTHERS CONSISTED OF RINGFORM VIRUS LIKE PARTICLES. NUMEROUS VIRUS LIKE PARTICLES WERE FOUND IN NUCLEI OF EPITHELIAL CELLS OF THE NASAL MUCOSA FROM PATIENTS WITH ADENOVIRUS DISEASE.

UNCLASSIFIED

1/2 018 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--OXIDATIVE CHLORINATION OF TOLUENE. 1. EFFECT OF THE COMPOSITION OF
THE CHLORINATING MIXTURE AND TEMPERATURE ON THE OXIDATIVE CHLORINATION
AUTHOR--SOLOMONOV, A.B., GERTSEN, P.P., KETOV, A.N.
COUNTRY OF INFO--USSR
SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(2), 471-2
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--CHLORINATION, OXIDATION, TOLUENE, THERMAL EFFECT, CHEMICAL
REACTION RATE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1987/1216
STEP NO--UR/0080/70/043/002/0471/0472
CIRC ACCESSION NO--AP0104582
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0104582

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MAX. YIELD OF CHLORINATED PRODUCTS (O AND P-CHLOROTOLUENES AND PHCH SUB2 CL) OF OXIDATIVE CHLORINATION OF PHME USING CU CHLORIDES AS CATALYST WAS OBTAINED WITH 30PERCENT OF HCL IN AIR AND STOICHIOMETRIC RATIO OF REACTANTS. RATE DETD. REACTION IS OXIDN. OF HCL TO CL. AT HIGHER TEMPS., THE YIELD OF PRODUCTS INCREASED IN ACCORDANCE WITH INCREASED RATE OF OXIDN. OF HCL IN AIR.

0123

1/2 008 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--TWO PYRIDYLAZONAPHTHOL ISOMERS AND THEIR REACTION WITH COPPER IONS
-U-
AUTHOR--GUSEV, S.I., GLUSHKOVA, I.N., KETOVA, L.A., PESIS, A.S.
COUNTRY OF INFO--USSR
SOURCE--ZH. ANAL. KHIM. 1970, 25(2), 260-6
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--PYRIDINE, AZO COMPOUND, NAPHTHOL, COPPER COMPLEX, EQUILIBRIUM
CONSTANT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1987/1687 STEP NO--UR/0075/70/025/002/0260/0266
CIRC ACCESSION NO--AP0104902
UNCLASSIFIED

2/2 008

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0104902

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A MIXT. OF 2, (2, PYRIDYLAZO), 1, NAPHTHOL (I) AND 4, (2, PYRIDYLAZO), 1, NAPHTHOL (II) WAS OBTAINED. NA 2, PYRIDYLAZOTATE (17 G) IN 75 ML ETOH WITH 17.3 G NAPHTHOL WAS TREATED WITH CO SUB2 UNTIL A THICK PASTE IS FORMED TO GIVE I AND II BY FRACTIONAL CRYSTN. I HAS LAMBDA 360, 470 MMU; II HAS LAMBDA 450 MMU. PK SUBNH AND PK SUBOH OF I AND II WERE 1.05 PLUS OR MINUS 0.13 AND 11.11 PLUS OR MINUS 0.16 AND 1.57 PLUS OR MINUS 0.16 AND 10.45 PLUS OR MINUS 0.49, RESP. I FORMS WITH CU 1:1 AND 1:2 COMPLEXES, DEPENDING ON THE PH AND THE REAGENT RATIO. WITH EXCESS REAGENT THE COMPLEXES HAVE LAMBDA 570 MMU AT PH 1-3 AND LAMBDA 560 MMU AT PH 5-6. WITH CU IONS EXCESS LAMBDA IS 570 MMU. THE 1:1 COMPLEX CAN BE EXTD. WITH BUOH, THE 1:2 COMPLEX WITH CCL SUB4. MOLAR ABSORPTIVITY OF THE COMPLEXES, THEIR INSTABILITY CONSTS., AND REACTION EQUIL. CONSTS. FOR THE CU-I (PH 1-3) COMPLEX, THE CU-I (PH 5-6) AND THE CU-II COMPLEX WERE AS FOLLOWS: (2.447 TIMES 10 PRIME⁴, (2.87 PLUS OR MINUS 0.46) TIMES 10 PRIME⁶, (1.18 PLUS OR MINUS 0.02) TIMES 10 PRIME^{NEGATIVE4}; 4.745 TIMES 10 PRIME⁴, (7.61 PLUS OR MINUS 0.99) TIMES 10 PRIME^{NEGATIVE7}, (6.45 PLUS OR MINUS 0.29) TIMES 10 PRIME^{NEGATIVE4}; 3.95 TIMES 10 PRIME⁴, (2.70 PLUS OR MINUS 0.02) TIMES 10 PRIME^{NEGATIVE5}, (6.79 PLUS OR MINUS 0.07) TIMES 10 PRIME^{NEGATIVE4}.

KETSKHOVELI, N. N.

Botany

28 May 71

16. UZM

"Our Green Sanitation Workers"

Moscow, Preva, 31 Jan 71, p 3

13

79:SOVIET SCIENCE

Abstract: This article reviews and discusses the work of the Georgian Laboratory of Plant Hygiene, headed by Academician S. V. Dumishidze. They have studied the qualities for more than 100 higher plants. Some, such as laurel and rose, have no useful features for cleaning the air, whereas others, such as the field maple, wild Cassia tree, and Canadian poplar, are capable of removing significant quantities of harmful hydrocarbons and derivatives from the air (for example, up to several dozen milligrams of benzene per kilogram of wet leaves in a day). Using formaldehyde, acrolein, styrene, and aromatic compounds of other class. Data shows that plants do have the necessary permeability for these substances. It is noted that Penzlin is now going forward to find if plants can remove such atmospheric substances as benzene from the air.

In a quote, Director of the Georgian Institute of Geography N. B. Davitashvili mentions the universality of air pollution, the emphasis that plants remove it still have a major duty to cut down on emissions from industrial plants. Director of the Georgian Institute of Pharmacology and Chemistry Y. S. Gvishiani stated he was 1/2

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Preva, 31 Jan 71, p 3

pleased with Dumishidze's work, and hoped that they would also investigate plants processes which give off endogenous substances. Director of the Georgian Institute of Botany, K. K. Kalandadze pointed out that, despite the clear findings of Davitashvili's research, residents of Tbilisi, who are engaged in a good deal of planting and pruning the wrong kinds of trees. He gives the example of the plane tree, the fact that from which plant ventilation systems and gases affect reactions; he proposes that the maples, with its strong air-cleaning features, should be planted much more widely.

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1/2 013 UNCLASSIFIED PROCESSING DATE-- 39DCT7J
TITLE--KINETICS OF TRIMETHYLOLPROPANE SYNTHESIS ON THE ANION EXCHANGE
RESIN AV-17-8 -U-
AUTHOR-(03)-KETS~~LA~~KH, M.M., RATANOVA, A.I., RUDKOVISKIY, D.M.
COUNTRY OF INFO--USSR
SOURCE--NEFTEKHIMIYA 1970, 10(1), 68-95
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--REACTION KINETICS, CHEMICAL SYNTHESIS, PROPANE, ANION EXCHANGE
RESIN, METHANOL/(U)AN17 8 ION EXCHANGE RESIN
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA~~M~~E--1992/1888 STEP NO--UR/0204/70/010/001/0088/0095
CIRC ACCESSION NO--AP0112868
UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0112868

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TITLE SYNTHESIS PROCEEDS IN 3 STEPS: PRCHO (I) PLUS CH SUB2 O (QH PRIME NEGATIVE) YIELDS ETC(CH SUB2 OH)CHO (II); II PLUS CH SUB2 O (OH PRIME NEGATIVE) YIELDS ETC(CH SUB2 OH) SUB2 CHO (III); III PLUS CH SUB2 O PLUS OH PRIME NEGATIVE YIELDS ETC(CH SUB2 OH) SUB3 (IV) PLUS HCO SUB2 PRIME NEGATIVE (RATE DETG.; V SUB1 EQUALS D (IV)-DT EQUALS K SUB1 (III) (CH SUB2 O) (ANEX)), ACCOMPANIED BY: 2CH SUB2 O PLUS OH PRIME NEGATIVE YIELDS MEDH PLUS HCO SUB2 PRIME NEGATIVE (V SUB2 EQUALS D(MEOH)-DT EQUALS K SUB2 (CH SUB2 O) PRIME2 (ANEX)), AND OTHER MINOR SIDE REACTIONS. OPTIMUM STATIC CONDITIONS WERE: 50DEGREES, 30 MIN CONTACT TIME, MOL. RATIO I: ANEX EQUALS 1-1.58 (ANEX EQUALS ANION EXCHANGE RESIN). THE KINETICS WERE MEASURED AT 20-50DEGREES AND FOLLOWING EQUATIONS WERE DERIVED: K SUB1 EQUALS 7.62 TIMES 10 PRIME11 EXP (MINUS 17230-RT), AND K SUB2 EQUALS 8.74 TIMES 10 PRIME16 EXP (MINUS 25900-RT). FACILITY: VSES. NAUCH. ISSLED. INST. NEFTEKHIM. PROTSESSOV, LENINGRAD, USSR.

UNCLASSIFIED

USSR

UDC 539.4

ZOLOTUKHIN, I. V., AKININ, K. G., ABRAMOV, V. V., KETUSOV, Yu. K.,
SKOROBOGATOV, V. S., and SVEDOMTSEV, N. V. (Voronezh)

"Investigation of the Damping and Elastic Characteristic of Plasma Coatings
of Tungsten, Nichrome, Zirconium Dioxide, and Chrome-Nickel Spinel"

Kiev, Problemy Prochnosti, No 9, Sep; 73, pp 86-89

Abstract: Consideration is given to problems connected with study of the damping and elastic characteristics of thin plasma coatings. The influence of the conditions of application and annealing of the coatings upon the value of oscillation attenuation and the modulus of elasticity. The results of investigation of the modulus of elasticity are presented in a table and in three figures. For tungsten coatings, the modulus of elasticity is characterized by considerable scattering of the values -- from $2 \cdot 10^5$ kg/cm² to $14 \cdot 10^5$ kg/cm².

The relationship of the modulus of elasticity of the coatings to the temperature, before and after annealing, is shown. Analysis of the E -- t relationships of tungsten and zirconium dioxide coatings shows that in the temperature interval from 20 to 800°C the values of the elasticity modulus E change insignificantly (within the limits of 2-10). For nichrome coatings E decreases more intensively with a temperature rise, and at $t = 800^\circ\text{C}$ its

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ZOLOTUKHIN, I. V., et al., Problemy Prochnosti, No 9, Sep 73, pp 86-89

values are on the average 17-23% smaller than at room temperature. 4 figures.
1 table. 14 references.

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USSR

UDC 612.85:62-50

KHECHINASHVILI, S. N., KEVANISHVILI, Z. Sh., and KADZHAYA, O. A., Tbilisi
Institute for the Advanced Training of Physicians

"Investigation of Induced Auditory Potentials in Human Cerebral Cortex by
Means of an Electronic Computer"

Tbilisi, Soobshcheniya Akademii Nauk Gruzinskoy SSR, Vol 63, No 3, 1971, pp
689-691

Abstract: Cerebral cortical potentials, induced by sound stimuli, were re-
corded by monopolar electrodes, amplified and averaged by an electronic com-
puter, and analyzed. A single sound induces two deflections, with a negative
peak in 100 msec and a positive peak in 185 msec. The amplitude is greatest
at a stimulation rate of one sound per 5 sec. With increasing stimulation
rate, the amplitude decreases, to become indiscernible at a stimulation rate
of three sounds per sec. The contralateral response is greater than the
ipsilateral. A threshold stimulus produces only the contralateral response.
Upon delivery of paired stimuli to one ear, the second response is weaker.
However, when the first stimulus is delivered to the other ear, no reduction
occurs in the second response. In individuals with impaired hearing, all
induced action potentials are weaker.

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1/2 034

UNCLASSIFIED

PROCESSING DATE--16OCT70

TITLE--THE ROLE OF THE CALLOSAL BODY IN TRANSMISSION OF AUDITORY

INFORMATION FROM ONE HEMISPHERE TO THE OTHER -U-

AUTHOR--(02)-MOSIDZE, V.M., KEVANISHVILI, Z.SH.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL VYSSHEY NERVNOY DEYATEL'NOSTI, 1970, VOL 20, NR 3, PP
619-625

DATE PUBLISHED-----70

R

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BRAIN, SURGERY, ACOUSTIC DETECTION, AUDIOLOGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0060

STEP NO--UR/0247/70/020/003/0619/0625

CIRC ACCESSION NO--AP0120760

UNCLASSIFIED

2/2 034

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0120760

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT HAS BEEN SHOWN IN CHRONIC EXPERIMENTS ON INTACT DOGS THAT IN THE COURSE OF MONAURAL ELABORATION OF ACOUSTIC DIFFERENTIATION, TEMPORARY CONNECTIONS ARE FORMED AND STABILIZED NOT ONLY IN THE CONTRALATERAL BUT IN THE IPSILATERAL HEMISPHERE AS WELL. CALLOSOTOMY RESULTS IN A DISTURBANCE OF THE TRANSFER OF FINE ACOUSTIC DIFFERENTIATION TO THE HEMISPHERE IPSILATERAL TO THE STIMULATED EAR. A CONCLUSION HAS BEEN DRAWN THAT ADEQUATE TRANSMISSION OF THE MONAURAL INFORMATION TO THE IPSILATERAL HEMISPHERE CALLS FOR INTEGRITY OF THE CALLOSAL BODY ALONG WITH THE NON CROSSING FIBERS AND THE COMMISSURES OF THE RHOMBOID, MID AND INTERBRAIN. FACILITY: INSTITUTE OF PHYSIOLOGY, GEORGIAN ACADEMY OF SCIENCES, TBILISI.

UNCLASSIFIED

USSR

BAGDASAROV, CH. S., et al., Doklady Akademii Nauk SSSR, Vol 212, No 6, 1973, pp 1326-1327

luminescence showed that the Nd^{3+} ions enter into the composition of a minimum of two types of activated sensors, which result, with the measurements made, cast serious doubt on the results reported by Arsenev, Raiskaya, and Sviridovaya in Phys. Stat. Sol., No 13, 1972.

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- 24 -

1/2 041

UNCLASSIFIED

PROCESSING DATE--13NOV79

TITLE--DISLOCATING STRUCTURE AND OPTICAL HETEROGENEITIES OF YTTRIUM ALUMINUM GARNET SINGLE CRYSTALS -U-

AUTHOR--(05)-JEDUKH, L.M., ZHIZHEYKO, I.A., BAGDASAROV, KH.S., KEVORKOV, A.M., NIKITENKO, V.I.
COUNTRY OF INFO--USSR

SOURCE--KRISTALLOGRAFIYA 1970, 15(2), 334-41

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, EARTH SCIENCES AND OCEANOGRAPHY, PHYSICS

TOPIC TAGS--GARNET, SINGLE CRYSTAL, CRYSTAL DISLOCATION, YTTRIUM COMPOUND, LASER PROPERTY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--2000/1570

STEP NO--UR/0070/70/015/002/0334/0341

CIRC ACCESSION NO--AP0125196

UNCLASSIFIED

2/2 041
CIRC ACCESSION NO--AP0125196

UNCLASSIFIED

PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DISLOCATIONS WERE OBSD. BY MEANS OF AN OPTICAL POLARIZATION STUDY OF THE BIREFRINGENCE RELATED TO SINGLE DISLOCATIONS IN ND PRIME3 POSITIVE DOPED Y SUB3 AL SUB5 O SUB12 SINGLE CRYSTALS. THE INFLUENCE OF DISLOCATIONS OF THE LASER CHARACTERISTICS OF THE CRYSTAL IS DISCUSSED, AND A FURTHER STUDY OF OPTICAL INHOMOGENEITIES IS PRESENTED.

FACILITY: INST. KRISTALLOG., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 621.315.592

YUROVA, YE. S., SOLOV'YEVA, YE. V., KISTOVA, YE. M., D'YAKONOV, L. I., IGLITSYN, M. I., ~~KRYVONOSOV, H. N.~~

"Autocompensation of Donors in Gallium Arsenide and the $\text{GaAs}_{1-x}\text{P}_x$ Solid Solution"

Leningrad, Fizika i Tekhnika Poluprovodnikov, Vol 6, No 3, 1972, pp 498-501

Abstract: A study was made of the autocompensation phenomenon (constancy of the degree of compensation in a broad alloying range) detected in films of $\text{GaAs}_{1-x}\text{P}_x$ alloyed with Te and Se and GaAs alloyed with Se. The dependence of the degree of compensation and the concentration of the compensating centers in the neutral state was obtained as a function of the composition of the solid solution. A deep level connected with compensating centers was detected, and the dependence of its activation energy on the composition of the solid solution was determined.

The study was made in the entire composition range of the solid solution and also in films of gallium arsenide alloyed with Se. The temperature range was expanded to 800° K. The degree of compensation in the $\text{GaAs}_{1-x}\text{P}_x$ close with respect to composition to GaP was determined by the curve for the temperature dependence of the charge carrier concentration by the same procedure as used

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USSR

YUROVA, YE. S., et al., Fizika i Tekhnika Poluprovodnikov, Vol 6, No 3, 1972, pp 498-501

earlier [M. I. Iglitsyn, et al., FTP, No 4, 230, 1970]. Graphs are presented showing the degree of compensation and the concentration of the compensating defects in the neutral state as functions of the composition of $\text{GaAs}_{1-x}\text{P}_x$ crystals, the concentration of the ionized detectors as a function of the electron concentration in the films of GaAs alloyed with Se, the temperature dependence of the charge carrier concentration in the compensated samples of $\text{GaAs}_{1-x}\text{P}_x$, and the dependence of the approximate activation energy of the D' level on the composition of the $\text{GaAs}_{1-x}\text{P}_x$ crystals. The divergence between the degree of compensation observed in the GaAs crystals ($K \approx 0.5$) and the value of K obtained by extrapolating the function $K(x)$ for the solid solution to $x = 0$ is explained by the difference between the growth temperatures of these crystals 200° . The calculation of N_v^0 from the value of K in GaAs by the previously obtained formula

$$K = \frac{N_A}{N_D} = \frac{N_v^0}{N_c} e^{(E_g - E_a)/kT}$$

USSR

YUROVA, YE. S., et al., Fizika i Tekhnika Poluprovodnikov, Vol 6, No 3, 1972, pp 498-501.

leads to a value of the same order as the value of N_v^0 in $\text{GaAs}_{1-x}\text{P}_x$ determined on heat treatment of the crystals at a temperature close to the growth temperature of the GaAs films (N_v^0 is the concentration of the compensating defects in the neutral state, N_c is the effective density of the states of the conduction band, and E_g is the width of the forbidden band).

USSR

UDC 612.215+612.42/.017.1.014.481/.482

KEVORKOV, N. N., and RAVICH-SHCERBO, M. I., Kursk Medical Institute

"Antibody Formation in Lungs and Lymphoid Organs in Irradiated Animals"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 9, 1973,
pp 80-84

Abstract: Studies were conducted on rabbits immunized with sheep erythrocytes either intratracheally or intravenously to determine the effects of a previous irradiation with 1000 r x-rays. Irradiation of intravenously immunized animals inhibited antibody formation by lung, spleen, and paratracheal lymph nodes. However, irradiation of intratracheally immunized animals showed that hemagglutinin formation by lung explants was not inhibited, while that of the other tested tissues was. Studies on plaque formation with cellular suspensions indicated that in the latter case radioresistant alveolar macrophages may have been responsible for antibody production.

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- 34 -

1/2 029 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--THE INFLUENCE OF PYROGENAL ON THE SYNTHESIS OF HEMAGGLUTININS IN
THE CULTURE OF TRANSPLANTABLE TISSUE OF THE LUNG, SPLEEN AND
AUTHOR--KEVORKOV, N.N. *K*
COUNTRY OF INFO--USSR
SOURCE--BYULLETEN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 69,
NR 5, PP 76-78
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PYROGEN, HEMAGGLUTININ, TISSUE CULTURE, TISSUE TRANSPLANT,
LUNG, SPLEEN, LYMPHATIC SYSTEM, RABBIT, IMMUNIZATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1998/0191 STEP NO--UR/0219/70/069/005/0076/0078

CIRC ACCESSION NO--AP0120889
UNCLASSIFIED

2/2 029

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0120889

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PYROGENAL INTRODUCED TO RABBITS, IMMUNIZED WITH SHEEP ERYTHROCYTES, STIMULATES THE SYNTHESIS OF ANTIBODIES IN THE CULTURE OF TRANSPLANTABLE TISSUE OF EXPLANTS OF THE SPLEEN AND PARATRACHEAL LYMPH NODES. ANTIBODY FORMATION IN THE LUNGS WAS NOT OBSERVED. INTRODUCTION OF PYROGENAL INTO THE CULTURE MEDIUM RESULTED IN A SLIGHT INTENSIFICATION OF THE SYNTHESIS OF HEMAGGLUTININS IN THE LUNGS AT EARLY PERIODS OF CULTIVATION. FACILITY: KURSK MEDICAL INSTITUTE.

UNCLASSIFIED

Acc. Nr:

AP0100578

Abstracting Service:

CHEMICAL ABST. 5-70

Ref. Code:

UR0065

102360w Preparation of transformer oil from Sangachaly Sea petroleum by adsorption and hydrogenation methods. Kuliev, R. Sh.; ~~Keyorkova, I. G.~~; Anisimova, A. M. (USSR). *Khim. Tekhnol. Topl. Masel* 1970, 15(2), 20-2 (Russ). By adsorption purification on the optimum amt. (25%) of an aluminosilicate catalyst at 35° and by hydrogenation on a WS₂ catalyst at a vol. input rate of 0.5 hr⁻¹ at 300°/300 atm with 1000 l. H₂/l. distillate, viscosity at 50°, acid no., and f.p. of a dewaxed distillate transformer oil were changed from 7.08 cSt, 0.36 mg KOH/g and -47° to 7.09 and 7.27 cSt, 0.01 and 0.02 mg KOH/g and -45°, resp., color and transparency were improved, and stability toward oxidn. was raised to the level specified by GOST 981-55 and 11257-65. The resp. stabilized oils had flash points of 150° and tan angles of dielec. loss at 70° of 0.17 and 0.31. Process variable ranges explored were 25-150% adsorbent and hydrogenation temps., pressures, and H concns. of 300-425°, 50-300 atm, and 300-1000 l./l.

Lucile S. Davison

400

REEL/FRAME

19842013

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UDC 541.183

USSR

BELYAKOVA, L. D., KEYBAL, V. I., and KISELEV, A. V., Institute of Physical Chemistry, Academy of Sciences, USSR, Chemical Faculty at the Moscow State University Imeni M. V. Lomonosov

"Gas-Chromatographic Study of the Adsorption of Carbon Dioxide on NaX Zeolite"

Moscow, Zhurnal Fizicheskoy Khimii, Vol 44, No 9, Sep 70, pp 2345-2349

Abstract: Isotherms of the molecular adsorption of CO₂ on the NaX zeolite crystals with and without a binder were calculated for temperature range 70-180° on the basis of the theory of nonideal equilibrium chromatography. These isotherms agree with data obtained from static measurements carried out at 150 and 170°C. From the data obtained it was possible to calculate the relationship between isosteric heats of adsorption of CO₂ and the adsorption values for low saturation levels of the surface of zeolites. The values agree with those obtained from calorimetry data, with consideration of the heat capacity of the adsorption system zeolite-CO₂.

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USSR

UDC: 621.375.82

KEYDAN, V. F., MIKHALEVSKIY, V. S., SEM, M. F., and SHELEPO, A. P.

"Oscillations in Ionized Selenium"

Moscow, V sb. Kvant. elektronika (Quantum Electronics--collection of works) "Sov. radio," No 1(13), 1973, pp 75-78 (from RZh--Fizika, No 7, 1973, Abstract No 7D1015)

Translation: The characteristics of oscillations in selenium ion transitions are investigated in pulsed continuous operation. It is established that in a pulsed discharge, the upper energy level population may originate in electronic excitation from the base state of the atom as well as the recharge of the helium ions with neutral selenium atoms. In continuous operation, the dependence of the generated power on the discharge conditions is determined, the plasma parameters are measured, and the pumping velocity of the upper levels of the laser transitions by the recharging and electronic excitation processes is calculated. Comparison of the computed pumping velocity with the measured velocity showed that in continuous operation the principal contribution to the creation of the population inversion at the energy levels of the selenium ion is made by the recharging. Authors' abstract

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Lasers and Masers

USSR

UDC: 621.375.82

KEYDAN, V. F.

"Generation of Coherent Radiation at Junctions in Spectra of Elements of the Fifth Group of the Periodic System"

Materialy 10-y Nauchno-Teor. Konferentsii Aspirantov. Ser. Yestestven. i Toc.m. N. [Materials of Tenth Scientific-Theoretical Conference of Graduate Students. Natural and Precise Sciences Series -- Collection of Works], Rostov University Press, 1970, pp 24-27, (Translated from Referativnyy Zhurnal Fizika, No. 8, 1970, Abstract #8D1116, by E. B.).

Translation: Generation is produced for the first time at nine wave lengths in the spectra of singly and doubly ionized atoms of Sb, As, and Bi. Generation was observed in the pulse mode in a mixture of vapors of the working material with helium and neon at low buffer gas pressures (0.1-2 mm Hg). The vapor pressure of the working material necessary to assure generation varies for different junctions and falls within the area of $0.5-5 \cdot 10^4$ mm Hg. It is concluded on the basis of the dependence of the intensity of generation and spontaneous radiation on current that the common mechanism of excitation of the upper working level of the ions is

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USSR

KEYDAN, V. F., Materialy 10-y Nauchno-Teor. Konferentsii Aspirantov. Ser. Yestestven. i Tochn. N., Rostov University Press, 1970, pp 24-27.

electron excitation from the base state of the atom. Assumptions are stated concerning the possibility of producing continuous generation at junctions with $\lambda = 6043, 6034,$ and 6087 \AA in the P II spectrum and with $\lambda = 5651 \text{ \AA}$ in the As II spectrum.

Masers

USSR

UDC 621.373:530.145.6

SEM, M. F., KEYDAN, V. F., MIKHAYLEVSKIY, V. S.

"Continuous Generation of Coherent Radiation in Ion Transitions of Substances Introduced into the Discharge Volume by Cataphoresis"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektron. SVCh (Electronic Engineering Scientific and Technical Collection. Microwave Electronics), 1971, vyp. 1, pp 69-76 (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 4D166)

Translation: The possibility of using cataphoresis to introduce the vapors of a number of substances into the discharge volume of a laser operating in the continuous mode is discussed. The experimental results of obtaining continuous generation on 37 wavelengths in the 0.81-0.4 micron range in iodine, phosphorus, selenium, cadmium, arsenic, zinc and tellurium vapors show that zinc, tellurium and, in particular, selenium are prospective for use in practical laser designs as a result of their high amplification coefficients.

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1/2 011 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--CATALYTIC ACTION OF PHTHALOCYANINES IN THE OXIDATION OF HYDROGEN
SULFIDE IN AQUEOUS SOLUTIONS -U-
AUTHOR--KUNDO, N.N., KEIYER, N.P. K
COUNTRY OF INFO--USSR
SOURCE--KINET. KATAL. 1970, 11(1) 91-9
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--CATALYST ACTIVITY, PHTHALOCYANIDE, CATALYTIC OXIDATION,
HYDROGEN SULFIDE, SULFIDE, COBALT COMPLEX, SPECTROSCOPY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/0197 STEP NO--UR/0195/70/011/001/0091/0099
CIRC ACCESSION NO--AP0106853
UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0106853

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CATALYTIC ACTIVITY OF CU, NI, V, FE, ZN, AND CO TETRASULFOPHTHALOCYANINES IN THE OXIDN. OF H SUB2 S OR SULFIDES IN AQ. SOLN. IS COMPARED TO CATALYTIC ACTIVITY OF THESE METAL SULFATES. THE ACTIVITY OF DIVALENT CATION SULFATES DECREASED IN THE ORDERS: NI LARGER THAN CO LARGER THAN CU LARGER THAN FE LARGER THAN VO LARGER THAN ZN. AMONG THE TETRASULFOPHTHALOCYANINES, THE CO COMPLEX WAS THE MOST ACTIVE CATALYST AND ITS ACTIVITY DECREASED (SIMILAR TO 40 TIMES) WITH INCREASING PH (7.9-11.3). SPECTROSCOPIC STUDY IMPLIES THAT THE OXIDN. REDN. FORMS OF THESE COMPS. PARTICIPATE IN THEIR CATALYTIC ACTIVITY. UNDER EXPTL. CONDITIONS, THE CO COMPLEX DOES NOT REACT DIRECTLY WITH THE HS PRIME NEGATIVE OF S PRIME2 NEGATIVE SPECIES.

UNCLASSIFIED

1/2 017 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--CHEMISORPTION OF OXYGEN ON SOLID SOLUTIONS OF THE MAGNESIUM OXIDE
NICKEL OXIDE SYSTEM -U-
AUTHOR-(02)-KEIYER, N.P., RUBTSOVA, L.F.
COUNTRY OF INFO--USSR
SOURCE--KINET. KATAL. 1970, 11(1), 200-6
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--OXYGEN, SOLID SOLUTION, MAGNESIUM OXIDE, NICKEL OXIDE,
ELECTRIC PROPERTY, CHEMISORPTION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAHE--1997/1458 STEP NO--UR/0195/70/011/001/0200/0206
CIRC ACCESSION NO--AP0120245
UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120245

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. NIO WAS DILO. IN A CATALYTICALLY
INERT MGO MATRIX TO STUDY THE STATE OF THE NI CATION BY EPR. THE NO. OF
CHEMISORBED O MOLS. PER NI CATION INCREASED WITH INCREASING NIO DILN.
THE ABOVE OCCURS DUE TO A DECREASING INTERACTION BETWEEN NI(II) IONS IN
DILD. SOLNS. THE EFFECT OF LOCAL ELEC. PROPERTIES OF THE SOLID SOLN.
SURFACE ON O CHEMISORPTION IS DISCUSSED. FACILITY: INST.
KATAL., NOVOSIBIRSK, USSR. ,

UNCLASSIFIED

1/2 012 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--IMPORTANCE OF LOCAL AND COLLECTIVE ELECTRONIC PROPERTIES AND
MODIFIED TITANIUM DIOXIDE IN CARBON MONOXIDE OXIDATION AND IN ISOPROPYL
AUTHOR--(04)--KEIYER, N.P., SAZONOVA, I.S., KHCKHLOVA, T.P., MIKHAYLOVA,
I.L.
COUNTRY OF INFO--USSR
SOURCE--KINET. KATAL. 1970, 11(2), 447-54
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--TITANIUM DIOXIDE, CARBON MONOXIDE, OXIDATION, PROPANOL, FORMIC
ACID, DEHYDRATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3005/0093 STEP NO--UR/0195/70/011/002/0447/0454
CIRC ACCESSION NO--AP0132386
UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0132386

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE SELECTIVITY IN THE DEHYDRATION OF SIC PROH AND HCO SUB2 H ON A TIO SUB2 CATALYST DEPENDS ON THE POSITION OF FERMI SURFACE, IN OTHER WORDS, ON THE COLLECTIVE ELECTRONIC PROPERTIES OF THE CATALYST. THE DEGREE OF DEHYDROGENATION SIDE REACTION INCREASES WITH ELEVATION OF THE FERMI SURFACE. IN A CASE OF THE PROMOTION OF THE CATALYTIC ACTIVITIES OF TIO SUB2 (E.G. WITH WO SUB3 ADDITIVES), LOCAL ELECTRONIC CHARACTERISTICS BECOME STRONGER THAN THE COLLECTIVE ELECTRONIC PROPERTIES. ADDN. OF WO SUB3 TO TIO SUB2 DECREASES E SUBA TO HCO SUB2 H AND ISO PROH DEHYDRATION FROM 28 TO 25 AND FROM 21 TO 19 KCAL-MOLE, RESP. FACILITY: INST. KATAL., NOVOSIBIRSK, USSR.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--PROPAGATION OF RADIATION IN A POSSIBLE MODEL OF A SCATTERING MEDIUM
WITH NONUNIFORM ABSORPTION -U-
AUTHOR--KEYEVALLIK, S.YE.

COUNTRY OF INFO--USSR

SOURCE--EESTI NSV TEADUSTE AKADEEMIA, TOIMETISED, FUSIKA--MATEMAATIKA,
VOL. 19, NO. 2, 1970, P. 196-202
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--LIGHT ABSORPTION, SCATTERING MATRIX, LIGHT TRANSMISSION, LIGHT
SCATTERING, MATHEMATIC MODEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1388

STEP NO--UR/0458/70/019/002/0196/0202

CIRC ACCESSION NO--AP0125036

UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0125036

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

ABSTRACT. ANALYSIS OF RADIATIVE TRANSFER IN A UNIFORM SCATTERING MEDIUM IN WHICH AN ABSORBING SUBSTANCE IS CONCENTRATED IN RANDOMLY LOCATED REGIONS OF DIFFERENT SHAPE AND DIFFERENT SIZE. THE OPTICAL CHARACTERISTICS OF THE MEDIUM ARE DETERMINED AS A FUNCTION OF THE MEAN SIZE AND NUMBER OF THE ABSORBING REGIONS, ASSUMING THAT THE MEAN DENSITY OF THE ABSORBING SUBSTANCE IS CONSTANT. THE RESULTS ARE OBTAINED IN A DIFFUSION APPROXIMATION FOR A PLANE PARALLEL LAYER ILLUMINATED BY MONOCHROMATIC LIGHT.

FACILITY: AKADEMIIA NAUK ESTONSKOI SSR, INSTITUT FIZIKI I ASTRONOMII, TARTU, ESTONIAN SSR.

UNCLASSIFIED

1/2 010 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--SPLITTING OF AN ETHER BOND DURING DIETHYLENE GLYCOL VINYLATION -U-
AUTHOR--ATAVIN, A.S., AMOSOVA, S.V., VYLEGZHANIN, O.N., KEYKO, V.V.,
TROFIMOV, B.A. K
COUNTRY OF INFO--USSR \$
SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (1), 149-52
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ETHYLENE GLYCOL, CHEMICAL BONDING, ETHER, ETHYLENE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1987/1055 STEP NO--UR/0062/70/000/001/0149/0152
CIRC ACCESSION NO--AP0104453
UNCLASSIFIED

2/2 910

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0104453

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HEATING O(CH SUB2 CH SUB2 OH) SUB2 (I) WITH KOH AND C SUB2 H SUB2 2 HR AT 160DEGREES (17 ATM INITIALLY) GAVE 53PERCENT DIVINYL ETHER 4F THE GLYCOL, B SUB13 89DEGREES, WHICH WITH 1 PERCENT HCL REGENERATED THE PURE GLYCOL, B SUB2 90DEGREES. HEATING I WITH KOH AT 165DEGREES IN C SUB2 H SUB2 (15 ATM INITIALLY) 3 HR GAVE, AFTER CHROMATOG. OF THE MIXT. 1.8PERCENT (CH SUB2 OH) SUB2 IDENTIFIED BY Silylation. Thus, DIETHYLENE GLYCOL IS CLEAVED BY KOH TO (CH SUB2 OH) SUB2 AND THE PROCESS IS ACCELERATED BY THE PRESENCE OF C SUB2 H SUB2. THE EFFECT IS POSSIBLY CAUSED BY CLEAVAGE OF THE ETHER BOND THROUGH ACTION OF THE ETHEREAL O AS A NUCLEOPHILE IN REACTION WITH C SUB2 H SUB2 AND FORMING AN INTERMEDIATE SUCH AS (HOCH SUB2 CH SUB2) SUB2 D PRIME POSITIVE CH:CH PRIME NEGATIVE.

UNCLASSIFIED

1/2 043

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--FORCE COOLED SUPERCONDUCTING SYSTEMS --U-

AUTHOR--(04)-KEILIN, V.E., KLIMENKO, E.YU., KOVALEV, I.A., SAMOILOV, B.N.

COUNTRY OF INFO--USSR

SOURCE--CRYOGENICS 1970, 10(3), 224-32

DATE PUBLISHED-----70

K

SUBJECT AREAS--PHYSICS

TOPIC TAGS--SUPERCONDUCTING MAGNET, CRYOGENIC LIQUID COOLING, CURRENT DENSITY, PRESSURE EFFECT, TRANSITION TEMPERATURE, FLUID FLOW, CRYOGENIC PUMP

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--2000/1204

STEP NO--UK/0000/70/010/003/0224/0232

CIRC ACCESSION NO--AP0124858

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--30OCT70

2/2 043

CIRC ACCESSION NO--AP0124858

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPTS. WITH A SUPERCONDUCTING COIL (60 MM INSIDE DIAM., 160 MM OUTSIDE DIAM., AND 230 MM LONG) WITH FORCED CIRCULATION OF LIQ. HE SHOWED THAT UNDER FORCED CIRCULATION THE SUPERCOND. WAS DESTROYED AT A COIL CURRENT OF SIMILAR TO 500 A, CORRESPONDING TO A FIELD OF SIMILAR TO 15 KOE. HOWEVER, WITH THE COIL IMMERSSED IN LIQ. HE, THE SUPERCOND. WAS DESTROYED AT 600-700 A. THE COOLING CAPACITY OF HE INCREASED WITH DECREASING PRESSURE, AND WITH DECREASING DIFFERENCE BETWEEN THE CRIT. TEMP. OF THE SUPERCONDUCTOR (10.2DEGREE SK) AND HE TEMP. FORCED COOLED SUPERCONDUCTING SYSTEMS ARE COMPARED WITH TRADITIONAL "POOL" SYSTEMS. A MODEL FOR DETG. THE STABILITY CRITERIA FOR SUPERCONDUCTING CURRENT IS PROPOSED. FACILITY: I. V. KURCHATOV AT. ENERGY INST., MOSCOW, USSR.

UNCLASSIFIED

1/2 045 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--FORCE COOLED SUPERCONDUCTING SYSTEMS --U-
AUTHOR--(U4) KEILIN, V.E., LKIMENKO, E.LU., KOVALEV, I.A., SAMOILOV, B.N.
COUNTRY OF INFO--USSR
SOURCE--CRYOGENICS, VOL. 10, JUNE 1970, P. 224-232 *K*
DATE PUBLISHED--JUN70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--SUPERCONDUCTIVITY, CRYOGENIC LIQUID COOLING, CYROGENIC PUMP,
FLUID FLOW, CURRENT STABILIZATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1275 STEP NO--UK/0000/70/010/000/0224/0232
CIRC ACCESSION NO--AP0124926
UNCLASSIFIED

2/2 045

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124926

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FORCE COOLED SUPERCONDUCTING SYSTEMS (FCSS) ARE COMPARED WITH TRADITIONAL 'POOL' SYSTEMS. A MODEL IS PROPOSED TO DETERMINE THE STABILITY CRITERIA FOR CURRENT IN FCSS AND SOME RESULTS OF THE ANALYSIS OF THIS MODEL ARE PRESENTED. A FORCE COOLED SUPERCONDUCTING COIL AND THE APPARATUS TO TEST THE COIL, BUILT IN IV KURCHATOV ATOMIC ENERGY INSTITUTE DURING 1968, ARE DESCRIBED. THE RESULTS OF THE TESTS ON THE COIL ARE ALSO PRESENTED. FACILITY: AKADEMIIA NAUK SSSR, INSTITUT ATOMNOI ENERGII, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 621.396.6.017.7

KEYN, V. M.

"Design of Thermoregulators"

Konstruirovaniye termoregulyatorov (cf. English above), Moscow, "Sov. radio", 1971, 151 pp, ill. 39 k. (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6V288 K)

Translation: The book is devoted to the calculation and construction of devices for temperature stabilization of objects with small volumes. The problem of precision temperature stabilization arises in the development of high-stability quartz-controlled oscillators and other devices. Consideration is given to the principles of construction of systems, design, methods of calculation and reduction of stabilization errors. Practical regulator circuits are also presented. Considerable attention is given to methods of experimental checking and adjustment. The book is written for engineers and technicians working in the radio engineering and instrument building industry, as well as in the corresponding scientific research and design organizations. The book may also be useful to students in colleges and universities specializing in radio engineering and instrument building. Sixty-five illustrations, five tables, bibliography of 155 titles. Annotation.

1/1

1/2 023 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--SENSITIVITY OF SPHERICAL DETECTORS FOR 0.4 EV-10 MEV NEUTRONS -U-
AUTHOR--(05)-ANDREYEVA, L.S., KEIKIMMARKUS, I.B., USPENSKIY, L.N.,
FILYUSHKIN, I.V., CHERNOV, YE.N.
COUNTRY OF INFO--USSR
SOURCE--PRIB. TEKH. EKSP. 1970, 1, 72-5
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--NEUTRON DETECTOR, THERMAL NEUTRON, POLYETHYLENE, NEUTRON
SPECTRUM, FAST NEUTRON, VAN DE GRAAFF ACCELERATOR
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1991/1072 STEP NO--UR/0120/70/001/000/0072/0075
CIRC ACCESSION NO--AP0110762
UNCLASSIFIED