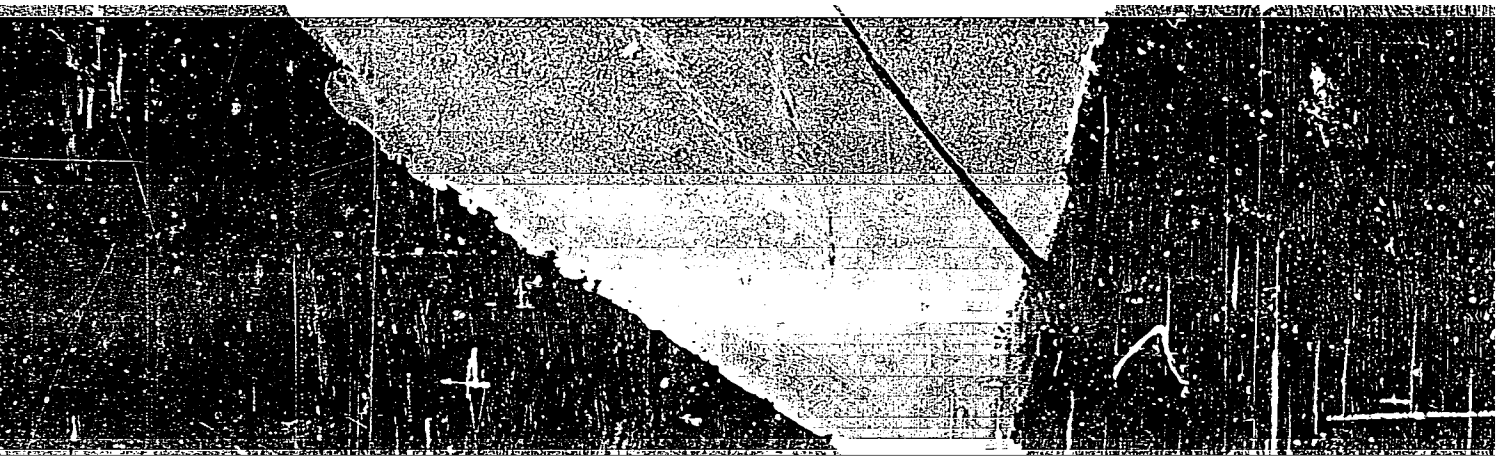
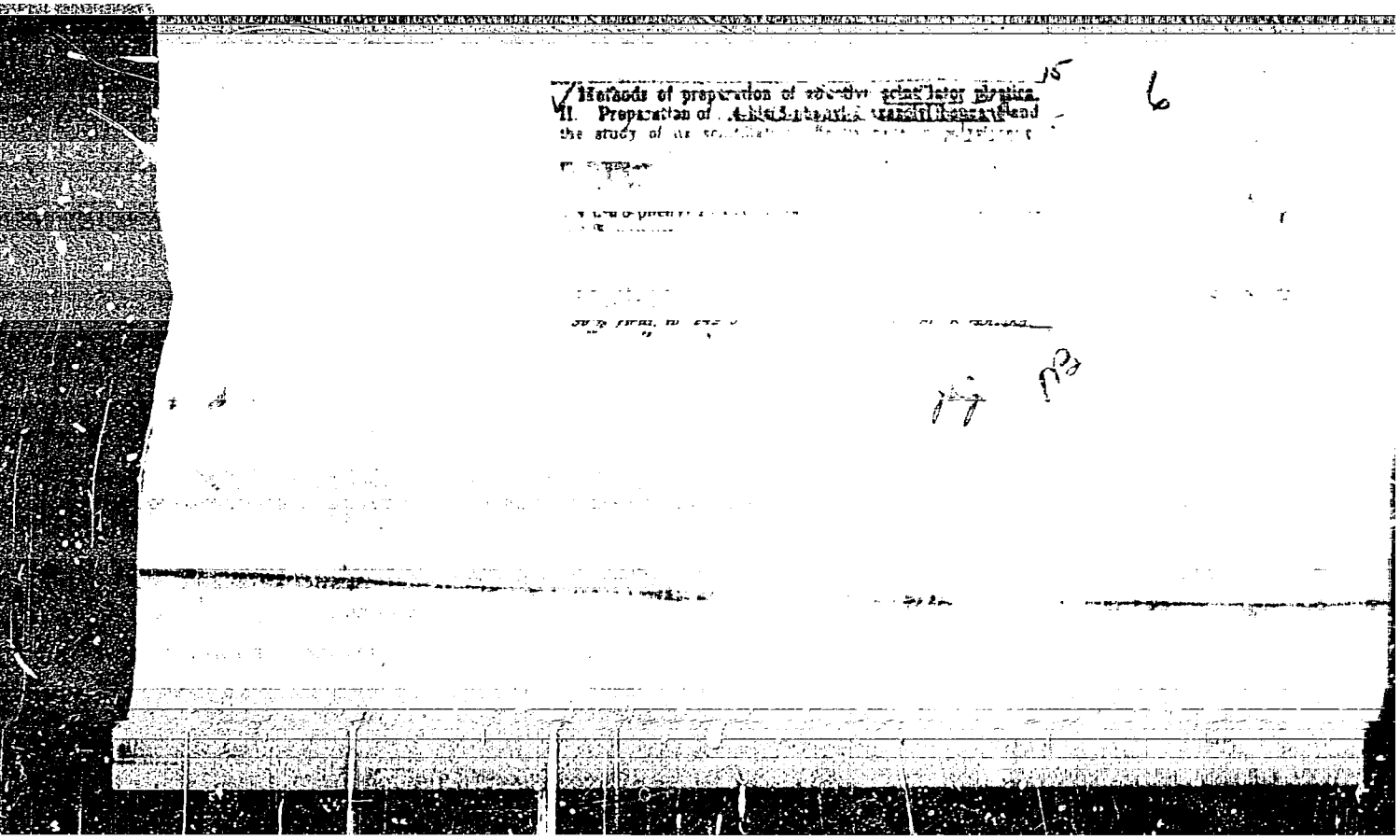


APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100410001-4"



ADROVA N.

120-3-11/40

AUTHORS: Adrova, N.A., Koton, M.M., Panov, Yu.D., Florinskiy, F.S.

TITLE: Effective Plastic Scintillators for Recording of Radioactive Emissions (Effektivnyye plastmassovyye stsintillyatsionnyye plastiny dlya registratsii radioaktivnykh izlucheniy)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1957, Nr 3, pp.45-47 (USSR)

ABSTRACT: Various plastics have been investigated as possible scintillators. It has been shown experimentally that the following plastic scintillators based on polystyrene are efficient:

1. 2% terphenyl + 0.1 quarterphenyl.
2. 1% 2,5-diphenyloxazole.
3. 1-2% 1,1,4,4-tetraphenylbutadiene.
4. 2% terphenyl + 0.02 to 0.03% 1,1,4,4, tetraphenylbutadiene.
5. 2.5% 9,10-diphenylanthracene.
6. 2% terphenyl + 0.02 to 0.03% 1,4- 2-(5-phenyloxazolyl)-benzene.
7. 1% 2,5-diphenyloxazole + 0.02 to 0.05% 1,4-di-2-(5-phenyloxazolyl)-benzene.

Card 1/2 The technique of preparation of plastic scintillators based

12(7)-3-11/40

Effective Plastic Scintillators for Recording of Radioactive Emission.

on styrene has been worked out. Specimens can be obtained with diameters between 5 and 15 cm. There are 1 figure, 2 tables and 27 references, of which 9 are Russian, 21 are English and 3 are Dutch.

ASSOCIATION: Institute of High Molecular Compounds of the Academy of Sciences of the USSR (Institut vysoko-molekulyarnykh soyedineniy AN SSSR)

SUBMITTED: December 6, 1956.

AVAILABLE: Library of Congress.

Card 2/2 1. Radioactive emissions-Recording devices 2. Plastic scintillators 3. Plastics-Determination

ADROVA, N.A.; KOTON, M.M.; FLORINSKIY, F.S.

Preparation of 2, 5-diphenyloxazole and study of its scintillation efficiency in plastics. Izv.AN SSSR.Otd.khim.nauk no.3:385-386 Mr '57. (MLRA 10:5)

1.Institut vysokomolekulyarnykh soyedineniy Akademii nauk SSSR.
(Oxazole) (Plastic materials) (Scintillation counters)

ADROVA, N. A.

ADROVA, N.A.; KOTON, M.M.

Preparing effective scintillation plastics. Report No.2: Preparing 1,4-di-[2-(5-phenyloxazolyl)]-benzene and studying its scintillation efficiency in polystyrene plastics. Izv. AN SSSR Otd. khim. nauk no.6:758-760 Je '57. (MIRA 10:11)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
(Benzene) (Styrene) (Scintillation counters)

464

AUTHORS: Pigulevskiy, G. V., and Adrova, N. A.

TITLE: Study of Myrcene Dioxide (K issledovaniyu diokisi mirtsena)

PERIODICAL: Zhurnal Obshchey Khimii, 1957, Vol. 27, No. 1, pp. 136-137 (U.S.S.R.)

ABSTRACT: During the derivation of monoxide by the oxidation of myrcene with acetyl hydrogen peroxide, the authors obtained a product identified as myrcene dioxide. The formation of the latter is explained as the result of partial polymerization of myrcene and the origination of an active oxygen surplus. Efforts were made to explain the structure of myrcene dioxide and to become acquainted with some of its properties. Optical methods were selected over the chemical ones because the latter have hardly offered any specific results. It was found that one of the oxide rings in the myrcene dioxide is oriented in the same way as in myrcene monoxide; the orientation of the second oxide ring has not been decided. Hydrogenation of myrcene dioxide resulted in the formation of dihydromyrcene dioxide. The hydrogenation was carried out in presence of

Card 1/2

AUTHORS: Pigulevskiy, G. V., and Adrova, N. A. 79-2-21/50

TITLE: Myrcene Monoxide in the Grinard Synthesis (Monookis' mirtsena v sintese Grin'yara)

PERIODICAL: Zhurnal Obshchey Khimii, 1957, vol 27, No 2, pp. 375-377 (U.S.S.R.)

ABSTRACT: Data are presented on the products obtained from the reaction of magnesium iodomethyl with myrcene monoxide. In order to explain the behavior of myrcene monoxide in the Grignard reaction, it was decided to carry out the reaction with a saturated monoxide figuring it will be possible under these conditions to avoid the effect of the conjugated system of double bonds. The monoxide was hydrogenated in the presence of platinum black. The oxide of tetrahydromyrcene during its reaction with magnesium iodomethyl yielded an unsaturated $C_{11}H_{22}$ hydrocarbon. It was established that the anomalous Grignard reaction is not connected with the presence of a conjugated system. The presence of an isopropylidene group in the synthesized hydrocarbon was confirmed by the large amounts of acetone obtained during the ozonolysis. The results of spectral analysis to which the

Card 1/2

ADROVA, N.A.

AUTHORS: Adrova, N. A., Koton, M. M., Panov, Yu. N., Florinskiy, F. S.

TITLE: The Scintillation Activity of Carbocyclic and Heterocyclic Compounds as Related to Their Chemical Structure (O svyazi mezhdu khimicheskim stroyeniyem karbo- i geterotsiklicheskikh soyedineniy i ikh stsintillyatsionnoy aktivnost'yu)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 2 (USSR)

ABSTRACT: The paper under review investigates the relationship between the chemical structure of the carbocyclic and heterocyclic compounds and their scintillating activity.
In addition to the known inorganic 'phosphors', also the organic 'phosphors' are at present being widely used as crystalline, liquid, or synthetic scintillators. Among the organic compounds, fluorescence will be found in the majority of the aromatic hydrocarbons and also in a considerable number of heterocyclic compounds, the molecules of which contain ring-shaped structures and conjugated double bonds.

Card 1/4

The Scintillation Activity of Carbocyclic and Heterocyclic Compounds as Related to Their Chemical Structure

carbons with 4-5 cycles in the molecule and with conjugated double bonds, have the highest activity. In the series of the oxazoles and of the oxadiazoles, which have high values of scintillating activity, the latter depends to a considerable degree on the nature of the substituents in the position 2,5. If the substituents are the same (phenyl), then the oxazole derivatives (IV) are of a higher activity than the oxadiazoles (V). Also the 1,1,4,4-tetraarylbutadienes (VI) and p-terphenyl (VII) are of a high activity. The above interrelationship exists also for the hydrocarbons with three condensed nuclei which differ from each other by the structure of their rings, their number of conjugations, and the existence of different heterocycles (O, S, NH). Anthracene is more effective than phenanthracene and azenaphthene. In the series of the dibenzyl derivatives of furan, thiophene and pyrrole, the oxygen-containing heterocycle XI has the highest activity. Different diarylmethanes are of lower activity, also in their crystallized state, in the molecule of which the conjugation between the benzene rings is interrupted. Only if the number

Card 3/4

PHASE I BOOK EXPLOITATION SOV/1297

Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya po primeneniyu radioaktivnykh i stabil'nykh izotopov i izlucheniy v narodnom khozyaystve i nauke, Moscow, 1957

Polucheniye izotopov. Moshchnyye gamma-ustanovki. Radiometriya i dosimetriya; trudy konferentsii... (Isotope Production. High-energy Gamma-Radiation Facilities. Radiometry and Dosimetry; Transactions of the All-Union Conference on the Use of Radioactive and Stable Isotopes and Radiation in the National Economy and Science) Moscow, Izd-vo AN SSSR, 1958. 293 p. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR; Glavnoye upravleniye po ispol'zovaniyu atomnoy energii SSSR.

Editorial Board: Prokov, Yu.S. (Resp. Ed.), Zhavoronkov, N.M. (Deputy Resp. Ed.), Aglintsev, K.K., Alekseyev, P.A., Bochkarev, V.V., Leshchinskiy, N.I., Malkov, T.P., Sinitsyn, V.I., and Popova, G.L. (Secretary); Tech. Ed.: Novichkov, N.D.

PURPOSE: This collection is published for scientists, technologists, persons engaged in medicine or medical research, and others concerned with the production and/or use of radioactive and stable isotopes and radiation.

COVERAGE: Thirty-eight reports are included in this collection under three main subject divisions: 1) production of isotopes 2) high-energy gamma-radiation facilities, and 3) radiometry and dosimetry.

TABLE OF CONTENTS:

PART I. PRODUCTION OF ISOTOPES

Card 2/12

. . .

PART III. RADIOMETRY AND DOSIMETRY

Card 3/12

AUTHORS: Adrova, N. A., [illegible], Florinskiy, F. S.

TITLE: Efficacy of the Scintillation of Carbo- and Heterocyclic Compounds in Plastics (Stsintillyatsionnaya effektivnost' karbo- i geterotsiklicheskikh soyedineniy v plastmassakh).

PERIODICAL: Izvestiya AN SSSR Seriya Fizicheskaya, 1959, Vol. 23, Nr 1, pp. 41-43 (USSR).
Received: March 8, 1958

ABSTRACT: The efficacy of the scintillation of substituted anthracenes, polyphenyls, aryl-derivatives of dienes and an number of heterocyclic compounds (oxyzolen, oxydiazolen etc.) on their introduction into a polystyrene-plastic was investigated here. The above-mentioned substances were introduced into the styrene-monomer in quantites corresponding to their maximum efficacy (1-2%) and were polymerized with 0,2% benzoylperoxide at a gradual rise of temperature from 80 to 120°C during 4-5 days until the formation of transparent firm blocks which were then shaped into cylinders. From the obtained data it was possible to determine a connection between the chemical structure of the organic substances and the efficacy of their scintillation. The following compounds

Card 1/3

Efficacy of the Scintillation of Carbo- and Heterocyclic Compounds in Plastics. 48-1-9/10

possess the highest efficacy in plastics: 1,4-di-[2-(5--phenyloxazolyl)] benzene (I) which is designated as POPOP, quaterphenyl (II), and 9-10-diphenylanthracene (III), i.e. compounds with 4-5 cycles in the molecule and conjugate double bonds. In the series of oxazoles (IV) and oxydiazoles (V) with the same substituents (e.g. phenyl-groups) the oxazole-derivatives have a higher scintillation-activity than the oxydiazole-derivatives. 1,1', 4,4'-tetraarylbutadiene (VI), where R = H, CH_3 and p-terphenyl (VII) also possess a sufficiently high scintillation-activity. Other compounds with 3 cycles in the molecule (anthracene, phenanthrene, acenaphthene, dibenzofuran, dibenzothiophene and others) do not show a high scintillation-efficacy in plastics. Stilbene and tolane which in monocrystal-form possess a high scintillation-efficacy are ineffective on introduction into plastics. 1,4-diphenylbutadiene is little effective in plastics, although it possess sufficient effectiveness in solutions. For increasing the scintillation-efficacy of plastics it is expedient to introduce two organic scintillators simultaneously into polystyrene. One of these, the cheaper and easier one to obtain (terphenyl, diphenyloxazole) plays the part of

Card 2/3

Efficacy of the Scintillation of Carbo- and Heterocyclic Compounds in Plastics. 48-1-9/20

a coactivator (quaterphenyl, POPOP) and is introduced in small quantities but at the same time it considerably increases the total scintillation-efficacy of the plastic. On the basis of the obtained experimental data the authors produced effective scintillation-plastics on a styrene-base of a diameter of from 30 to 150 mm and of a weight up to 3 kg. The effectiveness varies from an order of magnitude of 85% in the stilbene-crystals to 50% in the anthracene-crystal.
There are 1 table and 4 references, 2 of which are Slavic.

ASSOCIATION: Institute for High-Molecular Compounds AN USSR (Institut vysokomolekulyarnykh soyedineniy Akademii nauk SSSR).

AVAILABLE: Library of Congress

1. Plastics 2. Cyclic compounds 3. Polymerization

Card 3/3

24(4), 5(3) SOV/51-7-1-5/27

AUTHORS: Panov, Yu.N., Adrova, N.A. and Koton, M.M.

TITLE: Optical Properties of Compounds of the Oxazole, Oxydiazole and Furan Series (Opticheskiye kharakteristiki soyedineniy ryadov oksazola, oksidiazola i furana)

PERIODICAL: Optika i spektroskopiya, 1959, Vol 7, Nr 1, pp 29-34 (USSR)

ABSTRACT: The paper was presented at the Second Conference for Coordination of Work on Application and Preparation of Scintillators, which was held in Khar'kov in November, 1957. To find the relationship between the chemical structure and scintillation properties of organic compounds the authors studied optical properties of benzene solutions of 2,5-diaryl derivatives of oxazoles, oxydiazoles and furan. For this purpose the following compounds were synthesized and studied:

2,5-diphenyl-1,3-oxazole (PPO);
2-α-naphthyl-5-phenyl-1,3-oxazole (NPO);
2-β-styryl-5-phenyl-1,3-oxazole (SPO);
2-phenyl-5-(4-biphenyl)-1,3-oxazole (PBO);
2-α-furyl-5-phenyl-1,3-oxazole (FPO);

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Optical Properties of Compounds of the Oxazole, Oxydiazole and Furan Series

total absorption of the excitation energy. The quantum yields of all the compounds were extrapolated approximately to the conditions of infinite dilution. The scintillation light yields (i.e. the maximum scintillation amplitudes) were determined by the method described earlier by Adrova et al. (Ref 6). The absorption and luminescence maxima, the quantum and light yields are listed for some of the oxazoles in Table 1 (this table includes also data on terphenyl and anthracene). The same properties of several oxydiazoles are listed in Table 2. The absorption and luminescence spectra of some oxazoles and oxydiazoles are shown in Figs 1-4. It was found that in the oxazole and oxydiazole series the luminescence quantum yield decreased and the absorption and luminescence spectra were displaced towards longer wavelengths on decrease of the number of hetero-atoms of nitrogen (Tables 3 and 4). In each series the spectra were displaced towards longer wavelengths and

Optical Properties of Compounds of the Oxazole, Oxydiazole and Furan Series

the luminescence quantum yield fell on transition from phenyl to styryl radicals. Acknowledgment is made to Ye.V. Anufriyeva for her help in this work. There are 4 figures, 4 tables and 6 references, 4 of which are Soviet and 2 English.

SUBMITTED: August 2, 1958

24(4) SOV/51-7-1-24/27

AUTHORS: Adrova, N.A., Andreyev, V.N., Koton, M.M., Panov, Yu.N. and Musalev, N.S.

TITLE: Optical and Scintillation Properties of the Oxydiazole-Series Compounds (Opticheskiye i stsintillyatsionnyye kharakteristiki soyedineniy ryada oksidiazola)

PERIODICAL: Optika i spektroskopiya, 1959, Vol 7, Nr 1, pp 128-129 (USSR)

ABSTRACT: The authors studied plastic scintillators with (I) 2-α-naphthyl-5-(n-biphenyl)-1,3,4-oxydiazole (abbreviated to α-NBD) and (II) 2-phenyl-5-(n-biphenyl)-1,3,4-oxydiazole (PBD). Their properties were compared with earlier results (Ref 1) on (III) 2,5-diphenyloxydiazole (PPD) and (IV) n-terphenyl. Compounds I and II were prepared as described earlier (Ref 2). Plastic scintillators were prepared by low-temperature polymerization. The scintillation quantum yield was determined using apparatus described earlier (Ref 4). For the purpose of these measurements the scintillation yield of a sample containing 2% by weight of terphenyl in polystyrene was taken to be 100%. Scintillations were excited with γ-rays from Co^{60}. The absorption spectra of compounds I and II (Figs 1a, 2a) were recorded using a spectrophotometer SF-4. Fig 3a shows the absorption spectrum of PPD. The luminescence spectra of compounds I and II (Figs 1b and 2b) were obtained by means of a

Card 1/2

Optical and Scintillation Properties of the Oxydiazole-Series Compounds

quartz monochromator and a photomultiplier FEU-19; they were excited with light of 313 mμ wavelength. Fig 3b shows the luminescence spectrum of PPD. The quantum yields of luminescence were determined relative to the yield of a 1 mg/cm^3 solution of anthracene in benzene; these quantum yields were extrapolated to infinite dilutions. The results are summarized in a table on p 129. This table shows that the scintillation yields of α-NBD and PBD are considerably higher (~125%) than the scintillation yield of n-terphenyl. Reasons for this are discussed briefly. There are 3 figures, 1 table and 4 references, 3 of which are Soviet and 1 English.

SUBMITTED: January 30, 1959

Card 2/2

81584
S/190/60/002/03/06/014
B020/B066

53831

AUTHORS: Adrova, N. A., Koton, M. M.

TITLE: Synthesis and Polymerization of 3-Vinyl-2,5-Diphenyl Furan

PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 3, pp. 408-410

TEXT: As was previously shown by one of the authors (Ref. 1), many vinyl derivatives of the furan series have a high softening point and good dielectric properties. It was the purpose of the present paper to continue the investigation of the influence exercised by the accumulation of a number of cyclic groups in the vinyl furan molecule upon the polymerizability and some properties of polymers. First, 3-vinyl-2,5-diphenyl furan was synthesized, and its polymerizability investigated. As starting material for the synthesis of 3-vinyl-2,5-diphenyl furan the authors used 2,5-diphenyl furan which is obtained by reduction of trans-dibenzoyl ethylene with stannous dichloride in a mixture of hydrochloric acid and acetic acid under simultaneous cyclization (Ref. 2). The

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content of active hydrogen in the intermediate methyl-(2,5-diphenyl-furyl) carbinol was determined according to Tserevitinov. The polymerization and copolymerization of 3-vinyl-2,5-diphenyl furan was investigated in bulk and solution in the presence of 0.5 mole% benzoyl peroxide and azo-isobutyric acid dinitrile in the temperature range 60-120°. The resultant polymers had a specific viscosity (η) of 0.91 and a thermal stability (according to ИФП(IFP)) of 175 - 182°, while the copolymer of 3-vinyl--2,5-diphenyl furan with styrene (in the ratio 1:1) had a specific viscosity of 0.9 and a thermal stability of 126° (according to IFP). Fig. 1 graphically illustrates the polymerization kinetics of 3-vinyl--2,5-diphenyl furan (1 M solution in toluene) in the presence of 0.5 mole% benzoyl peroxide, and Fig. 2 shows log k as a function of 1/T for 3-vinyl-2,5-diphenyl furan. A comparison between the polymerization rates of the vinyl derivatives of the furan series (1 M solution in toluene) in the presence of 0.5 mole% benzoyl peroxide at 100° (Fig. 3) shows that accumulation of benzene rings in the monomer molecule causes a considerable increase of the polymerization rate. The presence of benzene rings in the 2,5-position in the moleoule of polyvinyl furan

Synthesis and Polymerization of 3-Vinyl-2,5-Diphenyl Furan

81584
S/190/60/002/03/06/014
B020/B066

also effects a considerable increase of the softening point of the polymer. There are 3 figures and 2 references: 1 Soviet and 1 US.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy AN SSSR (Institute of High-molecular Compounds AS USSR)

SUBMITTED: December 14, 1959

Card 3/3

158150

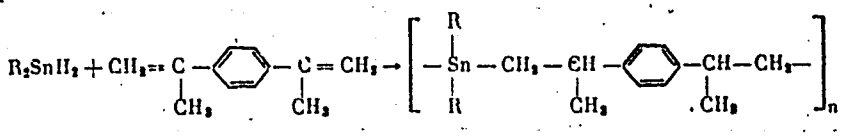
25267 S/190/61/003/007/011/021
B102/B220

AUTHORS: Adrova, N. A., Koton, M. M., Klages, V. A.

TITLE: Synthesis of new organotin compounds

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 7, 1961, 1041-1043

TEXT: The present paper is based on studies by J. Curry, K.Kojima, E.Pear (see below) with regard to the synthesis of compounds with direct $Si-CH_2$ or $Sn-CH_2$ bond in the chain effected by the migration of the H atom from the disubstituted silane (or stannane) to the double bond of the hydrocarbon. The authors studied this reaction on the interaction of diphenyl or di-n-butyl stannane with di-isopropenyl benzene. The following equation was obtained for this reaction:



Card 1/3

25267 S/190/61/003/007/011/021
B102/B220

Synthesis of new organotin compounds

and infusible R_2SnO compounds resulted. There are 1 table and 8 references: 2 Soviet-bloc and 6 non-Soviet-bloc. The 3 most important references to English-language publications read as follows: J. Curry, G. Harrison, J.org. Chem., 23, 1219, 1958; K. Kojima, Bull. Chem. Soc. Japan, 31, 663, 1958; E. Pear, J. Polymer Sci., 40, 273, 1959.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy AN SSSR (Institute of High-molecular Compounds, AS USSR)

SUBMITTED: October 1, 1960

Card 3/3

28181

S/190/61/003/010/010/019
B124/B110

15.8670

AUTHORS: Adrova, N. A., Prokhorova, L. K.

TITLE: Synthesis and polymerization of trityl methacrylate

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 10, 1961, 1509 - 1510

TEXT: Trityl methacrylate was synthesized by reaction between trityl chloride and silver methacrylate $(C_6H_5)_3CCl + CH_2 = C(CH_3)COOAg \longrightarrow$ $CH_2=C(CH_3)COOC(C_6H_5)_3 + AgCl$ for several hours at room temperature and in etheric solution under intensive mixing. The product obtained was purified by recrystallizing from anhydrous petroleum ether. It was a colorless, crystalline substance having its melting point at 101 - 103°C. The yield was 75%. Trityl methacrylate is easily soluble in benzene, methanol, and other organic solvents; it is decomposed by water with formation of triphenyl carbinol (melting point 159 - 161°C). The polymers of trityl methacrylate were synthesized both by polymerization in cyclohexanol solution in the presence of azoisobutyric acid dinitrile with a

Card 1/3

Synthesis and polymerization...

stepwise temperature rise from 60 to 120°C within 144 hr and by block polymerization in the presence of tert-butyl peroxide with a stepwise temperature rise from 120 to 180°C within 144 hr. The polymers obtained were insoluble in most of the ordinary organic solvents. The resistance to heat was 140 - 155°C (ИФП(IFP)). The loss in weight by 3-hr heating up to 200°C was 45%. Copolymers of trityl methacrylate with styrene and methyl methacrylate in the ratio 1:1 were synthesized under the same conditions. Under heating, the resulting copolymers were soluble in benzene and precipitated by methyl alcohol. The polymerizability of trityl methacrylate was dilatometrically determined in the block in the presence of 0.5 mole% tert-butyl peroxide at 115, 120, and 125°C by means of polymerization kinetics (Fig. 1). The polymerization-activation energy of trityl methacrylate was determined from the tangent of the angle of inclination of the straight line $-\ln k = f(1/T)$ and found to be equal to 20 kcal/mole. The factor of the exponential function was $3.43 \cdot 10^7$ cm^{-2}. There are 2 figures and 3 non-Soviet references.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy AN SSSR
(Institute of High-molecular Compounds AS USSR)

ADROVA, N.A.; KHOMENKOVA, K.K.

Synthesis of some derivatives of p-vinylbenzoic acid. Zhur.ob.khim. 32 no.7:2267-2268 Jl '62. (MIRA 15:7)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
(Benzoic acid)

ADROVA, N.A.; KOTON, M.M.; MOSKVINA, Ye.M.

Synthesis and ploymerization of some new derivatives of biphenyl. Izv. AN SSSR.Otd.khim.nauk no.10:1804-1807 O '62. (MIRA 15:10)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
(Butadiene) (Polymerization)

ACCESSION NR: AP4007950 S/0190/63/005/012/1817/1818

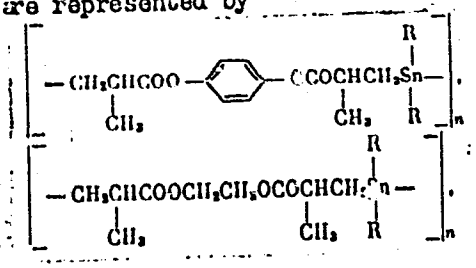
AUTHORS: Adrova, N. A.; Koton, M. M.; Klages, V. A.

TITLE: Synthesis of organometallic polymers with tin atoms in the basic chain.

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 5, no. 12, 1963, 1817-1818

TOPIC TAGS: polymer, organometallic polymer, organotin polymer, organotin, compound synthesis, tin.dihydrodibutyl-, polymer structure, polymer property, methacrylic acid, tin. dihydrodiphenyl-, ethylene glycol.methacrylic acid diester

ABSTRACT: A new tin-organic polymer has been synthesized from the reaction of R_2SnH_2 with dimethacrylate ethylene glycol and with dimethacrylate hydroquinone. The structures of the compound are represented by



where R = C_4H_9; C_6H_5.

Card 1/2

ACCESSION NR: AP4007980

The reactions were carried out in toluene, with and without initiators under atmospheric nitrogen, increasing the temperature gradually from 80 to 100-120C. The molecular weights were determined using the cryoscopic technique in benzol. Orig. art. has: 3 formulas and 1 table.

ASSOCIATION: Institut vy*sokomolekulyarny*kh soyedineniy AN SSSR (Institute of High-Molecular-Weight Compounds AN SSSR)

SUBMITTED: 26Apr62 DATE ACQ: 20Jan64 ENCL: 00

SUB CODE: CH, MA NO REF SOV: 001 OTHER: 000

Card 2/2

ADROVA, N.A.; KOTON, M.M.; KLAGES, V.A.

Preparation of organometallic polymers containing tin atoms in the main chain. Vysokom. soed. 5 no.12:1817-1818 D '63. (MIRA 17:1)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.

ACCESSION NR: AT4033978 S/0000/63/000/000/0009/0010

AUTHOR: Adrova, N. A.; Koton, M. [illegible]; Prokhorova, L. K.

TITLE: Preparation of polymers containing phenylene groups [illegible] and phosphorus atoms in the [illegible]

SOURCE: Geterotsepnyye vy[illegible] (Heterochain macromolecular compounds);

TOPIC TAGS: polymerization [illegible] metallic polymer

ABSTRACT: New metallic po[illegible] phenylenetriphenylstibine, [illegible] prepared by polycondensati[illegible] and organometallic dichlor[illegible]

in which Me is Sn, Sb or P, [illegible]

Card 1/2

ADROVA, N.A.; KHOMENKO, K.F.; DUBNOVA, A.[illegible]

Synthesis of new derivatives of p-vinyl[illegible]
ob. khim. 34 no. 5:15[illegible]

1. Institut vysokomolek[illegible]

ACCESSION NR: AT4020708 S/0000/63/000/000/0195/0197

AUTHOR: Koton, M. M.; Adrova, N. A.; Khomenkova, K. K.

TITLE: Polymerization of some derivatives of p-vinylbenzoic acid

SOURCE: Karbotsepnyye vysokomolekulyarnyye soyedineniya (Carbon-chain macromolecular compounds); sbornik statey. Moscow, Izd-vo AN SSSR, 1963, 195-197

TOPIC TAGS: polymerization, vinylbenzoic acid, vinylbenzoate, vinylbenzamide, polymer physical property, polyvinylbenzoate, dilatometry, azodiisobutyronitrile, butyl peroxide, block polymerization

ABSTRACT: Using a dilatometric method, the authors compared the block and liquid-phase polymerization rates of p-vinylbenzoic acid, its methyl and amyl esters, p-vinylbenzamide and its N-methyl, N,N-dimethyl and N-amyl derivatives, using 0.2 mol.% tert.-butyl peroxide or azodiisobutyronitrile as the initiators, respectively, at 120-180C. Some of the physical properties (thermal stability, solubility, weight loss during heating) of the polymers obtained were also studied. The polymerization rate of the derivatives of p-vinylbenzoic acid decreased in the following order: acid > amides > esters. It was found that the polymerized amides of p-vinylbenzoic acid have a higher softening point and a higher thermal stability than the corresponding polymerized esters. Orig. art. has: 1 figure

Card 1/2

ACCESSION NR: AT4020708

and 1 table.

ASSOCIATION: Institut vy*sokomolekulyarny*kh soyedineniy AN SSSR (Institute of Macromolecular Compounds, AN SSSR)

SUBMITTED: 18Jun62	DATE ACQ: 20Mar64	ENCL: 00
SUB CODE: OC	NO REF SOV: 002	OTHER: 004

Card 2/2

L 19760-65 EPA(s)-2/EWT(m)/EPF(c)/EPR/ENP(j)/T Pc-4/Pr-4/Ps-4/Pt-10 RPL
WW/RM/HCA

ACCESSION NR: AT4049864 S/0000/64/000/000/0257/0259

AUTHOR: Adrova, N. A., Koton, M. M., Khomenkova, K. K.

TITLE: Reaction of poly-p-vinylbenzoyl chloride with alcohols and amines

SOURCE: Khimicheskiye svoystva i modifikatsiya polimerov (Chemical properties and the modification of polymers); sbornik statey. Moscow, Izd-vo Nauka, 1964, 257-259

TOPIC TAGS: vinylbenzoic acid, polyvinylbenzoyl chloride, polyacyl chloride, esterification, amidation, polymer thermostability

ABSTRACT: Under reflux in tetrahydrofuran solution, poly-p-vinylbenzoyl chloride, prepared by polymerizing the monomer at 100C with 0.2 mol. % azodiisobutyronitrile, gave polymeric methyl p-vinylbenzoate with dry methanol, and poly-N-n-amyl-p-vinylbenzamide with n-amylamine. The thermal stability of the polyamide was improved by partial deamination. Yields from 1 g poly-p-vinylbenzoyl chloride and 5 ml amylamine or 10 ml methanol were 0.7 g of the benzamide or 0.8 g of the methyl ester, respectively. Triethylamine was added in both reactions to neutralize liberated HCl. Poly-N-n-amyl-p-vinylbenzamide was also prepared by a second route by polymerizing the monomer at 90C with azodiisobutyronitrile in dimethylformamide solution, yielding after approximately 19% deamination by 2 hrs. of heating at 280-300C in argon under 8-10 mm Hg pressure, a

Card 1/2

L 19760-65
ACCESSION NR: AT4049864

yellow polymer with increased thermal stability. This polymer was insoluble in "ordinary" solvents, and its properties are ascribed to its crosslinked structure. Orig. art. has: 2 tables and 2 chemical equations.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy AN SSSR (Institute of High Polymers, AN SSSR)

SUBMITTED: 10Jun63 ENCL: 00 SUB CODE: OC

NO REF SOV: 003 OTHER: 003

Card 2/2

L 11316-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 RPL WW/RM/RM

ACCESSION NR: AP4043788 S/0190/64/006/009/1493/1495

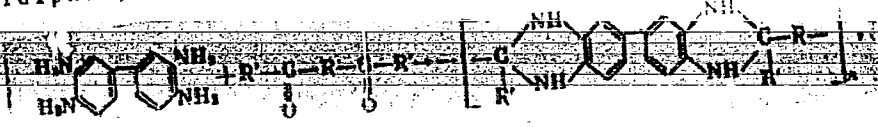
AUTHOR: Adrova, N. A.; Dubnova, A. M.; Koton, M. M.

TITLE: Preparation of new polymers with benzimidazoline groups in the backbone

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 6, no. 9, 1964, 1493-1495

TOPIC TAGS: copolymer, benzimidazole group containing copolymer, polycondenoation, thermally stable copolymer

ABSTRACT: Polymers with benzimidazoline groups in the backbone have been synthesized by polycondensation in the melt of 3, 3', 4, 4'-bi-phenyltetramine with terephthaldehyde, isophtaldehyde, their acetals, diacetyldiphenylmethane, or bis(-acetylphenyl)ether as follows:



Card 1/2

L 11316-65

ACCESSION NR: AP4043788

2

where: 1) R is C_6H_4; R', H; 2) R is $C_6H_4CH_2C_6H_4$; R', CH_3; 3) R is $C_6H_4OC_6H_4$; R', CH_3. The copolymers are insoluble and infusible [illegible] brown powders. The structure of the copolymers was confirmed [illegible] the copolymers determined by weight [illegible] at 300C, 6.8—14.5 at 400C, and 14.6—60.[illegible] at 500C. [illegible] art. has: 1 table.

[illegible] Institute of Macromolecular [illegible] AN SSSR

SUBMITTED: 04Oct63 ATD PRESS: [illegible] ENCL: 00

SUB CODE: GC, OC NO REF SOV: 002 OTHER: 005

Card 2/2

L 11357-65 EPA(s)-2/EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4/Pt-10 RPL WW/RM

ACCESSION NR: AP4045096 S/0020/64/158/001/0130/0132

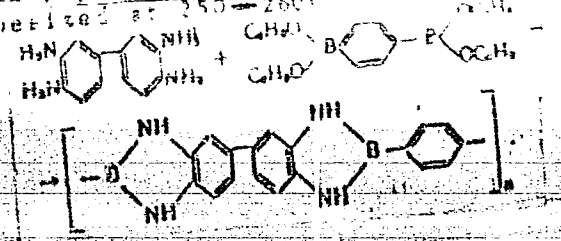
AUTHOR: Adrova, N. A.; Prokhorova, L. K.; Koton, M. M. (Corresponding member AN SSSR) B

TITLE: Preparation of polymers with bi(borabenzimidazole) rings in the backbone

SOURCE: AN SSSR. Doklady*, v. 158, no. 1, 1964, 130-132

TOPIC TAGS: heat resistant polymer, boron containing polymer, nitrogen containing polymer

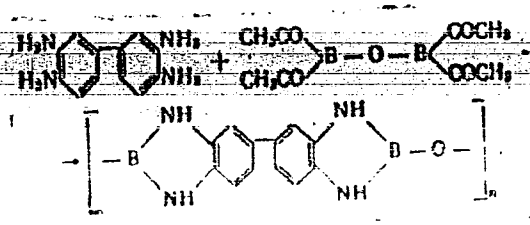
ABSTRACT: Polymers containing 6,6'-bi(2-borabenzimidazole) units alternating with p-phenylene units or oxygen atoms in the backbone have been synthesized at 250—260°



(1)

Card 1/3

L 11357-65
ACCESSION NR: AP4045096



(II)

This research, part of a study of the synthesis of heat-resistant polymers containing stiff heterocyclic rings in the backbone, was done to study the effect of backbone structure on the thermal stability of such polymers. Polymer II is the first polymer containing B-O-B units ever prepared. The polymers are infusible dark-brown powders soluble in sulfuric acid. Both polymers have low molecular weight, and both, especially II, are stable in air at 300--400C. Polymer II hydrolyzes in moist air. Orig. art. has: 2 formulas, 1 table, and 1 figure.

Card 2/3

L 11357-65
ACCESSION NR: AP4045096

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy Akademii nauk SSSR (Institute of High-Molecular-Weight Compounds, Academy of Sciences SSSR)

SUBMITTED: 04May64 ATD PRESS: 3118 ENCL: 00

SUB CODE: MT NO REF SOV: 002 OTHER: 004

Card 3/3

L 44169-65 EPF(c)/EWP(j)/EWA(c)/EWT(m) Po-4/Pr-4 RM S/0190/65/007/002/0305/0307

ACCESSION NR: AP5005599

AUTHORS: Adrova, N. A.; Koton, M. M.; Dubnova, n. M.; Moskvina, Ye. M.; Pokrovskiy, Ye. I.; Fedorova, Ye. F.

TITLE: Synthesis and properties of polybenzimidazoles containing aliphatic units in the main chain

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 2, 1965, 305-307

TOPIC TAGS: polymer, polybenzimidazole, polymer synthesis, polymer property, polycondensation

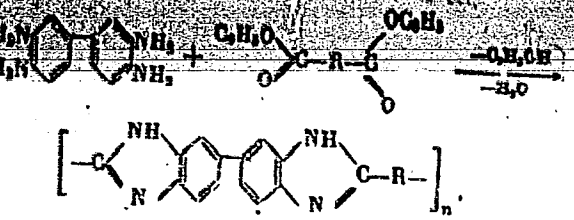
[illegible] were synthesized by poly-

0.5-1 hours [illegible] determined in 0.1-0.2% N solutions of formic acid, and the [illegible] determined by heating for one hour each at 300, 400 and 500C in air. The polycondensation occurs according to the reaction

Card 1/2

L 44169-65

ACCESSION NR: AP5005599



R = $(CH_2)_n$; n = 0, 1, 2, 3, 4, & C_6H_4.

yielding a yellowish-brown powder, soluble in formic acid and thermally stable in air and nitrogen. Polymers based on the following dicarboxyl acids were obtained: oxalic, malonic, succinic, glutaric, adipic and sebacic. Their characteristic viscosities were 0.3, 0.3, 2.2, 2.15, 3.3 and 1.5-13.0 respectively. Their weight loss at 500C was 98.5, 66.34, 71.38, 80.10, 73.94, 56.8 and 23.1% respectively. Orig. art. has: 7 figure and 1 table.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy AN SSSR (Institute of High Molecular Weight Compounds, AN SSSR)

SUBMITTED: 25Apr64 ENCL: 00 SUB CODE: OC

NO REF SOV: 001 OTHER: 002

Card 2/2

L 00992-66 EPA(s)-2/EWT(m)/EPF(c)/EWP(j)/T WW/RM

ACCESSION NR: AP5019567 UR/0191/65/000/008/0034/0038
678.742'547.785.5-416.01:539.3

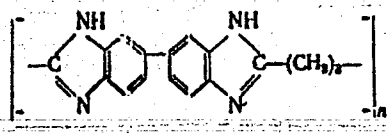
AUTHOR: Layus, L. A.; Bessonov, M. I.; Adrova, N. A.; Koton, M. M.

TITLE: Physicomechanical properties of poly-2-octamethylene-5-5'-dibenzimidazole films

SOURCE: Plasticheskiye massy, no. 8, 1965, 34-38

TOPIC TAGS: heat resistant polymer, polybenzimidazole

ABSTRACT: The mechanical properties and heat resistance of isotropic and oriented films of poly-2-octamethylene-5,5'-dibenzimidazole



films of various molecular weights have been studied in a wide range of temperatures. The films were deposited from formic acid solutions. Testing involved thermomechanical and thermogravimetric measurements and measurements of tensile strength, elon-

Card 1/2

L 00992-66

ACCESSION NR: AP5019567

3

gation, and modulus of elasticity at various temperatures. The data are given in graphic form. On the basis of the data, optimum conditions for film drying and orientation stretching were selected. The results showed that the polymer is suitable for producing high-grade polymer films. In addition to good strength, elasticity, and thermal stability, the films also showed good dielectric properties. Film mechanical strength could be considerably increased by orientation stretching in the softened state: tensile strength attained 5000 kg/cm^2 while film elasticity and flexibility met the most stringent specifications [Sic]. The polymer was considered to be of considerable interest as a material for films suitable for construction, electrical and thermal insulation purposes and for fibers suitable for long-time service at temperatures up to 200C. Orig. art. has: 9 figures and 1 formula. [SM]

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: OC,GC

NO REF SOV: 006 OTHER: 002 ATD PRESS: 4068

Card 2/2

BOLDYREV, A.G.; ADROVA, N.A.; BESSONOV, M.I.; KOTON, M.M.; KUVSHINSKIY, Ye.V.; RUDAKOV, A.P.; FLORINSKIY, F.S.

Electron paramagnetic resonance study of free radicals in polyimides. Dokl. AN SSSR 163 no.5:1143-1146 Ag '65. (MIRA 18:8)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR. 2. Chlen-korrespondent AN SSSR (for Koton).

ADROVA, N.A.; KOTON, M.M.; MOSKVINA, Ye.M.

Synthesis of new aromatic polyimides based on 3,3:4,4'-diphenyltetracarboxylic acid dianhydride. Dokl. AN SSSR 165 no.5:1069-1070 D '65. (MIRA 19:1)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
2. Chlen-korrespondent AN SSSR (for Koton). Submitted April 14, 1965.

L 01263-67 EWT(m)/T IJP(c) WW/RM

ACC NR: AP6003490 (N) SOURCE CODE: UR/0020/66/166/001/0091/0094 38 B

AUTHOR: Adrova, N. A.; Koton, M. M. (Corresponding member AN SSSR); Prokhorova, L. K.

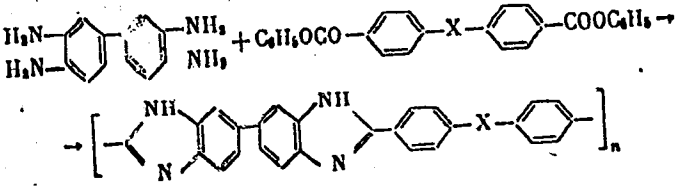
ORG: Institute of High-Molecular-Weight Compounds, AN SSSR (Institut vysokomolekulyarnykh soyedineniy AN SSSR)

TITLE: Synthesis of thermally stable polybenzimidazoles with diphenyl oxide and diphenylsulfone links in the main chain

SOURCE: AN SSSR. Doklady, v. 166, no. 1, 1966, 91-94

TOPIC TAGS: organic synthetic process, resin, thermal stability

ABSTRACT: Polybenzimidazoles were synthesized by thermal method (at 300C in argon atmospherewith subsequent heating in vacuo) according to the scheme:



where X = —O—, —SO_2—.

UDC: 541.64:54

Card 1/3

ACC NR: AP7001410 (A,N) SOURCE CODE: UR/0413/66/000/021/0110/0111

INVENTOR: Koton, M. M.; Adrova, N. A.; Dubnova, A. M.; Bessonov, M. I.; Rudakov, A. P.

ORG: none

TITLE: Preparative method for polyimides. Class 39, No. 188005 [announced by the Institute of Macromolecular Compounds AN SSSR (Institut vysokomolekulyarnykh soyedineniy AN SSSR)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 110-111

TOPIC TAGS: polyimide resin, elasticity

ABSTRACT: An Author Certificate has been issued for a preparative method for polyimides, involving the polycondensation of pyromellitic anhydride and an aromatic diamine. To produce polyimides exhibiting high elasticity, hydroquinone bis(4-aminophenyl) ether is used as the amine. [SM]

SUB CODE: 07, 11/ SUBM DATE: 07Jun65/ ATD PRESS: 5109

Card 1/1 UDC: 678.675.002.2

ACC NR: AP6006982 SOURCE CODE: UR/0190/66/008/002/0278/0281

AUTHORS: Ginzburg, B. M.; Korshavin, L. N.; Frenkel', S. Ya.; Layus, L. A.; Adrova, N. A.

ORG: Institute of High-Molecular Polymers, AN SSSR (Institut vysokomolekulyarnykh soyedineniy AN SSSR)

TITLE: Crystallinity of poly-2,2'-octamethylene-5,5'-dibenzimidazole

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 2, 1966, 278-281

TOPIC TAGS: x ray diffraction study, crystalline polymer/ URS-50I x-ray diffraction apparatus, GUR-3 goniometer

ABSTRACT: X-ray diffraction study of freshly prepared fibers and films of poly-2,2'-octamethylene-5,5'-dibenzimidazole (I) disclosed a crystalline structure of high order for that polymer, in spite of earlier observations to the contrary by the authors as well as by other workers (A. A. Izyneyev, V. V. Kurashev, V. V. Korshak, T. M. Frunze, and N. Sh. Aldarova. Izv. AN SSSR, Otd. khim. n., 1963, 2019; L. A. Layus, M. I. Bessonov, N. A. Adrova, and M. M. Koton. Plast. massy, 1965, No. 8, 34). The x-ray diffraction study was performed using instrument URS-50I with goniometer GUR-3 adjusted for measurements at small angles. It was established that a 3-hr thermal treatment at 160C results in almost total amorphization of the structure, as can be seen in Fig. 1. However, it also leads to a two-fold rise of tenacity and a

Card 1/2

UDC: 678.01:53+678.6

Card 2/2

ACC NR: AP7011355 SOURCE CODE: UR/0062/66/000/010/1824/1828

AUTHOR: Adrova, N. A.; Prokhorova, L. K.; Koton, M. M.

ORG: Institute of High-Molecular Compounds, Academy of Sciences USSR (Institut vysokomolekulyarnykh soyedineniy AN SSSR)

TITLE: Production of new polymers with dibenzophosphorimidazoline links in the principal chain

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 10, 1966, 1824-1828

TOPIC TAGS: polymer heat resistance, ester, polycondensation

SUB CODE: 07

ABSTRACT: A number of heat-resistant polymers containing dibenzophosphorimidazoline links in the principal chain were produced by polycondensation of 3,3'-diaminobenzidine with tetraphenyl esters of phosphorus-containing acids in equimolar quantities with heating for two hours in a stream of inert gas at 250-260° C. The phenyl esters included triphenoxyphosphine, diphenoxychlorophosphine, tetraphenyl ester of pentamethylene diphosphorous acid, tetraphenylpyrophosphate and tetraphenylpyrophosphite. The resultant materials show thermal stability with heating up to 400°C. The authors

Card 1/2 UDC: 54[1].64+541.6+547.7+661.718.1

0931 1735

ACC NR: AP7011355

thank Ye. I. Pokrovskiy for taking the infrared spectra of the polymers.
Orig. art. has: 2 figures, 5 formulas, 1 table. [JPRS: 40,351]

Card 2/2

ACC NR: AP7002974 (A) SOURCE CODE: UR/0413/66/000/024/0070/0070

INVENTOR: Adrova, N. A.; Bessonov, M. I.; Dubnova, A. M.; Koton, M. M.; Moskvina, Ye. M.; Rudakov, A. P.

ORG: none

TITLE: Preparative method for polyimides. Class 39, No. 189574 [announced by Institute of Macromolecular Compounds, AN SSSR (Institut vysokomolekulyarnykh soyedineniy AN SSSR)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 24, 1966, 70

TOPIC TAGS: polyimide, heat resistant material, elastic material

ABSTRACT:
An Author Certificate has been issued for a method of preparing polyimides having high elasticity and high heat resistance. The method involves polycondensation of 3,3',4,4'-biphenyltetracarboxylic dianhydride with hydroquinone bis(4-aminophenyl ether).

SUB CODE: 11/ SUBM DATE: 18Oct65/ ATD PRESS: 5112

UDC: 678.675

Card 1/1

ADROVICZ, Istvan

Deformation of the customary indexes of the working time utilization in case of reduced working time. Munka szemle 6 no.6: 18-22 Je '62.

ADRUSHKO, A. M.

32419. ADRUSHKO, A. M. MAaterialy po biologii Alsophylax pipiend (Pall). Nauch. byulleten' Leningr. gos. un-ta im. Zhdanova, No. 23, 1949, s. 35-39--Bibliogr: 9 nazv.

SO: Letopis Zhurnal'nykh Statey, Vol. 44

ADRYKHAYEV, A.Kh., dotsent

Dynamics of changes in the fundus oculi in the treatment of hypertension with apressin and ganglionic blocking agents. Sbor. nauch. trud. SOGMI no.14:170-177 '63. (MIRA 18:9)

1. Iz kafedry obshchey terapii Severo-Osetinskogo meditsinskogo instituta.

SMIRNOV, V.A.; ADSKAYA, I.N.; BAGRAMYAN, L.A.

Calculation of the gas consumption levels in planning urban gas supply systems. Gaz. prom. 6 no.9:29-33 '61. (MIRA 14:12)
(Gas distribution)

SMIRNOV, V.A., kand. tekhn. nauk; ADSKAYA, I.N., inzh.; BAGRAMYAN, L.A., inzh.; CHERKASOVA, A.Ya., inzh.

Optimum distribution of differential pressure in l-p annular systems. Ispol'. gaza v nar. khoz. no.2:133-138 '63. (MIRA 18:9)

1. Laboratoriya tekhniko-ekonomicheskikh izyskaniy Saratovskogo gosudarstvennogo nauchno-issledovatel'skogo i proyektnogo instituta po ispol'zovaniyu gaza v narodnom khozyaystve.

SMIRNOV, V.A., kand. tekhn. nauk; ADSKAYA, I.N., inzh.

Method for calculating the optimum number of gas distribution stations. Ispol'. gaza v nar. khoz. no.2:139-145 '63.
(MIRA 18:9)

1. Laboratoriya tekhniko-ekonomicheskikh izyskaniy Saratovskogo gosudarstvennogo nauchno-issledovatel'skogo i proyektnogo instituta po ispol'zovaniyu gaza v narodnom khozyaystve.

SMIRNOV, V.A.; ADSKAYA, I.N.; BAGRAMYAN, L.A.; GOLIK, V.G.

Technical and economic indices of municipal distribution of liquefied petroleum gases. Gaz.prom. 10 no.11:30-33 '65. (MIRA 19:1)

KULAKOV, D.V.; OCHKIN, F.V.; KARPOVA, V.V.; SIMAKINA, N.V.; YAGUDIN, Z.Kh.; GREBENSHCHIKOVA, N.F.; CHEREMUSHKINA, V.M.; YELISEYEV, I.A.; CHERVYAKOVA, A.P.; BEREZOV, A.A.; FEDOTOVA, A.I.; SILKINA, I.V.; NOVIKOVA, V.P.; TANOVA, V.P.; NESVETAYEVA, G.M.; ADSKAYA, V.M.; DRYUCHIN, A.P., otv. red.; KONDRASHOVA, V.I., tekhn. red.

[Economy of Saratov Province in 1960; collected statistics]Narodnoe khoziaistvo Saratovskoi oblasti v 1960 godu; statisticheskii sbornik. Saratov, Kn.stat.izd-vo,1962. 325 p. (MIRA 15:9)

1. Saratov(Province)Statisticheskoye upravleniye. 2. Nachal'nik Statisticheskogo upravleniya Saratovskoy oblasti (for Dryuchin). (Saratov Province—Statistics)

SHUROVSKIY, V.G.; VLADIMIROV, V.P.; GNATYSHENKO, G.I.; KUROCHKIN, A.F.; SHCHUROVSKIY, Yu.A.; ADSON, N.I.; GOLOVKO, V.V.

Some physicochemical properties of charges for and the products of the electric smelting of Dzhezkazgan copper concentrates. Izv.AN Kazakh.SSR.Ser.met., obog.i ogneup. no.1:8-13 '61. (MIRA 14:6)
(Dzhezkazgan—Copper—Electrometallurgy)

ONAYEV, I.A.; KUROCHKIN, A.F.; TSEFT, A.L.; ADSON, N.I.; GOLOVKO, V.V.; KRUTASOV, V.I.

Smelting of the Balkhash copper concentrates with an oxygen-enriched blow in cyclone furnaces. Vest. AN Kazakh. SSR 21 no.1:27-34 Ja '65. (MIRA 18:7)

TSEFT, A.L.; ONAYEV, I.A.; SHCHURANSKIY, V.G.; KUROCHKIN, A.F.; PANFILOV, F.F.; ADSON, N.I.; GOLOVKO, V.V.

Liquative electric smelting of Dzhezkazgan copper concentrates with the prodiction of high calcium slag. Trudy Inst. met. i obog. AN Kazakh. SSR 8:40-49 '63 (MIRA 17:8)

ACCESSION NR: AR4041618 S/0137/64/000/005/I070/I070

SOURCE: Ref. zh. Metallurgiya, Abs. 51408

AUTHOR: Kristal', M. M.; Adugina, N. A.; Sovetnikova, Ye. N.

TITLE: Investigation of corrosion stability of electric welded pipes of steel 1Kh18N9T

CITED SOURCE: Tr. Vses. n.-i konstrukt. in-t khim. mashinostr., vy*p. 45, 1963 3-15

TOPIC TAGS: corrosion, corrosion stability, electric welded pipe, welded pipe, steel pipe, intercrystalline corrosion, 1Kh18N9T steel

TRANSLATION: Electric welded pipes of steel 1Kh18N9T in state of delivery do not possess inclination to intercrystalline corrosion if they are prepared from tape not inclined to this form of disintegration. Stability of pipes against intercrystalline corrosion after tempering at 650° can be ensured by additional cold rolling of pipes and use for their manufacture of tape with content C≤0.08% and ratio of Ti:C≥5. Electric welded pipes do not possess increased inclination to

Card 1/2

L 32800-66 EWT(m)/EWP(t)/ETI IJP(c) JD/WB

ACC NR: AP6012587 (N) SOURCE CODE: UR/0314/66/000/004/0036/0039

AUTHOR: Kristal', M. M.; Khalizova, V. N.; Adugina, N. A.

ORG: none

TITLE: Corrosion resistance of two-layer metals

SOURCE: Khimicheskoye i neftyanoye mashinostroyeniye, no. 4, 1966, 36-39

TOPIC TAGS: corrosion resistance, bimetal, corrosion resistant metal

ABSTRACT: The paper reports on tests of corrosion resistance of 1) two-layer metals with the cladding layer made of the steels Kh18N10T, Kh18N12M2T, Kh17N13M2T, and OKh23N28M3D3T, 2) weld joints of the same sheets; and 3) two-layer metals with the cladding layer made of Ni, M3S copper, No. 0.4 bronze, and L90 brass. In all the cases the corrosion resistance of the two-layer metal proved to be approximately equal to the corrosion resistance of the pure metal even when the joints exhibited fissures of transcrystallite character. Some of the investigations were carried out at the NIIkhimmash in conjunction

Card 1/2 UDC: 621.9-419:620.193.001.5

GUSEYNOV, G.D.; AKHUNDOV, G.A.; ALIYEVA, M.Kh.; ADULLAYEV, G.B.

Electrophysical properties of TlSe single crystals. Izv. AN SSSR. Ser. fiz. 28 no.8:1323-1327 Ag '64 (MIRA 17:8)

ADULLAYAEV, R.N.

Principal geological and petrographical features of the Mesozoic granitoid intrusives of the north eastern Lesser Caucasus (Azerbaijan). Sov.geol. 4 no.6:58-70 Je '61. (MIRA 14:6)

1. Institut geologii AN AzSSR.
(Caucasus—Geology, Stratigraphic)

NIKOLIC, Z.; ADUM, O.; MALESEVIC, I.

Evaluation of the incidence of accidents as a basis for preventive measures in coal mining industry. Arh. hig. rada 15 no.4:405-412 '64.

1. Institut za medicinu rada , Socijalisticke Republike Srbije, Beograd.

ADUM, Ognjan, dr.

Some experiences with health education in factories. Med. glas. 18 no.3:90-91 Mr-Ap '64.

1. Institut za medicinu rada Socijalisticke Republike Srbije u Beogradu (Direktor: prof. dr. D. Karajovic); Zdravstvena stanica Radioindustrije "Nikola Tesla" u Beogradu (Upravnik: dr. O. Adum).

YUGOSLAVIA

ADUM, Dr Ognjan; and MARKOVIC, Dr Miodrag; Institute of Occupational Medicine, Socialist Republic of Serbia (Institut za medicinu rada SR Srbije) Head (Direktor) Docent Dr Milos KILIBARDA; and Medical Department of Public Transit Agency of City of Belgrade (Zdravstvena stanica Gradskog saobracajnog preduzeca) Head (Upravnik) Dr Dragan JOVANOVIC, Belgrade.

"Protecting the Health of Transportation Workers."

Belgrade, Narodno Zdravlje, Vol 21, No 8-9, 1965; pp 257-264.

Abstract : Very thorough analysis of the many reasons why traffic accidents have been increasing very sharply in both frequency and severity over the course of the recent years in Yugoslavia: professional drivers and tram or trolley or bus conductors are incredibly overworked, as some of them may work 7 days a week for months on end, often with overtime at night too; then the noise, temperature; many of these and other noxious factors are analyzed and discussed in detail, as are some proposed corrective steps. Graph, 4 tables; 5 Yugoslav and 8 Western references.

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ADUTS, G. T.

Dynamics of the activity of thiamine and riboflavin in edible green plants at various developmental stages [in Armenian with summary in Russian]. Izv.AN Arm.SSR.Biol.i sel'khoz.nauki. 4 no.5:423-429 '51. (MLRA 9:8)

(VITAMINS--B) (GREENS, EDIBLE)

ADUNTS, G.T.

Dynamics of the amount of ascorbic acid and carotenes in edible green plants at different stages of development [in Armenian with summary in Russian]. Izv.AN Arm.SSR.Biol.i sel'khoz.nauki 4 no.6: 527-532 '51. (MLRA 9:8)

(Ascorbic acid) (Carotenes) (Caucasus--Greens, edible)

ADUNTS, O.T.

Dynamics of the amount of vitamins in some cabbage varieties cultivated in Erivan [in Armenian with summary in Russian]. Izv. AN Arm.SSR.Biol.i sel'khoz.nauki. 5 no.2:83-87 '52. (MLRA 9:8)
(ERIVAN--CABBAGE) (VITAMINS)

Determination of thiamine with the aid of a photometer. G. T. Adamy[illegible]. *Doklady Akad. Nauk* [illegible] S.S.R. 10, [illegible] (in Russian). [illegible] special photometer designed by the author, light from a quartz lamp, first passed through a dark Ni glass filter, is directed into the photometric cups contg. the thiamine soln. The latter is prepd. by adding $K_3Fe(CN)_6$ to the animal or vegetable ext. and taking up the fluorescent material with iso-BuOH. Within the range of 0.0[illegible]–1.0 γ per 10 ml., the fluorescence intensity is proportional to the thiamine concn. Above that a deflection in the proportion is noticed. The claims for his procedure are economy and simplicity and elimination of false high readings due to the presence of fluorescent substances other than thiamine.

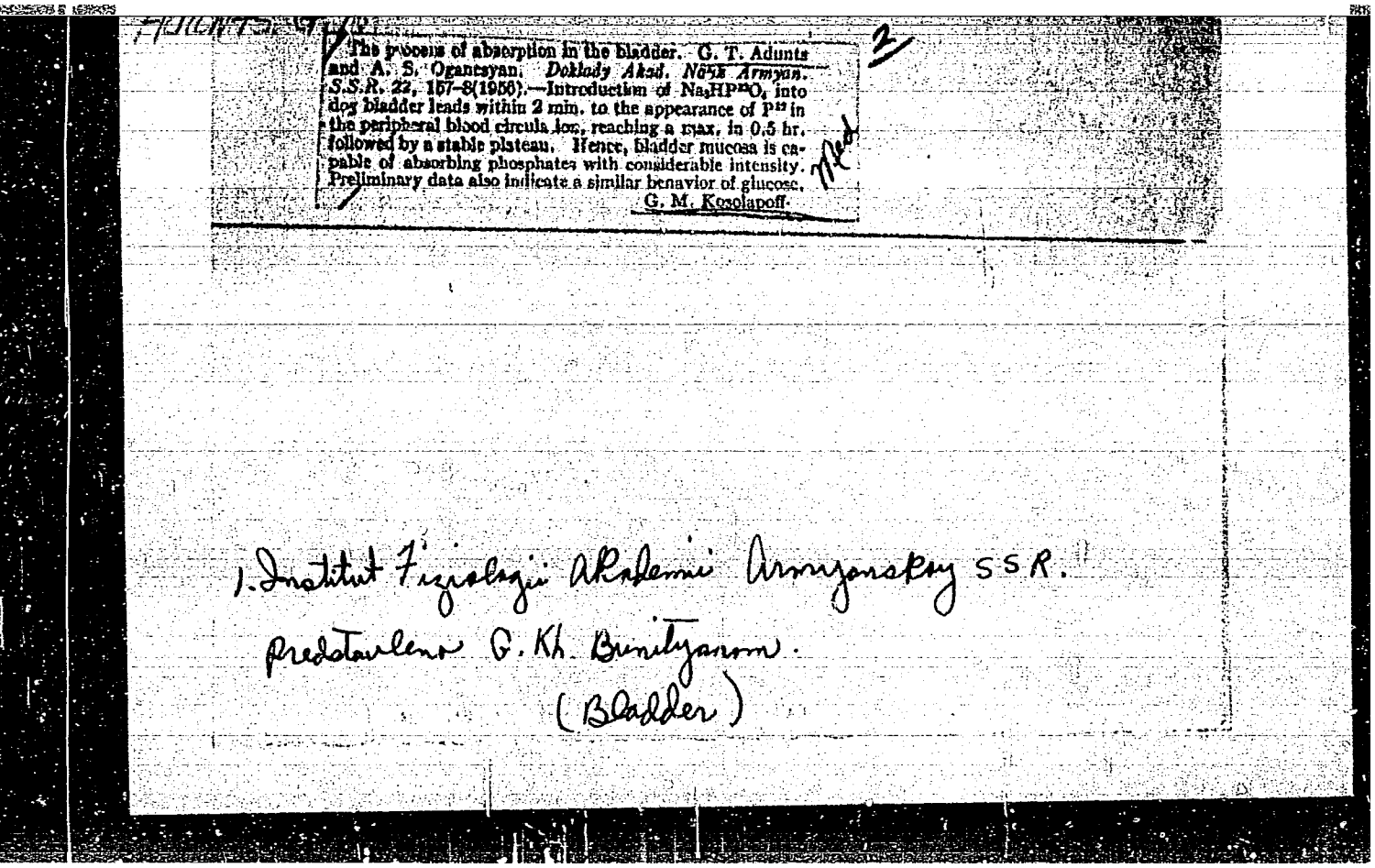
B. S. Levine

1. Inst. Fiziologii Akademii Nauk Arm. SSR.
(Thiamine)

ADUNTS, G.T.; OGANESYAN, A.S.

Effect of severing the vagus nerve on diuresis and renal filtration. Izv.AN Arm.SSR.Biol.i sel'khoz.nauki 7 no.10:65-71 O '54. (MLRA 9:8)

1. Institut fiziologii AN Armyanskoy SSR.
(VAGUS NERVE) (KIDNEYS) (DIURETICS AND DIURESIS)



The process of absorption in the bladder. G. T. Adamts and A. S. Organsyan. *Doklady Akad. Nauk Armyan. S.S.R.* 22, 157–8(1956).—Introduction of $Na_2HP^{32}O_4$ into dog bladder leads within 2 min. to the appearance of P^{32} in the peripheral blood circulation, reaching a max. in 0.5 hr. followed by a stable plateau. Hence, bladder mucosa is capable of absorbing phosphates with considerable intensity. Preliminary data also indicate a similar behavior of glucose.
G. M. Kosolapoff.

1. Institut Fiziologii Akademii Armyanskoy SSR.
Predstavlena G. Kh. Buniatyanom.
(Bladder)

USSR/Human and Animal Physiology - Sensory Organs. T-11

Abs Jour : Ref Zhur - Biol., No 7, 1958, 32253

Author : Demirchoglyun, G.G., Adunts, G.T., Avakyan, Ts.M.
Inst : -
Title : Action of Radioactive Phosphorus on the Functional Dondition of the Retina of the Eye.

Orig Pub : Izv. AN ArmSSR. Biol. i s.-kh. M., 1957, 10, No 2, 3-13.

Abstract : Immersion of a preparation of an isolated frog eye in a solution of $Na_2HP^{32}O_4$ (strength not indicated) caused stronger depression of ERG than di immersion of the same in a solution of NA_2HPO_4. Sometir s depression of ERG preceded an increase. With subcutaneous introduction of $Na_2HP^{32}O_4$, impairments of the ERG (removed also from the isolated preparation) set in only through four to ten days after the introduction. In addition, the accumulation of P^{32} was the same in the retina of an exposed and unexposed eye.

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ADUNTS, G.T.

Effect of β-radiation on glycogenic function of the liver.
Izv.AN Arm.SSR.Biol.nauki 12 no.4:49-54 Ap '59.
(MIRA 12:9)

1. Sektor biokhimii Akademii nauk ArmSSR.
(BETA RAYS--PHYSIOLOGICAL EFFECT)
(LIVER--GLYCOGENIC FUNCTION)

ADUNTS, G.T.; MERSESYAN, R.R.

Glycogen content of a chick embryo on different days of development. Izv.AN Arm.SSR, Biol.nauki 12 no.11:15-23 N '59.
(MIRA 13:5)

1. Sektor biokhimii Akademii nauk ArmSSR.
(GLYCOGEN) (EMBRYOLOGY--BIRDS)

BUNYATYAN, G.Kh.; ADUNTS, G.T.

Changes in the polyphosphatase activity with relation to inorganic polyphosphates during the development of a chick embryo. Vop. biokhim. 1:149-160 '60. (MIRA 14:12)

1. Department of Biochemistry, Academy of Sciences of Armenian S.S.R., Erevan.
(POLYPHOSPHATASE) (EMBRYOLOGY--BIRDS)

ADUNTS, G.T.; NERSESYAN, R.R.; CHALABYAN, G.A.

Activation of amylase by bile. Izv. AN Arm. SSR. Biol. nauki 13 no.10:97-99 '60. (MIRA 13:12)

1. Sektor biokhimii Akademii nauk ArmSSR.
(AMYLASE) (BILE)

ADUNTS, G.T.; ASLANYAN, I.G.

Activity of inorganic polyphosphatases. Izv. AN Arm. SSR. Biol. nauki 14 no. 4:79-85 Ap '61. (MIRA 14:4)
(PHOSPHATASES) (EMBRYOLOGY--BIRDS)

ADUNTS, G.T.; NERSESYAN, R.R.

Amylase activity of bile. Izv. AN Arm. SSR. Biol. nauki 14 no.8: 47-53 Ag '61. (MIRA 14:9)

1. Sektor biokhimii AN Armyanskoy SSR.
(AMYLASE) (BILE)

ADUNTS, G.T.

Reactivation of some phosphomonoesterases after their denaturation by heat. Vop.biokhim. 2:129-137 '6[illegible] (MIRA 15:12)

1. Institute of Biochemistry, Academy of Sciences of Armenian S.S.R., Erevan.

(Phosphatase)
(Heat—Physiological effect)

ADUNTS, G.T.

Dynamics of phosphomonoesterase activity in the development of a chicken embryo. Vop.biokhim. 2:139-152 '61. (MIRA 15:12)

1. Institute of Biochemistry, Academy of Sciences of Armenian S.S.R., Erevan.
(Phosphatase) (Embryology—Birds)

ADUNTS, G.T.; NERSESYAN, R.R.

Changes in the amylase and phosphorylase activity in the development of a chicken embryo. Vop.biokhim. 2:153-158 '61. (MIRA 15:12)

1. Institute of Biochemistry, Academy of Sciences of Armenian S.S.R., Erevan.

(Amylase) (Phosphorylase) (Embryology--Birds)

ADUNTS, G.T.

Specific differences of phosphomonoesterases. Izv. AN Arm. SSR. Biol. nauki 15 no.1:41-51 Ja '62. (MIRA 15:2)

1. Institut biokhimii AN Armyanskoy SSR.
(PHOSPHATASES)

ADUNTS, G.T.; SARKISYAN, L.V.

Change in the activity of phosphomonoesterases related to the preservation of the homogenate. Izv.AN Arm.SSR.Biol.nauki 15 no.7:13-22 Jl '62. (MIRA 15:11)
(PHOSPHATASE) (TISSUES--PRESERVATION)

ADUNTS, G.T.; SIMONYAN, A.A.

Studying the dynamics of phosphoprotein phosphatse activity during the development of a chick embryo. Izv.AN Arm.SSR.Biol.nauki 15 no.9:35-45 S '62. (MIRA 15:11)

1. Institut biokhimii AN Armyanskoy SSR.
(PHOSPHOPROTEIN PHOSPHATASE)(EMBRYOLOGY—BIRDS)

ADUNTS, G.T.; NERSESYAN, R.R.

Effect of gamma-aminobutyric acid on the phosphorylase activity.
Vop. biokhim. 3:99-105 '63. (MIRA 17:12)

1. Institute of Biochemistry, Academy of Sciences of the Armenian S.S.R., Erevan.

ADUNTS, G.T.; SARKISYAN, L.V.

Effect of adrenaline and serotonin on the activity of alkaline phosphatase of the liver and kidney. Vop. biokhim. 3:115-123 '63. (MIRA 17:12)

1. Institute of Biochemistry, Academy of Sciences of the Armenian S.S.R., Erevan.

ADUNTS, G.T.; ARAMOVA, R.A.

Effect of adrenaline on the activity of alkaline phosphatase of rat kidneys (in vivo). Vop. biokhim. 3:125-131 '63. (MIRA 17:12)

1. Institute of Biochemistry, Academy of Sciences of the Armenian S.S.R., Erevan.

ADUNTS, G.T.; ASLANYAN, I.G.

Effect of certain factors on the activity of glucose-6-phosphatase. Vop. biokhim. 3:133-146 '63. (MIRA 17:12)

1. Institute of Biochemistry, Academy of Sciences of the Armenian S.S.R., Erevan.

ADUNTS, G.T.

Fluctuations in the activity of phosphomonoesterases of various brain sections of a chicken embryo under changing pH of the medium. Izv. AN Arm. SSR. Biol. nauki 16 no.5:25-[illegible] My '63. (MIRA 17:6)

ADUNTS, G.T.; ABRAMOVA, R.A.

Effect of pain on the functional activity of alkaline phosphatase in the kidneys of white rats. Izv. AN Arm. SSR. Biol. nauki 17 no.2:21-32 F '64. (MIRA 17:8)

1. Institut biokhimii AN Armyanskoy SSR.

ADUNTS, G.T.; ASLANYAN, I.G.

Chang[illegible] the glucose-6-phosphatase (D-glucose-6-phosphate-phospho-hydrolase) activity under the influence of adrenaline in embryonic tissues of chickens. Izv. AN Arm. SSR. Biol. nauki 17 no.6:9-13 Je '64. (MIRA 17:12)

1. Institut biokhimii AN ArmSSR.

ADUNTS, G.T.; SARKISYAN, L.V.

Effect of adrenaline and serotonin on the activity of liver and kidney alkali phosphatase in a chick embryo. Izv. AN Arm. SSR. Biol. nauki 17 no.10:53-57 O '64. (MIRA 18:8)

1. Institut biokhimii AN ArmSSR.

AIDUNTS, G.T.; ASLANYAN, L.G.

Dynamics of the activity of adenosinetriphosphatase and inorganic tetrametaphosphatase in the process of development. Izv. AN Arm. SSR. Biol. nauki 18 no.5:22-28 My '65. (MIRA 18:7)

1. Institut biokhimii AN Armyanskoy SSR.

ADUNTS, G.T.; ABRAMOVA, R.A.

Effect of pain on the functional activity of alkaline phosphatase in the kidneys of white rats. Izv. AN Arm. SSR. Biol. nauki 17 no.2: 21-32 F '64. (MIRA 17:8)

1. Institut biokhimii AN Armyanskoy SSR.