"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

L 19444-63
ACCESSION NR: AP3006747

The acetylacetonate complex yielded a polymer with molecular weight 12,000 which melts at about 120C and is hydrolyzed in air to form a brittle insoluble product. The benzoylacetonate complex yielded a polymer with molecular weight 900 which is soluble in methyl alcohol, benzene, acetone, and dimethylformamide. Orig. art. has: 4 formulas.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Organoelemental Compounds, AN SSSR)

SUBMITTED: 23Dec61 DATE ACQ: 30Sep63 ENCL: 00

SUB CODE: CH NO REF SOV: 003 OTHER: 000

4/4

Card 4/4

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

MEDVED', T.Ya.; FRUNZE, T.M.; KHU CHIN-MEY; KURASHEV, V.V.; KORSHAK, V.V.; KABACHNIK, M.I.

Organophosphorus polyamides based on methyldi-(m-aminophenyl)phosphine oxide. Vysokom.soed. 5 no.9:1309-1314 S '63. (MIRA 17:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

KORSHAK, V.V.; BEKASOVA, N.I.; CHIKISHEV, Yu.G.; ZAMYATINA, V.A.; TSETLIN, B.L.; RAFIKOV, S.R.

Radiation synthesis of borazole-based polymers. Vysokom. soed. 5 no.10:1447-1450 O '63. (MIRA 17:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

KORSHAK, V.V.; SERGEYEV, V.A.; SURNA, Ya.A.; PERNIKIS, R.Ya.

Polyethers of levoglucosan. Part 3: Polymers of trimethyllevoglucosan. Vysokom.soed. 5 no.11:1593-1596 N '63. (MIRA 17:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR i Institut lesokhozyaystvennykh problem i khimii drevesiny AN Latviyskoy SSR.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP3012237 S/0190/63/005/011/1597/1602

AUTHORS: Korshak, V. V.; Sergeyev, V. A.; Shitikov, V. K.; Burenko, P. Sh.

TITLE: Isomeric polymerization of aliphatic diazo compounds

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 5, no. 11, 1597-1602

TOPIC TAGS: polymerization, polymerization mechanism, isomeric polymerization, isomer polymerization, isomerizational polymerization, diazo compound, aliphatic diazo compound, absorption spectrum, infrared absorption spectrum, infrared spectroscopy, infrared spectrum, polymer, copolymer, polybenzylidene, methane.4-methylphenyldiazo-, methane.4-methylbenzenediazo-, heat resistant polymer, thermostable polymer, methane.phenyldiazo-, benzenediazomethane, thermomechanical property, compressive strength, compression curve, thermomechanical compression curve, methane.diazo-, polyethylidene

ABSTRACT: The aim of the present investigation consisted in elucidating the structure of polymers and copolymers obtained via cleavage of certain diazo compounds by means of boron fluoride ethyl ether and tributylboron catalysts. The issuing materials included diazo-methane, phenyldiazomethane and 4-methylphenyl-

Card 1/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP3012237

diazomethane (4MPD), which were prepared by standard procedures, as was the phenyldiazomethane-diazomethane (PD) copolymer. The obtained polymers and copolymers were subjected to infrared spectroscopy and proton resonance spectroscopy from solutions in carbon tetrachloride. The spectrum of the PD copolymer showed an increased intensity of the absorption bands in the 2930 and 2855 cm^{-1} region, as compared with those of polybenzylidene, which correspond to the 2926 and 2853 cm^{-1} valency oscillation frequencies of methylene groups. A similar intensification of bands corresponding to the methylene groups was observed in the spectrum of the 4MPD polymer, besides showing the characteristic absorption bands for the methyl group. A peak corresponding to methylene groups appeared also on the proton resonance spectrum. The authors assume that the formation of methylene groups is due to partial isomerization of the benzylidene group during the polymerization process, the methylene and phenylene groups appearing in the main chain. Thermal stability studies within a 50-300C range revealed the 4MPD polymer to be the most resistant, almost equaling polybenzylidene, while the PD copolymer's compression modulus was most affected by temperature, which was attributed to a higher content in methylene groups. Thanks are given to G. A. Sidorov for the taking of infrared spectra, and to E. I. Fedin and A. P. Petrovskiy for the proton resonance spectra. Orig. art. has: 1 formula and 3 charts.

Card 2/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP3012237

ASSOCIATION: Institut elementoorganicheskikh soedineniy AN SSSR (Institute of Elementoorganic Compounds, AN SSSR)

SUBMITTED: 15Feb62 DATE ACQ: 22Nov63 ENCL: 00

SUB CODE: CH, MA NO REF SOV: 003 OTHER: 019

Card 3/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

KORSHAK, V.V.; VINOGRADOVA, S.V.; U BAN-YUAN' [Wu Pang-yuan]

Heterochain polyesters. Part 46: Preparation of polyamido-arylates based on isophthalyl chloride, p,p'-dihydroxy-2,2-diphenylpropane, and hexamethylenediamine by interfacial polycondensation. Vysokom. soed. 5 no.12:1765-1770 D '63. (MIRA 17:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4007975 S/0190/63/005/012/1771/1775

AUTHORS: Korshak, V. V.; Vinogradova, S. V.; Vinogradov, M. G.

TITLE: Study of coordination polymers. Report 17. Effect of different factors on the polycoordination process

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 5, no. 12, 1963, 1771-1775

TOPIC TAGS: chelate polymer, coordination polymer, polycoordination, diphenyloxide. 4.4'-bis(acetoacetyl)-, beryllium acetylacetonate, beryllium chelate polymer, metal chelate polymer, inner complex, inner complex polymer

ABSTRACT: The influence of various factors such as solvent species, temperature, time-duration of reaction, the concentration and proportion of the initial substances, as well as of additives, upon the polycoordination process of 4.4'-bis-(acetoacetyl) diphenyloxide and beryllium acetylacetonate in solution has been investigated. Reduced viscosity versus temperature curves in a range 160-240C for a solution of beryllium in dimethylformamide are given. At 250C a viscosity curve is obtained for the same solution as a function of polycoordination duration between 2 to 10 hours. A small excess of beryllium acetylacetonate is shown to

Card 1/2

ENCL: 00

SUBJ: OH, MA NO REF SOV: 004 OTHER: 000

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R00082493000

Card 2/2

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP3001572 S/0191/63/000/006/0009/0011

AUTHOR: Korshak, V. V.; Mozgova, K. K.; Krukovskiy, S. P.

TITLE: Preparation of graft copolymers. Graft copolymers of polyethyleneterephtalate (lavsan) and styrene.

SOURCE: Plasticheskiye massy, no. 6, 1963, 9-11

TOPIC TAGS: graft copolymers, polyethyleneterephtalate, lavsan, styrene, oxidative destruction, ozonization, copolymer viscosity

ABSTRACT: Lavsan films were treated with ozone for varying lengths of time and then grafted with styrene. The yield of copolymer depends on the duration of the ozonization and of the copolymerization. The ozonization is accompanied by progressive oxidative destruction of the polymer and it is concluded in a discussion of the mechanism that the benzene rings also are cleaved to give oxygen-rich compounds. The highest copolymer viscosity was obtained when approximately 100-110% of styrene was grafted to the film. Orig. art. has 2 tables and 4 figures.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 01Jul63 ENCL: 00

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

L 12725-63 EPF(c)/EWP(j)/EWT(m)/BDS ASD Pr-4/Pc-4 RM/WW
ACCESSION NR: AP3002291 S/0062/63/000/006/1095/1100

65
64

AUTHOR: Korshak, V. V.; Gribova, I. A.; Andreyeva, M. A.

TITLE: Research on organophosphorous polymers. Report 28. Transesterification of dialkyl esters of phosphinic acids with various glycols

SOURCE: AN SSSR. Izv. Otdeleniye khimicheskikh nauk, no. 6, 1963, 1095-1100

TOPIC TAGS: transesterification, organophosphorous polymers, dialkyl ester phosphinic acid, dibutyl methanephosphinate, dimethyl methanephosphinate, eicosamethylene glycol

ABSTRACT: Dibutyl and dimethyl methanephosphinate were synthesized from the acid chloride and transesterified with diethylene, hexamethylene, and eicosamethylene glycol. A number of acidic and basic catalysts were tried. Metallic sodium gave the best results. The effect of variations in temperature and length of heating was studied. At the temperature required for the reaction to proceed, some decomposition, contaminating the product with an acidic impurity, was unavoidable. The products obtained with diethylene and hexamethylene glycol are dense, viscous liquids composed mainly of trimers and tetramers, soluble in chloroform, cresol, and acetic acid, and insoluble in benzene, dichloroethane, carbon tetrachloride,

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

L 12725-63
ACCESSION NR: AP3002291

ether, and petroleum ether. In the reaction of the dibutyl ester with eicosamethylene glycol, a mixed monomeric ester was obtained. Orig. art. has: 4 tables.

ASSOCIATION: Institut elementoorganicheskhikh soyedineniy Akademii nauk SSSR (Institute of Organoelemental Compounds, Academy of Sciences SSSR)

SUBMITTED: 29Jun62 DATE ACQ: 16Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 009 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

L 12724-63 EPF(c)/EWP(j)/EWT(m)/BDS AFFTC/ASD Pr-4/Pc-4 RM/WW

ACCESSION NR: AP3002292 S/0062/63/000/006/1100/1105

67
66

AUTHOR: Korshak, V. V.; Sergeyev, V. A.; Pokrikyan, V. G.

TITLE: Polymerization of styrene previously irradiated in the presence of atmospheric oxygen

SOURCE: AN SSSR. Izv. Otdeleniye khimicheskikh nauk, no. 6, 1963, 1100-1105

TOPIC TAGS: polymerization, styrene, irradiation, atmospheric oxygen, peroxide, polymer, molecular weight

ABSTRACT: Styrene was irradiated with x-rays while air was bubbled through. The treated monomer was then polymerized. The effect of radiation dosage and temperature on peroxide content of monomer and of the same variables and time on the rate of formation and molecular weight of the polymer was studied. During the polymerization, the molecular weight of the product increases continuously reaching higher values than in polymerizations using benzoyl peroxide as initiator. This is attributed to the breakdown of polyperoxide sequences derived from the polyperoxide initiator produced by irradiation in the presence of oxygen and incorporated in the main polystyrene chain. Orig. art. has: 5 tables and 7 figures.

Association: Inst. of Organoelemental Compounds, Academy of Sciences SSSR

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

L 12723-63 EPR/EPF(c)/EWP(j)/EWT(m)/BDS ASD Ps-4/Pr-4/Pc-4 RM/WW

ACCESSION NR: AP3002293 S/0062/63/000/006/1106/1109

72

AUTHOR: Pokrikyan, V. G.; Sergeyev, V. A.; Korshak, V. V.

TITLE: Preparation of block copolymer of polystyrene and methyl methacrylate

SOURCE: AN SSSR. Izv. Otdeleniye khimicheskikh nauk, no. 6, 1963, 1106-1109

TOPIC TAGS: block copolymer, polystyrene, methyl methacrylate, polymeric peroxides

ABSTRACT: Polystyrenes, obtained by polymerization of styrene previously irradiated in the air and containing fragments of polymeric peroxides, were used for the synthesis of block copolymers. The formation of a block copolymer containing 7% of polystyrene and 24% polymethyl methacrylate by heating a 20% solution of polystyrene in methyl methacrylate for 5 hours at 95 degrees was confirmed by fractionation and turbidimetric analysis. Polystyrene obtained with benzoyl peroxide did not give any copolymer. Orig. art. has: 2 figures and 6 tables.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy, Akademii nauk SSSR (Institute of Organoelemental Compounds, Academy of Sciences SSSR)

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

L 13364-63 EPF(c)/EPR/EWP(j)/BDS/EWT(m) AFFTC/ASD Pr-4/Ps-4/
Pc-4 RM/WW

ACCESSION NR: AP3005299 S/0191/63/000/007/0003/0007

72

AUTHORS: Korshak, V. V.; Mozgova, K. K.; Krukovskiy, S. P.

TITLE: Preparation of graft-copolymers of polyethyleneterephthalate (Dacron) and methylmethacrylate.

SOURCE: Plasticheskiye massy, no. 7, 1963, 5-7

TOPIC TAGS: graft-copolymer, polyethyleneterephthalate, dacron, methylmethacrylate

ABSTRACT: The process of preparation of graft copolymers of dacron and methylmethacrylate and the study of their properties has been investigated. Prior to reaction, the samples of dacron were first activated by heating them in an atmosphere of air or ozone, afterwards the films were heated to a temperature of 700 with methylmethacrylate. The investigation of the graft copolymerization process, described above, showed that the quantity of grafted polymethylmethacrylate primarily depends on two factors: the length of activation of dacron and the time duration of copolymerization. It was observed that the maximum quantity of grafted polymethlmethacrylate is obtained when the dacron film activated in air is heated only for a short period of time. The increase of activation time results in the decrease of grafted polymer. In case of activation of the dacron film

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

L 13364-63

ACCESSION NR: AP3003299

in ozone, the quantity of grafted polymethylmethacrylate increases with an increase of ozone activation time. The grafted copolymers vary from one another by their density which is dependent on the applied method of activation of the film. Orig. art. has: 1 table and 3 figures.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 30Jul63 ENCL: 00

SUB CODE: CH NO REF SOV: 009 OTHER: 009

2/2

Card

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

VASNEV, V.A.; SOSIN, S.L.; KORSHAK, V.V.

Study of the reaction of fatty and aromatic acid nitriles with tertiary butyl peroxide. Izv. AN SSSR. Ser.khim. no.7:1312-1319 Jl '63. (MIRA 16:9)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Nitriles) (Butyl peroxide)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

VAL'KOVSKIY, D.G.; SOSIN, S.L.; KORSHAK, V.V.

Study of tert-butyl peroxide decomposition and the reactions of radicals formed in the synthesis of polydiphenylmethylene. Izv. AN SSSR. Ser.khim. no.7:1319-1327 Jl '63. (MIRA 16:9)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(butyl peroxide) (Polymers) (Radicals (Chemistry))

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

SLADKOV, A.M.; KORSHAK, V.V.; MAKHSUMOV, A.G.

Synthesis of polyesters with acetylenic bonds in their chain. Izv. AN SSSR. Ser.khim. no.7:1343-1345 Jl '63. (MIRA 16:9)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Esters) (Polymers) (Acetylene compounds)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

VASNEV, V.A.; SOSIN, S.L.; KORSHAK, V.V.

Synthesis of polymers from diphenylmethane derivatives by means of polyrecombination reaction. Izv.AN SSSR.Ser.khim. no.8: 1487-1496 Ag '63. (MIRA 16:9)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Polymers) (Methane)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

KORSHAK, V.V.; ZAMYATINA, V.A.; BEKASOVA, N.I.; OGANESYAN, R.M.; SOLOMATINA, A.I.

Polyesters of boric acid. Izv.AN SSSR.Ser.khim. no.8:1496-1502 Ag '63. (MIRA 16:9)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Boric acid) (Esters)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

KORSHAK, V.V.; BEKASOVA, N.I.; CHURSINA, L.M.; ZAMYATINA, V.A.

Reaction of 1,2-diphenyldiborane with amines and organoborodiamines. Izv. AN SSSR. Ser.khim. no.9:1645-1648 S '63. (MIRA 16:9)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Diborane) (Amines) (Boron organic compounds)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

KORSHAK, V.V.; ZAMYATINA, V.A.; BEKASOVA, N.I.

Polycondensation of 1,2-diphenyldiborane with diamines. Izv. AN SSSR. Ser.khim. no.9:1648-1651 S '63. (MIRA 16:9)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Diborane) (Amines)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

KORSHAK, V.V.; GRIBOVA, I.A.; ANDREYEVA, M.A.

Phosphorus-containing thermosetting resins. Plast.massy no.10: 11-12 '63. (MIRA 16:10)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

KASATOCHKIN, V.I.; SLADKOV, A.M.; KUDRYAVTSEV, Yu.P.; SMUTKINA, Z.S.; KHRENKOVA, T.M.; KORSHAK, V.V.

Properties of polyacetylenes. Izv. AN SSSR Ser.khim. no.10:1766-1771 O '63. (MIRA 17:3)

1. Institut elementoorganicheskikh soyedineniy AN SSSR i Institut goryuchikh iskopayemykh.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

KORSHAK, V.V.; SLADKOV, A.M.; KUDRYAVTSEV, Yu.P.; MAKHSUMOV, A.G.

Synthesis of polyesters containing acetylenic bonds in the chain.
Izv. AN SSSR Ser.khim. no.10:1852-1853 O '63. (MIRA 17:3)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

KORSHAK, V.V.; SOLOMATINA, A.I.; BEKASOVA, N.I.; ZAMYATINA, V.A.

Polycondensation of trimeric dimethylphosphinoborine with boron-substituted borazoles. Izv. AN SSSR Ser.khim. no.10:1856-1857 O '63. (MIRA 17:3)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

KORSHAK, V.V.; MOZGOVA, K.K.; BABCHINITSER, T.M.

Preparation of graft copolymers. Part 14: Copolymers of polytrifluoroethylene and vinyl monomers. Vysokom. soed. 5 no.10:1451-1456 O '63. (MIRA 17:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

IZYNEYEV, A.A.; KORSHAK, V.V.; FRUNZE, T.M.; KURASHEV, V.V.

Preparation of polymers by polycyclization. Report No.2: Study of the formation of polybenzimidazoles. Izv. AN SSSR Ser.khim. no.10:1828-1836 O '63. (MIRA 17:3)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

IZYNEYEV, A.A.; KORSHAK, V.V.; FRUNZE, T.M.; ALDAROVA, N.Sh.; KURASHEV, V.V.

Preparation of polymers by polycyclization reaction. Report No.3: Properties of polybenzimidazole obtained from 3,3-diaminobenzidine and diphenyl ester of sebacic acid. Izv. AN SSSR. Ser. khim. no.11:2019-2023 N '63. (MIRA 17:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

VINOGRADOV, M.G.; VINOGRADOVA, S.V.; DAVIDOVICH, Yu.A.; KORSHAK, V.V.

Coordination polymers. Report No.19: Properties of an inner-complex beryllium-containing polymer based on 4,4'-bis (acetoacetyl) diphenyl oxide. Izv. AN SSSR. Ser. khim. no.11: 2023-2027 N '63. (MIRA 17:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

SLADKOV, A.M.; UKHIN, L.Yu.; KORSHAK, V.V.

Reaction of copper acetylides with halogen compounds.
Izv. AN SSSR. Ser. khim. no.12:2213-2215 D '63.
(MIRA 17:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

KORSHAK, V.V.

KORSAHK, V.V.; FRUNZE, T.M.; KURASHEV, V.V.; IZYNEYEV, A.A.

Reactions involved in the formation of polybenzimidazoles.
Dokl.AN SSSR 149 no.1:104-106 Mr '63. (MIRA 16:2)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
2. Chlen-korrespondent AN SSSR (for Korshak).
(Benzimidazole) (Polymerization)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

SOSIN, S.L.; KORSHAK, V.V.; ALEKSEYEVA, V.P.

Polymers and copolymers of derivatives of ferrocene obtained by the polyrecombination method. Dokl. AN SSSR 149 no.2:327-329 Mr '63. (MIRA 16:3)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
2. Chlen-korrespondent AN SSSR (for Korshak).
(Ferrocene) (Polymerization)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

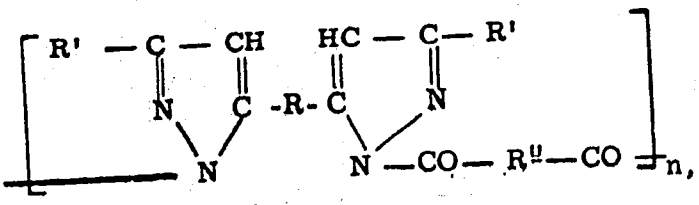
KORSHAK, V. V.

AID Nr. 982-10 4 June

SYNTHESIS OF POLYPYRAZOLES (USSR)

Korshak, V. V., Ye. S. Krongauz, A. M. Berlin, and P. N. Gribkova.
IN: Akademiya nauk SSSR. Doklady, v. 149, no. 3, 21 Mar 1963, 602-605.
S/020/63/149/003/020/028

Four polypyrazoles (I) with alternating pyrazole rings in the backbone, of the type



Card 1/5

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

AID Nr: 982-10 4 June

SYNTHESIS OF POLYPYRAZOLES [Cont'd] S/020/63/149/003/020/028

where

No.	R	R'	R''	m.p., °C	Reaction temperature and pressure, °C/mm Hg
1	C_6H_4—O-C_6H_4	CH_3	$(CH_2)_4$	210-220	200-210/1
2	C_6H_4 $(CH_2)_2$ C_6H_4	CH_3	$(CH_2)_4$	218-225	200/10^{-4}
3	$(CH_2)_8$	C_6H_5	$(CH_2)_4$	100-120	225-235/1
4	C_6H_4 $(CH_2)_2$ C_6H_4	CH_3		260-280	250/1

have been synthesized for the first time by the reaction of bis(diketones) of the type R' $COCH_2CO$-R-$COCH_2COR'$ (II) with dicarboxylic acid dihydrazides

Card 2/5

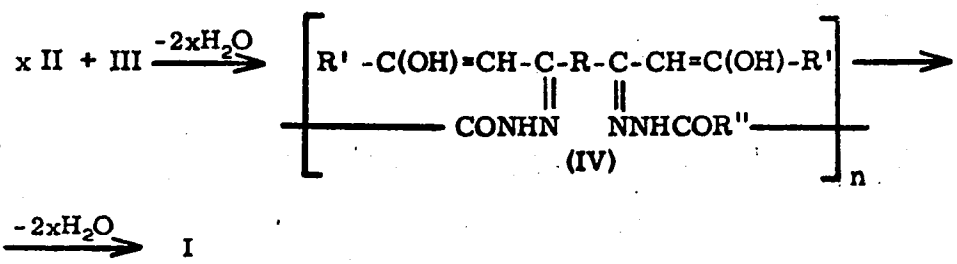
APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

AID Nr. 982-10 4 June

SYNTHESIS OF POLYPYRAZOLES[Cont'd] S/020/63/149/003/020/028

of the type $NH_2NHCO-R''-CONHNH_2$ (III). Polymers I are formed as a result of pyrazole ring closure (polycyclization) which occurs in two steps as follows:



The first step is the formation of a polyhydrazone (IV) from an equimolar mixture of II and III in boiling absolute ethanol. Compounds IV are green powders soluble in common organic solvents and do not have a sharp melting point. The reduced viscosity of 0.5% IV in cresol was as high as 0.4. The second step of the reaction is the ring closure of IV to form I in quantitative

Card 3/5

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

AID Nr. 982-10 4 June

SYNTHESIS OF POLYPYRAZOLES [Cont'd] S/020/63/149/003/020/028

yields when IV is heated for 3 to 5 hrs at its melting point in an N_2 atmosphere under reduced pressure. Polymers I are yellow powders of mol. wt. 9200, soluble in cresol, dimethylformamide, concentrated H_2SO_4, and formic acid. Upon ring closure the polymer chain of IV decreases in length, causing a drop of reduced viscosity in cresol from 0.4 to 0.1. It is noted that the synthesis of I can be achieved in one step by the reaction of bis(4-acetoacetylphenyl) ethane with adipic acid dihydrazides in boiling benzyl alcohol. The structures of I and IV were determined by elemental analysis, IR and UV spectroscopy, and analysis of their alkaline or acid hydrolysis products. In the UV spectra of I and IV obtained from sebacyldiacetophenone, a bathochromic shift of 40 mμ was observed with respect to 4,4'-bis[3-(5-methyl-N-acetylpyrazolyl)]diphenylethane and 4,4'-bis(acetoacetyl)-diphenylethane acetylhydrazone. Prolonged

Card 4/5

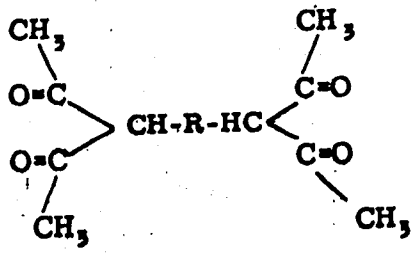
APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

AID Nr. 982-10 4 June

SYNTHESIS OF POLYPRAZOLES [Cont'd] S/020/63/149/003/020/028

treatment of polymers I with concentrated H_2SO_4 yielded a mixture of unidentified sulfonated products. Basic hydrolysis of I or IV in an aqueous 25% KOH solution boiling for 12 hrs caused backbone degradation. Bis(diketones) of the structure



where R = -, or CH_2, form polyhydrazones which could not be converted to the polypyrazoles. [NI]

Card 5/5

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

KORSHAK, V.V., nauchnyy sotrudnik; MOZGOVA, K.K., nauchnyy sotrudnik; YEGOROVA, Yu.V., nauchnyy sotrudnik; TOKAR', Ye.G., nauchnyy sotrudnik; ROZOVA, T.S., nauchnyy sotrudnik; Prinimala uchastiye KUCHINA, L.F.

Using the method of graft copolymerization ofr the modification of wool characteristics. Tekst. prom. 23 no.7:64-66 Jl '63. (MIRA 16:8)

1. Institut elementoorganicheskiky soyedineniy AN SSSR (for Korshak, Mozgova, Yegorova). 2. TSentral'nyy nauchno-issledovatel'skiy institut sherstyanoy promyshlennosti (for Tokar', Rozova). 3. Starshiy laborant khimiko-tekhnologicheskoy laboratorii TSentral'nogo nauchno-issledovatel'skogo instituta sherstyanoy promyshlennosti (for Kuchina).
(Yarn—Testing)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

KORSHAK, V.V.; MOZGOVA, K.K., kand. khim. nauk

Graft copolymers. Vest. AN SSSR 33 no.10:37-42 O '63. (MIRA 16:11)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
2. Chlen-korrespondent AN SSSR (for Korshak).

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

KORSHAK, V.V.; SERGEYEV, V.A.; SHLEYFMAN, R.B.

"Kaprolit." Priroda 52 no.10:98-100 '63. (MIRA 16:12)

1. Institut elementoorganicheskikh soyedineniy AN SSSR, Moskva.
2. Chlen-korrespondent AN SSSR (for Korshak).

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

L 17232-63 BDS/EWT(m)/EPR/EWP(j)/EPF(c)--AFFTC/ASD--Ps-4/Pc-4/
Pr-4--RM/WW/MAY

ACCESSION NR: AP3006594 S/0020/63/151/006/1332/1334

AUTHOR: Korshak, V. V. (Corresponding member, AN SSSR); Mozgova, K. K.; ~~Bebchinitser, I. M.~~

TITLE: Preparation of graft copolymers. Copolymers of polytetrafluoroethylene and methyl methacrylate

SOURCE: AN SSSR. Doklady*, v. 151, no. 6, 1963, 1332-1334

TOPIC TAGS: polytetrafluoroethylene, teflon, methyl methacrylate, copolymer, polytetrafluoroethylene poly(methyl methacrylate) copolymer, silent electrical discharge, activation, adhesive strength, silent electrical discharge activation, infrared spectra, graft copolymer, polymer metal adhesion, activation mechanism, property modification

ABSTRACT: Copolymerization of methyl methacrylate with films of polytetrafluoroethylene (PTFE) preactivated by the silent-discharge method have been studied in an attempt to improve the poor adhesive properties of PTFE. The elemental composition, infrared spectra,

Card 1/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

L 17232-63

ACCESSION NR: AP3006594

and adhesion to metals of the graft copolymers were determined. The PTFE film was activated by silent discharge (frequency, 50 cps; voltage, 22—30 kv) in a mixture of air and oxygen for 10—30 min in a specially constructed apparatus. The activated PTFE film was then placed in a vessel containing methyl methacrylate, and bulk polymerization of the methyl methacrylate was conducted at 85—90C, to a degree of conversion of 4—5%. The film was then treated with boiling dichloroethane and acetone to remove the homopolymer and dried to constant weight. The properties of the dry film were determined and compared with the properties of the initial PTFE. Table 1 of the Enclosure shows the results of the grafting of methyl methacrylate to a PTFE film 40 μ thick. In individual experiments yields of 7—8% on the initial PTFE were obtained for the grafted layer. Comparison of the infrared spectra of the initial and the grafted PTFE shows two new absorption bands, 3000 cm^{-1} and 1450 cm^{-1}, for the latter, corresponding to the valency and deformation vibrations of the CH_3 groups. The grafted PTFE-to-steel adhesive bond strength ranged from 5 to 25 kg/cm^2, depending on the amount of methyl methacrylate grafted. It was assumed that

Card 2/4

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Organoelemental Compounds, Academy of Sciences SSSR)

SUBMITTED: 20Nov62 DATE ACQ: 27Sep63 ENCL: 00

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-

SUB CODE: CH, MA NO REF SOV: 001 OTHER: 002

Card 3/4

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

KORSHAK, V.V.; SOSIN, S.L.; VASNEV, V.A.

Synthesis of polymers from the nitriles of aromatic and fatty acids by polyrecombination reaction. Dokl. AN SSSR 152 no.4: 872-874 O '63. (MIRA 16:11)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
2. Chlen-korrespondent AN SSSR (for Korshak).

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

KORSHAK, V.V.; KRONGAUZ, Ye.S.; BERLIN, A.M.

New method for the production of polypyrazoles. Dokl. AN SSSR 152 no.5:1108-1110 O '63. (MIRA 16:12)

1. Institut elementoorganicheskikh soyedineniy AN SSSR. 2. Chlen-korrespondent AN SSSR (for Korshak).

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

KASATOCHKIN, V.I.; SLADKOV, A.M.; ASEYEV, Yu.G.; KUDRYAVTSEV, Yu.P.; YEGOROVA, O.I.; KORSHAK, V.V.

Infrared spectra of polyynes. Dokl. AN SSSR 153 no.2:346-349 N '63. (MIRA 16:12)

1. Institut goryuchikh iskopayemykh AN SSSR i Institut elementoorganicheskikh soyedineniy AN SSSR. 2. Chlen-korrespondent AN SSSR (for Korshak).

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

[illegible]

[illegible] Abs [illegible]

[illegible]dkov, A.M., Korshak, V.V., Maksumov, A.G.

[illegible] of simple polyethers with [illegible]

[illegible] Dokl. AN UzSSR, no. 12, 1963, 28-31

[illegible]

[illegible] Polyethers were obtained from [illegible]

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

L 19854-65

ACCESSION NR: AR4048158

the monomers and polymers are presented. V.F.

SUB CODE: OC ENCL: 00

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

EPA(s)-2/EWP(j)/EWT(m)/T [illegible]

ACCESSION NR: AT5002111 S/0000/64/000/000/0063/0066

AUTHOR: Korshak, V.V.; Frunze, T.M.; Kurashev, V.V.; Medved', T.Ya.; Pomkarpov, Yu. M.; Hu, Ch'ing-mei; Kabachnik, M.I.

TITLE: Synthesis of certain phosphorus-containing monomers

SOURCE: AN SSSR. Institut neftekhimicheskogo sinteza. Sintez i svoystva monomerov [illegible] synthesis and properties of monomers). Moscow, Izd-vo Nauka, 1964, 63-66

TOPIC TAGS: polyamide, aromatic dicarboxylic acid, aromatic diamine, organophosphorus compound, polycondensation, aliphatic diamine, phosphine derivative

ABSTRACT: The authors synthesized a series of phosphorus-containing bifunctional monomers of the type of aromatic dicarboxylic acids or amines, e.g. the oxides of phenyl- and methyldi-(m-carboxyphenyl)-phosphine and of phenyl- and methyldi-(m-aminophenyl)-[illegible] The monomers were then utilized for the synthesis of polyamides by the methods of [illegible] and inter-phase polycondensation. A large number of polyamides were ob-[illegible] the phosphorus-containing dicarboxylic acids with aliphatic and aromatic diam-[illegible] the phosphorus-containing [illegible] dicarboxylic acids [illegible] amides were capable of fiber- and film-forming [illegible] mechanical properties. The polyamides were comparable to polymers of the type of polyhexamethylenediamine

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

L 22658-65
ACCESSION NR: AT5002111

...hexamethylensebacamide. The polyamides containing phosphorus showed good flame resistance. In addition, they can be used for the same applications as ordinary polyamides. Orig. art. has: 3 tables and 5 formulas.

...ATION: None

...TTED: 30Jul64 ENCL: 00 SUB CODE: OC, ...

...V. 006 OTHER: 006

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

[illegible] /EWP(j)/EWA(c)/T Pc-4/Pr-4 [illegible]

[illegible] Khimiya, Abs. 20513

[illegible]eshekhonova, A. L.; Kamenskiy, I. [illegible]

[illegible] formation [illegible]

[illegible]ylenetetramine [illegible]

[illegible] Mendeleyeva, vyp. 42,

[illegible] fractiona-

[illegible] furfural polymer, hexamethylene[illegible]

tion, plastics synthesis, polymer spectroscopy

TRANSLATION: The authors studied the mechanism of formation of polymers based [illegible] 99.95% pure hydrolytic furfural and 99.98% pure hexamethylenetetramine at a [illegible] varying from 30:1 to 3:1. They found that the solid polymers FG-2, [illegible] obtained in > 80% yield [illegible] of the reaction [illegible] mixture and a furfural.hexamethylenetetra[illegible]

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

L 38285-65

ACCESSION NR: AR5003009

0

... of considerable interest for the manufacture of plastics. The ... and separated ... of fraction- ... petroleum ether, ethanol, acetone ... followed by pre- ... water. The infrared and ultra... indicate the pre- ... changed furan ring, bound ... position, as ... groups in FG-2 and FG-1 and amid... 87hKhim, Kotlyarevskaya.

DE: GC, OC ENCL

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

L 19422-65 EWP(e)/EPA(s)-2/EWT(m)/EPF(c)/EPR/EWP(j)/T/EWP(b) Pc-4/Pq-4/
Pr-4/Ps-4 RM/WH/WW S/0081/64/000/011/S059/S059

ACCESSION NR: AR4048161

SOURCE: Ref. zh. Khimiya, Abs. 11S355

AUTHOR: Deshekhonova, A.L., Kamenskiy, I.V., Korshak, V. V., Tomashuk, L. A.

TITLE: Glass textolites based on nitrogenous furfural resins

CITED SOURCE: Tr. Mosk. khim.-tekhnol. in-ta im. D.I. Mendeleyeva, vy*p. 42, 1963, 146-150

TOPIC TAGS: glass textolite, glass reinforced plastic, furfural resin, nitrogenous furfural resin, binder content, glass plastic

TRANSLATION: The authors studied the relationship between the physical and mechanical properties of glass reinforced plastics based on nitrogenous furfural resins and their binder [illegible] results showed that the optimal binder content is 27-35% for woven materials [illegible] -woven materials. The structure and density of the glass fabric were [illegible] effect on the physical and mechanical properties of the glass textolites. The use of a glass fabric treated with GVS-9 increased the strength [illegible] at normal temperatures. An attempt was made to obtain furfural-based glass textolites [illegible] vacuum

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

L 19422-65

ACCESSION NR: AR4048161

In this connection, the original resistance to static bending was low, practically the same level at temperatures [illegible]

SUB CODE: MT ENCL: 00

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

L 32590-66 EWT(m)/EWP(v)/EWP(j)/T IJP(c) WW/JWD/DJ/RM

ACC NR: AR5023721 SOURCE CODE: UR/0081/65/000/013/S010/S010

19
B

AUTHOR: Korshak, V. V.; Mozgova, K. K.; Babchinitser, T. M.

TITLE: Modification of the properties of fluorine-containing polymers

SOURCE: Ref. zh. Khimiya, Abs. 13S59

REF SOURCE: Sb. Tezisy dokl. Vses. konferentsii po khimii ftororgan. soyedineniy. Novosibirsk, 1964, 27

TOPIC TAGS: polytetrafluoroethylene, polytrifluorochloroethylene, styrene, methylmethacrylate, adhesion

ABSTRACT: In order to increase the adhesion to metals of polytrifluorethylenechloride, a polytetrafluoethylene graft of styrene, methylmethacrylate and other monomers was made to films of these polymers. To increase the activation process of the film, it was previously conditioned by a slow electric discharge. The results of the studies of the reaction mechanism of fluorine layers with vinyl monomers are given. A. Sorokin

SUB CODE: 11,20/ SUBM DATE: 10Jul65

Card 1/1 BK

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

KORSHAK, Vasiliy Vladimirovich; VINOGRADOVA, Svetlana Vasil'yevna; RAFIKOV, S.R., doktor khim. nauk, otv. red.; LOSKUTOVA, I.P., red.

[Polyaryalates] Poliarilaty. Moskva, Izd-vo "Nauka," 1964. 67 p. (MIRA 17:6)

1. Deystvitel'nyy chlen AN Kaz.SSR (for Rafikov).

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

GRIGOR'YEV, A.P.; KORSHAK, V.V., red.; FEDOROVA, T.P., red.

[Laboratory work in the technology of polymeric plastic materials] Praktikum po tekhnologii polimerizatsionnykh plasticheskikh mass. Moskva, Vysshaia shkola, 1964. 284 p. (MIRA 18:1)

1. Chlen-korrespondent AN SSSR (for Korshak).

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

[illegible] Po-4/Pr-4/Pu-4/Peb

GG/JAJ/RMGS

[illegible] AT4049850 S/0000/64/000/000/0122/0125

[illegible] V. V.; Karpova, G. V., Korshak, V. V.; Rafikov, S. R.; [illegible]setlin, B. L.; Chao, Hsiang-tsun

[illegible] Chemical transformations of polymers. X. Radiation-induced chemical reactions of mixed polyesters based on terephthalic and sebacic acids and ethylene glycol

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

[illegible] mixed polyester, terephthalic acid, sebacic acid, ethylene glycol, [illegible] polyethylene [illegible] dicarboxylic [illegible] radiation, xray vulcanization

[illegible] induced [illegible]

[illegible] terephthalic acids, containing [illegible] were used as [illegible] gen, then in a vacuum (2mm) [illegible]

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

EWP(j)/EWP(n)-2/EWG(j)/EWA(h), EWP(j)/EWT(m)/T/EWA(l) Pc-4/Pr-4/
Pu-4/Ter GC/JAJ/RM/GS

AT[illegible] S/0000/64/000/000/0126/0130

AUTHOR: Chao, Hsiang-tsun; Valetskiy, P. M; Vinogradova, S. V.; Glazunov, P. Ya.; Korshak, V. V.; Rafikov, S. R.; Tsetlin, B. L.

TITLE: Chemical transformations of polymers. XI. Radiation-induced chemical reactions of polyarylates

SOURCE: Khimicheskiye svoystva i modifikatsiya polimerov (Chemical properties and the modification of polymers); sbornik statey. Moscow, Izd-vo Nauka, 1964, 126-130

TOPIC TAGS: polyarylate, radiation chemistry, isophthalic acid, diphenylol propane, polyethylene terephthalate, polycarbonate, polyisobutylene, hydroquinone, ionizing radiation

ABSTRACT: For the investigation of the radiation-induced chemical reactions of polyarylates, a polyarylate (ID) obtained by polycondensation of isophthalic acid and diphenylolpropane, a polyarylate (IP) based on isophthalic acid and hydroquinone, and a polycarbonate (Makrolon) were used as test samples in both crystalline and amorphous forms. Irradiation was carried out at an electron accelera-

Card 1/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

[illegible]146-65

ACCESSION NR: AT4049851

2

[illegible] voltage of 800 kv, a current density of 0.1-0.2 microampere (on the samples), and a dose of 2[illegible] x 10^{18} ev/cc.sec. The preparation of the different samples and the experimental procedure are described. The thermomechanical curves taken [illegible] load of 0.8 kg/cm^2 and a heating rate of 75C per hour showed that [illegible] a high stability toward the effect of [illegible] radiation. The radiation yield of the gaseous products [illegible] ev, which is much lower than the yield from irradiation of poly- [illegible] polycarbonate. [illegible] significantly [illegible] the gaseous products [illegible] containing diphenyl [illegible] is known, during [illegible] (-C(CH$_3$)$_2$), methane [illegible] from the [illegible] for ID than for IH. [illegible] stabil[illegible] absorbed by [illegible] aromatic rings and is partially scattered, as a result of which hydrogen atoms split off from

Card 2/3

[illegible]-65

ACCESSION NR: AT4049851

1

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006

the phenyl groups. Orig. art. has: 2 figures and 3 tables.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Heteroorganic compound institute, AN SSSR)

SUBMITTED: 31Aug62 ENCL: 00 SUB CODE OC, GC

NO REF SOV: 005 OTHER: 002

Card 3/3

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

EPF(c)/EPR/EWP(j)/EWT(m)/T Pc-4/Pr-4/Ps-4 RPL RM/WW
ACCESSION NR: AP4010043 S/0062/64/000/001/0132/0141

AUTHORS: Korshak, V. V.; Vinogradova, S. V.; Papava, G. Sh.

TITLE: Heterochain polyesters. 53th Comm. Mixed block polyacrylates based on polyethylene oxide, diene and chloranhydride of terephthalic acid

SOURCE: AN SSSR. Izvestiya. Ser. khim., no. 1, 1964, 132-141

TOPIC TAGS: polyester, heterogeneous polyester, mixed block polyacrylate, terephthalic acid, terephthalic acid derivative, infrared absorption spectrum, ditoylmethane, polycondensation

ABSTRACT: The polycondensation of polyethylene oxide, diene and the chloranhydride of terephthalic acid is investigated. Polyethylene oxide has a greater reactivity with respect to the chloranhydride of terephthalic acid than diene. By varying the polycondensation conditions, mixed polyester containing homopolyester blocks of different length can be obtained. The synthesis of mixed polyesters of different composition based on polyethylene oxide of dif-

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

L 27273-65

ACCESSION NR: AP4010043

2

ferent molecular weight, dience and the chloranhydride of terephthalic acid was carried out and their properties were investigated. The characteristics of polyethylene oxide are tabulated. Orig. art. has: 3 formulas, 7 tables, 3 figures.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Organometallic Compounds, Academy of Sciences SSSR); Institut khimii im. Melikishvili Akademii nauk Gruz SSR (Institute of Chemistry, Academy of Sciences Gruz SSR)

SUBMITTED: 20Aug62 ENCL: 00

SUB CODE: OC, GC NO REF SOV: 000 OTHER: 004

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4010044 S/0062/64/000/001/0141/0148

AUTHOR: Korshak, V. V.; Vinogradova, S. V.; Pankratov, V. A.; Baskakov, A. N.

TITLE: Polyesters with a hetero backbone. Report No. 54. Synthesis and studies of new types of polyarylates based on phenyl-bis-(4-oxyphenyl)methane and diphenyl-bis-(4-oxyphenyl)methane

SOURCE: AN SSSR. Izvestiya. Ser. khim., no. 1, 1964, 141-148

TOPIC TAGS: heterochain polyesters, polyarylates, phenyl-bis-(4-oxyphenyl) methane, diphenyl-bis-(4-oxyphenyl) methane, diatomic phenols, aromatic dicarboxylic acids, polymer thermostability, polymer workability, polymer solubility, voluminous side substituents, interphase polycondensation, equilibrium polycondensation, polymer physical properties.

ABSTRACT: In the search for polymers with high thermal stability and good workability, interphase or equilibrium polycondensation was carried out for the synthesis of homogenous and mixed polyarylates based

Card 1/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4010044

on the title compounds, hydroquinone, diane and the acid chlorides of terephthalic and isophthalic acid in a high-boiling solvent. The presence of the thermostable phenyl ring in the backbone as well as on the macromolecular side branches in the end products also was expected to result in less packing of the backbone, thus better workability. Yields, viscosity in solution, softening point, break, and stretchability are graphed for some homogenous compounds, as well as solubility, thermomechanical properties and degree of crystallization for seven mixed polyarylates based on either of the title compounds and the acids, hydroquinone and diane. Interphase polycondensation yielded homogenous polyarylates whose pellicles had good elasticity and solubility. Equilibrium condensation yielded homogenous polyarylates with high thermostability and non-solubility. Mixed polyarylates with terephthalic acid were more heat-stable and less soluble than those with isophthalic acid. The softening point passed through a minimum upon addition of the title compounds. Both title compounds gave mixed polyarylates easily soluble in many organic solvents. The presence of voluminous phenyl side substituents

Card 2/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4010044

considerably decreased the degree of crystallinity of the polymers. Laboratory procedures are described. "In conclusion, the authors wish to thank the staff of the X-ray analysis laboratory headed by A. I. Kitaigorodski for providing the roentgenographic study of the polymers." Orig. art. has: 5 figures, 4 tables, 1 formula.

ASSOCIATION: Institut elementoorganicheskikh soedineniy Akademii nauk SSSR (Institute of Organoelemental Compounds, Academy of Sciences, SSSR); Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleeva (Moscow Chemical-Technological Institute)

SUBMITTED: 20Aug62 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: CH NO REF SOV: 004 OTHER: 000

Card 3/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4010045 S/0062/64/000/001/0149/0155

AUTHOR: Papava, G. Sh.; Vinogradova, S. V.; Korshak, V. V.; Tsiskarishvili, P. D.

TITLE: Polyesters with a hetero backbone Report No. 56. Mixed block-polyarylates based on polypropylene oxides, diatomic phenols and the acid chlorides of aromatic carboxylic acids

SOURCE: AN SSSR. Izvestiya. Ser. khim., no. 1, 1964, 149-155

TOPIC TAGS: heterochain polyesters, mixed block polyarylates, polypropylene oxide, diatomic phenols, dicarboxylic acid chlorides, aromatic acid chlorides, polymer synthesis, polymer backbone packing, equilibrium polycondensation, polymer solubility, polymer softening point

ABSTRACT: In continuation of earlier work, this polycondensation involved varying percentages of polypropylene oxide with a molecular weight of 420 (#1) and 880 (#2), liquids easily soluble in organic solvents, and terephthalic and isophthalic acid chlorides, diane,

Card 1/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4010045

hydroquinone, resorcin or phenolphthalein. Results are tabulated and graphed, reporting on yields, melting or softening points, solubility and consistency of the end products. The probable reaction formulas are presented; these were verified by determining the amount of HCl liberated during the reaction. The starter polymer was found to react more rapidly than diane with terephthaloyl chloride during the first hour. Such starter polymers would thus be considered sufficiently active for use as monomers in polymer synthesis. Block formation was verified by IR spectroscopy, structure by X-ray. All factors influenced properties, e.g. end products (with diane and terephthaloyl chloride) containing more than 50 weight % of #1 or 70% of #2 were semi-liquid or waxy substances easily soluble in most organic solvents. The m.p. of end products containing up to 40-50% starter polymers was inversely related to this content. Those containing the low-molecular starter polymer had lower m.p. and better solubility than the high-molecular. Terephthalic acid gave higher softening temperatures than isophthalic acid. The possible reasons for such influence on physical properties was discussed, such as solubility,

Card 2/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4010045

elasticity, and dyability, while retaining a high softening point. "In conclusion, the authors wish to thank L. B. Sokolov for placing the polypropylene oxide at their disposal." Orig. art. has: 5 figures, 3 tables, and 3 formulas.

ASSOCIATION: Institut elementoorganicheskikh soedineniu Akademii nauk SSSR (Institute of Organoelemental Compounds, Academy of Sciences, SSSR); Institut khimii im Melikishvili Akademii nauk GruzSSR (Melikishvili Institute, Academy of Sciences, GruzSSR)

SUBMITTED: 17Jul63 DATE ACQ: 14Feb64 ENCL: 00

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

Card 3/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4010050 S/0062/64/000/001/0173/0174

AUTHOR: Bekasova, N. I.; Zamyatina, V. A.; Korshak, V. V.

TITLE: Copolymerization of tri(ethylamino)boron and B-aminoborazoles with hexamethylenediisocyanate

SOURCE: AN SSSR. Izvestiya. Ser. khim., no. 1, 1964, 172-174

TOPIC TAGS: boro-organic polymer, linear boro-organic polymer, cross linked boroorganic polymer, tri(ethylamino)boron hexamethylene-diisocyanate copolymer, B-aminoborazole hexamethylenediisocyanate copolymer, borazole copolymer

ABSTRACT: Linear polymers containing B-N bonds were obtained by copolymerizing tri(ethylamino)boron and hexamethylenediisocyanate. Essentially the same product was obtained with reactant ratios of 1:1 and 1:1.5. New linear boro-organic polymers containing molecules of the borazole ring in the basic chain were obtained by copolymerizing boron-substituted borazoles with hexa-

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4010050

methylenediisocyanate. Reaction of B-triethylamino-N-triethylborazile with hexamethylenediisocyanate, 1:1, gives a linear polymer; product of 1:1.5 ratio is a polymer cross-linked in several places with the diisocyanate as evidenced by higher fusion temperature and lowered boron content. Reaction of B-tri-(dimethylamino)borazole with hexamethylene diisocyanate, 1:1 and 1:1.5, gives a linear polymer. Here the lowered reaction temperature indicates the catalytic action of the dimethylamino group situated at the B atom. However, block polymerization of a 1:1.5 mixture at higher temperatures does give a cross linked polymer. Orig. art. has; 1 table and 1 equation.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Organometallic Compounds, Academy of Sciences SSSR)

SUBMITTED: 08Jul63 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: CH NO REF SOV: 001 OTHER: 004

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

L 65 EWT(m)/EPF(c)/EWT(j) Pc-4/Pr-4 RM/MLK

ACCESSION NR: AT5002130 S/0000/64/000/000/0173/0177

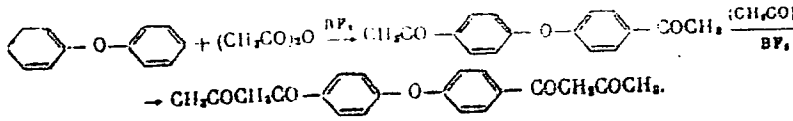
AUTHOR: Korshak, V. V.; Krongauz, Ye. S.; Grigoreva, P. N.; Sheina, V. Ye.; Vasnev, V. A.

TITLE: Synthesis of bis-(beta-diketones)

SOURCE: AN SSSR. Institut neftekhimicheskogo sinteza. Sintez i svoystva monomerov (The synthesis and properties of monomers). Moscow, Izd-vo Nauka, 1964, 173-177

TOPIC TAGS: diketone synthesis, beta-diketone, aromatic diketone, diketone polymerization, organometallic complex, boron trifluoride, acetoacetylation

ABSTRACT: A direct method has been developed for preparing aromatic bis-(β-diketones) which can be polymerized to give coordination-bonded metal complexes, and a reaction mechanism for the ketone synthesis has been proposed. The aromatic compounds [illegible] in the presence of boron trifluoride with acetic anhydride. 4,4-Bis-(acetoacetyl)diphenyloxide was [illegible] the following equation:



$$\rightarrow CH_3COCH_2CO-C_6H_4-O-C_6H_4-COCH_2COCH_3. \quad (1)$$

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

L 22651-65

ACCESSION NR: AT5002130

and by similar reactions the 4,4-bis-(acetoacetyl)- derivatives of diphenylmethane, diphenylethane, and of the diphenyl ethers of ethylene- and diethylene glycol were obtained. The best results were obtained when boron trifluoride was rapidly added to the reaction [illegible] and this effect was shown to be related to the proposed reaction mechanism. [illegible] ated ketones formed by the first reaction step are further acetylated either by [illegible] acetylation, or via O-acetylation of diketones and subsequent C-acetylation of [illegible] ester formed with the enol of the diketones. The [illegible] exclusive during the [illegible] reaction period, while the second can become dominant as the acid concentration [illegible] Infrared analysis showed that only p-derivatives are formed and that the [illegible] ketones exist only in their enol form. Their reaction, either in the melt with [illegible] acetonates or in solution with the acetates of Be, [illegible], Mn, Co and Cd, [illegible] coordination chain polymers, most of which were highly colored and infusible [illegible] were insoluble in conventional [illegible] solvents at [illegible]. Orig. art. [illegible] formulas.

ASSOCIATION: None

SUBMITTED: 30Jul64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 006 OTHER: 010

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4019009 S/0062/64/000/002/0334/0340

AUTHOR: Teplyakov, M.M.; Korshak, V. V.; Vinogradova, S.V.

TITLE: Investigation of the exchange reaction between a polyamide and a polyarylate

SOURCE: AN USSR. Izv. Seriya khimicheskaya, no. 2, 1964, 334-340

TOPIC TAGS: polyamide polyarylate interaction, interchain reaction, polyamide, polyarylate, polyamide ester, synthesis

ABSTRACT: This is a continuation of a work done by the same authors (Dokl. AN SSR 147, 1365 1962) where they showed the possibility of synthesizing polyamide esters by interchain interaction of initial polyamide macromolecules and a polyester. The present article was prompted by the higher thermal stability and other valuable properties of polyarylates for the production of polyamisoarylates. For this purpose the authors investigated the interchain reactions of polyarylates and polyamides. They selected for their tests the reaction between polyhexamethysebacineamide and polydiphenylpropanesebacinate (a polyester of sebacic acid and 4,4'-dioxy-2,2'-dipehylpropane). Condensation was carried out in test tubes in an inert gas at temperatures from 240 to 280C with and without a catalyst. The selected catalysts were p-toluene stlfoacid, lithium hydroxide, lead oxide, zinc

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4019009

acetate, and tetrabutoxy titanium. Most suitable was lead oxide. It enhances lower reaction temperatures (240C) and their rate. The properties of the reaction product depend on the proportion of the initial compounds, temperature and duration of the reaction. Orig. art. has 4 figures, no formulas, 4 tables.

ASSOCIATION: Institut elementoorganicheskikh siyedineniy Akademii nauk SSSR (Institute of Organomelallic Compounds, Academy of Sciences, SSSR); Moskovskiy khimiki-tekhnologicheskiy institut im. D. I. Mendeleyeva (Moscow Chemical-Engineering Institute)

SUBMITTED: 05Sep63 DATE ACQ: 27Mar64 ENCL: 00

SUB CODE: CH NO. REF SOV: 006 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4019011 S/0062/64/000/002/0347/0353

AUTHOR: Sosin, S. L.; Korshak, V. V.

TITLE: Synthesis of polymers from phenols and their esters by polyrecombination

SOURCE: AN SSSR. Izv, Seriya khimicheskaya, no. 2, 1964, 347-353

TOPIC TAGS: phenol polyrecombination, cresol, phenol, hydroquinone, cross recombination

ABSTRACT: As a development from their previous work, the authors investigated the polyrecombination reactions of p-cresol, phenol, hydroquinone, dimethyl ether and hydroquinonediacetate. Polymers with mol. weights ranging from 7000 to 10000 were prepared by treating them with di-tert.butyl peroxide at a temperature of 200C. Their properties were investigated. The authors propose a probable formation mechanism of such polymer, taking into account, in the case of phenols with free hydroxy groups, a preliminary cross-recombination of phenoxy radicals with the active free radicals. The polymer of hydroquinone has a chain of alternating hydroquinone and benzoquinone rings and shows superior thermal

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4019011

stability. "The authors express their gratitude to E. I. Fedin and P. V. Petrovskiy for recording and participation in deciphering the IR spectra." Orig. art. has: 5 figures, 12 formulas, 1 table.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Elementoorganic Compounds, AN SSSR)

SUBMITTED: 22Aug62 DATE ACQ: 27Mar64 ENCL: 00

SUB CODE: OC NO REF SOV: 006 OTHER: 012

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4019012 S/0062/64/000/002/0354/0357

AUTHORS: Sosin, S.L.; Korshak, V.V.

TITLE: Polymer synthesis from aromatic amines by polyrecombination

SOURCE: AN SSSR. Izv. Seriya khimicheskaya, no.2, 1964, 354-357

TOPIC TAGS: polymer semiconductor, aromatic amine polyrecombination, amine, aromatic amine, polymer, semiconductor

ABSTRACT: High melting points and possible application of these polymers as semiconductors prompted this work. This is a continuation of other work by the authors showing that polymers with regularly repeated azo-group in the chain (i.e., polyazobenzenes and their analogues) can be readily prepared by polyrecombination of aromatic amines (p-phenylenediamine, benzidine) when treated with tertiary butyl peroxide at 200C. Apparently, polymers are formed by recombination, active butoxyl and methyl radicals formed in the decomposition of the peroxide tear off hydrogen atoms from the amino-groups while the radicals which are formed recombine with the unpaired hydrogen at the nitrogen atom. A further growth of the chain on behalf of the amino end-groups is

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4019012

apparently accompanied by the simultaneous dehydrogenation of the secondary amino-groups resulting in polyazobenzene. Along with the growth of the chain, there is the possibility of an attack of the benzene rings by active radicals and condensations as a result of homolytic substitution of hydrogen atoms. To prove these premises, the authors heated initial compounds; benzidine, p-phenylenediamine and a mixture of the latter with hydroquinone in a nitrogen atmosphere until they melted (but below 200C) and introduced into the melt tertiary butyl peroxide dropwise until the mixture thickened. The reaction product was leached with methanol or dimethylformamide and the solid residue was analyzed and its characteristics determined and described. The molecular weight of the polymers amounted to 7000.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Organoelemental Compounds, AN SSSR)

SUBMITTED: 22Aug62 DATE ACQ: 27Mar64 ENCL: 00

SUB CODE: CH NR REF SOV: 006 OTHER: 005

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4019013 S/0062/64/000/002/0357/0361

AUTHOR: Korshak, V. V.; Rogozhin, S. V.; Chou, Jun-P'ei

TITLE: Preparation of polymer products from p-cymene

SOURCE: AN SSSR. Izv. Seriya khimicheskaya, no. 2, 1964, 357-361

TOPIC TAGS: paracymene polymer, immersed wire polymerization, polymer, cymene, hydrocarbon pyrolysis, polystyrene

ABSTRACT: The purpose of this study was to find the mechanics of p-cymene polymerization by electrically heating a wire immersed in it to 700C. This method, unlike the usual pyrolysis of hydrocarbons in gaseous form permits the reaction of radicals formed on the hot wire to recombine with the mother substance and the gaseous products of the reaction. As a result, the polymers so formed are incorporated with the liquid at their boiling temperature and are not subjected to the destructive high temperatures of pyrolysis. The polymer yield is 40% of the initial material, with a molecular weight of 2000 to 5000 and an identical elementary composition and, probably structure, rather than a mixture of different polymers. The physical properties of the polymer are analogous to

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4019013

those of polystyrene and its alkyl derivatives. The influence of time and temperature of p-cymene hydrocondensation on the yield and molecular weight of the polymer are described. The polyhydrocondensation itself is discussed. Refining was done by dissolution in benzene and precipitation by methanol (twice). Oligomers were separated from the benzene solution by subsequent distillation. Orig. art. has: 6 figures, 1 formula, 3 tables.

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

SUBMITTED: 10Sep62 DATE ACQ: 27Mar64 ENCL: 00

SUB CODE: OC NO REF SOV: 003 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4019014 S/0062/64/000/002/0362/0363

AUTHORS: Korshak, V.V.; Oganesyan, R.M.; Zamyatina, V.A.

TITLE: Polycondensation of N-substituted borazols with bis-β,β'-aminodiethyl ester of trimethylenediboric acid

SOURCE: AN SSSR. Izv. Seriya khimicheskaya, no. 2, 1964, 362-363

TOPIC TAGS: triphenylborazol, methylntriphenylborazol, borazol, diboric acid bisbetabeta aminodiethyl, trimethylene diboric acid

ABSTRACT: The relation of the hydride character of the B-H bond in borazol which appears in the reactions of N-triphenylborazol with diols and polyols, was investigated particularly the relationship of this bond to the aminogroup. N-triphenylborazol and of B-methyl-N-triphenylborazol with bis-β,β'-aminodiethyl ester of trimethylene diboric acid was reacted for this purpose. Since this ester is at the same time a di-secondary amine, it is sufficiently stable both hydrolytically and thermally sufficiently stable. Polymers were obtained whose structure is described and discussed. They are of linear or latticed structures and have molecular weights from 4250 to

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4019014

4391.3. "The authors express their gratitude to L.I. Zakharkin and A.I. Kovredov for placing at their disposal the bis-β, β'-aminodiethyl ester of trimethylenediboric acid." Orig. art. has: 2 formulas

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Organometallic Compounds, Academy of Sciences, SSSR)

SUBMITTED: 08Jul63 SUB CODE: OC ENCL: 00

DATE ACQ: 27Mar64 NR REF SOV: 003 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4033389 S/0062/64/000/004/0716/0720

AUTHOR: Korshak, V. V.; Mozgova, K. K.; Babchinitser, T. M.

TITLE: Production of graft copolymers. Communication 17: copolymers of polytrifluorochloroethylene with vinyl monomers.

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 4, 1964, 716-720 and bottom half of insert facing p. 712

TOPIC TAGS: graft copolymer, polytrifluorochloroethylene, polytrifluorochloroethylene styrene graft copolymer, polymer film, powder, x ray analysis, crystallinity, solvent stability, swelling, polymer morphology, activation center, mechanism

ABSTRACT: As a continuation of their earlier work (Vy*sokomolekul. soyedineniya 5, 1451, (1963)), the authors studied the process of grafing vinyl monomers onto polytrifluorochloroethylene films. It is possible to form graft copolymers of polytrifluorochloroethylene and styrene without activating the initial polyer; the maximum yield was about 10%, based on initial sample, of grafted layer. X-ray studies showed the graft does not change the crystallinity of polytrifluorochloroethylene. The stability to solvents compared with copolymers formed by radiation

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4033390 S/0062/64/000/004/0733/0736

AUTHOR: Makhsumov, A. G.; Sladkov, A. M.; Korshak, V. V.

TITLE: Acid polycondensation of dipropargyl ethers containing silicon, phosphorus and fluorine.

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 4, 1964, 733-736

TOPIC TAGS: acid polycondensation, dipropargyl ether, acetylenic polymer, triple bond containing polymer, phosphorus containing acetylenic polymer, fluorine containing acetylenic polymer, silicon containing acetylenic polymer, methylphosphonic acid dipropargyl ether, diphenoxysilane dipropargyl ether, polydehydrocondensation, thermal stability, hexafluorodiane dipropargyl ether, oligomer, IR spectrum

ABSTRACT: The authors continued their earlier work in preparing polymers containing triple bonds in the chain by acid polycondensation of dipropargyl ethers (A.M. Sladkov, V. V. Korshak i A. G. Makhsumov. Izv. AN SSSR. Ser. khim. 1343, 1963), attempting to prepare acetylenic polymers containing phosphorus, fluorine or silicon. These acetylenic ethers, not described previously in the literature,

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4033390

were synthesized: the dipropargyl ethers of methylphosphonic acid, of diphenoxy silane, and of hexafluoro-2,2-bis-(4-hydroxyphenyl)- propane. When subject to acid polydehydrocondensation the first compound hydrolysed to the original materials, methylphosphonic acid and propargyl alcohol; the second hydrolysed to form polyphenoxysiloxane. A thermally stable oligomer of the dipropargyl ether of hexafluorodiane, molecular weight 2730 (dark brown, boiling 95-98C) and molecular weight 1327 (yellow, boiling 160-162C), was formed from the third. A polymer containing phosphorus and acetylenic bonds was obtained by the polycondensation of methylphosphonic acid chloranhydride with butyndiol. IR spectra identifying the products are shown. Orig. art. has: 4 figures.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Organometallic Compounds, Academy of Sciences, SSSR)

SUBMITTED: 09Dec63 DATE ACQ: 15May64 ENCL: 00

SUB CODE: OC NO REF SOV: 003 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 RPL/ASD(a)-5/AS(mp)-2/
[illegible]/AEDC(a)/AFWL/APETR/RAEM(c)/RAEM(e)/RAEM(i)/ESD(gs)/ESD(t) WW/JWD/RM

[illegible]/64 004/005/0747/0752

[illegible]

[illegible] Polymerization of some acetylene derivatives

SOURCE: Neftekhimiya, v. 4, no. 5, 1964, 747-752

[illegible] acetylene, acetylene derivative, polymerization, acetylene polymer, [illegible] derivative polymer, explosive polymerization, pressure effect, temperature [illegible] thermomechanical curve, polymer solubility, [illegible] paramagnetic res-[illegible]

[illegible] Polymerization of 1-hexyne, 2-methyl-[illegible]-ethynylpyridine, p-chlorophenyl-[illegible] and [illegible]-ethynylacetylene was [illegible] pressure and [illegible] the process of polymerization was demonstrated. The above mentioned [illegible] order to study [illegible] at the triple [illegible] was found [illegible] degree [illegible] 2-methyl-[illegible]-ethynylpyridine [illegible] p-chlorophenylacetylene and, especially, [illegible] In accordance [illegible] active with an average polymerization coefficient [illegible]

Card 1/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

[illegible]

ACCESSION NR: AP4047687

[illegible] high thermal effect observed in the polymerization of acetylene compounds, [illegible] that the monomers studied underwent an [illegible] merization, ac- [illegible] at definite temperatures [illegible] which varied [illegible] minimum [illegible] among [illegible] polymer yields [illegible] reaction [illegible] in the [illegible] and pressure were established [illegible] temper- [illegible] the dependence on pressure has a maximum [illegible] The thermo- [illegible] an S-shaped curve with [illegible] were linear [illegible] curves of the polymers indicate [illegible] The solubility of polymers [illegible] softening points in the range of 230—240[illegible] A prolonged heating in [illegible] with the increase in the polymerization pressure [illegible] by the loosen- [illegible] 180[illegible] renders polymers soluble, which is [illegible] pressure. The EPR [illegible] the close packing of macromolecules caused [illegible] The polymers [illegible] observed in all polymers except those obtained from [illegible] obtained from 1-hexyne, [illegible] in the form of yellow or red [illegible] powders. Orig. art. has [illegible]

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Organoelemental Compounds, AN SSSR)

Card 2/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

L 17641-65
ACCESSION NR: AP4047687

SUBMITTED: 25Jul63 ENCL: 00 SUB CODE OC, GC

NO REF SOV: 005 OTHER: 007

Card 3/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

VINOGRADOVA, S.V.; VINOGRADOV, M.G.; KORSHAK, V.V.

Kinetics of polycoordination. Kin. i kat. 5 no.2:247-252 Mr-Ap '64. (MIRA 17:8)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

KORSHAK, V.V.; VINOGRADOVA, S.V.; U BAN-YUAN' [Wu Pang-yuan]

Heterochain polyesters. Report No. 49: Regularities of the formation of polyamidoarylates under conditions of interfacial polycondensation. Izv. AN SSSR. Ser. khim. no. 5:897-904 My '64. (MIRA 17:6)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

S/0190/64/006/001/0180/0181

ACCESSION NR: AP4009163

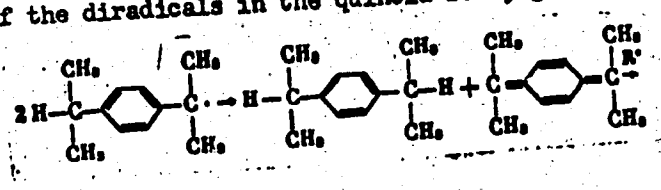
AUTHORS: Korshak, V. V.; Sosin, S. L.

TITLE: Production of high-molecular polymer by p-di-isopropylbenzene reaction with tret.butyl peroxide [Letter to the editor]

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 6, no. 1, 1964, 180-181 and lower half of insert following page 86

TOPIC TAGS: polymer, crystalline structure, quinoid, isomer, chromatography, oligomer, isopropylbenzene

ABSTRACT: It has been shown that chromatographically pure p-di-isopropylbenzene reacts with tret.butyl peroxide at 200C to form a high-molecular weight polymer (mol wt $4 \cdot 10^5 - 5 \cdot 10^5$) of crystalline structure. This is apparently due to chain polymerization of the diradicals in the quinoid form, given by



Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4009163

The m-isomer gives only the oligomer under the same conditions. "The authors are grateful to V. B. Bondarev and S. V. Vitt for the gas-liquid chromatography analysis." Orig. art. has: 2 figures and 2 formulas.

ASSOCIATION: none

SUBMITTED: 10Sep63 DATE ACQ: 10Feb64 ENCL: 00

SUB CODE: PH NO REF SOV: 001 OTHER: 003

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

BR

S/0190/64/006/003/0571/0571

ACCESSION NR: AP4030377

AUTHORS: Korshak, V. V.; Mozgova, K. K.; Yegorova, Yu. V.

TITLE: A new method of synthesizing multilayer graft copolymers

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 6, no. 3, 1964, 571

TOPIC TAGS: polymer, copolymer, graft copolymer, multilayer copolymer, dacron, caprone, polystyrene, polymethylmethacrylate, vinyl monomer, pemosor

ABSTRACT: The authors found it possible to graft repeatedly certain vinyl monomers to polymers, thus obtaining the so-called "pemosor" (repeatedly grafted) copolymers. The pemosors obtained in this manner have a high molecular weight and are not of tridimensional structure, since they dissolve readily in solvents, such as tricresol. The authors used dacron and caprone as the base and grafted thereon (repeatedly) polystyrene or a succession of polystyrene and polymethylmethacrylate layers, as well as other vinyl monomers. After a five-fold graft of styrene on dacron the total increase in weight was 1120%, and the viscosity in tricresol was 1.31. The grafting in succession of styrene and methylmethacrylate layers on

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4032574 S/0190/64/006/004/0729/0733

AUTHORS: Korshak, V. V.; Vinogradova, S. V.; Vinogradov, M. G.

TITLE: Studies in coordination polymers. 19. Exchange reactions in the polycoordination process

SOURCE: Vysokomolek. soyedin., v. 6, no. 4, 1964, 729-733

TOPIC TAGS: coordination polymer, polycoordination process, acetoacetyl diphenyloxide, beryllium acetylacetonate, polycoordination exchange reaction, Huggins equation, Huggins constant, high molecular fraction, low molecular fraction

ABSTRACT: In order to study the exchange reactions it was necessary to produce polymer fractions differing considerably in molecular weight. This was achieved by fractionating a polymer synthesized from 4,4'-bis-(acetoacetyl)diphenyloxide and beryllium acetylacetonate in solution, at 160C, in vacuum, as described in an earlier paper by the authors (Vysokomolek. soyed., 5, 1771, 1964). The fractionation of the polymer was conducted by methanol precipitation from a 1% dimethylformamide solution. Fourteen fractions were isolated, and the specific viscosities of these and of the nonfractionated polymers were determined in 0.5% dimethylform-

Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4032574

amide solutions. Values of 0.30-0.80 were obtained. They matched closely the 0.31-0.80 range for specific viscosities calculated by the Huggins equation. The study of the exchange reactions taking place during the polycondensation process was conducted on a mixture of high-molecular fraction of the polymer with a low-molecular fraction. The latter polymer was obtained under conditions of excess beryllium acetylacetonate and contained no terminal free enolic groups. The experiment was conducted in a 25% dimethylformamide solution. The viscosity of the mixture of the two fractions was determined after heating the mixture to 100C for periods up to 10 hours. It was found that the molecules of the polymer interacted at a rate of approximately the same order of magnitude as the rate of their growth from the issuing materials. It is concluded that the reaction of polycoordination of 4,4'-bis-(acetoacetyl)diphenyloxide and beryllium acetylacetonate is a process of balanced polycondensation. Orig. art. has: 3 charts, 1 table, and 1 formula.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Organoelemental Compounds, AN SSSR)

SUBMITTED: 28May63 DATE ACQ: 11May64 ENCL: 00

SUB CODE: CH NO REF SOV: 002 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4032577 S/0190/64/006/004/0745/0750

AUTHORS: Sosin, S. L.; Korshak, V. V.; Alekseyeva, V. P.

TITLE: A study of the possibility of synthesizing high molecular compounds from diphenylsilane under conditions of the polyrecombination reaction

SOURCE: Vysokomolek. soyedin., v. 6, no. 4, 1964, 745-750

TOPIC TAGS: organosilicon compound, diphenylsilane, triphenylsilane, tetraphenylsilane, phenylsilane polyrecombination, phenylsilane heterochain polymer, tetraphenylsilane polymer, diphenylsilane disproportionation, UR 10 spectroscope, Trub Tauber spectrometer

ABSTRACT: The polyrecombination of diphenylsilane was conducted in the presence of tert.butyl peroxide in a special apparatus at 170 and 200C. The reaction products were treated with benzene, and the soluble polymer was precipitated with methanol. The obtained compounds were fractionated, analyzed chemically, and examined by infrared spectroscopy on a UR-10 apparatus and on a nuclear magnetic resonance Trüb Täuber spectrometer. The main polymer isolated by the authors

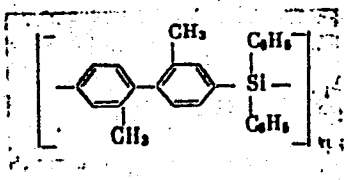
Card 1/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4032577

is ascribed the formula



Its formation may have proceeded through the intermediate product tetraphenylsilane, which has been isolated from the reaction products together with triphenylsilane and hydrosilicon. Since at a 1:0.1 molar ratio of the issuing diphenylsilane and peroxide only 4% of diphenylsilane could be recovered, it is assumed that a disproportionation reaction takes place in which some of the products become involved in the building of the polymer chain. This assumption is supported by the fact that increased concentrations of the peroxide result in a higher yield of tetraphenylsilane. Heating of the obtained polydiphenylsilane of molecular weight 1530 to 9000 in a quartz tube yielded a polymer with a molecular weight of 810. The benzene-insoluble fraction of the diphenylsilane polyrecombination reaction products yielded a polymer of 190 500 molecular weight. Orig. art. has: 5 formulas and 1 chart.

Card 2/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4037279 S/0190/64/006/005/0827/0831

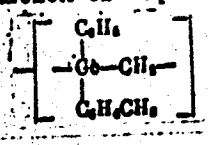
AUTHORS: Sosin, S. L.; Korshak, V. V.; Alekseyeva, V. P.

TITLE: A study of the possibility of obtaining high molecular compounds from diphenylgermanium under conditions of the polyrecombination reaction

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 6, no. 5, 1964, 827-831

TOPIC TAGS: diphenylgermanium polyrecombination, diphenylgermanium high molecular compound, diphenylgermanium disproportionation reaction, diphenylgermanium disproportionation product, tetraphenylgermanium, diphenylgermanium, germanium hydride

ABSTRACT: The polyrecombination of diphenylgermanium was conducted at 200C (in the presence of tert.butyl peroxide) by a technique described by the authors in an earlier publication (Vy*sokomolek. soyed. 3, 1332, 1961). The reaction product was treated with benzene, and the soluble fraction was precipitated with methanol. It was found that the disproportionation of diphenylgermanium produced 50% of a polymer



Card 1/2

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"

"APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9

ACCESSION NR: AP4037282 S/0190/64/006/005/0843/0849

AUTHOR: Vasnev, V. A.; Sosin, S. L.; Korshak, V. V.

TITLE: Preparation of polymers by recombination from aromatic and aliphatic nitriles

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 6, no. 5, 1964, 843-849

TOPIC TAGS: organic semiconductor, semiconducting polymer, polynitrile, recombination, nitrile, aromatic nitrile, aliphatic nitrile

ABSTRACT: A study has been made of 1) the polyrecombination of an aromatic nitrile having no substituents such as methyl or methylene, and 2) the synthesis of aliphatic nitrile copolymers showing both high thermal stability and solubility in organic solvents and softening without decomposition. In case 1, benzonitrile was

Card 1/3

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824930006-9"