

USSR

UDC 612.822.3-053

PISAREVA, N., I., Laboratory of Comparative Ontogenesis of the Nervous System,  
Brain Institute, Academy of Medical Sciences USSR, Moscow

"Influence of the Visual Cortex on Evoked Potential of the Superior Colliculus  
in the Developing Rabbit"

Leningrad, Zhurnal Evolyutsionnoy Biokhimii i Fiziologii, No 5, 1972, pp 542-  
547

Abstract: Evoked potentials of the superior colliculus and visual cortex were recorded in 10- to 90-day-old rabbits and in adult animals following photic stimulation of the contralateral eye. Subsequent extirpation of the ipsilateral visual cortex or its functional depression with potassium chloride did not have any appreciable effect on the latent periods, duration, configuration, or amplitudes of evoked potentials. This suggests that the visual cortex does not exert a significant influence on the total electrical activity of the collicular neurons responsible for generating potentials evoked by photic stimulation. In another series of experiments, the application of strychnine to the visual cortex sharply increased the amplitudes of the primary cortical responses and the second negative and especially following positive component of the collicular response to light flashes. The effect of strychninization,

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PISAREVA, N. L., Zhurnal Evolyutsionnoy Biokhimii i Fiziologii, No 5, 1972, pp  
542-547

which was manifested from the end of the second week of life, is ascribed to  
the topographic (retinotopic) organization of the corticotectal relations in  
the rabbit.

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AA0051814

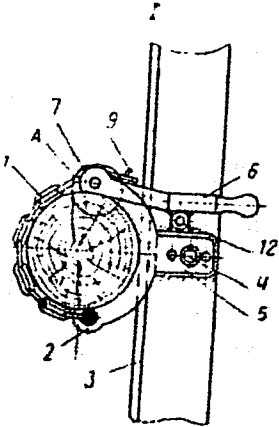
PISAREV N. Ye.

UR 0482

Soviet Inventions Illustrated, Section III Mechanical and General,  
Derwent, 1-70

242038

FIXING VERTICAL PROPS in the holds of ships



during log loading, using a chain and lever arrangement on the lip of the hatch. Chain 1 is permanently attached at one end to brace 2, while the other end is free. Brace 2 is mounted on the lip of the hatch 3 by means of a shaft and nut 4. After the prop has been positioned in the brace, the chain is passed around it and a link at its free end hooked on to catch 9 of lever 6. The chain is then tightened by turning lever 6 on axle 7, so that

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AA0051814

AUTHORS: Kuz'min, V. I.; Balberov, Yu. A.; Pisarev,  
N. Ye.

Gor'kovskiy Institut Inzhenerov Vodnogo Transporta

an eye on the lever fits over a ring on the brace;  
retaining pin 12 can then be passed through both  
to fix the lever in position. 18.1.68. as  
1211141/29-33, KUZ'MIN, V. I. et al. Inst. of Water  
Transport Engineering, Gor'ki. (4.9.69) Bul  
14/18.4.69. Class 81e, Int. Cl. B 65g.

2/2  
19820209  
A/D

1/2 024

UNCLASSIFIED

PROCESSING DATE--20NOV70

TITLE--LIGHT SCATTERING ON ACOUSTICAL PHONONS AND PCLARITONS IN LITAO SUB3

-U-

AUTHOR--(03)-KHASHKHGZHEV, Z.M., LEMANOV, V.V., PISAREV, R.Y.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TVERD. TELA 1970, 12(4), 1208-13

DATE PUBLISHED--70

*P*

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--LITHIUM COMPOUND, PHONON, TANTANIUM ALLOY, CRYSTAL, LIGHT SCATTERING, METAL OXIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0376

STEP NO--UR/0181/70/012/004/1208/1213

CIRC ACCESSION NO--AP0126131

UNCLASSIFIED

2/2 024

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0126131

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. LIGHT SCATTERING WAS INVESTIGATED ON ACOUSTICAL PHONONS AND POLARITONS IN LITAO SUB3. THE VELOCITIES OF ACOUSTIC PHONONS FOR DIFFERENT DIRECTIONS IN THE CRYSTAL, OBTAINED FROM THE SHIFT IN THE FREQUENCY OF SCATTERED LASER LIGHT, ARE IN SATISFACTORY AGREEMENT WITH THE VELOCITIES CALCD. FROM KNOWN ELASTIC AND PIEZOELEC. CONSTS. A DIFFERENCE WAS NOTED BETWEEN EXPTL. OBSD. AND CALCD. INTENSITIES OF SCATTERING WHICH IS APPARENTLY DUE TO INACCURATE VALUES OF THE CONSTS. USED IN THE CALCN. SCATTERING OF LIGHT WAS INVESTIGATED ON PHONON PHOTON EXCITED POLARITONS RELATED TO THE TRANSVERSE PHONON MODE OF A SUB1 TYPE WITH LOWER ENERGY OF 203 CM PRIME NEGATIVE1 AT 300DEGREE SK WHICH IS A SOFT MODE IN THE TRANSITION FROM THE FERROELEC. PHASE INTO THE PARAELEC. VARIATION WAS OBSD. OF THE FREQUENCY OF POLARITONS (203-141 CM PRIME NEGATIVE1) DEPENDING ON THE ANGLE OF SCATTERING (5-1.8DEGREES), CORRESPONDING APPROX. TO THE SCATTERING CURVE. INCREASE WAS OBSD. IN THE INTENSITY OF LIGHT SCATTERING ON POLARITONS WITH DECREASED ANGLE OF SCATTERING. FACILITY: INST. POLUPROV., LENINGRAD, USSR.

UNCLASSIFIED

1/2 027 UNCLASSIFIED PROCESSING DATE--23OCT70  
TITLE--OPTICAL GYROTROPY AND BIREFRINGENCE IN MAGNETIC ORDERED CRYSTALS  
-U-  
AUTHOR--PISAREV, R.V. P  
COUNTRY OF INFO--USSR  
SOURCE--ZHURNAL EKSPERIMENTAL'NOY I TEORETICHESKOY FIZIKI, 1970, VOL 58,  
NR 4, PP 1421-1427  
DATE PUBLISHED-----70  
  
SUBJECT AREAS--PHYSICS  
  
TOPIC TAGS--MAGNETIC STRUCTURE, CRYSTAL OPTIC PROPERTY, MAGNETOOPTIC  
EFFECT, CRYSTAL SYMMETRY, LIGHT POLARIZATION, LIGHT REFRACTION, FARADAY  
EFFECT, FERROMAGNETIC STRUCTURE, ANTIFERROMAGNETISM  
  
CONTROL MARKING--NO RESTRICTIONS  
  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1988/1496 STEP NO--UR/0056/70/058/004/1421/1427  
  
CIRC ACCESSION NO--AP0106252  
UNCLASSIFIED

2/2 027

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0106252

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. OPTICAL EFFECTS IN MAGNETIC ORDERED CRYSTALS ARE STUDIED PHENOMENOLOGICALLY ON BASIS OF MAGNETIC SYMMETRY PRINCIPLES. IT IS SHOWN THAT ALONG WITH SUCH MAGNETOOPTICAL PHENOMENA AS ROTATION OF THE POLARIZATION PLANE OF LIGHT OR BIREFRINGENCE DUE TO THE FERROMAGNETIC VECTOR, THE SAME EFFECTS EXIST AT THE EXPENSE OF THE ANTIFERROMAGNETIC VECTOR. THE ANTIFERROMAGNETIC FARADAY EFFECT SHOULD BE OBSERVED IN CRYSTALS IN WHICH MAGNETIC SYMMETRY PERMITS THE EXISTENCE OF WEAK FERROMAGNETISM. ANTIFERROMAGNETIC BIREFRINGENCE SHOULD BE OBSERVABLE IN ALL FERRI AND ANTIFERROMAGNETIC STRUCTURES. IN SOME STRUCTURES THE BIREFRINGENCE SHOULD CHANGE SIGN ON REMAGNETIZATION OF THE FERROMAGNETIC MOMENT, PROVIDING THE ANTIFERROMAGNETIC MOMENT PRESERVES ITS DIRECTION. IT IS ALSO POINTED OUT THAT GYROTROPY MAY BE PRODUCED BY APPLYING AN ELECTRIC FIELD OF STRESSES (IN MAGNETOELECTRIC AND PIEZOELECTRIC CRYSTALS) TO THE CRYSTAL. A NUMBER OF OTHER EFFECTS ARE ALSO MENTIONED. FACILITY: INST. POLUPROVDNIKOV, AN SSSR.

UNCLASSIFIED



1/2 012 UNCLASSIFIED PROCESSING DATE--18SEP70  
TITLE--MANDELSTAM BRILLOUIN SCATTERING OF LIGHT IN LITHIUM NIOBATE -U-  
AUTHOR-(03)-KHASHKHOZHEV, Z.M., LEMANOV, V.V., PISAREV, R.V.  
COUNTRY OF INFO--USSR  
SOURCE--FIZ. TVERD. TELA 1970, 12(1), 128-31  
DATE PUBLISHED-----70  
SUBJECT AREAS--MATERIALS, PHYSICS  
TOPIC TAGS--LIGHT SCATTERING, LITHIUM COMPOUND, NIOBATE  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1980/0248 STEP NO--UR/0181/70/012/001/0128/0131  
CIRC ACCESSION NO--AP004P527  
UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--APO048527

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SPECTRA WERE OBTAINED OF  
MANDELSTAM BRILLOUIN SCATTERING OF LIGHT IN LINBO SUB3. THE SCATTERING  
ON TRANSVERSE ACOUSTICAL PHONONS IN MOST CASES IS CONSIDERABLY MORE  
INTENSE THAN THE SCATTERING ON LONGITUDINAL PHONONS. VELOCITIES OF  
ELASTIC WAVES FOR VARIOUS DIRECTIONS IN THE CRYSTAL DETD. FROM THE  
SPECTRA ARE IN SATISFACTORY AGREEMENT WITH THE CALCD. VALUES.

UNCLASSIFIED

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UDC 669.018.298

YEPIKHIN, M. A., ZABOLEYEV-ZOTOV, V. V., ~~PISAREV, S. P.~~ SHASHIN, A. V.

"Effect of a Third, Previously Formed Phase on the Hardness of Certain Aging Alloys"

V sb. Metallovedeniye i prochnost' materialov. T. 3 (Physical Metallurgy and the Material Strength. Vol 3 -- collection of works), Volgograd, 1971, pp 341-345 (from RZh-Metallurgy, No 4, Apr 72, Abstract No 41633)

Translation: A study was made of the hardness of aging alloys hardened simultaneously by particles of intermetallides isolated during the aging process and solid particles of a third previously formed phase of the Cr oxide and Al oxide type introduced into the melt (AK4 alloy with different amounts of additives of Cr oxide and BRA9 aluminum bronze powder with different Al oxide content). For the case of the bronze, a sharp drop in the hardness increment was observed on reaching a third phase concentration of 30-40 volumetric % whereas for the AK4 alloys this decrease was observed at 4-5 volumetric %. It is expedient to use a dispersion hardening base in order to increase the strength characteristics of the alloys hardened by disperse inclusions only for defined content of the third phase in it, considering also the size of the inclusions. Two illustrations and a 1-entry bibliography.

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1/3 006

UNCLASSIFIED

PROCESSING DATE--13NOV70

TITLE--REACTION OF PHOSPHOROUS ACID WITH IODINE AND ALCOHOLS. II -U-

AUTHOR--(02)-PISAREV, V.T., KIRSANOV, A.V.

COUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(4), 770-3

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ALCOHOL, GLYCOL, IODINATED ORGANIC COMPOUND, IODINE,  
PHOSPHORUS, PROPANOL, ETHYLENE, PROPYLENE, BUTENE FESHCHENKO, N. G.

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1364

STEP NO--UR/0079/70/040/004/0770/0774

CIRC ACCESSION NO--AP0128766

UNCLASSIFIED

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2/3 006

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0128766  
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. SECONDARY ALCS. AND GLYCOLS REACT WITH P AND IODINE OR WITH H SUB3 PO SUB3 AND IODINE TO FORM ALKYL IODIDES; TERTIARY ALCS. REACT IN TWO PATHS TO FORM H SUB2 O AND OLEFIN OR TO FORM ALKYL IODIDES, IN THE REACTION WITH H SUB3 PO SUB3 AND IODINE, WHILE IN REACTION WITH RED P AND IODINE THE DEHYDRATION IS INHIBITED AND ALKYL IODIDE IS FORMED IN GOOD YIELD PROVIDED THAT IODINE IS ADDED TO MIXED ROH AND RED P. TO 0.5 MOLE ISO-PROH AND 0.25 MOLE H SUB3 PO SUB3 WAS ADDED AT 70DEGREES 0.25 MOLE IODINE AT 80-90DEGREES; HEATING THE MIXT. 1 HR AT 85DEGREES GAVE (AFTER TREATMENT WITH AQ, NA SUB2 SO SUB3) 84PERCENT ISO-PRI; AN 87PERCENT YIELD RESULTED FROM ADDN. OF 1 MOLE RED P TO 0.5 MOLE ISO-PROH AND 0.25 MOLE IODINE AT 80-100DEGREES AND HEATING THEMIXT. 2 HR AT 80-100DEGREES. TO 0.5178 MOLE ME SUB3 COH AND 0.3452 MOLE H SUB3 PO SUB3 WAS ADDED AT 70DEGREES 0.3452 MOLE IODINE (MAINTAINING THE MIXT. AT 75-80DEGREES); HI WAS EVOLVED ALONG WITH ME SUB2 C:CH SUB2; AFTER 2.5 HR AT 80DEGREES AND AN AQ. TREATMENT, THE MIXT. GAVE 0.3641 MOLE HI, 0.0643 MOLE ME SUB2 C:CH SUB2, AND 0.2217 MOLE ME SUB2 CI (43PERCENT). TO 1 MOLE ME SUB3 COH AND 0.2 G ATOM RED P WAS ADDED 1 MOLE IODINE AT 70-80DEGREES AND AFTER A HOLD OF 2.5 HR GAVE 78PERCENT ME SUB3 CI.

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PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0128766

ABSTRACT/EXTRACT--TO 0.25 MOLE GLYCOL AND 0.25 MOLE H SUB3 PD SUB3 WAS  
ADDED AT 70DEGREES 0.25 MOLE IODINE (MAINTAINING THE MIXT. AT  
80-110DEGREES) AND THE MIXT. HEATED 1.5-2 HR AT 80-100DEGREES TO GIVE  
THE FOLLOWING DIIODIDES: 1,3,PROPYLENE 88PERCENT; 1,3,BUTYLENE  
91.5PERCENT; 1,4,BUTYLENE 91.5PERCENT; 1,5,PENTYLENE 91.5PERCENT;  
1,6,HEXYLENE 91.5PERCENT; 1,10,DECYLENE 91.5PERCENT; AND ETHYLENE  
16PERCENT WITH THE LATTER THE REACTION IS BEST RUN AT NO HIGHER THAN  
50-70DEGREES, WHEN IT ALSO YIELDS 20PERCENT HI, 14PERCENT C SUB2 H SUB4,  
AND MUCH TAR. TREATING 0.25 MOLE GLYCOL AND 0.25 MOLE IODINE WITH 0.1 G  
ATOM RED P AT 80-100DEGREES AND HEATING THE MIXT. 1.5-2 HR AT  
80-100DEGREES GAVE THE ABOVE DIIODIDES IN 94-7PERCENT YIELDS, EXCEPT 9CH  
SUB2 I) SUB2, WHICH GAVE BUT 26PERCENT YIELD, AGAIN BEST AT  
50-60DEGREES. FACILITY: INST. ORG. KHIM. KIEV, USSR.

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UDC 546.183 : 547.2 2

FESHCHENKO, N. G., PISAREV, V. T., and KIRSANOV, A. V., Institute of Organic Chemistry, Academy of Sciences Ukrainian SSR

"Reaction of Phosphorous Acid With Iodine and Alcohols. II."

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 4, Apr 70, pp 770-773

Abstract: Secondary alcohols and glycols (except ethylene glycol) react with phosphorus and iodine or with phosphorous acid and iodine to give iodides with high yields. The reaction between tertiary alcohols and iodine takes two directions, viz. splitting off of water and formation of an unsaturated compound and formation of alkyl iodide. In the interaction of tertiary alcohols with red phosphorus and iodine dehydration of alcohols is almost completely suppressed by adding crystalline iodine to the alcohol-phosphorus mixture, with tertiary alkyl iodides being obtained in high yields.

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1/2 014

UNCLASSIFIED

PROCESSING DATE--16OCT70

TITLE--DIRECT EVIDENCE OF SODIUM RELEASE IN THE COURSE OF NA PRIME  
POSITIVE, K PRIME POSITIVE DEPENDENT ATPASE REACTION -U-

AUTHOR--(02)-LEV, A.A., PISAREVA, L.N.

COUNTRY OF INFO--USSR

*P*

SOURCE--BIOCHEM. BIOPHYS. RES. COMMUN. 1970, 38(3), 465-9

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--KIDNEY, MICROSOME, ADENOSINE TRIPHOSPHATE, ENZYME ACTIVITY,  
CHEMICAL ANALYSIS, ELECTROMETRY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1997/0309

STEP NO--US/0000/70/038/003/0465/0469

CIRC ACCESSION NO--AP0119296

UNCLASSIFIED



2/2 014

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0119296

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MICROSOMAL ATPASE MATERIAL FROM GUINEA PIG KIDNEY CORTEX WAS PREPD. ACCORDING TO POST AND SEN IN 10M MU IMIDAZOLE BUFFER CONTG. 12-5 MG MICROSOMAL PROTEIN. STABLE NA PRIME POSITIVE SENSITIVE ELECTRODES WERE IMMERSERD IN THE TEST SOLN. AFTER CALIBRATION IN NA CL SOLNS. CHANGES OF NA PRIME POSITIVE ACTIVITY WERE AUTOMATICALLY RECORDED UPON SEQUENTIAL ADDN. OF 3M MU MGCL SUB2, 2.5 M MU NA ATP AND 2.0M MU KCL. ATPASE WAS FOUND TO BE SIMILAR TO 60PERCENT WHEN COMPARED WITH THE OPTIMAL ACTIVITY FOR THE SAME SUSPENSION. A STATISTICALLY SIGNIFICANT RELEASE OF NA PRIME POSITIVE WAS OBTAINED UPON ADDN. OF K PRIME POSITIVE TO THE TEST MIXT. THE NA PRIME POSITIVE RELEASE WAS COMPLETELY INHIBITED BY CA CL SUB2, OMISSION OF ATP, OR SUBSTITUTION OF ADP FOR ATP. NO EFFECT WAS OBTAINED WITH OUABAIN. IT WAS FOUND THAT 100 NA PRIME POSITIVE WER RELEASED FOR EACH INORG. PHOSPHATE FORMED. FACILITY: LAB. CELL PHYSIOL., INST. CYTO., LENINGRAD, USSR.

UNCLASSIFIED

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ADO, YU. M., ZHURAVLEV, A. A., LOGUNOV, A. A., MYAE, E. A., NAUMOV,  
 A. A., PISAREVSKIY, V. YE., ROGOZINSKIY, V. G., TUSHABRAMISHVILI, K.  
 Z., SHUKHEYLO, I. A., BOYKO, S. N., KONAR, YE. G., MALYSHEV, I. F.,  
 KOZIN, I. V., MCNOSZON, N. A., MCZALEVSKIY, I. A., SPEVAKOVA, F. M.,  
 STOLOV, A. M., TITOV, V. A., VODOP'YANOV, F. A., KUZ'MIN, A. A., KUZ'-  
 MIN, V. F., MINTS, A. L., RUBCHINSKIY, S. M., UVAROV, V. A., GUTNER,  
 B. M., ZALMANZON, V. B., PROKOP'YEV, A. I., and TEMKIN, A. S.

"Some Results of the Overall Adjustment and Start-up of the 70-Gev  
 Proton Synchrotron of the Institute of High-energy Physics"

Moscow, Atomnaya Energiya, Vol 28, No 2, Feb 70, pp 132-138

Abstract: The physical part of the plan for the 70-Gev proton syn-  
 chrotron was executed by the Institute of Theoretical and Experimental  
 Physics. The electromagnet with feed system, the vacuum chamber, and  
 the injection devices were developed at the Scientific Research Insti-  
 tute of Electrophysical Apparatus imeni D. V. Yefremov. The radio-  
 electronic systems for acceleration process control and generation of

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ADO, YU. M., et al., Atomnaya Energiya, Vol 28, No 2, Feb 70, pp 132-138

the accelerating field, as well as the radiotechnical measurement and beam observation systems, were developed by the Radiotechnical Institute of the Academy of Sciences USSR. "Tyazhpromelektroproyekt" [State Planning Institute for the Planning of Electrical Equipment for Heavy Industry] designed the general-purpose electrotechnical devices and cable connections. The plan for the construction complex of the accelerator was developed by the State All-Union Planning Institute. The construction of the accelerator was under the general supervision of the State Committee for the Use of Atomic Energy USSR. The adjustment of individual systems and the overall adjustment and start-up of the accelerator were carried out by the Institute of High-energy Physics and the developers of the accelerator systems. The basic beam work was done by the Institute of High-energy Physics with the participation of the Radiotechnical Institute. The construction of the accelerator was begun in 1960, and all the basic construction and assembly work was completed at the beginning of

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ADO, YU. M., et al., Atomnaya Energiya, Vol 28, No 2, Feb 70, pp 132-138

1967. At the initial stage of construction, before the formation of the Institute of High-energy Physics in 1963, the work was coordinated by the Institute of Theoretical and Experimental Physics. The linear accelerator injector was started on 28 July 1967, the operation of the individual systems was adjusted by September 1967, and the physical start-up of the accelerator was accomplished on 14 October.

A description is given of the work done to adjust the annular electromagnet (including the electromagnet cooling and feed systems), the injection system (consisting of matching channel and injection device), the vacuum system, the radioelectronic system (including the accelerating field generation system, the acceleration process control system, and the radiotechnical measurement system), and the beam observation system (which provides for beam observation in the first revolution and during acceleration). In the physical start-up of the accelerator the main efforts were directed towards obtaining accelerated protons of the planned energy, and the problem of obtaining high

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ADO, YU. M., et al., Atomnaya Energiya, Vol 28, No 2, Feb 70, pp 132-138

intensity of the accelerated proton was not raised.

The article gives a listing of the principal parameters of the proton synchrotron, as well as a schedule of the individual stages of the start-up of the accelerator. Photographs include a view of the part of the ring hall in the beam injection area and a general view of the hall of ignitron rectifiers.

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UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--EFFECT AND AFTEREFFECT OF SIMAZINE ON GOOSEBERRIES -U-

AUTHOR--(02)-PISAREVA, M.G., TARNAKINA, L.G.

COUNTRY OF INFO--USSR

SOURCE--KHIM. SEL. KHOZ. 1970, 8(2), 123-6

DATE PUBLISHED-----70

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SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HERBICIDE, SOIL CHEMISTRY, NITRIFICATION/(U)SIMAZINE HERBICIDE

CONTRGL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--2000/1360

STEP NO--UR/0394/70/008/002/0123/0126

CIRC ACCESSION NO--AP0125008

UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125008

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SIMAZINE WAS APPLIED AT 4, 6, 8, AND 12 KG-HA. AFTER 3 MONTHS, CONTENTS OF THE HERBICIDE IN THE SOIL LAYER, DEPENDING ON LEVEL WERE: 0-5 CM, 1.46-3 KG-HA; 5-10 CM, 0.58-1.46 KG-HA; 10-20 CM, 0-0.69 KG-HA; 20-30 CM, NONE. OATS WERE SOWN IN THE SOIL CONTG. THE SIMAZINE, AND A DECREASE IN OATS WT. WAS NOTED. A YEAR AFTER ITS APPLICATION THE SIMAZINE CONTENT WAS: 0-5 CM, 0.20-0.65 KG-HA; 5-10 CM, 0.21-0.99 KG-HA; 10-20 CM, 0-0.30 KG-HA; 20-30 CM, NONE. THE CONTENTS OF NO SUB3 PRIME NEGATIVE AND NH SUB4 PRIME POSITIVE IN THE SOIL IN THE YEAR OF SIMAZINE APPLICATION INDICATED THAT IT HAD NO EFFECT ON AMMONIFICATION AND NITRIFICATION. IT DID NOT AFFECT THE GROWTH OF GOOSEBERRY SHRUBS OR THE CROP YIELD AND QUALITY. THE WT. OF WEEDS IN THE YEAR OF SIMAZINE APPLICATION (JULY) AT LEVELS 4, 6, AND 8 KG-HA WAS ALMOST THAT OBTAINED BY HAND TREATMENT (SIMILAR TO 600 G-M PRIME2 OF GREEN MATTER).

UNCLASSIFIED

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UDC 541.49+541.65+546.18+546.31

SINYAVSKAYA, E. I., SHEKA, Z. A., MEDVED', T. YA., PISAREVA, S. A.,  
KABACHIK, M. I., Institute of Physical Chemistry imeni A. V.  
Pisarzhevski, Academy of Sciences, UkSSR, Kiev, and Institute of  
Heteroorganic Compounds, Academy of Sciences, USSR, Moscow

"Reaction of Some Metal Halides with Tetraphenyl- and Tetra-  
butylalkylenediphosphine Dioxides"

Moscow, Zhurnal Neorganicheskoi Khimii, vol 18, No 9, Sept 73,  
pp 2427-2433

Abstract: The reaction of alkali metal halides and cupric chlo-  
ride with  $(C_6H_5)_2P(O)(CH_2)_nP(O)(C_6H_5)_2$  ( $n = 1$  to  $3$ ) and  $(C_4H_9)_2P-$   
 $(O)(CH_2)_nP(O)(C_4H_9)_2$  ( $n = 1$  to  $6$ ) was studied by measuring the  
electrical conductivity of the respective salts in nonaqueous sol-  
vents. Owing to formation of electrically neutral complexes, the  
electrical conductivity decreased when the subject compounds were  
added to LiCl or LiI or to  $CuCl_2$ . The most effective complexes  
of the inorganic compounds were the compounds with the methylene  
bridge with  $n = 1$  or  $2$ . With higher  $n$  values the complex  
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SINYAVSKAYA, E. I., et al., Zhurnal Neorganicheskoi Khimii, vol 18, No 9, Sept 1973, pp 2427-2433

formation decreased sharply. This is in agreement with published data on protonation in such dioxides, which show formation of stable cyclic structures for  $n = 1$  or  $2$ .

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USSR

UDC 661.718.1:541.133

KABACHNIK, M. I., MATROSOV, Ye. I., MEDVED', T. Ya., PISAREVA, S. A., and ROMANOVA, I. B.; Institute of Organoelemental Compounds, Academy of Sciences USSR, Moscow

"Acid-Base Properties of Tetraalkyl(Aryl)alkylenediphosphine Dioxides"

Kiev, Teoreticheskaya i Eksperimental'naya Khimiya, Vol 8, No 3, 1972, pp 361-365

Abstract: Potentiometric titration was carried out with perchloric acid in nitromethane of three series of alkylene-diphosphine dioxides with different numbers of methylene links in a bridge of a general formula  $R_2P(O) - (CH_2)_n - P(O)R_2$  (where:  $n = 1-4$ ,  $R = C_6H_5, C_4H_9, C_2H_5$ ). Protonation proceeds in all cases through a stage of ring formation with an intramolecular hydrogen bond and participation of the both phosphoryl groups. On the curves of potentiometric titration of the phosphine dioxides with propylene and butylene bridges ( $n = 3, 4$ ) there appears in the acidic region the second potential jump, which, apparently, corresponds to a process connected with ring cleavage and protonation of the second phosphoryl group. The values of  $pK_a (CH_3NO_2)$  of the second stages substantially differ from the first ones. In this respect the investigated phosphine dioxides exhibit a definite similarity to the

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USSR

KABACHNIK, M. I., et al., Teoreticheskaya i Eksperimental'naya Khimiya, Vol 8, No 3, 1972, pp 361-365.

behavior of dibasic carboxylic acids in which the formation in monoanions of intramolecular hydrogen bonds leads to a considerable difference of  $K_1$  and  $K_2$ .

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1/2 028 UNCLASSIFIED PROCESSING DATE--04DEC70  
TITLE--TRANSMISSION BAND OF THE RECORDING CHANNEL DURING DETECTION OF  
MODULATED SEQUENCE OF LIGHT PULSES -U-  
AUTHOR-(03)-KOMAROV, L.I., MELAMID, A.E., PISAREVSKIY, A.N. *P*  
COUNTRY OF INFO--USSR  
SOURCE--ZH. PRIKLAD. SPEKTROSK (USSR), VOL. 12, NO. 4, P. 755-6 (APRIL  
1970)  
DATE PUBLISHED----APR 70  
SUBJECT AREAS--PHYSICS, NAVIGATION  
TOPIC TAGS--PHOTON, SIGNAL TO NOISE RATIO, OPTIC DENSITY, LIGHT PULSE  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--3008/1409 STEP NO--UR/0368/70/012/004/0755/0756  
CIRC ACCESSION NO--AP0138419  
UNCLASSIFIED

2/2 028

CIRC ACCESSION NO--AP0138419

UNCLASSIFIED

PROCESSING DATE--04DEC70

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

ABSTRACT. THE WORK CONCERNED THE DETERMINATION OF SPECTRAL DENSITY OF SIGNAL OBTAINED BY STATISTICAL MODULATION OF PULSE SEQUENCES. THESE WERE DERIVED FROM PHOTOMULTIPLE DETECTING WEAK RADIATION, AND THUS OPERATING WITH DISCRETE PHOTON REGIME. THE MATHEMATICAL ANALYSIS PROVIDES AND EQUATION OF OPTICAL DENSITY WHICH ALLOWS A FAMILY OF CURVES TO BE PLOTTED, AND INCLUDES VARIOUS INPUT PARAMETERS CORRESPONDING TO ACTUAL CONDITIONS. THE INTRODUCTION OF NOISE PARAMETER DOES NOT CHANGE THE STRUCTURE OF EXPRESSION FOR THE OPTICAL DENSITY, AND THE METHOD ENSURES DERIVATION OF SIGNAL-NOISE RATIO.

UNCLASSIFIED

S/019/62/000/008/107/121

A154/A126

24,1600

AUTHOR: Pisarevskiy, M.M.

TITLE: A device for measuring acoustic power of supersonic oscillators

PERIODICAL: Byulleten' izobreteniy, no. 8, 1962, 75

TEXT: Class 42s. No. 146616 (722618/26-10 of March 11, 1961). 1) A device for measuring acoustic power of supersonic oscillators is based on calorimetry and metering the amplitude of oscillations. It incorporates supersonic and master oscillators, a calorimeter, a microscope with an eyepiece-micrometer, and a heated element. It differs from others in that the heated element is connected to the oscillator (directly or through a capacitor), serves as a load and is made from a material possessing great internal friction, e.g., of a 2 13 (2Kh13) steel, in the form of a half-wave rod. Its purpose is to measure the value of oscillations of the latter. 2) A device as in 1, in which, to obtain a dependence of the acoustic power on the amplitude (at a given electric condition) there is an assembly of half-wave measuring rods of different cross sections.

VB

Card 1/1

29801

S/019/61/000/018/056/073

A152/A126

24,1700  
9,2185

**AUTHORS:** Pisarevskiy, M.M.; Voronov, V.N.

**TITLE:** Composite piezoelectric resonance transducer

**PERIODICAL:** Byulleten' izobreteniy, no. 18, 1961, 49 - 50

**TEXT:** Class 42s. No. 141340 (681633/26 of October 10, 1960). A composite piezoelectric resonance transducer, containing a piezoelectric element and two straps, and having the thickness of the package equal to one half of the wave length at a given frequency, the distinctive feature of the transducer consists in that, for the purpose of increasing its effectiveness and operational stability when working at a frequency of 5 - 50 cps, it uses a double piezoelectric element tightly compressed between the straps, e.g., by cylinders or prisms in such a way that together with the connecting members (bolts or pipes) it forms a system of semi-wave vibrators parallel-connected in the antinode.

4

Card 1/1







1/2 009

UNCLASSIFIED

PROCESSING DATE--18SEP70

TITLE--CARBONYL COMPOUNDS AND THEIR ROLE IN THE AROMA OF FRUITS AND BERRIES -U-

AUTHOR--(04)-PISARNITSKIY, A.F., VERESHCHAGIN, P.V., MACHAROSHVILI, G.I., BOGATOVE, YE.G.

COUNTRY OF INFO--USSR

SOURCE--PRIKL. BIOKHM. MIKROBIOL. 1970, 6(1), 13-17

DATE PUBLISHED-----70

SUBJECT AREAS--AGRICULTURE, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--AGRICULTURE CROP, CHEMICAL ANALYSIS, CARBONYL COMPOUND, PAPER CHROMATOGRAPHY, ALDEHYDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1984/0895

STEP NO--UR/0411/70/006/001/0013/0017

CIRC ACCESSION NO--AP0055593

UNCLASSIFIED

2/2 - 009

CIRC ACCESSION NO--AP0055593

UNCLASSIFIED

PROCESSING DATE--18SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE COMPN. OF VOLATILE CARBONYL  
COMPS. IN RASPBERRIES AND STRAWBERRIES AT DIFFERENT RIPENING STAGES,  
AND THEIR CONTENT IN MATURE FRUITS WERE DETD. THEY WERE SEPD. AS  
2,4-DINITROPHENYLHYDRAZONES BY PAPER CHROMATOG. THE MAIN CHANGES  
NOTICED DURING THE MATURIZATION PROCESS WERE THE SYNTHESIS OF PHCHO AND  
THE DISAPPEARANCE OF HEXANAL AND HEXENE-2-AL.

UNCLASSIFIED

USSR

UDC 620.193.4:669.295

TSINMAN, A. I., ~~PISCHIK, L. M.~~ BRUSENTOVA, V. M., ZAKHARENKOVA, L. Ye.

"Influence of Water and Oxidizers on Electrochemical and Corrosion Behavior of Titanium in Acetic-Acid Media"

Moscow, Zashchita Metallov, No 5, Sep-Oct, 1972, pp 567-569.

Abstract: Studies of the corrosion of titanium in aqueous solutions of acetic acid were performed using type VT-1 titanium. Titanium is not passivated in water-free acetic-acid solutions. The corrosion rates in 1 n. acetic-acid solutions of sodium acetate, determined by extrapolation of the linear sectors of the anode and cathode curves, indicate that titanium has good corrosion resistance in water-free acetic-acid solutions when no oxidizers are present, even at the boiling point. When the water content is over 0.02% in boiling acetic-acid solutions, titanium can be passivated. In the presence of water, titanium is spontaneously passivated in deactivated acetic-acid solutions. Addition of oxidizers to boiling solutions containing less than 0.1% water may shift the potential of titanium to the area of anode activation of the surface. With high water concentrations, titanium is stable in acetic-acid solutions both with and without oxidizers.

1/1

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Acc. Nr: **AP0048959**

Ref. Code: **UR0357**

PRIMARY SOURCE: Vestnik Oftal'mologii, 1970, Nr / ,  
pp 91-92

A CASE OF OCULO-CRANIOCEREBRAL FIREARM WOUND

Pisetskiy, V. S.

Summary

A case of a rare oculo-craniocerebral wound caused by a firearm in a boy aged 12 years is reported. A big metal foreign body fired from a self-made blunderbuss penetrated the right orbit, having destroyed the eyeball. The fore-part of this extraneous body entered the anterior cranial fossa. The patient was admitted in a critical condition presenting manifestations of meningitis. The foreign body was removed surgically by the orbital route. On its removal minute bone fragments loosely connected with the dura mater, along with the rests of the smashed eyeball were extracted. The healing proceeded uneventfully against the background of intensive antibiotic therapy.

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hh 2

REEL/FRAME  
19800734

PISHCHAK, V. K.

SO: SPAS 57623  
26 JULY 1973

HIGH-TEMPERATURE CREEP OF HELIUM WITH A FACE-CENTERED CUBIC LATTICE

HW: 539.376

Article by P. N. Okrainets and V. K. Pishchak, (Kiev): Ponoco, Avantika  
Akademi Nauk SSSR-Moscow, Soviet Union, No. 1, 1973, submitted 10 January 1972,  
pp 151-156

A substantial improvement was recently noted in understanding the role of a number of factors which determine the behavior of metals during creep. Successes in establishing the nature of high-temperature creep of pure metals were especially noted. At high temperatures the role of certain factors, important at low temperatures, is substantially diminished, and the correlation of experimental and calculated data noticeably improved  $1/3$ . In this instance a strong relationship of the rate of steady-state creep  $\dot{\epsilon}$  to the magnitude of stacking fault energy  $\gamma$  has been observed for metals with an fcc lattice which can be expressed by the empirical expression:

$$\dot{\epsilon} = A \gamma^{-1/2} \exp(-Q/kT)$$

(1)

where  $m$  can have values of 2.3  $\mu$ , 2.6  $\mu$ , and 3.5  $\mu$ . Despite differences in the regions in solution of various the modulus  $E$  and corrections to the modulus defect  $\mu$ , an intense effect of stacking fault energy on the rate of high-temperature ( $\sim 0.7T_m$ ) creep was evident. Use of equation (1) was limited only by the high-temperature region

In the limits of which the activation energy of creep  $Q_c$  should coincide with the activation energy of self-diffusion  $Q_d$  or, in other words, when the rule of cross control group. It is assumed that this condition is satisfied for all metals at a temperature close to half their melting point  $T_p / 1.2$ .

Results of the mechanical and structural investigations for a number of metals with a face lattice over a wide temperature interval showed that the established, by mechanical and structural criteria, temperature of transition from low-temperature deformation to high-temperature deformation depends on the stacking fault energy  $\gamma$ . The lower the metal's stacking fault energy the higher the transition temperature. In the case of a slow deformation rate ( $0.05 \text{ hr/TF-sec}$ ) the transition temperature varied from 0.27  $T_p$  for aluminum up to 0.42  $T_p$  for lead. In Fig. 1 reference is made to the data for local plastic deformation for silver, copper, nickel, and aluminum which conforms to the empirical relationship of the type

$$T_{tr} / T_p = 0.27 + 0.015 \gamma$$

(2)

Line b in Fig. 1 was obtained from tests of the same metals for creep under a constant stress  $\sigma/\sigma_0$ . In this case the indicator of degree of the relative transition temperature was equal to 5 and the transition temperature for all metals investigated turned out to be higher than in the case of stress increasing tests. These tests were conducted with slowly increasing loads almost to fracture of the samples. At the same time, close to "equilibrium" the tests clearly reveal the metal differences with respect to mechanical  $\sigma/\sigma_0$  and structural  $\gamma$  properties. In the case of conventional creep tests with a constant load the substructure formed as a result of rapid load application in the first stage of creep renders a strong "leveling" effect and, consequently, the transition temperature turns out to be somewhat higher and its relationship to stacking fault energy is somewhat weaker than in the case of smooth loading.

Since the transition temperature was previously established by the appearance of substructure lines of necessity, it is obvious that in comparing the data obtained by us with existing literature data on the change of creep activation energy of metals with a face lattice inasmuch as this would make it possible to contemplate the possible mechanism of recovery. Literature data systematized by us on the change of creep activation energy in relation to temperature are pronounced in Fig. 2 (9-12). For

USSR

UDC 539.4.015.1

KOZYRSKIY, G. YA., OKRAINETS, P. N., and PISHCHAK, V. K., Institute of Metal Physics, Academy of Sciences UkrSSR

"The Effect of the Loading Rate on the Characteristics of the Creep and Substructure of Nickel"

Kiev, Metallofizika, N1 31, 1970, pp 139-143

Translation: The characteristics of the creep and the substructure of nickel at a temperature of 500°C and a load of 5 kg/mm<sup>2</sup> were studied. The time of application of the load changed from 1 to 5.10<sup>5</sup> seconds. It is shown that the characteristics of nickel creep depend greatly on the time and application of the load. The smaller the rate of the load's application, the greater the rate of the specimen's creep. The mechanical characteristics of the creep are compared with x-ray structural studies. A correlation is made between the specific disorientation of the substructure and the resistance of nickel creep. Bibliography: 2 entries, 2 illustrations and 2 tables.

1/1

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USSR

UDC 539.4.015.1

KOZYRSKIY, G. YA., OKRAINETS, P. N., and PISHCHAK, V. K., Institute of Metal Physics, Academy of Sciences USSR

"A Change in the Disorientation of the Substructure of Nickel and Copper Under Conditions of Slow Loading at High Temperatures"

Kiev, Metallofizika, No 31, 1970, pp 148-152

Translation: The effect of plastic deformation and temperature on the substructure's disorientation was studied on high-purity polycrystalline nickel and copper specimens. Mechanical tests were conducted in vacuum at a loading rate  $v = 0.05 \text{ kg/mm}^2$  per hour at temperatures 0.448, 0.564, and 0.68 from the melting point. It is shown that under appropriate testing conditions the specific disorientation (the relationship of the disorientation angle to the value of deformation) of the substructure of copper is several times greater than that of nickel. It is concluded that such a difference in the values of specific disorientation of the substructure of copper and nickel is connected with the difference in the values of packing defects in these metals. Bibliography: 10 entries, 3 illustrations, 1 table.

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USSR

UDC 669.017:539.371

OKRAINEYS, P. N., and PISHCHAK, V. K., Institute of Physics of Metals, Academy of Sciences Ukrainian SSR

"Disorientation of the Substructure of Metals with Face-Centered Lattice at High Temperature Deformation"

Sverdlovsk, Fizika Metallov and Metallovedeniye, Vol 29, No 6, Jun 70, pp 1204-1209

Abstract: A study is made of the change of disorientation angles of the substructure of coarse-grained polycrystalline specimens of nickel and copper under slow loading at temperatures 0.45, 0.56, and 0.68 from melting temperatures, which for nickel were 500, 700, and 900°C and for copper -334, 492, and 650°C. All specimens were tested in a vacuum of  $10^{-5}$  torr at a loading rate of 0.05 kg/mm<sup>2</sup>·hr. It is shown that at identical values of deformation and smelting stress application, the angles of substructure disorientation for copper and nickel decrease with increasing temperature. In the entire range of deformations studied, temperatures and stresses, the angles of disorientation of the substructure of copper are smaller than that of nickel. The specific disorientation of the substructure decreases with increase in stress. It is shown that the difference in the curves obtained for nickel and copper depend on the difference in energy of the packing defects of these metals.

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USSR

2

UDC: 621.317.44

AFANAS'YEV, Yu. V., GRINBAUM, M. B., PERSIYANOV, T. V., PISHCHER, I. V.,  
REKALOVA, G. I., SHAKHOV, A. A., Leningrad Electrical Engineering Insti-  
tute imeni V. I. Ul'yanov (Lenin)

"A Device for Measuring Magnetic Fields"

Moscow, Otkrytiya, Izobreneniya, Promyshlennyye Obraztsy, Tovarnyye Znaki,  
No 13, May 72, Author's Certificate No 335628, Division G, filed 10 Nov 70,  
published 11 Apr 72, pp 189-190

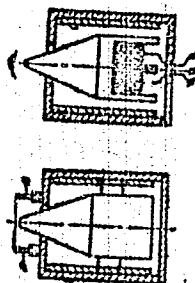
Translation: This Author's Certificate introduces a device for measuring  
magnetic fields. The device contains an acoustic concentrator coupled to  
a hollow conducting half-wave cup holding an electromechanical converter  
such as a piezoelectric converter, needle holders mounted on an acoustic  
neutral, and a microwire which acts as part of the measurement loop. The  
microwire is fastened in supports and is put into oscillatory motion by  
the concentrator mentioned above. As a distinguishing feature of the  
patent, in order to measure the normal component of the field on the sur-  
face of magnetized bodies, the device is equipped with a second electro-  
mechanical converter connected in antiphase with the first. The converters

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USSR.

AFANAS'YEV, Yu. V. et al., USSR Author's Certificate No 335628

are securely fastened to the concentrator base which is made in the form of a wedge. The converters are arranged symmetrically with the geometric axis of the wedge, which is excited on the resonance frequency of flexural vibrations of the converters.



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USSR

UDC: 621.317.44

2

AFANAS'YEV, Yu. V., GRINBAUM, M. B., PERSIYANOV, T. V., PISHCHER, I. V.,  
REKALOVA, G. I., SHAKHOV, A. A., Leningrad Electrical Engineering Insti-  
tute imeni V. I. Ul'yanov (Lenin)

"A Device for Measuring Magnetic Fields"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obratzsy, Tovarnyye Znaki,  
No 13, May 72, Author's Certificate No 335629, Division G, filed 10 Nov 70,  
published 11 Apr 72, p 190

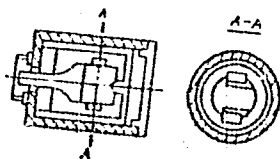
Translation: This Author's Certificate introduces a device for measuring  
magnetic fields. The device contains an acoustic concentrator coupled to  
an electromechanical transducer such as a piezoelectric converter, needle  
holders mounted on an acoustic neutral, and a microwire which acts as part  
of the measurement loop and is fastened in supports and put into oscil-  
latory motion by the transducer. As a distinguishing feature of the patent,  
provision is made for measuring the induction of the magnetic field inside  
the cavities of magnetized articles. For this purpose the device is equipped  
with a second electromechanical transducer of longitudinal oscillations con-  
nected in phase with the first. The transducers are securely fastened on

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USSR

AFANS'YEV, Yu. V. et al., USSR Author's Certificate No 335629

opposite sides of the lateral surface of the concentrator, which is made in the shape of a truncated cone and is excited on the resonance frequency of torsional vibrations of the transducers.



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USSR

UDC 615.919:591.145.2.615.918:58.615.9:576.8.097.29

CHEREPOV, V. L., ORLOV, B. N., and PISHCHIK, A. M.

"Effect of Cobra Venom on the Structure of Frog Nerves"

Uch. zap. Gor'kov. un-t. Ser. biol. (Educational Proceedings of the Gor'kov University, Biological Series), Vyp 40, 1972, pp 52-55 (from Referativnyy Zhurnal -- Farmakologiya. Khimioterapevticheskiye Sredstva. Toksikologiya, No 1, 1973, Abstract No 1.54.779 by V. K.)

Translation: When the sciatic nerve of a frog was placed in a 10% solution of venom (I) from the Asiatic cobra for 30 minutes, a swelling of the epinerve and a thickening of the myelin sheath were observed. The destruction of the Shvammovsky cells and collagen fibers was also noted. In a 0.2% solution the epinerve ruptured but the nerve fibers did not change.

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USSR

UDC: 612.766.2

8  
DOVALENKO, Ye. A., POPKOV, V. L., KONDRAT'YEV, Yu. I., MAILYAN, E. S., GALUSKO, Yu. S., PROKHONCHUKOV, A. A., KAZARYAN, V. A., MOROZOVA, R. S., SEROVA, L. V., POTAPOV, A. N., ROMANOV, V. S., and PISHCHIK, V. B.

"Shifts in the Functions of the Organism During Prolonged Hypolinesia"

Moscow, Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, Vol 14, No 6, Nov/Dec 70, pp 3-9

Abstract: Rats kept immobilized for up to 170 days in special cages showed an increase in general gas exchange and rate of oxygen utilization in the muscles, and a slowing of the rate of tissue metabolism in the liver and myocardium. The level of phosphorylation in the myocardium and, to some extent, in the skeletal muscles and liver dropped. Prolonged hypokinesia also stunted the animals' growth, prevented them from gaining weight, and in some cases caused them to lose weight. Besides disturbing mineral and protein metabolism, immobilization resulted in exhaustion of the hypothalamus - pituitary - adrenal cortex system.

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USSR

UDC 621.791.754:621.643:669.715

BUKAROV, V. A., ISHCHENKO, Yu. S., PISHCHIK, V. T. AND SLAVINSKIY, V. D.,  
Engineers

"Pulse-Arc Welding of Aluminum Alloy Tubes Using Nonconsumable Electrodes"

Moscow, Svarochnoye Proizvodstvo, No 11, Nov 70, pp 14-15

Abstract: Results are presented from technological studies of pulsed argon-arc welding of joints in tubes of AMg6 and SAV1 alloys using a tungsten electrode without filler wire and reverse polarity current. This type of welding provides satisfactory quality of welded seams for these alloys. A new technology has been developed for welding tubing with wall thicknesses up to 2 mm, with programed welding mode changes achieved by changing the pulse repetition frequency of current pulses. A pulse device has been developed, allowing welding by a pulsed arc using standard direct current power supplies.

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USSR

UDC 616-001.28+591.8.481.1

~~PISHCHINSKIY, A. V.~~ and CHEVLYTKO, A. A., Minsk Medical Institute

"Neurosecretory Cells of the Hypothalamus in Dogs After Acute Radiation Sickness"

Minsk, Doklady Akademii Nauk BSSR, Vol 15, No 3, 1971, pp 277-279

Abstract: Histological examination revealed substantial changes in the neurosecretory cells of the hypothalamus in dogs that died or were killed in the terminal state 12 to 13 days after single exposure to x-ray irradiation (56 r). The neurosecretory cells were highly polymorphic. Besides neurons containing a moderate quantity of neurosecretion, there were many cells whose cytoplasm was rich in an aldehyde-fuchsinophilic material. Wide processes with granules of neurosecretion protruded from the cells. The supraoptic and paraventricular nuclei frequently contained cells whose bodies were jagged and had irregular outlines. A number of cells had fairly large vacuoles. Destructive changes were also evident in the nuclei (vacuolation, wrinkling, pyknosis). In some cells the nuclei had indistinct outlines or could not be discerned at all. These signs of vulnerability to radiation of the neurosecretory cells of the hypothalamus are related to the high physiological activity of this section of the brain.

1/1

Steels

USSR

UDC 621.643.411.4.62-192

MOISEYEV, A. A., Candidate of Technical Sciences, SUKHAREVA, V. D., Engineer, ZEMZIN, V. N., Doctor of Technical Sciences, KHITRIK, A. I., Candidate of Technical Sciences, MOSHEVICH, Ye. I., Candidate of Technical Sciences, KOROBCHIKIN, I. Yu., Candidate of Technical Sciences, KIRVALIDZE, N. M., Candidate of Technical Sciences, PISHCHIKOV, G. P., Candidate of Technical Sciences, DEVIATKO, E. I., Engineer, All-Union "Order of the Red Banner of Labor" Scientific Research Institute of Heat Engineering imeni F. E. Dzerzhinskiy, Central Scientific Research Design and Planning Boiler and Turbine Institute imeni I. I. Polzunov, Road Construction Division, Southern Pipe Plant, All-Union Scientific Research Diesel Locomotive Institute

"Improving the Operational Reliability of Welded Joints and the Technological Properties of High-Strength EP184 Austenitic Steel"

Moscow, Teploenergetika, No 8, Aug 72, pp 46-49

Abstract: The article is a report on the results of joint research by various scientific research institutes and industrial organizations to determine what effect methods of melting EP184 steel might have on the work-

USSR

MOISEYEV, A. A. et al., Teploenergetika, No 8, Aug 72, pp 46-49

ing reliability of welded joints as well as on the other properties of the metal. It was found that crack formation in joints can be eliminated by reducing the oxygen content, as well as the concentrations of hydrogen, nitrogen, sulfur and phosphorus below certain levels. This can be done by melting from a fresh charge with subsequent vacuum-arc remelting. Electroslag remelting can be used as well, but is less effective.

2/2

1/2 015

UNCLASSIFIED

PROCESSING DATE--04DEC70

TITLE--FORMATION OF ANION RADICALS IN NUCLEOPHILIC AROMATIC SUBSTITUTION REACTIONS -U-

AUTHOR--(05)-SHEIN, S.M., BRYUKHOVETSKAYA, L.V., PISHCHUGIN, F.V., STARICHENKO, V.F., PANFILOV, V.N.

COUNTRY OF INFO--USSR

SOURCE--ZH. STRUKT. KHIM. 1970, 11(2), 243-8

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--EXCHANGE REACTION, AROMATIC NITRO COMPOUND, ANION, EPR, COMPLEX COMPOUND, ETHER, ESTERIFICATION, PHENOL, HALOGEN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FIGHE NO----FD70/605018/009 STEP NO--UR/0192/70/011/002/0243/0248

CIRC ACCESSION NO--AP0140796

UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0140796  
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. IN THE TYPICAL REACTION OF  
 NUCLEOPHILIC SUBSTITUTION WITH A NO. OF AROMATIC NITRO DERIVS. I (R  
 EQUALS NO SUB2, R PRIME1 EQUALS H), R PRIME2 EQUALS F, CL, BR, NO SUB2,  
 OME, SME, SCF SUB3, SO SUB2 ME; I (R EQUALS CL, R PRIME1 EQUALS NO  
 SUB2), AND I (R EQUALS OME, R PRIME1 EQUALS NO SUB2). R PRIME2 EQUALS  
 NO SUB2, CF SUB3, SO SUB2 ME, SO SUB2 CF SUB3, RESP., THE FORMATION OF  
 ANION RADICALS WAS OBSD. (EPR). THE TRANSEETHERIFICATION REACTION OF  
 ALKYL ETHERS OF MONO AND POLYNITROPHENOLS IS ASSOC'D. WITH THE FORMATION  
 OF ANION RADICALS FROM THESE COMPS. THAT REMAIN IN EQUIL. WITH STARTING  
 PRODUCTS AND SIGMA COMPLEXES. SIMILARLY ANION RADICALS WERE OBSD.  
 DURING THE REPLACEMENT OF HALOGEN OR NITRO SUBSTITUENTS. UNDER THESE  
 CONDITIONS NITRO COMPS. I (R EQUALS OME OR CL) FAIL TO PRODUCE ANION  
 RADICALS IN DETECTABLE CONCNS. FACILITY: INST. ORG. KHIM.,  
 NOVOSIBIRSK, USSR.

UNCLASSIFIED

USSR

UDC 621.789-977:669.14.018.29

BERNSHTEYN, M. L., PETSOV, G. G., and PISHCHULIN, N. I., Moscow Institute of Steel and Alloys

"Forming the Structure of Structural Steels by High-Temperature Thermomechanical Treatment"

Moscow, Metallovedeniye, No 6, 1971, pp 55-57

Abstract: The structure and mechanical properties of 40Kh, 40KhN, and 40KhNM structural steels were investigated after high-temperature thermomechanical treatment (HTMT) under conditions of pressing at various deformation rates. Specimens of pressed bars were subjected to tensile tests, and their microstructures, particularly the change of their graining character, were investigated at distances of 0.5, 1.5, 2.5, 4.5, and 7.5 mm from the surface. The optimum deformation degree under investigated HTMT conditions was found to be 70%. In this case, recrystallization processes had not yet been developed substantially. It is expedient to anneal structural steels with molybdenum and chromium by HTMT with pressing, which makes it possible to retain the structure developed by hot plastic deformation even in the event of great reduction. Five figures, six bibliographic references.

1/1

USSR

UDC: 681.3.06:51

KORNEV, Yu. N., PISHKUNOV, S. V., SERGEYEV, S. N.

"Algorithms of Generalized Substitutions and Problems of Their Interpretation"

V sb. Teor. kibernetika. Vyp. 4 (Theoretical Cybernetics--collection of works, No 4), Kiev, 1970, pp 3-20 (from RZh-Kibernetika, No 7, Jul 71, Abstract No 7V702)

Translation: Formal rules are given for recording algorithms in the form of substitutions defined on a set of generalized words. A generalized word is taken to mean a finite set of named cells in each of which is recorded a symbol from some alphabet called the alphabet of states of the cell. The rules for carrying out the algorithms allow simultaneous application of the substitutions of the algorithm to the word to be processed. Consideration is given to problems involving recognition of the noncontradiction of systems of generalized substitutions, and to problems of interpretation of one class of algorithms with the aid of networks of automata.

1/1



AA0040631

P

Fish. Gonzalez, B.A.F.  
UR 0482

3-76

Soviet Inventions Illustrated, Section I Chemical, Derwent,

233657 MERCURATED POLYSTYRENE CATALYST used in preparation of polymerisable vinyl carboxylates ensures less toxicity of the process improved catalyst life and economy of production and also renders the process continuous. The catalyst is prepared by soaking 15.6g of polystyrene in 174.6g of nitrobenzene overnight at room temp. A further 40g. of nitrobenzene are then added and the mixt. heated to 120°C for 1½-2hrs followed by the addition of 52.5g mercuric acetate and 9 ml. acetic acid. The mixture is heated for a further 6-7 hrs. at 120°C with stirring. The product is washed with methylated spirit and acetone and dried at 60°C. The catalyst is used in amount of 5% wt. of the fatty or aromatic acid used. 29.7.67. as 1175988/23-4, DAVANKOV, A.B. et al. In: G. Mamedaliev Petrochemical Inst. Sumgait Filial. (30.6.69) Bul. 3/24.12.68. Class 12o, 21, 12o, 12. Int. Cl. C 07c. C 07c.

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19750191

AA0040631

AUTHORS: Davankov, A. B.; Renard, T. L.; Pishnamazzade, B.-A. F.;  
Shabanova, D. A.; and Kotlyarevskaya, V. N.

Sungaytskiy Filial Instituta Neftekhimicheskikh Protessov  
imeni Yu. G. Mamedaliyeva

19750192

Acc. Nr:

AA0108720

Abstracting Service: 3-70

Ref. Code:  
UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent,

244353 AIR TUYERE AND GAS LANCE FOR BLAST FURNACE is fitted with a protective case (5) in the lance water jacket (1) to protect the insulation there. The ring gap between lance (2) and case (3) is rammed with vermiculite expanded in situ or perlite etc.

29.5.67 as 1160010/22-2. MALIKOV, K. V., V. L. LISHVANOV, A. L. GALATONOV et al. METALLURGICAL HEAT TECHNIQUES RES INST. (9.10.69) Bul 18/28.5.69. Class 18a. Int. Cl. C 21 b.

AUTHORS: Malikov, K. V.; Pishvanov, V. L.; Galatonov, A. L.; Babarykin, N. N.

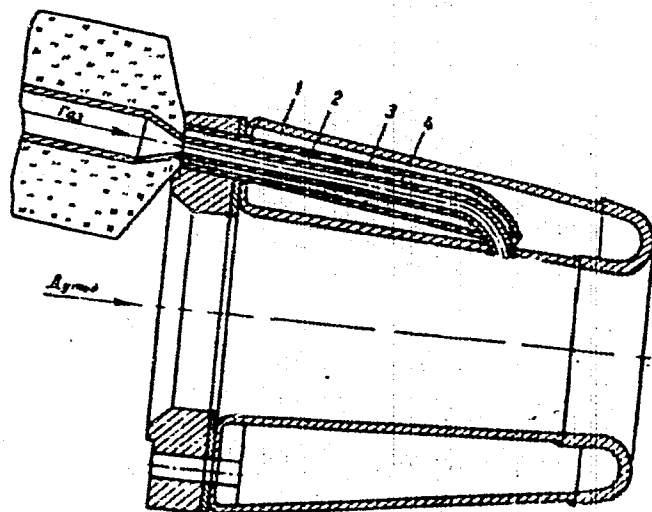
Vsesoyuznyy Nauchno-Issledovatel'skiy Institut Metallurgicheskoy Teplotekhniki

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REEL/FRAME  
19900494

18

Acc. Nr.: RA0108720



2/2

Reel/Frame  
19900495

BS

USSR

UDC 615.23:547.775+546.171.5

PISKAREV, A. V., NESTERENKO, V. S. and SUMINOV, S. I., Division of Radiation Pathophysiology and Radiation Pharmacology, Scientific Research Institute of Medical Radiology, Academy of Medical Sciences USSR, Obninsk

"Effect of Pyrazolone and Hydrazine Derivatives on the Resistance of Mice to Hypoxia"

Moscow, Farmakologiya i Toksikologiya, Vol 36, No 1, Jan/Feb 73, pp 48-54

Abstract: The effects of 23 pyrazolone and hydrazine derivatives in increasing the resistance of mice to hypoxia were studied in experiments in which the animals were lifted to a simulated altitude of 10,000 m (rate of lifting 30 m/sec) or 10,500 m (rate of lifting 11 m/sec) by reducing the pressure in a chamber after intraperitoneal administration to the animals of the compounds tested. Of the seven pyrazolone derivatives tested, analgin exerted the greatest effect in protecting against hypoxia. The antihypoxic activity decreased in the order analgin > antipyrine > 2-cyano-ethyl-5-pyrazolone > amidopyrine. Butadion, 1-benzyl-3-methyl-5-pyrazolone, and 1-phenyl-3-methyl-5-pyrazolone had no significant activity. With the exception of hexylhydrazine and heptylhydrazine sulfates, all the hydrazine derivatives tested increased the resistance of the mice to hypoxia after being administered in appropriate

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USSR

PISKAREV, A. V., et al., Farmakologiya i Toksikologiya, Vol 36, No 1, Jan/Feb 73, pp 48-54

doses. The most pronounced antihypoxic effect was observed on administration of apressin, 1-hydrazinophthalazine-4-carboxylic acid hydrazide, phelazine, phenizine, and 1-(2-cyanoethyl)-1-p-toluenesulfonylhydrazine. The activity of the pyrazolone derivatives was associated with the hypothermic effect produced by them. While some of the hydrazine derivatives also reduced the rectal temperature of the animals, one may assume that compounds of this type, being MAO inhibitors, could increase the level in the body of biogenic amines (serotonin, adrenaline, and histamine) that are of importance in adaptive reactions.

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1/2 009 UNCLASSIFIED PROCESSING DATE--16OCT70  
TITLE--GIANT DIPOLE RESONANCE ON NICKEL ISOTOPES -U-  
AUTHOR--(05)-GORYACHEV, B.I., ISHKANOV, B.S., KAPITONOV, I.M., PISKAREV,  
I.M., SHEVCHENKO, V.G.  
COUNTRY OF INFO--USSR  
SOURCE--YAD. FIZ. 1970, 11(2), 252-9  
DATE PUBLISHED-----70  
SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY, PHYSICS  
TOPIC TAGS--NICKEL ISOTOPE, INTEGRAL CROSS SECTION, PARTICLE PRODUCTION  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1980/0367 STEP NO--UR/0367/70/011/002/0252/0259  
CIRC ACCESSION NO--AP0048639  
UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0048639

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECTIVE CROSS SECTIONS OF PHOTO N PRODUCTION FOR PRIME58 NI AND PRIME60 NI IN THE DOMAIN OF THE GAINT DIPOLE RESONANCE ARE DESCRIBED. THE INTEGRAL CROSS SECTION UP TO 30 MEV IS 310 FOR PRIME58 NI AND 620 MEV-MB. FOR PRIME60 NI. TOTAL ABSORPTION CROSS SECTIONS FOR THE ISOTOPES ARE CONSTRUCTED AS THE SUMS OF THE PHOTO N AND PHOTO P CROSS SECTIONS. THE VALUES DO NOT AGREE WELL WITH THOSE COMPUTED BY VARIOUS MODELS. FACILITY: INST. YAD. FIZ., MOSCOW, USSR.

UNCLASSIFIED



1/2 025 UNCLASSIFIED PROCESSING DATE--30OCT70  
TITLE--INTERMEDIATE STRUCTURE OF CROSS SECTIONS OF PHOTONEUTRON REACTIONS  
ON MOLYBDENUM ISOTOPES -U-  
AUTHOR--(05)-ISHKHANOV, B.S., KAPITONOV, I.M., LAZUTIN, YE.V., PISKAREV,  
I.M., SHEVCHENKO, O.P.  
COUNTRY OF INFO--USSR  
SOURCE--YAD. FIZ. 1970, 11(3), 702-4  
DATE PUBLISHED-----70  
SUBJECT AREAS--PHYSICS, NUCLEAR SCIENCE AND TECHNOLOGY  
TOPIC TAGS--PHOTONEUTRON, BETATRON, RESONANCE ABSORPTION, MOLYBDENUM  
ISOTOPE, INTEGRAL CROSS SECTION  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--1991/1079 STEP NO--UR/0367/70/011/003/0T02/0T04  
CIRC ACCESSION NO--AP0110769  
UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0110769

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PHOTO-N REACTIONS ON PRIME92 MO AND PRIME98 MO ARE INVESTIGATED BY USING A 35-MEV BETATRON. CROSS SECTIONS OF THE REACTION (GAMMA, TN) EQUALS CROSS SECTIONS OF (GAMMA, NI), PLUS 2 (CROSS SECTION OF (GAMMA, 2N)) PLUS CROSS SECTION OF (GAMMA, NPI); THERE ARE SIMILAR TO 15 RESONANCES FOR EACH CROSS SECTION. THE WIDTHS OF THE GIANT RESONANCES IN THE REACTION (GAMMA, TN) ON THE PRIME92 MO AND PRIME98 MO NUCLEI ARE 5 AND 7 MEV, RESP. FOR THE REACTIONS (GAMMA, N) PLUS (GAMMA, NPI), THE VALUES OF THE INTEGRAL CROSS SECTIONS FOR PRIME92 MO AND PRIME98 MO ARE 1.12 PLUS OR MINUS 0.11 AND 1.10 PLUS OR MINUS 0.11 MEV-B, RESP. EXPTL. RESULTS ARE COMPARED TO THEORETICAL VALUES. THE EXPTL. VALUES SHOW A GREATER NO. OF RESONANCES. THE GREATEST DISCREPANCY BETWEEN THEORY AND EXPT. IS FOUND AT 24-30 MEV. FACILITY: INST. YAD. FIZ., MOSK. GOS. UNIV., MOSCOW, USSR.

UNCLASSIFIED

1/2 015 UNCLASSIFIED PROCESSING DATE--16OCT70  
TITLE--PHOTOPROTON CROSS SECTIONS FOR NUCLEI WITH (1F-2P) SHELL -U-  
AUTHOR--(05)-ISHKHANOV, B.S., KAPITONOV, I.M., PISKAREV, I.M., SHEVCHENKO,  
V.G., SHEVCHENKO, O.P.  
COUNTRY OF INFO--USSR  
SOURCE--YAD. FIZ. 1970, 11(3), 485-91  
DATE PUBLISHED-----70  
SUBJECT AREAS--NUCLEAR SCIENCE AND TECHNOLOGY, PHYSICS  
TOPIC TAGS--PHOTONUCLEAR REACTION, PROTON SPECTRUM, EXCITATION CROSS  
SECTION, INTEGRAL CROSS SECTION, NICKEL ISOTOPE, CHROMIUM ISOTOPE  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--1991/1053 STEP NO--UR/0367/70/011/003/0485/0491  
CIRC ACCESSION NO--AP0110743  
UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0110743

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PHOTO-P CROSS SECTIONS WERE MEASURED FOR PRIME52 CR, PRIME58 NI, AND PRIME60 NI FROM THRESHOLD TO 30 MEV. THE P WITH ENERGIES GREATER THAN 1 MEV WERE REGISTERED. A NO. OF MAX. WERE FOUND. THE INTEGRAL CROSS SECTIONS FOR PRIME52 CR, PRIME58 NI, AND PRIME60 NI WERE 240,570, AND 320 MEV-MB, RESP. THE ANOMALOUSLY HIGH VALUE OF THE PHOTO-P PRODUCTION CROSS SECTION FOR PRIME58 NI, AS WELL AS THE SHIFT OF THE CENTERS OF GRAVITY FOR THE PHOTO-P CROSS SECTIONS TOWARD HIGHER EXCITATION ENERGIES, AS COMPARED TO THE PHOTO-N CROSS SECTION WHICH WAS OBSERVED FOR PRIME51 CR AND PRIME60 NI, CAN BE EXPLAINED BY THE INFLUENCE OF THE ANALOG STATES. FACILITY: INST. YAD. FIZ., MOSK. GOS. UNIV., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 620.172.22

ABRAMOV, V. I., LOKSHIN, I. Kh, and PISKAREV, V. D.

"Experimental Comparison of Various Methods for Determining the Limit of Elasticity"

Moscow, Zavodskaya laboratoriya, Volume 6, 71, p 120

Abstract: Metal plates were tested for elasticity by bending, using different techniques. A special electrical apparatus invented by Piskarev (Declaration No. 251231) was used to measure residual deformation with high accuracy. Results indicated good agreement among the various standard methods used; the values obtained for limit of elasticity were quite close, even though the procedures differed significantly.

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USSR

UDO 621.3.055

KOZLOV, V.A., PISKAREV, V.I. [Scientific-Research Radiophysics Institute]

"Concerning Frequency Multiplication In The Millimeter Range In N-InSb"

Izv.VUZ:Radiofizika, Vol XV, No 2, Feb 1972, pp 300-304

Abstract: The effect is investigated of tripling the frequency of the electromagnetic field in the semiconductor n-InSb at 77° K in the millimeter range. A comparison is made of the experimental results and the calculated, fulfilled under the assumption that the nonlinear susceptibility for tripling is caused by a nonparabolic conduction band. In this connection the effect is taken into account of a strong pumping field at the omission condition of the third harmonic. The experimental equipment used in the work is described. The authors thank A.M. Belyantsev and V.N. Genkin for discussion of the results of the work and for a number of valuable comments. 2 fig 12 ref. Received by editors, 17 March 1971.

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USSR

UDO 535.8:535.241.13

PISKAREV, V.I., SHELCROV, A.N.

"Light Modulation By A Travelling Microwave"

Radiotekhnika i elektronika, Vol XVII, No 5, May 72, pp 1010-1017

Abstract: On the basis of an analysis of a paper by D. Chen and T.O. Lee (IEEE Trans. Microwave Theory and Techn., 1966, 14, 10, 482), a calculation is made for a modulator of light by a travelling microwave, which basically consists of a round waveguide with a coaxially located core of KDP, in the 10-10 GHz range. Evaluations are made of the band, the precision of fabrication of the modulator elements, and the necessary magnitude of the modulation power. The frequency characteristics of the modulator and the dependence of the percentage modulation on the magnitude of the microwave signal were experimentally investigated. A He-Ne laser with a 0.6328 micrometer wave length served as a light source in the experimental installation. The authors thank V.I. Beepalov and D.M. Bravo-Zhivotovskiy for constant attention to the work and discussion of the result, and L.B. Gordeyev for assistance during construction of the modulator. 6 fig. 7 ref. Received by editors, 19 March 1971.

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1/2 032

UNCLASSIFIED

PROCESSING DATE--04DEC70

TITLE--MODERNIZATION OF THE CONTINUOUS ACTION PNEUMATIC GRAVIMETRIC MEASURING DEVICE DN-20-3A -U-

AUTHOR--(03)-PISKAREV, YU.A., PLIS, G.A., MASLOV, A.D.

COUNTRY OF INFO--USSR

SOURCE--KHIM. VOLOKNA 1970, (3), 71-2

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--GRAVIMETER, FLOW RATE, ELECTROMAGNETISM, ELECTRIC VIBRATOR, POLYVINYL CHLORIDE, ACRYLONITRILE, ACRYLIC COPOLYMER/(U)DN203A GRAVIMETER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--3009/0111

STEP NO--UR/0183/70/000/003/0071/0072

CIRC ACCESSION NO--AP0138976

UNCLASSIFIED



2/2 032

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0138976

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

ABSTRACT. THE TITLE DEVICE IS MODIFIED BY USE OF A CONST. FREQUENCY (50 HZ) VIBRATING FEEDER, WHOSE OUTPUT CAN BE CONTROLLED BY CHANING THE AMPLITUDE OF VIBRATIONS PRODUCED BY AN ELECTROMAGNETIC VIBRATOR. THE MODIFICATION GIVES A MORE LINEAR RELATION BETWEEN THE FLOW RATES OF POLYMER (SUCH AS POLY(VINYL CHLORIDE) OR ACRYLONITRILE COPOLYMERS) AND AIR.

UNCLASSIFIED

USSR

UDC 576.858.13:636.27.083.35

PISKAREVA, N. A. and GAYEVA, L. L., Leningrad Scientific Research Institute of Children's Diseases

"The Effect of Cofactor on Sensitivity of the Neutralization Reaction with Vaccine Virus in Tissue Cultures"

Moscow, Laboratornoye Delo, No 12, 1971, pp 733-736

Abstract: Sera from children vaccinated for the first time against smallpox were used. The neutralization reaction was conducted with 67 serum samples in a culture of chick fibroblasts with and without cofactor. At the same time, the hemmagglutination inhibition reaction with 55 specimens (I), and the neutralization reaction with human chlorio-allantoic membrane (CAM) with 23 specimens (II) were run in parallel. The obtained results show that use cofactor (as 10% native rabbit serum) increased the neutralization reaction sensitivity two weeks after vaccination. Virus-neutralizing antibodies were recorded in sera diluted to 1:80 and higher. At the same time, titration of sera under similar conditions but without cofactor showed that antibodies were either absent or present in small amounts (1:10). The mean geometric titers of virus-neutralizing antibodies two weeks after vaccination was 1:56 with cofactor and only 1:10 without it. A similar relationship was established with sera taken six weeks after vaccination. Two other  
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USSR

PISKAREVA, N. A., et al., *Laboratornoye Delo*, No 12, 1971, pp 733-736

reactions, I and II, showed approximately the same results with the use of cofactor. Statistically reliable data with respect to antibodies for the suggested method and for methods I and II could not be obtained.

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Epidemiology

USSR

PISKAREVA, N. A., KUZNETSOVA, E. Ye., POPOVA, R. P., and PRATUSEVICH, R. M.,  
Leningrad Scientific Research Institute of Childrens Infections

"Acute Febrile Diseases in Children Caused by Mixed Enterovirus and Adenovirus  
Infection"

Moscow, Voprosy Virusologii, No 5, 1971, pp 624-625

Abstract: Hospitalized children convalescing from dysentery (Sh. sonnei) developed a disease of focal character. Virological and serological studies revealed the participation of two viral agents -- adenovirus and ECHO-1 virus. The clinical picture included the syndrome of serous meningitis in some cases and symptoms of respiratory infection in others. In some children, it was impossible to tell from the clinical symptoms which pathogen was more significant. In a few cases, the viral infection exacerbated the dysentery. Thus, an isolated group of children recovering from dysentery (Sh. sonnei) experienced an outbreak of diseases with heterogeneous clinical symptoms caused by ECHO-1 virus and adenovirus type 3.

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USSR

PISKAREVA, N. A., KUZNETSOVA, E. Ye., POPOVA, R. P., BRODOVA, M. D., TRUSHINSKAYA, E. P., and YAKIMANSKAYA, K. I., Leningrad Scientific Research Institute of Childrens Infections

"Virological, Clinical and Immunological Characterization of Hong Kong A2 Influenza in Children"

Moscow, Voprosy Virusologii, No 4, Jul/Aug 71, p 492

Translation: The 1969 influenza outbreak in Leningrad was caused by a new antigenic strain of influenza virus of sero type A2 (Hong Kong). During the outbreak, tests were performed on chick embryos infected with materials collected from 53 patients with sporadic forms of the disease, with eight samples collected from foci, and with 10 samples collected from children who had died of influenza. Twenty-three hemagglutinating agents were isolated and identified as A2 Hong Kong influenza viruses. All strains were sensitive to inhibitors. Serological investigation of paired sera of 388 persons revealed that specific immunological shifts took place in children fairly early. Positive shifts occurred in 40.2% of children aged up to 1 year, which considerably exceeded analogous shifts in a similar group of children in previous years. The express method of immunofluorescent analysis of nose and throat smears yielded positive  
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USSR

PISKAREVA, N. A., et al, Voprosy Virusologii, No 4, Jul/Aug 71, p 492

results in 104 out of 165 ill children (63%). Combined positive results by the express method and by the serological method were obtained in about 83% of the total number of individuals examined during the influenza outbreak.

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USSR

UDC 681.327.8:621.391

PISKAREVA, S.M., TARASOV, G.I., TVERDOV, B.I.

"Device For Determining Adjusting Capacity Of The Receiving Apparatus Of Discrete Communication Systems"

USSR Author's Certificate No 308527, filed 26 Jan 70, published 23 Aug 71 (from RZh:Elektrosvyaz', No 2, February 1972, Abstract No 2.64.318P)

Translation: A device is proposed for determining the adjusting capacity of the receiving apparatus of the discrete communication systems of Author's Certificate No 221022. With the object of assuring straightforward direct measurement of the values of the adjusting capacity of receivers, the outputs of the coincidence circuits are connected via the time delay elements with the inputs of supplementary coincidence circuits, the second input of which is connected to the output of the pulse comparator, and the inputs of the latter are combined with the outputs of the time delay element and the code converter, connected respectively with the input and output of the receiver. The cadence [taktovyye] inputs of the time delay elements, the code converter, and the comparator are connected with the outputs of the circuit for separation of the fronts of samples.

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1/2 014 UNCLASSIFIED PROCESSING DATE--11DEC70  
TITLE--DEAMINATION OF AMP IN HEAVY AND LIGHT FRACTIONS OF MYOCARDIUM  
MICROSOMES -U-  
AUTHOR--(03)--MECHIPORENKO, Z.YU., BARANEVA, N.P., PISKAROV, V.B.  
COUNTRY OF INFO--USSR  
SOURCE--UKRAYNS'KIY BICHNIMICHNIY ZHURNAL, 1970, VOL 42, NR 3, PP 329-334  
DATE PUBLISHED-----70  
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES  
TOPIC TAGS--MYOCARDIUM, CELL PHYSIOLOGY, MICROSOME, ENZYME ACTIVITY  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY FICHE NO----FD7C/605043/E02 STEP NO--UR/0300/70/042/003/0329/0334  
CIRC ACCESSION NO--AP0142904

UNCLASSIFIED



2/2 014

UNCLASSIFIED

PROCESSING DATE--11DEC70

CIRC ACCESSION NO--AP0142904

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE INVESTIGATIONS CONDUCTED EARLIER SHOWED THAT IN MICROSOMES AS COMPARED WITH OTHER CELL ELEMENTS OF MYOCARDIUM, THE ACTIVITY OF ENZYMES WHICH TAKE PART IN DEZAMINATION OF AMP DIRECTLY AND THROUGH THE STAGE OF ADENOSINE FORMATION IS THE MOST INTENSIVE. HYDROLISIS OF AMP WAS STUDIED BY MEANS OF TWO FRACTIONS OF THE RABBIT MYOCARDIUM MICROSOMES, THE HEAVY FRACTION (18000-30000 G) AND THE LIGHT ONE (30000-105000 G). THE ANALYSIS OF THE PRODUCTS OBTAINED WITH THE EFFECT OF THE FRACTIONS ON AMP SHOWED THAT THE FORMATION OF ADENOSINE OCCURS MORE INTENSIVELY IN THE PRESENCE OF THE HEAVY FRACTION AND THAT OF INOSINE ACID, IN THE PRESENCE OF THE LIGHT FRACTION OF MICROSOMES. ADENOSINE TURNS INTO INOSINIC, AND THE LATTER, INTO HYPCXANTHINE IN BOTH FRACTIONS WITH APPROXIMATELY THE SAME INTENSITY. THE DATA OBTAINED MAY TESTIFY TO THE FACT THAT IN THE LIGHT MICROsome FRACTION AMP DESAMINATION OCCURS PRECOMINANTLY DIRECTLY, AND IN THE HEAVY FRACTION, THROUGH THE STAGE OF ADENOSINE FORMATION.  
FACILITY: INSTITUTE OF BIOCHEMISTRY, ACADEMY OF SCIENCES, UKRAINIAN SSR, KIEV.

UNCLASSIFIED

Lasers & Masers

USSR

UDC 621.375.82

IGNATAVICHUS, M., KABELKA, V., PISKARSKAS, A., and YUOZAPAVICHUV, A.

"Use of Thin Phototropic Films for the Synchronization of a Neodymium Laser"

V sb. Nelineyn. protsessy v optike (Nonlinear Processes in Optics -- Collection of Works), No 2, Novosibirsk, 1972, pp 61-66 (from RZh-Fizika, No 11, Nov 72, Abstract No 11D891)

Translation: The oscillation of a Nd glass laser with a synchronization of modes produced by a thin phototropic film of polystyrene with polymethenyl dye introduced into it was investigated. With an initial film transmission of 60% the pulses generated with a total energy of  $\sim 0.1$  joule consisted of 12-15 subpulses, the duration of which as determined from two-photon luminescence was  $\sim 4$  psec. Total radiation modulation was observed in 7-8 out of 10 oscillation pulses. The smoothness of the spectrum (the spectral width of the radiation close to threshold was  $\sim 6$  Å), the stability of the average wavelength of the radiation, and the ease of achieving oscillation in single-mode operation were noted; this is explained by the high degree of homogeneity of the polystyrene films. 3 ref. S. F. Sharlay.

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USSR

UDC 621.373.826

IGNATAVICHUS, M. V., PISKARSKAS, A. S., and STABINIS, A. YU.

"Use of Some  $A^{II}B^{VI}$  Compounds for Controlling the Pulses of Optical Lasers"

V. sb. Probl. fiz. soyedineniy  $A^{II}B^{VI}$ . T.I (Problems of the Physics of Compounds  $A^{II}B^{VI}$ . Vol.I — collection of works), Vil'nyus, 1972, pp 121-125 (from RZh-Radio-tekhnika, No 11, Nov 72, Abstract No 11 DL38)

Translation: A detailed theoretical study is conducted on the effect of 2-photon absorption within a laser resonator on the characteristics of light pulses during variation of the laser parameters within broad limits. Instantaneous modulation of resonator quality is proposed (since it takes place during use of directed, phototropic filters). Calculations show that variation in the thickness of the semiconductor absorber makes it possible to change the duration of the light pulses within very broad limits. It is shown that it is necessary to use semiconductors with a large value of the 2-photon absorption coefficient and a small linear absorption value in order to obtain light pulses with large peak power densities with possibly longer duration. A.K.

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USSR

UDC 616.981.48-022.38-036.22

MATSIYEVSKIY, V. A., LOGACHEV, A. V., FEDORINA, A. P., and PISKLOVA, A. S.,  
Ivano-Frankovsk Medical Institute and Ivano-Frankovskaya Oblast Sanitary-  
Epidemiological Station

"An Outbreak of Food Poisoning Caused by E. coli 0124:K72 (B17)

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 3, 1971,  
pp 137-139

Abstract: An acute dysentery-like disease broke out among children and adult attendants in a children's sanatorium. The disease, caused by E. coli 0124:K72(B17), was characterized by an explosive onset, elevated temperature, gastrointestinal disturbances (abdominal pain, liquid stools sometimes admixed with mucus and blood), and brief course. All the cultures isolated from the patients produced a positive methyl red reaction and a negative Foges-Proskauer reaction. They were lacking in fibrinolytic and plasma-coagulating or hemolytic properties. All were sensitive to standard colicins but insensitive to penicillin and furacillin. They formed indole and hydrogen sulfide and fermented glucose, mannite, maltose, arabinose, xylose, sorbite, dulcitol, glycerine, lactose, and rhamnose with the formation of gas and acid. However, they did not ferment sucrose, inositol, salicin, urea, or milk.

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USSR

UDC 615.31:547.861.37-012.1

PIS'KO, G. T., NEVSKAYA, T. L., GANUSHCHAK, N. I., BURYAK, V. S., BRUZDEV,  
A. I., KOSUBA, R. B., KUCHER, V. I., Chernovitskiy Medical Institute

"Synthesis and Pharmacologic Properties of New Derivatives of Piperidine"

Moscow, Khimiko--Farmatsevticheskiy Zhurnal, No 4, 1973, pp 14-17

Abstract: As a result of studying the relation between chemical structure and biological activity in a series of quaternary ammonia compounds, it was concluded [G. T. Pis'ko, "Chromotologic Properties Antimicrobic Effect of Derivatives of Ethylene- and Hexamethylemediamine," Doctor's Dissertation, Chernotsy Dnepropetrovsk, 1965; Farmakol o toksikol, No 5, 1970] that the basic role in the antimicrobic effect of these compounds belongs to the high-molecular alcohol radical which is joined by the ester bond to the quaternary nitrogen atom. A study was made of the synthesis and pharmacological properties of some new derivatives of piperidine containing high-molecular alcohol radicals. For synthesis of N-(4-phenyl-3-methylputene-2-yl-1)-N-carbalkoxymethyl piperidinium chlorides (I-X), the interaction of N-aryl-butenyl derivatives of pure piperidine and esters of monochloroacetic acid were used. On heating in dry diethyl ether, stable, highly water soluble compounds I-X were obtained with good yields.

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USSR

FIS'KO, G. T., et al., khimiko-Farmatsevticheskiy Zhurnal, No 4, 1973, pp 14-17

The general effect and toxicity of the compounds were studied on white rats and white mice on intraperitoneal administration. The effects of the compounds on the arterial pressure, respiration and tonus of the third eyelid was studied in acute experiments on cats. Other experiments and the results are described. In studying the antimicrobial properties of the compounds the most sensitive turned out to be staphylococcus aureus and Candida albican fungus. The least sensitive were Vacilous coli, Proteus vulgaris Pseudomas Pyocyanea. When studying the relation between the chemical structure and the antimicrobial effect it was found that the activity appears for  $R = 1CH_3$ ; then gradually increases and the maximum effect is observed for

$R = C_9H_{19}$ .

2/2

USSR

UDC 615.31:547.827

HANUSHCHAK, N. I., PISIKO, G. T., BURYAK, V. S., KUCHER, V. I.,  
NIKOLAYCHUK, N. A., KARINKOVSKAYA, R. B., NEVSKAYA, T. L. and  
ZAPOROZHETS, V. I.; Chernovtsy University

"Synthesis and Certain Biological Properties of Piperidine Derivatives"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 5, No 9, 1971, pp 8-14

Abstract: Piperidine derivatives have a wide range of biological action, and many of them are now used in medical practice. However, the biological action depends largely upon the nature of the substitutes introduced, both at the nitrogen atom, and at the carbon atoms of the piperidine ring. Meanwhile, those compounds substituted with fatty-aromatic radicals at the nitrogen atom which have multiple carbon-carbon bonds have been very little studied. The authors studied 23 members of this group to determine their biological action on test animals (cats, white mice), and to determine basic physico-chemical properties. Increased toxicity, effect on blood pressure, and strengthened heart block-rents were observed in many cases. Data obtained are summarized in tabular form.

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USSR

UDC: 51

PISKORSKIY, L. F.

"GP-2 and GP-3 Algorithms for Global Optimization of Multiparametric Functions by the Random Search Method"

Tashkent, V sb. Vopr. vychisl. i prikl. mat. (Problems in Computer and Applied Mathematics--collection of works) No 20, 1973, pp 38-43 (from RZh--Matematika, No 1, 1974, Abstract No 1V555)

Translation: The article presents algorithms for global search which differ from existing types of self-instruction by the introduction of an auxiliary system of limits excluding the possibility of secondary entries into a previously discovered local minimum and by the condition for ending the global search. Author's abstract.

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USSR

UDC: 535.8:535.214.4

BOBROV, I. N., PISKOV, P. T.

"Optimum Synthesis of a Radiometer With Single-Tank Parametric Amplifier"

Moscow, Radiotekhnika i Elektronika, Vol. 16, No 6, Jun 71, pp 986-989

Abstract: The authors determine the conditions which must be satisfied to maximize input sensitivity in a radiometer with a single-tank parametric amplifier. Functional relationships are found for optimum values of the gain of the parametric amplifier, its passband, and the passband of the following (second) amplifier as functions of the "cold" passband of the parametric amplifier and the spectral density of the set noises of the parametric and second amplifiers.

1/1

1/2 025 UNCLASSIFIED PROCESSING DATE--16OCT70  
 TITLE--ANALOGS OF COCCIDINE -U-  
 AUTHOR-(03)-PISKOV, V.B., OSANOVA, L.K., KOBLOVA, I.A.  
 COUNTRY OF INFO--USSR P  
 SOURCE--ZH. ORG. KHIM. 1970, 6(3), 559-64.  
 DATE PUBLISHED-----70  
 SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY  
 TOPIC TAGS--ORGANIC NITROGEN COMPOUND, BENZENE DERIVATIVE, AMIDE,  
 TOXICITY, BIRD, VETERINARY MEDICINE  
 CONTROL MARKING--NO RESTRICTIONS  
 DOCUMENT CLASS--UNCLASSIFIED  
 PROXY REEL/FRAE--1990/0552 STEP NO--UR/0366/70/006/003/0559/0564  
 CIRC ACCESSION NO--AP0108767  
 UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--16OCT70

2/2 025  
 CIRC ACCESSION NO--AP0108767  
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE FOLLOWING 6-(R, SUBSTITUTED)  
 -3,5-DINITROBENZAMIDES. (1) WERE PREPD. BY STD. REACTIONS (R GIVEN):  
 NHME, NME SUB2, NET SUB2, CL. OTHER SYNTHESIZED COCCIDINE ANALOGS WERE :  
 4 AMINO 3, 5 DINITROBENZAMIDE, 5 R SUBSTITUTED 2, 4 DINITROBENZLAMIDE (R  
 IS H OR CONH SUB2), N, N MINUS R PRIME1 DERIVS. OF I (R EQUALS ME), (R  
 PRIME1 EQUALS ME RPIME2 OR ET), 2 MINUSR, 3 MINUSR PRIME1, 6 MINUSR  
 PRIME2 TRISUBSTITUTED 5 NITROBENZAMIDES (R, R PRIME1, R GIVEN): H, NO  
 SUB2, H; NH SUB2, NO R SUB2, H; H, CL, CI), 2 METHYL 5 NITRO BETA  
 PICOLINAMIDE, AND 3 ACETAMIDO 5 NITROBENZONITRILE. THE TOXICITY OF  
 THESE COMPS. ON CHICKENS DOES NOT EXCEED THE TOXICITY OF I (R EQUALS  
 H); HOWEVER NONE HAS BETTER COCLIDOSTATIC ACTIVITY THAN I (R EQUALS H).  
 FACILITY: GOS. NAUCH.-KONTR. INST. VET. 9.

UNCLASSIFIED

PISKOVA G.K.

Acc. Nr: 1P0043768

Ref. Coda: UR 0056 /

PRIMARY SOURCE: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1970, Vol 58, Nr 3, pp 753-759

EFFECT OF A STRONG OPTICAL FREQUENCY ELECTROMAGNETIC FIELD ON THE HYDROGEN MOLECULE

N. K. Berezhetshkaya, G. S. Voronov, G. A. Delone  
N. B. Delone, G. K. Piskova

The radiation of Nd glass laser the quantum energy of which ( $\hbar\omega = 1.18$  eV) is much less than the potentials of ionization and dissociation are was employed. The strong electromagnetic field action on the  $H_2$  molecule was investigated experimentally. It has been found that for the field strength  $E = 5 \cdot 10^7$  V/cm the multiphoton ionisation process  $H_2 + 14 \hbar\omega \rightarrow H_2^+ + e$  has far greater probability than the process of multiphoton dissociation  $H_2 + 5 \hbar\omega \rightarrow H + H$ . The value of multiphoton ionisation probability and its dependence on the light intensity has been measured.

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REEL/FRAME  
19770175

2,742

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BEREZHETSKAYA, N. K., VORONOV, G. S., DELONE, G. A., ~~DELONE, N. A.~~ and  
PISKOVA, G. K., Physics Institute imeni P. N. Lebedev, Academy of Sciences USSR

"Effect of a Strong Electromagnetic Field of Optical Frequency on the Hydrogen  
Molecule"

Moscow, Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 58, No 3, Mar 70,  
pp 753-759

Abstract: An experimental study of the effect of a strong electromagnetic field on the excitation, ionization, and dissociation of the hydrogen molecule is presented. The radiation source was a neodymium laser with a quantum energy of 1.18 eV and wavelength of  $1.06 \mu$ . In this case, four quanta were required for the dissociation of the hydrogen molecule and fourteen quanta for ionization. This quantum energy was considerably less than the ionization and dissociation potentials of the molecule. It was found that for a field strength of  $E \approx 5 \cdot 10^7$  v/cm there basically occurs ionization of the molecule with the formation of an  $H_2^+$  ion ( $H_2 + 14h\nu \rightarrow H_2^+ + e$ ) and not dissociation ( $H_2 + 5h\nu \rightarrow H + H$ ). It was found that molecular ions  $N(H^+)/N(H^+) \sim 10^3$  are formed principally; the probability for the formation of  $H_2^+$  ions for a field strength  $E = 10^{7.8 \pm 0.15}$  v/cm is equal to  $W(H_2^+) = 10^{7.8 \pm 1.0} \text{ sec}^{-1}$ ; for a given field strength the dependence of  $1/2$

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BEREZHETSKAYA, N. K., et al., Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 58, No 3, Mar 70, pp 753-759

the probability of molecular ion formation on field strength has the form

$$W(H_2^+) = AE^{2K} \text{ for } K = 10.5 \pm 2.8.$$

The need for further experimental and theoretical work to describe the effect of a strong electromagnetic field on molecules is emphasized.

2/2

I/2 015 UNCLASSIFIED PROCESSING DATE--04DEC70  
TITLE--HOMOPHASE AND HETEROPHASE ACYLATION OF ALIPHATIC AMINES -U-  
AUTHOR-(03)-VASILKEVICH, I.M., PISKOVITINA, G.A., SMIRNOVZANKOV, I.V.  
COUNTRY OF INFO--USSR  
SOURCE--DOPOV. AKAD. NAUK UKR. RSR, SER. B 1970, 32(3), 243-6  
DATE PUBLISHED-----70  
SUBJECT AREAS--CHEMISTRY  
TOPIC TAGS--ALIPHATIC AMINE, METHYLENE, BENZENE, ADSORPTION, ISOTHERM  
CONTROL MARKING--NO RESTRICTIONS  
DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAE--3005/0797 STEP NO--UR/0442/70/032/003/0243/0246  
CIRC ACCESSION NO--AT0132895  
UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AT0132895

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONSTS. OF THE 2ND ORDER RATE OF ME(CH SUB2) SUBN NH SUB2 (I, N EQUALS 2-5) BENZOLATION IN C SUB6 H SUB6 WERE 1500-2000 L. PER MOLE SEC AT 18-23DEGREES. THE RATE OF INTERFACE BENZOLATION (H SUB2 O-C SUB6 H SUB6) DEPENDED ON I CONC. IN THE ADSORPTION LAYER ON THE PHASE INTERFACE. ADSORPTION ISOTHERMS OF I (N EQUALS 2-4) WERE DETD. ON THE INTERFACE H SUB2 O-C SUB6 H SUB6 AT 20DEGREES. FACILITY: INST. ORG. KHIM., KIEV, USSR.

UNCLASSIFIED



USSR

UDC 539.31:534.1

PISKOZUB, L. I.

"Toward the Question of the Stability of Thin-Wall Cylindrical Shell of a Nonlinearly Elastic Material"

L'vov, Vestn. L'vov. Politekhn. in-ta (Journal of the L'vov Polytechnic Institute), No 70, 1972, pp 133-137 (from Referativnyy Zhurnal -- Mekhanika, No 4, 1973, Abstract No 4V475 by V. I. Shalashilin)

Translation: The stability of a thin ring made of a nonlinearly elastic material under uniform external pressure is considered in the framework of a shear modulus approach. The dependence of the stress ( $\sigma$ ) and the deformation ( $\epsilon$ ) is approximated by the expression ( $A_1, A_2, m$  are constants)

$$\epsilon = A_1 \sigma + A_2 \sigma^m.$$

The solution is generalized from the stability during cylindrical sag of an infinite tube, loaded with a uniform external pressure. The limits of applicability of the formulas obtained are discussed. (6 bibliographic entries)

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USSR

PISKULOV, Ye. A., SHIMBIREV, P. N., SOBKIN, B. L.

"Use of a Method of Digital Modeling to Study Voltage-Code Converters Using the Principle of Continuous Logic"

[Tr.] Mosk. Aviats. In-ta [(Works) of Moscow Institute of Aviation], 1972, No 249, pp 130-136 (Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V602, by A. Muchnik).

Translation: In the work of E. I. Titis and P. N. Shimbirev, "Application of Continuous Logic to Analog-Digital Conversion" (Tr. Region. Nauch.-Tekhn. Sem. po Preobr. i Obrab. Informatsii. [Works of Regional Scientific and Technical Seminar on Conversion and Processing of Information], Taganrog, 1971), problems of the construction of voltage-code converters (VCC) using the principles of continuous logic are discussed. Theoretical problems arise (development of methods of VCC synthesis), as well as practical problems such as increasing reliability and economy of equipment in VCC. This article suggests a method of digital modeling for determination of the parameters of the continuous logic function (CLF) realized by the VCC. A flow chart is presented of the algorithm of the VCC. In the process of construction of

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