

83477

Production and Structure Investigation of Poly- S/190/60/002/009/008/019
mers Containing Siloxane- and Hydrocarbon Links B004/B060
in the Principal Chain of Macromolecules. IV

group (infrared spectra Fig: 2). In both cases; the molecular weight increased, and the chain grew longer. Furthermore, dimethyl diphenyl dihydrodisiloxane was caused to react with acetylene. The polymerizate, a viscous mass, had the molecular weight 1670. Table 1 shows the results of the reaction of acetylene with tetramethyl- and dimethyl diethyl dihydrodisiloxane at a pressure of 15 atm. The infrared spectra (Fig. 3) of the oily products revealed both the presence of C=C bonds and of =CH₂ as terminal groups. Analyses and molecular weights of the fractions distilled in vacuum are given in Table 2. Only addition products and dimers were obtained on the reaction of phenyl acetylene and diphenyl acetylene with dihydrodisiloxanes (Table 3). With the exception of the reaction product from diphenyl acetylene and tetraethyl dihydrodisiloxane, whose structure is still unclear, the infrared spectra (Fig. 4) revealed -Si-H bands. The infrared spectra were taken with a BKIC M-3 (VIKS M-3) spectrophotometer. The authors thank A. D. Petrov and I. V. Obreimov for interest displayed in the work. There are 4 figures, 3 tables, and 6 references: 4 Soviet, 1 US, and 1 German.

Card 3/4

83477

Production and Structure Investigation of Poly- S/190/60/002/009/008/019
mers Containing Siloxane- and Hydrocarbon Links B004/B060
in the Principal Chain of Macromolecules. IV

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR
(Institute of Elemental-organic Compounds of the AS USSR).
Institut organicheskoy khimii im. N. D. Zelinskogo AN SSSR
(Institute of Organic Chemistry imeni N. D. Zelinskiy
of the AS USSR)

SUBMITTED: April 4, 1960

X

Card 4/4

83478

S/190/60/002/009/009/019
B004/B060

5.3700c also 2109, 2209

AUTHORS: Korshak, V. V., Polyakova, A. M., Sakharova, A. A.,
Mironov, V. F., Chernyshev, Ye. A.TITLE: Polycondensation of Halogen Alkyl (Halogen Aryl) Halogen
Silanes Under the Action of Metallic SodiumPERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 9,
pp. 1370-1374TEXT: The authors carried out condensation reactions with the following \times
five compounds: $\text{ClSi}(\text{CH}_3)_2\text{CH}_2\text{Cl}$; $\text{ClSi}(\text{CH}_3)(\text{C}_6\text{H}_5)\text{CH}_2\text{Cl}$; $\text{ClSi}(\text{CH}_3)$
 $(\text{C}_2\text{H}_5)\text{CH}_2\text{CH}_2\text{CH}_2\text{Cl}$; $\text{ClSi}(\text{CH}_3)_2\text{C}_6\text{H}_4\text{Cl}$, and $\text{ClSi}(\text{CH}_3)_2\text{OSi}(\text{CH}_3)_2\text{CH}_2\text{CH}_2\text{Cl}$.The reactions took place in nitrogen current with metallic sodium sus-
pended in toluene as a catalyst. The molecular weight was cryoscopically
determined in benzene. A table supplies the molecular weights of the
condensates, the polymerization coefficients, yields, and silicon content.
The temperature dependence of the viscosity of polymer $[-\text{Si}(\text{CH}_3)_2\text{CH}_2-]_n$

Card 1/2

83478

Polycondensation of Halogen Alkyl (Halogen Aryl) S/190/60/002/009/009/019
Halogen Silanes Under the Action of Metallic Sodium B004/B060

and of polymer $[-\text{Si}(\text{C}_6\text{H}_5)(\text{CH}_3)\text{CH}_2-]_n$ is illustrated in a diagram. Despite a lower degree of polymerization, the presence of the phenyl group gives rise to a higher viscosity. The authors analyzed the resulting compounds for the presence of -Si-Si- bonds by treating with concentrated potash lye and piperidine according to A. P. Kreshkov's method (Ref. 8). No such bonds were detected in any of the reaction products obtained. The authors, therefore, assume a succession of -Si-C- bonds. There are 1 figure, 1 table, and 11 references: 4 Soviet, 6 US, and 1 German.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR
(Institute of Elemental-organic Compounds of the AS USSR)

SUBMITTED: April 4, 1960

Card 2/2

5(3)

AUTHORS:

Polyakova, A. M., Chumayevskiy, N.A. S/020/60/130/05/023/061
B011/B005

TITLE:

The Interaction of Tetraalkyldihydridedisiloxanes⁷ With
Bifunctional Unsaturated Compounds

PERIODICAL:

Doklady Akademii nauk SSSR, 1960, Vol 130, Nr 5, pp 1037-1040
(USSR)

ABSTRACT:

The purpose of this paper is an investigation of the structure of polymeric products formed by the interaction mentioned in the title (Ref 1) by means of infrared spectroscopy. Besides these spectra, spectra of the initial components were recorded (Figs 1-4). Table 1 shows the frequencies of the tetraalkyldihydridedisiloxanes, table 2 those of the dialkenes. Figure 1 shows the infrared spectra of the former, figure 2 those of the latter. Figures 3 and 4 show the infrared spectra of the interaction products. On the basis of these results, the authors draw the following conclusions as to the structure of polymers: Cyclic monomers are formed by the interaction of divinyl monomers with disiloxanes (in equimolar ratio) while diallyl monomers form linear polymers. The authors thank

Card 1/2

The Interaction of Tetraalkyldihydriddisiloxanes With Bifunctional Unsaturated Compounds S/020/60/130/05/023/061
B011/B005

V. V. Korshak, Corresponding Member of the AS USSR, and I. V. Obreimov, Academician, for their interest in the present paper, V. M. Vdovin and V. F. Mironov for the syntheses made, Ye. A. Dimitriyev and R. A. Isayev for their assistance in recording the infrared spectra. V. I. Dianov-Klokov is also mentioned. There are 4 figures, 2 tables, and 2 Soviet references. (1)

PRESENTED: September 3, 1959, by I. V. Obreimov, Academician

SUBMITTED: September 3, 1959

Card 2/2

15.8063

31747
S/204/61/001/004/005/005
E075/E185

AUTHORS: ~~Polyakova, A.M.~~, Plate, A.F., Pryanishnikova, M.A.,
and Lipatnikov, N.A.

TITLE: Investigation of the polymerization under pressure of
some cyclic unsaturated hydrocarbons:
bicyclo-(2,2,1)-heptane-2, bicyclo-(2,2,1)-heptadiene-
2,5, and cycloheptatriene

PERIODICAL: Neftekhimiya, w.1, no.4, 1961, 521-527

TEXT: The polymerization of bicyclo-(2,2,1)-heptane-2,
bicyclo-(2,2,1)-heptane 2,5 and cycloheptatriene was investigated
under 6000 atm using tertiary butylperoxide as reaction initiator. X
An attempt was made also to evaluate relative reactivities of
these hydrocarbons at atmospheric pressure in the presence of an
ionic catalyst $TiCl_4$. The aim of this work was to obtain polymers
possessing high thermal stability. The pressure polymerizations
were carried out in lead ampules, and the corresponding
experiments under atmospheric pressure in glass ampules.
Temperature of the pressure polymerizations ranged from 130 to
200 °C. The polymerizations with $TiCl_4$ as initiator were carried
Card 1/3

Investigation of the polymerization... ³¹⁷⁴⁷ S/204/61/001/004/005/005
E075/E185

out at 72 °C in methylene chloride solution. It was found that for the pressure polymerizations the molecular weight and yields of the polymers increase with temperature. The same applies to the mechanical properties of the polymers. The polymer with the highest softening temperature was prepared at 200 °C. The polymerization under atmospheric pressures gave relatively low molecular weight polymers with low yields. Polydicycloheptadiene obtained under pressure did not soften below 400 °C. The effects of pressure and temperature on the polymerization of cycloheptatriene are the same as for bicycloheptene but are more accentuated. Polycycloheptatrienes have the highest thermal stability and are all insoluble. The polymers obtained with $TiCl_4$ as initiator have relatively low molecular weights and are obtained with low yields, but have similar thermal stabilities to the polymers obtained under pressure. Infrared spectra obtained for the monomers and polymers indicated that only very small proportion of double bonds are present in the polymers. X-ray examination indicates that all the polymers are amorphous.

Card 2/ 3

Investigation of the polymerization... ³¹⁷⁴⁷ S/204/61/001/004/005/005
E075/E185

There are 7 figures, 1 table and 8 references: 6 Soviet-bloc and 2 non-Soviet-bloc. The English language references read as follows:

Ref. 1: A.W. Anderson, N.G. Merckling, US Pat. 2721189, 1955.

Ref. 2: E.I. du Pont de Nemours and Co. Brit. Pat. 777414, 1957;
C.A. 51, 12546 d, 1957.

ASSOCIATION: Institut elementoorganicheskikh soedineniy AN SSSR
(Institute of Elementary Organic Compounds, AS USSR)

Institut organicheskoy khimii AN SSSR im.
N.D. Zelinskogo

(Institute of Organic Chemistry, AS USSR, imeni
N.D. Zelinskiy)

SUBMITTED: May 31, 1961

X

Card 3/3

POLYAKOVA, A.M.; KORSHAK, V.V.; TAMBOVTSEVA, Ye.S.

Polymerization under pressure of α -methylstyrenes substituted at the nucleus. Part 7: α -Methylstyrene containing Sn, Pb, and Ge.

Vysokom.soed. 3 no.5:662-664 My '61. (MIRA 14:5)

1. Institut elementoorganicheskikh soedineniy AN SSSR.
(Styrene) (Tin organic compounds) (Lead organic compounds)
(Germanium organic compounds)

POLYAKOVA, A.M.; KORSHAK, V.V.; LIPATNIKOV, N.A.

Polymerization of isopropenyl heterocyclic compounds. Part 1:
2-isopropenylthiophene. Vysokom.soed. 3 no.8:1144-1149 of '61.
(MIRA 14:9)

1. Institut elementoorganicheskikh soedineniy AN SSSR.
(Thiophene)

15-8170

2209

30724

S/020/61/141/003/009/021
B103/B101

AUTHORS: Polyakova, A. M., Korshak, V. V., Corresponding Member AS USSR,
Vdovin, V. M., and Tambovtseva, Ye. S.

TITLE: Study of the polymerization of cyanogenous organosilicon
compounds

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 141, no. 3, 1961, 641-644

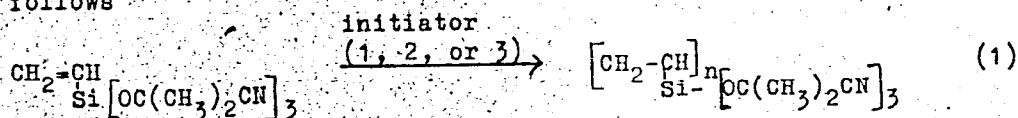
TEXT: The polymerizability of cyanogenous alkenyl silane derivatives was studied. These compounds were polymerized (a) under pressure (6000 atm) in the presence of the radical initiators (1) azoisobutyrodinitrile, (2) tert-butyl peroxide, or (3) benzoyl peroxide; (b) at normal pressure with Pt/C or $H_2PtCl_6 \cdot 6H_2O$ as catalysts. It was found that cyano-iso-propoxy alkenyl silane derivatives polymerize at comparatively low temperature. Above $120^\circ C$ these compounds frequently decompose. Only under the conditions of (a) colorless polymers were obtained at $80^\circ C$. For the rest, they were yellow to brown. Some of the experiments ended up with explosive polymerization and charring of the products. Most of the products are slightly soluble (Table 1, nos. 1-22). The authors also

Card 1/9 3

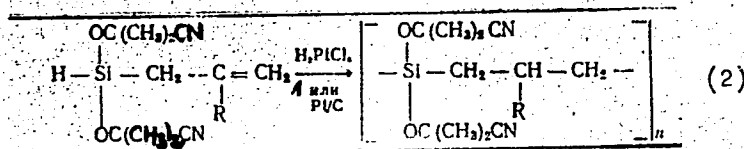
35721 S/020/61/141/003/009/021
B103/B101

Study of the polymerization ...

studied the interaction of tetraalkyl dihydro-disiloxane derivatives with cyanogenous diallyl silane derivatives, obtaining oily products. Such products had also been obtained previously (V. V. Korshak et al., DAN, 128, 960 (1959)) by treating dialkyl diallyl silane derivatives with the same disiloxanes. The conversion of the monomers (Table 1), which proceeded without explosive polymerization or charring, is illustrated as follows



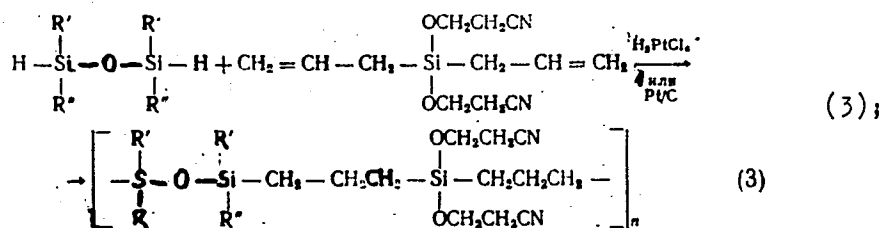
Polymerization of the cyanogenous dialkenyl compounds probably also occurs at the double bonds, possibly involving the formation of cyclic structures



Card 2/13

Study of the polymerization ...

S/020/61/141/003/009/021
B103/B107



(1) = or. There are 1 table and 9 references: 7 Soviet and 2 non-Soviet. The two references to English-language publications read as follows: J. C. Williams, R. A. Pike, F. Fekete, Ind. and Eng. Chem., 51, 939 (1959); R. M. Savage, Rubber Age, 64, 975 (1959).

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental Organic Compounds of the Academy of Sciences USSR). Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

Card 3/6
3

31291
S/190/62/004/003/001/023
B110/B144

15.8/30

AUTHORS: Polyakova, A. M., Korshak, V. V., Lipatnikov, N. A.

TITLE: Polymerization of heterocyclic isopropenyl compounds.
II. 2-isopropenyl furan

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 3, 1962, 334-338

TEXT: The polymerization of 2-isopropenyl furan (I) was investigated by using (a) pressure without initiators, and (b) atmospheric pressure in the presence of ion catalysts. A viscous mass formed at 120°C and 6000 atm, which, after reprecipitation resulted in a powdery polymer; yield of 16.3 % (molecular weight 2230; polymerization coefficient 21). A temperature increase to 160°C reduced the molecular weight by half. Within a few minutes, I, in the presence of 2.56 mole% of $TiCl_4$ in methylene chloride at -72°C, forms a polymer of viscosity 0.09, yield of 46.6 %. In the presence of 5.12 mole% of $TiCl_4$ it forms a mixture of insoluble (80 %) and soluble polymer. In the presence of $Al(C_2H_5)_3/TiCl_4$, 11 % of insoluble polymer is formed. I polymerizes more readily than
Card 1/3

5/190/62/004/003/001/023
B110/B144

Polymerization of heterocyclic...

isopropenyl thiophene in the presence of ion catalysts in analogy to the behavior of corresponding vinyl compounds. Comparison of the monomer IR absorption spectra with that of polymer shows that the double bond of the isopropenyl group is ruptured and the furan ring conserved, the double bonds of which presumably participate in forming the insoluble polymer in ionic polymerization. It was found by X-ray analysis that the insoluble polymer obtained in the presence of $TiCl_4$ was poorly ordered, while the soluble polymer was almost amorphous. The thermomechanical curves of benzene-soluble polymers obtained from (a) and from (b) with 2.56 mole% of $TiCl_4$ were almost identical, but differed substantially from those of the polymers obtained with 5.12 mole% of $TiCl_4$. The insoluble fraction of these polymers shows no flow, and carbonizes at $\sim 400^\circ C$. S. R. Rafikov is mentioned. Thanks are due to A. I. Kitaygorodskiy and co-workers, as well as to N. A. Chumayevskiy, for X-ray and spectroscopic investigations. There are 4 figures, 1 table, and 8 references: 5 Soviet and 3 non-Soviet. The three references to English-language publications read as follows: G. B. Bachman et al.: Industr. and

Card 2/3

PILIPENKO, V.G.; SHCHEKINA, T.A.; POLYAKOVA, A.M.

Immunobiological effectiveness of associated vaccine against plague, tularemia and brucellosis in various methods of its epicutaneous use. Zhur. mikrobiol., epid. i immun. 42 no.1: 14-21 Ja '65. (MIRA 18:6)

1. Stavropol'skiy protivochunnyy institut Kavkaza i Zakavkaz'ya.

TARAN, I.F.; ZAMAKHAYEVA, Ye.I.; ABAKIN, S.V.; POLYAKOVA, A.M.; NELYAPIN,
N.M.

Results of studying a brucellosis vaccine from the strain of
Brucella abortus 104-M. Zhur. mikrobiol., epid. i immun. 42
no.8:99-104 Ag '65. (MIRA 18:9)

1. Nauchno-issledovatel'skiy protivochumnyy institut Kavkaza i
Zakavkaz'ya.

POLYAKOVA, A.M.; KORSHAK, V.V.; LIPATNIKOV, N.A.

Investigation of the polymerization of isopropenyl aromatic compounds. Ionic polymerization of p- and o-substituted *o*-methyl-styrenes and *o*-isopropenyl naphthalene. Neftekhimiia 1 no.2:224-229 Mr-Apr '61. (MIRA 15:2)

1. Institut elementoorganicheskikh soedineniy AN SSSR.
(Polymerization) (Naphthalene)
(Styrene)

KOZLOV, M.P.; POLYAKOVA, A.M.; TARAN, I.F.

High rate of initial patient visits for brucellosis in the
Transcaucasian republics. Zhur. mikrobiol. epid. i immun.
32 no.6:61-66 Je '61. (MIRA 15:5)

1. Iz Nauchno-issledovatel'skogo protivochumnogo instituta Kavkaza i
Zakavkaz'ya, Stavropol'.
(TRANSCAUCASIA--BRUCELOSIS)

37761

S/661/61/000/006/035/031
D205/D302

5. 3832

AUTHORS: Polyakova, A. M., Korshak, V. V., Sakharova, A. A. and
Tambovtseva, Ye. S.

TITLE: Polymerization of silico-olefines under pressure

SOURCE: Khimiya i prakticheskoye primeneniye kre-mneorganicheskikh soyedineniy; trudy konferentsii. no. 6: Doklady, diskussii, resheniye. II Vses. konfer. po khimii i prakt. prim. kremneorg. soyed., Len., 1958. Leningrad, Izd-vo AN SSSR, 1961, 163-172

TEXT: The polymerization of more than 100 silico-olefinic monomers has been investigated by the authors and a series of rules was established. The polymerizations were carried out under 6000 atm. (gauge) at 120 - 130°C in the presence of tertiary butyl peroxide. Parallel experiments without pressure were also performed. Alkenyl silanes with double bonds in α -, β -, γ - and ϵ -positions with respect to the Si atom were investigated. α -alkenylsilanes polymerize into colorless, viscous oils. Using 1% mole of initiator the poly-

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Polymerization of silico-...

S/661/61/000/006/035/081
D205/D302

alkyl substituents in the 1-position polymerize without pressure, giving oil-like polymers. Polymerization under pressure gives solid products. *p*-Trialkyl silyl styrenes also polymerize without pressure, the application of pressure increasing the molecular weight of the polymer. Copolymerization of *p*-triethyl silyl styrene with styrene proceeds with or without pressure giving a copolymer with the link ratio 1:2. Polyalkenyl silanes polymerize as a rule into space networks which produce transparent solid polymers. $R_2Si-(CH_2C(CH_3)=CH_2)_2$ is an exception forming one-dimensional polymers. The polymerization of monoalkenyl hydrosilanes of the $R_2R'SiH$ type where $R = CH_3, C_2H_5, Cl, OC_2H_5$; $R' = CH_2CH=CH_2, OCH_2CH=CH_2, CH_2C(CH_3)=CH_2$ was studied, using tertiary butyl peroxide and platinized carbon as initiators. Depending on the initiator, various polymers are formed. It was established by infrared spectra that the polymers formed using the tertiary butyl peroxide under pressure (6000 atm.) preserve the Si-H bonds in contrast to those formed on platinized carbon. Comparing the tendency towards polymeri-
Card 3/4

Polymerization of silico-...

S/661/61/000/006/035/081
D205/D302

zation of analogous compounds of Si, Ge and Sn it was established that the polymerizationability of vinylic compounds of the type $R_3MCH=CH_2$ (where M=Si, Ge and Sn) decreases in the series $CH_2=CHSiR_3 > CH_2=CHGeR_3 > CH_2=CHSnR_3$. K. A. Andrianov (Moscow), D. N. Andreyev (IKhS AN SSSR, Leningrad), A. A. Zhdanov (INEOS AN SSSR, Moscow), P. V. Davydov (Moscow, S. G. Durgar'yan (INKhS AN SSSR, Moscow) and A. I. Dintzes (Moscow) took part in the discussion which followed. Andrianov expressed the opinion that the conclusion of the authors that the Si atom does not passivate the polymerization mechanisms, observed by the authors, between the processes at 6000 atm. and atmospheric pressure, were of the utmost importance and may explain the disagreements between this work and earlier observations to which Andrianov referred. There are 5 tables.

ASSOCIATION: Institut elementoorganicheskikh soedineniy Akademii nauk, SSSR, Moscow (Institute of Elemental Organic Compounds of the Academy of Sciences USSR, Moscow) X

Card 4/4

PILIPENKO, V.G.; MIROSHNICHENKO, M.A.; POLYAKOVA, A.M.

Distribution of the bacteria of vaccines in the body of guinea pigs vaccinated epicutaneously with associated vaccine against plague, tularemia, and brucellosis. Zhur.mikrobiol.epid.i immun. 32 no.1:46-51 Ja '61. (MIRA 14:6)

1. Iz Nauchno-issledovatel'skogo protivochumnogo instituta Kavkaza i Zakavkaz'ya.

(VACCINES)

BOROD'KO, S.L.; PILIPENKO, V.G.; POLYAKOVA, A.M.; VAL'KOV, B.G. ..

Immunological changes in persons inoculated epicutaneously against
plague, brucellosis, and tularemia. Sbor. nauch. rab. Elist.
protivochum. sta. no. 1:205-213 '59. (MIRA 13:10)
(IMMUNOLOGY) (PLAGUE) (BRUCELLOSIS) (TULAREMIA)

POLYAKOVA, A.M.; SUGKOVA, M.D.; KORSHAK, V.V.

Polymerization of certain derivatives of acetylene. Neftekhimiia 4
no.5:747-752 S-0 '64. (MIRA 18:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

POLYAKOVA, A.M., doktor khim. nauk; SMIRNOVA, O.V.

New glue. Priroda 52 no.9:111-112 '63.

(MIRA 16:11)

1. Institut elementoorganicheskikh soyedineniy AN SSSR, Moskva.

L 62543-65 EPF(c)/EMP(j)/EMT(m) Pc-4/Pr-4 RPL RM/JAJ

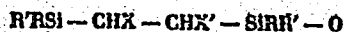
ACCESSION NR: AP5019778

UR/0062/55/000/007/1267/1268
546.287AUTHOR: Polyakova, A. M.; Suchkova, M. D.; Korshak, V. V.; Vdovin, V. M.TITLE: New five-membered cyclic organosiloxanes

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 7, 1965, 1267-1268

TOPIC TAGS: organosilicon compound, organosilicon polymer, cyclic compound

ABSTRACT: By directly reacting substituted acetylenes $XC \equiv CX'$ (where $X = H$ or Ph , and $X' = Ph$) with dihydride disiloxanes of the general formula $HR'Si-O-SiRR'H$ (where $R = CH_3$ and $R' = CH_3$ or C_2H_5), the authors prepared for the first time new five-membered organocyclosiloxanes with various substituents at the carbon,



where (1) $X = X' = Ph$; (2) $X = H$; $X' = Ph$; (3) $R = R' = CH_3$; (4) $R = CH_3$; $R' = C_2H_5$. The reaction takes place in a solvent (toluene) at atmospheric pressure at 110-120° in the presence of $H_2PtCl_6 \cdot 6H_2O$ (0.1 N solution in the isopropyl alcohol) or Pt/C as

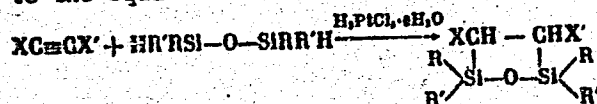
Card 1/2

L-62543-65

ACCESSION NR: AP5019778

2

the catalyst according to the equation



In addition to the cyclic compounds, addition products of linear structure are formed. The yield of the cyclic fraction is affected by the nature of the substituents in acetylene and of the radicals at the silicon in the dihydride disiloxanes. The structure of the cyclic compounds was identified by means of infrared absorption spectra, nuclear magnetic resonance spectra, ultimate analysis, and molecular weight determination. The new five-membered cyclic compounds synthesized are capable of polymerizing under the influence of acidic or basic catalysts to form linear polymers. Orig. art. has: 1 formula.

ASSOCIATION: Institut elementoorganicheskikh sovedineniy Akademii nauk SSSR (Institute of Elementoorganic Compounds, Academy of Sciences SSSR)

SUBMITTED: 21Oct64

ENCL: 00

SUB CODE: 0C

NO REF SOV: 000

OTHER: 002

km
Card 2/2

L 63392-65 EWT(1)/EWA(j)/EWA(b)-2 JK

ACCESSION NR: AP5020097

UR/0016/55/000/008/0099/0104

615.371 : 576.851.42

AUTHOR: Taran, I. F.; Zamakhayeva, Ye. I.; Abakin, S. V.; Polyakova, A. M.; Nelyapin, N. M.

2A
21
B

TITLE: A study of brucella vaccine from the *Br. abortus* 104-M strain

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 8, 1965, 99-104

TOPIC TAGS: brucella, vaccine, immunology, brucellosis

ABSTRACT: An experimental study on guinea pigs of the *Br. abortus* 104-M vaccinal strain showed that it possesses satisfactory immunogenic properties, viability, and capacity to induce active immunological reconstruction. Vaccine from *Br. abortus* 104-M proved to be harmless to sheep in doses of 8 to 10 billion microbial cells. It created stronger immunity than did *Br. abortus* 19. Sheep that received this vaccine had fewer abortions and gave birth to more healthy lambs than did the controls. Also, there was a sharp decrease in the incidence of brucellosis among those handling the animals. No side reactions were noted after subcutaneous inoculation with doses under 100 million microbial cells; doses ranging from 250 to 300 million

Card 1/2

L 63392-65

ACCESSION NR: AP5020097

cells produced severe general and local reactions. On the other hand, epicutaneous inoculation of doses ranging from 1 to 10 billion microbial cells were harmless and without side effects. Brucellosis incidence among vaccinated individuals was 2-4 times less than among non-vaccinated individuals. Orig. art. has: 2 tables. ²

ASSOCIATION: Nauchno-issledovatel'skiy protivochumnyy institut Kavkaza i Zakavkaz'ya (Scientific Research Plague Control Institute of the Caucasus and Transcaucasus)

SUBMITTED: 01Jul64

ENCL: 00

SUB CODE: LS

NO REF SOV: 002

OTHER: 000

dm
Card 2/2

POLYAKOVA, A. P.

*Phys
Sci*

V5956
DETERMINATION OF THE TRANSVERSE RELAXATION
TIME OF NUCLEAR MAGNETIC MOMENTS. S. D.
Gvozdozer, N. M. Pomerantsov, and A. P. Polyakova
(Moscow State Univ.). Soviet Phys. JETP 1, 471-4(1955)
Nov. (In English). Zhur. Eksptl. i Teoret. Fiz. 28, 584-8
(1955) May. (In Russian).

A new method is proposed for determining the transverse relaxation time from the shape of the magnetic resonance signals from atomic nuclei. In applying this method the inhomogeneity of the magnetic field over the volume of the sample can be measured simultaneously. The experiments indicated the usefulness of this method and agreed with the results of other authors, which were obtained by other methods. (auth)

3

609 - RMP

RMP

POLYAKOVA, A.P.; PUL'KIS, S.A.

Organization of sanitary-epidemiological stations in the Omsk region.
Sovet. zdravookhr. 11 no.6:18-21 Nov-Dec 1952. (CIML 23:4)

1. Omsk. 2. Includes the organizational composition of a sanitary-epidemiological stations in the Omsk region.

L 08277-67 - EWT(1) SCTB DD/GD

ACC NR: AT6036474

SOURCE CODE: UR/0000/66/000/000/0025/0026

35
B+1

AUTHOR: Altukhov, G. V.; Yegorov, A. D.; Polyakova, A. P.; Svistunov, I. B.;
Skuratova, S. A.

ORG: none

TITLE: Quantitative evaluation of changes in the latent period of conditioned
motor reflexes as a function of the number of stimuli and the intervals between
them

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy
kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii,
Moscow, 1966, 25-26

TOPIC TAGS: conditioned reflex, space physiology, human physiology, behavior
pattern

ABSTRACT: Quantitative evaluation of the length of the latent period in human
conditioned motor reflexes was made using different light and sound
stimuli with intervals of 0.5, 2.5, 5, and 10 sec between them.
Series of stimuli with equal or different probabilities of provoking a
reaction were used. Tests were conducted on an "Emotsiya" apparatus.
Twelve subjects, men and women aged 20-35 yrs, were used in 320
experiments. Results showed that increase in the number of stimuli

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L 08277-67

ACC NR: AT6036474

leads to increase in the average length of the latent period, with stimuli of equal or different probability. This statistically reliable increase is described by the equation of the second order parabola:

a) stimuli of equal probability--

$$t_{lp} = 0,2136 + 0,1832 x - 0,0173 x^2;$$

b) stimuli of different probability --

$$t_{lp} = 0.2525 + 0,1545 x - 0,0140 x^2,$$

where t_{lp} is the length of the latent period, and x is the number of stimuli. The length of the latent period also changed depending on the intervals between stimuli. The shorter the interval, the shorter the length of the latent period (on the average). This relationship is expressed by a linear equation:

$$t_{ep} = 0,4053 + 0,0116 z,$$

where z is the length of the interval between stimuli. [W. A. No. 22; ATD Report 66-1167]

SUB CODE: 06,05 / SUBM DATE: 00May66

Card 2/2

vmb

102 YD 2001, 17 S.

KLYUCHAREVA, T.Ye.; POLYAKOVA, A.S.; YESIKOVA, N.S.

Usefulness of the slide agglutination test (Huddleson's reaction) in determining infestation of milk products with Brucella. Zhur. mikrobiol. epid. i immun. 28 no.9:30 S '57. (MIRA 10:12)

1. Iz laboratorii Tashkentskoy gorodskoy sanitarno-epidemiologicheskoy stantsii.

(BRUCELLA,

in milk prod., Huddleson's reaction (Rus))

(MILK, microbiology,

Brucella, Huddleson's reaction (Rus))

POLYAKOVA, A.S., assistant

Hygienic value of the use of bactericidal lamps in children's institutions. Gig. i san. 24 no.2:80-82 F '59. (MIRA 12:3)

1. Iz kafedry obshchey gigiyeny Saratovskogo meditsinskogo instituta.
(INFECTION, prev. & control
bactericidal lamps in children's institutions,
hyg. evaluation (Rus))

POLYAKOVA, A.S.

Hygienic importance of the determination of air ionization in
some closed rooms. Trudy Vor. med. inst. 47:62-64 '62
(MIRA 16:12)

1. Kafedra obshchey Gigiyeny Saratovskogo meditsinskogo in-
stituta.

POLYAKOVA, A. S.

"The Importance of Rectoromanoscopy for Diagnosing
Gastro-Enteric Diseases in Young Children,"

Vop. Ped. i. Okhran. Mater. i. Det., 17, No. 2,

1949. Clinic Children's Diseases, Leningrad

Sanitation-Hygiene Med. Inst.

Children's Hospital, Smol'minsk Rayon, -cl949-.

POLYAKOVA, Anna Semenovna

Methodical Determination of Intestinal (palochki) in Water, Milk,
and Non-Alcoholic Beverages

Dissertation for candidate of a Medical Science degree. Chair of General
Hygiene. (head, Prof. L.I. Los'), Saratov Medical Institute, 1940

USSR / Microbiology. Sanitary Microbiology. Micro- F
biology of Food Products.

Abs Jour: Ref Zhur-Biol., No 2, 1959, 5520.

Author : Klyuchareva, T. Ye., Polyakova, A. S.; Yesikova,
N. S.

Inst : Not given.

Title : On the Suitability of the Method of Agglutination on Glass (Huddleson Reaction) for Determination of the Contamination of Milk Products.

Orig Pub: Zh. mikrobiol., epidemiol. i immunobiologii,
1957, No 9, 30.

Abstract: Tests were carried out with fermentation of milk samples with a negative Huddleson reaction to establish the relationship between a positive agglutination reaction and the degree of acidity of dairy products. All the samples pro-

Card 1/2

22

USSR / Microbiology. Sanitary Microbiology. Micro- F
biology of Food Products.

Abs Jour: Ref Zhur-Biol., No 2, 1959, 5520.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342020001-8"

Abstract: duced a positive reaction in 1:50 and 1:100 dilutions when the acidity exceeded 80° according to Turner. The agglutination titer increased in proportion to the increase in acidity. Accordingly, the nonspecificity of the agglutination reaction on glass for dairy products with an acidity above 80° according to Turner was demonstrated. -- L. G. Ivanova.

Card 2/2

POLYAKOVA, A.V.

Differentiation between similar grammatical material according to instruction methods. Vop. psikhol. 3 no.2:118-129 Mr-Apr '57.

(MIRA 10:6)

1. Institut psikhologii Akademii pedagogicheskikh nauk RSFSR, Moskva.
(Russian language--Study and teaching)

YEVDOKIMOV, M.M.; POLYAKOVA, A.Ya.; LEBEDEVVA, V.Ye.; GENERALOV, G.F.;
KONSTANTINOVA, N.N.; YEGOROVA, G.S.; CHESTKIN, V.M.; KAZAKOVA,
Ye.D., red.; ZUBRILINA, Z.P., tekhn. red.

[New kinds of vegetables, melons, squashes, and potatoes] Novye
sorta ovoshchnykh, bakchevykh kul'tur i kartofelia. Moskva, Gos.
izd-vo sel'khoz. lit-ry, 1956. 124 p. (MIRA 11:10)
(Vegetables) (Vine crops) (Potatoes)

LYUCHKOV, A.D.; LAMIN, A.B.; POLYAKOVA, B.Z.; CHERNYAVSKIY, A.A.

Determining the defects in welds of small-diameter pipes.
Zav.lab. no.4:454-457 '60. (MIRA 13:6)

1. Snepetrovskiy truboprokatnyy zavod.
(Pipe--Welding) (Ultrasonic testing)

69876

13.8400
24.1800

S/032/60/026/04/16/046
B010/B006

AUTHORS: Lynchkov, A.D., Lamin, A.B., Polyakova, B.Z., Chernyavskiy, A.A.

TITLE: Detection of Defects in Welding Seams of Small-diameter Tubes

PERIODICAL: Zavodskaya laboratoriya, 1960, Vol. 26, No. 4, pp. 454-457

TEXT: The sensitivity of ultrasonic control methods for welding seams of small-diameter tubes (51 mm x 2.5 mm) was investigated. A UZD-7N ultrasonic crack detector (Fig. 1, photograph) was used. The pulse-echo method and an acoustic frequency of 2.5 Mcps were applied in the tests. The sound waves were sent in such a way (Fig. 2, diagram) into the tube, as to make them strike the welding seam at an angle of 90°. The maximum heights of the echo pulses thus come to lie in the middle of the scope. Tube specimens having visible defects in the welding seams as well as specimens which had already been subjected to hydraulic tests were investigated. To evaluate the defects by means of the oscillograms obtained, the tubes were cut in pieces after ultrasonic control, and then investigated microscopically. It was found that ultrasonic control is insensitive to defects on the specimen surface, but

Card 1/2

Gz

POLYAKOVA, D.A.

Work of the Bureau of Technological Information staffed with volunteers. Tekst.prom. 23 no.11:24-25 N '63. (MIRA 17:1)

1. Zamestitel' predsedatelya Soveta pervichnoy organizatsii Nauchno-tekhnicheskogo obshchestva voronezhskoy kordnoy fabriki.

SOV/137-58-7-15461

Translation from: Referativnyy zhurnal, Metallurgiya. 1958, Nr 7, p 220 (USSR)

AUTHORS: Filimonovich, K.M., Lykov, Ye.P., Polyakova, D.A.,
Burtmaya, N.F.

TITLE: Influence of the Ions of Some Electrolytes on the Process of
Anodizing of Aluminum (Vliyaniye ionov nekotorykh elektro-
litov na protsess anodirovaniya alyuminiya)

PERIODICAL: Izv. Kiyevsk. politekhn. in-ta, 1957, Vol 20, pp 140-148

ABSTRACT: The influence exerted on the process of anodizing of basic
components of aluminum alloys (ions of Cu, Fe, Mg, Zn, Ni,
Mn, and Cr) which accumulate in the baths during the process
of anodic treatment was investigated. Sheet Al type AZ GOST
3549-47 served as the material for the investigation. The oxi-
dizing was conducted in H₂SO₄ (20 and 40%) solutions at an
anodic cd of 1.5 amp/dm² and at 8-20°C during 40 min. Evalu-
ation was made according to the change in weight of the speci-
mens and their resistance to corrosion (immersion for a cer-
tain time in 3% NaCl solution). It is shown that the concentra-
tion of Cu ions in the electrolyte should be (blank space left in
original. Transl. Ed. Note) 0.025%; the presence of other ions

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SOV/137-58-7-15461

Influence of the Ions of Some Electrolytes on the Process of Anodizing (cont.)

has practically no influence on the quality of the oxide film. In order to eliminate excess Cu ions from the electrolyte, the oxidation of Al was done by A-C current simultaneously with the electrolysis. A Pb plate served as the anode, a stainless-steel plate as the cathode. Cd was 3 amp/dm². It is indicated that the method may be recommended for the prevention of accumulation of Cu ions during the oxidation of Al.

Ye.K.

1. Aluminum--Oxidation
2. Electrolytes--Performance

Card 2/2

LOGINOV, Mariya Kapitonovna; LUR'YE, Dzhun Aliyevich; NEMKOVSKIY, Mikhail Il'ich; ORLEANSKIY, Yakov Pavlovich; SAVITSKIY, Aron Yakovlevich; SHUBIN, Vladimir Petrovich; MYLKO, M.N., kand. tekhn. nauk, retsenzent; POLYAKOVA, D.I., red.; BYKOVSKIY, A.I., red.; GORNOSTAYPOL'SKAYA, M.S., tekhn. red.

[Album of equipment for the mechanization of foundries]Al'bom sredstv mekhanizatsii liteirnykh tsekhov. [By] M.K.Loginova i dr. Moskva, Mashgiz, 1962. 131 p. (MIRA 15:10)
(Foundries--Equipment and supplies)

KLIMOV, A.N.; POLYAKOVA, E.D.; REMIZOV, A.L.; PETROVA, L.A.

Inhibition of the biosynthesis of cholesterol and fatty acids
in the liver in rats by derivatives of mevalonic acid. Vop. med.
khim. 11 no.1:101-103 Ja-F '65. (MIRA 18:10)

1. Otdel biokhimi Instituta eksperimental'noy meditsiny AMN SSSR,
Leningrad.

ALIMOV, A.N.; POLYAKOVA, E.D.; BOMEDOV, A.I.

Pathway of the oxidation of glutaric acid and some of its derivatives.
Bikhimiia 30 no.2:212-216 Mar-Apr '66. (MIRA 13:7)

J. Otdel biokhimi Institute eksperimental'noy meditsiny AMN SSSR,
Leningrad.

GROMOVA, K.G.; Prinsipala uchastiya POLYAKOVA, I.S.

Effect of insulin on glucose and fructose uptake by isolated fat tissue of the epididymis of normal rats, starved rats, and rats with alloxan diabetes. Biokhimiya 87 no.6:1106-1110 Nov '62. (IBRA 1785)

1. Otdel biokhimii Instituta eksperimental'noy meditsiny AN SSSR, Leningrad.

TRUBNIKOV, G.I.; L. YANUSHA, E.I.; VOI'PR-VIOP, O.I., Akademik

Yasin's marginal notes on Academician V.N. Ipat'ev's work "The
possibility of establishing the manufacture of electrodes from
Yuzhansk graphite." Vest. AN S.SR 55 no.7:102-110 Jul '65.

(MIRA 181E)

ПОДЪЯТ, П.

GULYANITSKIY, A.; POLYAKOVA, F.

Light-duty truck cranes designed at the L'vov Plant. Avt.
transp. 35 no.7:12-14 J1 '57. (MIRA 10:7)
(Cranes, derricks, etc.)

ALIMOV, V.A., assistant; POLYAKOVA, G., student; MANULKIN, A., student;
MATVEYEV, S., student

Atherosclerosis according to autopsy data of clinics of the
Tashkent State Medical Institute collected during 12 years
(1949-1960). Med. zhur. Uzb. no.4:51-54 Ap '63.

(MIRA 17:4)

1. Iz kafedry patologicheskoy anatomii (zav. - prof. G.N. Terekhov)
Tashkentskogo gosudarstvennogo meditsinskogo instituta.

SPRYSKOV, A.A.; POLYAKOVA, G.A.

Orientation in substitution in the aromatic series. Part 16: Effect
of substituents on the reactivity of the benzene ring. Zhur. org.
khim. 1 no.1:24-27 Ja '65. (MIRA 18:5)

1. Ivanovskiy khimiko-tehnologicheskii institut.

POLYAKOVA, G.A.

Optimum distribution of a planned highway system. (1962)
27 no.12:5-7 D 164. (1962)

Kolyakova, G.H.

128

PHASE I BOOK EXPLOITATION

SOV/6246

Soveshchaniye po tseolitam. 1st, Leningrad, 1961.

Sinteticheskiye tseolity; polucheniye, issledovaniye i primeneniye
(Synthetic Zeolites: Production, Investigation, and Use). Mos-
cow, Izd-vo AN SSSR, 1962. 286 p. (Series: Its: Doklady)
Errata slip inserted. 2500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye khimicheskikh
nauk. Komisiya po tseolitam.

Resp. Eds.: M. M. Dubinin, Academician and V. V. Serpinskiy, Doctor
of Chemical Sciences; Ed.: Ye. G. Zhukovskaya; Tech. Ed.: S. P.
Golub'.

PURPOSE: This book is intended for scientists and engineers engaged
in the production of synthetic zeolites (molecular sieves), and
for chemists in general.

Card 1/123

Synthetic Zeolites: (Cont.)

30V/6246

COVERAGE: The book is a collection of reports presented at the First Conference on Zeolites, held in Leningrad 16 through 19 March 1961 at the Leningrad Technological Institute imeni Lensovet, and is purportedly the first monograph on this subject. The reports are grouped into 3 subject areas: 1) theoretical problems of adsorption on various types of zeolites and methods for their investigation, 2) the production of zeolites, and 3) application of zeolites. No personalities are mentioned. References follow individual articles.

TABLE OF CONTENTS:

Foreword	3
Dubinina, M. M. Introduction	5

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Synthetic Zeolites: (Cont.)

SOV/6246

- Misin, M. S., L. M. Maksimova, V. A. Litvinova, and L. B. Khandros. Production and Adsorption Properties of NaA, NaP, CaA and CaP Zeolites 135
- Misin, M. S., L. M. Maksimova, V. A. Litvinova, L. B. Khandros, G. A. Polyakova, and L. S. Urin. Production and Adsorption Properties of NaX, CaX, and AgX Zeolites 143
- Figuzova, L. I., A. V. Agafonov, A. S. Vitukhina, V. F. Dmitriyeva, A. T. Slepneva, V. A. Burylov, and N. A. Chepurov. Synthesis Conditions and Thermal Stability of Type X Zeolites 152
- Mirskiy, Ya. V., M. G. Mitrofanov, and T. N. Bredikhina. Ion Exchange of Na for Ca in Type A Synthetic Zeolite 167
- Mirskiy, Ya. V., M. G. Mitrofanov, B. M. Popkov, L. T. Bolotov, and A. I. Mezhlumova. Production of Synthetic Zeolites Under Industrial Conditions 169

Card ~~7/12~~ 3/3

GLUKHOV, Ye.Ye.; POLYAKOVA, G.A.

Designing extrusion heads. ~~Plastics~~ ~~massy~~ no.4:50-54 '63. (MIRA 16:4)
(Extrusion (Plastics))

POLYAKOVA, G. A.
AID Nr. 1970-13, 17 May

DESIGNS OF EXTRUSION DIES FOR PLASTICS (USSR)

Glukhov, Ye. Ye., and G. A. Polyakova. *Plasticheskiye massy*, no. 4, 1963, 50-54. S/191/63/000/004/011/015

To obtain extruded parts of high quality, the correct relation between the extrusion rate, tool geometry, and pressure of the material before the die should be maintained, taking into account the producibility of desired cross sectional shapes and the density of extruded parts. Since different material velocities upon extrusion from the various sections of the die would cause shape distortions and variations in physical and mechanical properties, the author devised equations governing the extrusion process. Five examples are given for which the following parameters were determined: 1) the bearing-part lengths of two dies with different diameters which provide for the same extrusion velocity; 2) the ratio of bearing-part lengths of two sections of a

Card 1/2

AID Nr. 970-13 17 May

DESIGNS OF EXTRUSION DIES [Cont'd]

S/191/63/000/004/011/015

slit die with different widths which provide for the same extrusion velocity from wide and narrow die sections; 3) the ratio of the bearing-part lengths of a slit die in the middle of the slit and at the edges which provide for the same extrusion velocity; 4) the ratio of bearing-part lengths of a T-shape die which provide for the same extrusion velocity; and 5) the ratio of the bearing-part lengths for two-tube extrusion dies which provide for the same pressure drop at the same productivity.

[SS]

Card 2/2

PARSHIKOV, V.A., kand. tekhn. nauk; POLYAKOVA, G.A.

Using electronic computers in optimal planning of a highway
network. Avt.dor. 28 no.11:20-21 N '65.

(MIRA 18:11)

POLYAKOV, G.G.

TGG-150/600 deep-well manometric thermometer. Vash. i nef. (MIRA 17:6)
obor. no.8:38-35 '63.

1. Groznenskiy neftyanoy institut.

ACCESSION NR: AT4041987

S/2582/64/000/011/0153/0166

AUTHOR: Polyakov, G. I. (Moscow)

TITLE: Neurophysiological aspects of the problem of regulation, control, and coordination

SOURCE: Problemy* kibernetiki, no. 11, 1964, 153-166

TOPIC TAGS: neurophysiology, cybernetics, biological model, mathematical model, functional neurophysiology

ABSTRACT: On the assumption that all biological systems may be represented by mathematical models, the author attempts to present a systematic analysis of the evolutionary development and progressive complexity of nervous systems. The following schemata and block diagrams are provided, which represent various nervous functional mechanisms and their interrelationships: 1) a simplified scheme representing six separate nervous functions which are described as regulation and self-regulation, control and self-control, and coordination and self-coordination; 2) a functional schematic of an

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ACCESSION NR: AT4041987

elementary coordinating mechanism; 3) a figure comparing the central nervous system of a higher insect with man's; 4) a functional diagram contoured to the human brain showing the main analyzers in relation to coordinating mechanisms; 5) a simplified schematic of the neuron organization of a brain analyzer; 6) a block diagram showing the connection between different neuron divisions and functions of regulation and self-regulation, control and self-control, and coordination and self-coordination; 7) a general diagram representing anatomical relationships and connections of central nervous formations by which the six basic nervous functions are accomplished; 8) a figure showing the progressive differentiation of brain areas from the lower ape to man; 9) a figure contoured to the human brain showing pyramidal routes of control-signal transmission from the cerebral cortex to the brain stem and spinal cord; 10) a figure contoured to the human brain showing extra-pyramidal routes of signal transmission from various brain cortex areas to the cerebellum. Cybernetic representation and an understanding of the complex regulatory mechanisms of the human brain will require both physiological and psychophysiological approaches. Psychophysiological studies of human nervous regulation would logically entail

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ACCESSION NR: AT4041987

investigations of hypnotism and complicated mental functions such as acting. It is concluded that one of the greatest advances in human nature will be the capability of perfecting the regulatory mechanisms of the human brain. Orig. art. has: 10 figures.

ASSOCIATION: Nauchnyy sovet po kompleksnoy probleme Kibernetiki Akademii nauk SSSR(National Council on Complex Problems of Cybernetics, AN SSSR)

SUBMITTED: 14Sep62

ATD PRESS: 3074

ENCL: 00

SUB CODE: LS, MA

NO REF SOV: 000

OTHER: 000

Card 3/3

POLYAKOV, G.M., kand. tekhn. nauk; KULAGHKOV, V.I., inzh.

Temperature conditions of the heating surfaces of the TP-170 boiler operating on natural gas with increased loads. Sbor. nauch. soob. SPI no.17:65-76 '62. (MIRA 17:6)

L 52609-55 EMI(1)/EEG(b)-2/EMA(h) Feb

ACCESSION NR: AP5013346

UR/0109/65/010/005/0929/0935

AUTHOR: Polyakova, G. N.; Popov, A. I.; Fogel', Ya. M.

18
B

TITLE: Study of the height distribution of pulses at the output of a multiplier phototube

SOURCE: Radiotekhnika i elektronika, v. 10, no. 5, 1965, 929-935

TOPIC TAGS: multiplier phototube,²⁵ photomultiplier, pulse height distribution

ABSTRACT: The results of an experimental investigation of the pulse-height distribution in FEU-64, FEU-51, FEU-27, FEU-46, 6094B EMI, and 9502B EMI photomultipliers at +20C and -70C are reported. It was found that, in photomultipliers having a small photocathode area and activated dynodes, the dark-current pulses are largely generated by the dynode system. The height distribution of light-generated pulses agrees well with the Poisson law for FEU-64, under red and blue light, at +20C and -70C. This fact permits reliable selection of the

Card 1/2

L 52609-65

ACCESSION NR: AP5013346

discrimination level when the luminous intensity is measured by a quantum-counting photomultiplier. The pulse-height distribution in a gamma-irradiated (Co^{60}) FEU-64 was also measured. Orig. art. has: 8 figures and 1 table. [03]

ASSOCIATION: none

SUBMITTED: 03Feb64

ENCL: 00

SUB CODE: EC

NO REF SOV: 004

OTHER: 000

ATD PRESS: 4010

SR
Card 2/2

L 40843-66 EWT(1) IJP(c) AT

ACC NR: AP6020199 SOURCE CODE: UR/0056/66/050/006/1464/1471 ^{6/13}

AUTHOR: Polvakova, G. N.; Tatus', V. I.; Strel'chenko, S. S.; Fogel, Ya. M.; Fridman, V. M.

ORG: Physicotechnical Institute, Academy of Sciences, Ukrainian SSR (Fiziko-tehnicheskij Institut Akademii nauk Ukrainskoy SSR)

TITLE: Distribution by rotational energy level of molecules excited by ion impact ^{2/}

SOURCE: Zh eksper i teor fiz, v. 50, no. 6, 1966, 1464-1471

TOPIC TAGS: molecular spectrum, proton reaction, hydrogen atom reaction, spectral energy distribution, Boltzmann distribution, ion impact, rotation energy

ABSTRACT: The experimental apparatus and methodology are described for investigating the intensity distribution in the rotational structure of molecular spectrum bands. The intensity distributions of rotational lines of the $\lambda = 3914$ and $\lambda = 4278$ Å bands have been investigated in the spectrum of the first negative system of N_2^+ excited by impact of the mixed beam of 30-keV protons and hydrogen atoms. It has been observed that the distribution of the rotational line

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L 40843-66

ACC NR: AP6020199

intensity deviates from the Boltzmann distribution by an amount which exceeds the allowable measurement error. Orig. art. has: 4 figures and 1 formula. [Based on authors' abstract] [NT]

SUB CODE: 20/ SUBM DATE: 06Jan66/ ORIG REF: 003/ OTH REF: 009

Card 2/2 *M-L-P*

L 27453-66 EWT(1)/EWA(h)

ACC NR: AP5027033

SOURCE CODE: UR/0120/65/000/005/0198/0201

AUTHOR: Polyakova, G. N.; Popov, A. I.; Fogel', Ya. M.

34
B

ORG: Physics-Engineering Institute, AN UkrSSR, Khar'kov (Fiziko-tekhnicheskiy institut AN UkrSSR)

TITLE: Characteristics of ³⁵photomultipliers for weak light flux measurements

SOURCE: Pribory i tekhnika eksperimenta, no. 5, 1965, 198-201

TOPIC TAGS: photomultiplier, temperature dependence, visible light

ABSTRACT: The sensitivity of photomultipliers can be significantly increased by their cooling. The authors studied the effect cooling has on FEU-64, -51, -27, -15a, 6094BEMI, and FEU-46 photomultiplier sensitivity and the number of dark pulses. Results are presented in the form of diagrams giving, as a function of wave length of incident light, 1) the ratio of the low temperature to room temperature sensitivity; 2) the signal-to-background ratio at room temperature; and 3) signal-to-background ratio at low (-70 or -180C, depending on the type of photocathode) temperature. On the basis of these results, the authors estimate the threshold flux for better samples of the photomultipliers. Orig. art. has: 4 figures and 2 tables.

SUB CODE: OP / SUBM DATE: 07Sep64 / ORIG REF: 003 / OTH REF: 005

Card

1/1

UDC: 621.383.292

POLYAKOVA, G.N.; POPOV, A.I.; FOCEL', Ya.M.

Study of amplitude pulse distributors at the output of a photo-
electric multiplier. Radiotekh. i elektron. 10 no.5:929-935 My
'65. (MIRA 18:5)

POLYAKOVA, G.N.; POPOV, A.I.; FOGEL', Ya.M.

Characteristics of photomultipliers for measuring weak
luminous fluxes. Prib. i tekhn. eksp. 10 no.5:198-201
S-O '65. (MIRA 19:1)

1. Fiziko-tekhnicheskiy institut AN UkrSSR, Khar'kov.
Submitted Sept.7, 1964.

AUTHORS: Shklyarevskiy, I.N., Verkhovtseva, Z.T. and Polyakova, G.N. SOV/51-7-4-23/32

TITLE: On the "Vernier Effect" Observed when the Thickness of Thick Layers is Measured Using an Interferometric Method.

PERIODICAL: Optika i spektroskopiya, 1959, Vol 7, Nr 4, pp 566-568 (USSR)

ABSTRACT: In a preceding paper Shklyarevskiy (Ref 1) described an interferometric method of measuring thickness of thin and thick films. Two plates were used, distance t_1 apart. A layer of thickness t deposited on, say, one half of one of the plates, reduced the air gap locally to t_2 , i.e. $t = t_1 - t_2$. If these plates were placed in front of a spectrograph slit and illuminated with a parallel beam of white light, then two systems of equal-chromatic-order lines were observed in the focal plane of the spectrograph camera. By selecting the air gaps t_1 and t_2 it was possible to make one line of m -th order of one system to coincide with an n -th order line of the second system. The wavelength λ_0 of the coincident lines and their interference orders determine the layer thickness:

$$t = (m - n)\lambda_0/2. \quad (1)$$

Card 1/3

This formula is independent of the phase shifts (Ref 1). A new coincidence between lines of the equal-chromatic-order systems should

SOV/51-7-4-23/32

On the "Vernier Effect" Observed when the Thickness of Thick Layers is Measured
Using an Interferometric Method

occur after k lines of one system and $(k + 1)$ lines of the second system, i.e. the so-called vernier effect should be observed. The authors show that the exact vernier effect would be possible only if the dispersion of the phase shift was absent. If such dispersion occurs exact coincidence of more than one pair of lines is impossible. When not even one pair of lines is coincident on an interferogram, the film thickness can be calculated using

$$t = t_1 - t_2 = \frac{m\lambda_0}{2} - \frac{n\lambda'_0}{2}, \quad (10)$$

where n and m are the orders and λ_0, λ'_0 are the wavelengths of the two lines which almost coincide. Neglect of the phase shifts in Eq (10) leads to an error in the fifth place. This is unimportant in measurement of thicknesses of the order of several microns as shown by the practical example of a ZnS layer whose interferogram is given in a figure on p 568. The wavelengths and the interference orders of the almost coincident lines

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shown in the figure, are listed in a table on p 568. The mean thickness of the ZnS layer, calculated using Eq (10) was 49998.45 \AA , which differs only slightly from 50000.2 \AA calculated using Eq (1) for the $\lambda = 5263.18 \text{ \AA}$. Acknowledgment is made to K.D. Sinel'nikov for his advice. There are 1 figure, 1 table and 5 references, 2 of which are Soviet, 2 English and 1 translation from English into Russian.

SUBMITTED: March 27, 1959

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86888

S/056/60/039/005/002/051
B029/B077

26.2312

AUTHORS: Fogel', Ya. M., Kozlov, V. F., Polyakova, G. N.

TITLE: A Twofold Charge Exchange of Ions of Alkali Metals

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 5(11), pp. 1186 - 1192

TEXT: The present article presents new experimental data on the two-fold charge exchange of Li^+ , Na^+ , and K^+ ions in several gases. These data show that Massey's adiabatic criterion can be used to find the type of relation between the exchange cross section σ_{1-1} and the velocity of the primary ions in a velocity range $v < v_{\text{max}}$. The authors determined the cross section σ_{1-1} for the process $\text{Li}^+ \rightarrow \text{Li}^-$ in H_2 , Ar, Kr, and Xe in the energy interval of 5-60 keV, for the process $\text{Na}^+ \rightarrow \text{Na}^-$ in H_2 , Ar, Kr, Xe in the energy interval of 10-55 keV, and for $\text{K}^+ \rightarrow \text{K}^-$ in H_2 , Ne, Ar, Kr, Xe in the interval of 10-80 keV. The form of the curves

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$\sigma_{1-1}(v)$ depends upon the type of ion source that generates the primary-ion beam. The complicated structure of these curves can be explained by the addition of ions in excited, metastable states to the primary ion beam. Therefore, not only $A^+ + B \rightarrow A^- + B^{++}$ processes can take place but also $A^{+*} + B \rightarrow A^- + B^{++}$ (twofold charge exchange of excited fast ions) and $A^{+*} + B \rightarrow A^- + B^{++*}$ processes (twofold charge exchange of excited fast ions accompanied by the production of excited slow ions). The forms of the curves $\sigma_{1-1}(v)$ for the charge exchange $K^+ \rightarrow K^-$ with beams of a thermionic and a high-frequency source are similar, that is, the maxima of these two curves are located at the same velocities. Only the heights of these maxima are different due to a different concentration of excited ions in the beam. The curves representing the charge exchange for the various types of ions are described in detail with the aid of four diagrams. The form of the curves $\sigma_{1-1}(v)$ for the processes $Na^+ \rightarrow Na^-$ and $K^+ \rightarrow K^-$, like that of the previously investigated processes $H^+ \rightarrow H^-$, $Li^+ \rightarrow Li^-$, $B^+ \rightarrow B^-$, $O^+ \rightarrow O^-$, and $F^+ \rightarrow F^-$, can be fully explained by the adiabatic criterion $a|\Delta E|/h\nu_{\max} \approx 1$. a denotes

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the distance where the interaction forces act between colliding particles; (G. F. Drukarev gave another explanation for a), and ΔE represents the so-called resonance defect, i.e., the change of intrinsic energy of the particles due to the process considered. During the $K^+ \rightarrow K^-$ process, for instance, the additional maximum is much larger than the principal maximum since $\sigma_{1-1\max}$ decreases rapidly with increasing resonance effect in this case. The form of the curve $\sigma_{1-1}(v)$ follows the formula $\sigma = \sigma_0 \exp\{-ka|\Delta E|/hv\}$ only in that section of the curve where the condition $a|\Delta E|/hv \gg 1$ is not satisfied. This also holds for the processes $A^+ + B \rightarrow A^- + B^{++}$ and $A + B \rightarrow A^- + B^+$. At the conference on Electron and Atom Collisions (Riga, June 1959) V. M. Dukel'skiy stated that the deviation from Massey's adiabatic criterion is due to the fact that the relative velocity of the particles is not the same before and during the collision. An investigation of the functions $\sigma(v)$ for different processes at low velocities is considered necessary. The authors thank Professor A. K. Val'ter for his interest, and V. I. Muratov and O. I. Yekhichev for assisting in

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measurements. There are 4 figures and 15 references: 12 Soviet, 1 US,
and 2 British.

ASSOCIATION: Kar'kovskiy gosudarstvennyy universitet (Khar'kov State
University). Krymskaya astrofizicheskaya observatoriya
Akademii nauk SSSR (Crimean Astrophysical Observatory
of the Academy of Sciences USSR)

SUBMITTED: May 10, 1960

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S/033/63/040/002/017/021
E001/E120

AUTHORS: Polyakova G.N., Fogel' Ya.M., and Ch'iu Yu-mei

TITLE: Emission spectra of rarefied molecular gases excited by a mixed beam of protons and hydrogen atoms

PERIODICAL: Astronomicheskiy zhurnal, v.40, no.2, 1963, 351-362

TEXT: The authors describe laboratory experiments for studying the emission spectra of gases excited by beams of various particles in order to identify the constituents of planetary atmospheres. The following gases were investigated: N₂, O₂, CO₂, air, CO, H₂, H₂O, NH₃ and CH₄. Mixed beams of protons and hydrogen atoms with energies of 38 keV were used. The equipment and methods of experiments are described. The spectrum region from 3600 to 6700 Å was investigated. The authors describe the results of measuring spectrograms of emission spectra and analyze them. In the spectra of N₂, O₂ and air were observed the H_α and H_β lines of the Balmer series. In the spectrum of N₂ appear bands of the first negative system of N₂⁺ molecules, of

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high intensity. In the oxygen emission spectrum bands of O_2 molecules and lines of O I spectrum are absent. Faint bands of the first negative system of O_2^+ molecules and lines of O II spectrum are observed. The air emission spectrum consists of the superposition of the spectra of N_2 and O_2 . Specific features of their spectra are discussed and explained. From a comparison of the spectrum of air with auroral spectra it is concluded that in the excitation of the latter electrons play a considerable part. This conclusion is in agreement with direct data obtained by means of rockets. In the emission spectrum of CO the following Balmer series lines are observed: H_α , H_β and H_γ , and in the CO_2 spectrum, the H_δ line also. The system of CO^+ molecule bands, observed in cometary tails, appears in the CO spectrum. Bands of the system of Fox, Daffendack and Barker are most intense in the emission spectrum of CO_2 . These spectra were compared with the spectra of Venus nightsky glow photographed by N.A. Kozyrev and G. Newkirk, and the presence of CO_2 in the Venusian atmosphere was confirmed. The conclusions by Kozyrev and Warner on the presence of N and O in the atmosphere of Venus are not considered to be

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Emission spectra of rarefied ...

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well founded. In the emission spectra of H_2 , H_2O , NH_3 and CH_4 the lines of H_α , H_β , H_γ and H_δ were observed with a considerably higher intensity than in other gases investigated. In the spectrum of H_2O vapor a number of very weak lines of O II were observed. The investigations conducted may provide useful information of geophysical and astrophysical importance; it may be used for comparison with various types of emission spectra observed in atmospheres of the planets of the solar system and for studying auroras. It is intended to continue a broad program of similar investigations.

There are 1 figure and 3 tables.

ASSOCIATION: Khar'kovskiy gos. universitet im. A.M. Gor'kogo
(Khar'kov State University imeni A.M. Gor'kiy)

SUBMITTED: June 11, 1962

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POLYAKOVA, G.N.; NIKOLAYEV, A.P., professor, deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR, direktor.

Early breast feeding of newborn infants. Vop.pediat. 21 no.4:56-58 JI-Ag '53.
(MLA 6:10)

1. Otdeleniye novorozhdennykh Instituta akusherstva Akademii meditsinskikh nauk. 2. Akademiya meditsinskikh nauk SSSR (for Nikolayev).
(Infants--Nutrition)

ПОЛИАКОВА, Г. П.

Brain - Wounds and Injuries

Intracranial trauma in the newborn. Akush. i gin., no. 3, 1952

Monthly List of Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED.

POLYAKOVA, G.P.

Changes in the fetal organs in acute disturbances of placental blood circulation; experimental morphological investigation. Trudy AMN SSSR 29:32-44 '53.

(MLRA 6:11)

(Placenta--Diseases) (Fetus)

POLYAKOVA, G.P.

Clinical and morphological changes in so-called intracranial trauma in newborns. Trudy AMN SSSR 29:50-66 '53. (MIRA 6:11)
(Infants (Newborn)) (Cranium--Wounds and injuries)

POLYAKOVA, G. P.

POLYAKOVA, G. P. -- "The Pathogenesis and Clinical Aspects of So-Called Intracranial Trauma of Newborn Children." Acad Med Sci USSR. Joint Council of the Group of Leningrad Institutes. Leningrad, 1955. (Dissertation for the Degree of Candidate of Medical Sciences.)

SO: Knizhnaya Letopis', No 5, Moscow, Feb 1956

POLYANOVA, G.P.

POLYAKOVA, G.P.

Basic tasks in studying the pathogenesis, treatment, and prevention of hemolytic disease in the newborn. Akush. i gin. 32 no.6:3-11 (MIRA 10:11)
N-D '56.

1. Iz otdela novorozhdennykh (nauchnyy rukovoditel' - deystvitel'-nyy chlen AMN SSSR, prof. A.F. Tur) Instituta akusherstva i ginekologii (dir. prof. P.A. Beloshapko) AMN SSSR.
(ERYTHROBLASTOSIS, FETAL pathogen., prev. & ther.)

8
POLYAKOVA, G.P.

Hemolytic disease of newborn following sensitization of mothers by blood transfusions [with summary in English]. Akush. i gin. 33 no.3: 9-13 My-Je '57. (MLRA 10:8)

1. Iz otdeleniya novorozhdennykh (nauchnyy rukovoditel' - deystvitel'-nyy chlen AMN SSSR prof. A.F.Tur) Instituta akusherstva i ginekologii AMN SSSR (dir. - prof. P.A.Beloshapko)
(ERYTHROBLASTOSIS, FETAL, etiol. & pathogen.
maternal isoimmun. (Rus))

POLYAKOVA, G.P.; TYMINSKAYA, Ye.M.

Treating hemolytic diseases in newborns by exchange transfusion.
Vop. okh. mat. i det. 2 no.2:6-11 Mr-Ap '57 (MLRA 10:4)

1. Iz otdeleniya novorozhdennykh detey (nauchnyy rukovoditel'-
deystvitel'nyy chlen AMN SSSR prof. A.F. Tur) Instituta akusherstva
i ginekologii AMN SSSR (dir.-prof. P.A. Beloshapko)
(BLOOD--TRANSFUSION) (HEMOLYSIS AND HEMOLYSINS)

POLYAKOVA, G.P.

Various forms of hemolytic disease of newborn [with summary in English]. Akush. i gin. 33 no.2:3-8 Mr-Apr '57. (MLRA 10:6)

1. Iz otdeleniya novorozhdennykh (nauchnyy rukovoditel' - deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR prof. A.F.Tur) Instituta akusherstva i ginekologii Akademii meditsinskikh nauk SSSR (dir. - prof. P.A.Beloshapko)

(ERYTHROBLASTOSIS, FETAL

differentiation of forms with jaundice, with edema & without either)

POLYAKOVA, G.P.

Prevention and therapy of erythroblastosis Fetalis [with summary
in English]. Akush. i gin. 35 no.1:6-10 Ja-F '59. (MIRA 12:2)

1. Iz Instituta akusherstva i ginekologii (dir. - chlen-korres-
pondent AMN SSSR prof. P.A. Beloshapko) AMN SSSR.
(ERYTHROBLASTOSIS, FEMAL,
prev. & ther. (Rus)

EXCERPTA MEDICA Sec 10 Vol 12/10 Obstetrics Oct 59

1758. PROPHYLAXIS AND TREATMENT OF HAEMOLYTIC DISEASE OF THE NEWBORN (Russian text) - Polyakova G. P. - AKUSH. I GINEK. 1959, 1 (6-10)

For prophylactic purposes, 117 sensitized Rh-negative women were given vitamins K, E, solution of glucose with ascorbic acid and oxygen for 10 days 2-3 times in the course of pregnancy. The incidence of premature labour dropped from 46% to 12.6%, that of stillbirth from 44.2% to 7.3%. 118 newborns were affected with haemolytic disease (72 infants had a severe and 46 a mild form). Of the 54 infants subjected to exchange transfusions 4 died; 8 of the 18 infants treated with fractional Rh-negative blood transfusions died. There were no fatalities in the milder forms of the disease. The paper analyses the indications for exchange transfusions and discusses the relative merits of ACTH. (X, 7)

BEKKER, S.M.; POLYAKOVA, G.P.

Significance of the Rh factor in clinical practice. Sov. med. 23
no.5:16-26 My '59. (MIRA 12:7)

1. Iz Instituta akusherstva i ginekologii (dir. - chlen-korrespondent
AMN SSSR prof. P. A. Beloshapki) AMN SSSR.

(RH FACTORS

significance in clin. practice, review (Rus))

(ERYTHROBLASTOSIS, FETAL,

review (Rus))

POLYAKOVA, G.P., kand.med.nauk

Peculiarities of staphylococcal infections in young children. Vop.
okh.mat. i det. 4 no.5:61-65 S-0 '59. (MIRA 13:1)
(STAPHYLOCOCCAL DISEASE) (CHILDREN--DISEASES)