

This article was downloaded by:

On: 24 January 2011

Access details: *Access Details: Free Access*

Publisher *Taylor & Francis*

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



## Journal of Macromolecular Science, Part A

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713597274>

### Subject Index to Volume A31

**To cite this Article** (1994) 'Subject Index to Volume A31', Journal of Macromolecular Science, Part A, 31: 12, 2073 — 2086

**To link to this Article:** DOI: 10.1080/10601329409350121

**URL:** <http://dx.doi.org/10.1080/10601329409350121>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

## SUBJECT INDEX TO VOLUME A31

### A

- Abrasion-resistant coatings, inorganic-organic, preparation of by a sol-gel process, 249–260
- Acetylene moieties, thermal crosslinking of poly(2,6-diphenylphenylene ether) containing, 155–169
- Acrylamide  
copolymerization of  
with acrylonitrile, 1289–1301  
with *N*-vinylpyrrolidone, 613–627  
matrix polymerization of induced by the interaction between carbonyl and amide groups, 1169–1176  
polymerization of by peroxodiphosphate/different activators redox system in an aqueous medium, 383–394
- Acrylonitrile  
copolymerization of with acrylamide, 1289–1301  
copolymerization and copolymers of with brominated phenylmaleimides, 319–328  
graft copolymerization of onto sodium alginate, 581–591
- Additives, influence of on the level of solid-phase functionalization of isotactic polypropylene with maleic anhydride, 1447–1454
- Aging, effect of on the mechanical properties of polymeric materials, 1383–1398
- Albumin  
bovine serum, formation of a polymer complex of with sodium chondroitin-6-sulfate, 65–81  
fluorescence measurement of the interaction of polyelectrolytes with, 53–64
- Alcoholysis, of ethylene-vinyl acetate copolymers with butanol-1 in the extrusion process, 1425–1445
- Aliphatic dicarboxylic acid chlorides, and 4,4'-diamino-3,3'-dihydroxybiphenyl, silylation preparation of aliphatic polybenzoxazoles from, 817–826
- Alkyl propiolate, stereoregular polymerization of by Rh complex, 465–475
- $\eta^3$ -Allyl cerium/alkylaluminum, polymerization of isoprene with, 273–282
- Amination kinetics, of bromomethylated poly(2,6-dimethyl-1,4-phenylene oxide) with diethylamine, 2019–2031
- Ammonium persulfate-*N,N,N',N'*-tetramethyl ethylenediamine, in aqueous solution, for copolymerization of acrylamide with acrylonitrile, 1289–1301
- Amphiphilic chameleon networks, synthesis, characterization, and biological testing of, 1771–1790
- Anion-catalyzed group-transfer polymerization, involvement of an enolate intermediate in, 927–935
- Anionic conduction, in blends of poly(pyridinium ethyl methacrylate perchloride) and poly[oligo(oxyethylene) methacrylate-*co*-acrylamide], 873–882
- Anionic polymerization  
applications of to macromolecular engineering, 891–909

- Anionic polymerization (*contd.*)  
 enolate initiated, for the synthesis of  
 graft, block, and star polymers,  
 1377-1381
- Anionic synthesis, of heteroarm star-  
 branched polymers, scope and limi-  
 tations of, 911-926
- Azo aromatic chromophores, photoisomer-  
 ization of in poly(vinyl chloride),  
 1233-1239

**B**

- Barium sulfate, surface grafting onto,  
 1135-1145
- Benzylidenemalononitrile, copolymeriza-  
 tion of 2-vinylnaphthalene with,  
 2001-2010
- Biomedical functions, selective sulfation of  
 chitin derivatives for, 1701-1718
- Biopolymers, polyisobutylene based, 1771-  
 1790
- Biphenyl-3,3',4,4'-tetracarboxylic imide,  
 thermotropic aromatic poly(ester-  
 imide)s based on, 1315-1328
- Blends  
 of poly(pyridinium ethyl methacrylate  
 perchloride) and (poly[oligo(oxy-  
 ethylene) methacrylate-co-acryl-  
 amide], anionic conduction in, 873-  
 882
- poly(vinyl chloride)-lignin, for outdoor  
 application in building, 555-571
- Block copolymers  
 A-B-A type, of methyl methacrylate and  
 styrene, synthesis of by living free  
 radical polymerization, 827-833
- amphiphilic, design of nanoscopic vehicles  
 for drug targeting based on micelli-  
 zation of, 1759-1769
- Block polymers, synthesis of using enolate-  
 initiated anionic polymerization,  
 1377-1381
- Bromomethylated poly(2,6-dimethyl-1,4-  
 phenylene oxide), amination kinet-  
 ics of with diethylamine, 2019-2031
- Butanol-1, in the extrusion process of the  
 alcoholysis of ethylene-vinyl acetate  
 copolymers, 1425-1445
- Butyl acrylate, emulsion copolymerization  
 of styrene with, the influence of ini-  
 tiator type on, 835-846

**C**

- Calcium carbonate, surface treated, radia-  
 tion crosslinking of PVC com-  
 pounds with, 291-303
- Calorimetric analysis, of the aqueous solu-  
 tion of poly(*N*-isopropylacryl-  
 amide)-*b*-poly(ethylene glycol),  
 109-112
- Catalysts  
 cyclodextrin as for syntheses of key mo-  
 nomers for advanced polymer mate-  
 rials, 1491-1500
- functional group tolerant ROMP, devel-  
 opment of, 1829-1833
- magnesium ethoxide based titanium, for  
 the polymerization of propylene,  
 451-463
- phase transfer  
 polystyrene-supported dimethylform-  
 amides as in a solid-solid-liquid sys-  
 tem, 2033-2040
- for synthesis of aliphatic and aro-  
 matic poly(*S*-dithiocarbonates),  
 498-505
- Rh complex, stereoregular polymeriza-  
 tion of alkyl propiolate, 456-475
- systems  
 potassium peroxydisulfate/quaternary  
 ammonium salt, for the free radical  
 polymerization by phase-transfer ca-  
 talysis of methyl methacrylate, 847-  
 857
- Ziegler-Natta, for polymerization of  
 1-octene, 395-412
- transition metal  
 polymerization of 1-ethynyl-1-cyclo-  
 hexanol by, 703-714
- polymerization of  $\alpha$ -hydroxyacetyl-  
 enes by, 1177-1191
- Cation exchangers, use of terpolymer  
 resins as, 367-382
- Cationically polymerizable monomers, syn-  
 thesis and polymerization of, 1001-  
 1029
- Cellulose nitrate, homogeneous grafting  
 of, 1259-1269
- Charge density, effect of on the fluores-  
 cence of pyrene derivatives in the  
 presence of poly(methallyl sulfo-  
 nate-vinyl acetate) copolymers,  
 439-449

- Chemical industries, modification of by specialty polymers, 1355–1376
- Chiral crystallization, stereospecific polymerization and, 1501–1517
- Chiral smectic C mesophases, new architectures for side-chain liquid-crystalline polymers with, 1591–1607
- Chitin derivatives, for biomedical functions, selective sulfation of, 1701–1718
- Chitosan-gel nanospheres, coated with polysaccharides, release behavior of 5-fluorouracil from and their cell specific cytotoxicity, 629–642
- Chromophores, azo aromatic, photoisomerization of in poly(vinyl chloride), 1233–1239
- Chronoamperometry, for evaluation of membrane porosity, 1271–1288
- Coacervation, protein-polyelectrolyte, stoichiometry and the mechanism of complex formation in, 17–29
- Coatings
  - hybrid inorganic-organic abrasion resistant, preparation of by a sol-gel process, 249–260
  - well-adhered/abrasion-resistant optical, production of on an optical plastic substrate, 665–675
- Cobalt(II) acetate, radical polymerization and copolymerization of ethyl 3-oxo-4-pentenoate in the presence of, 643–650
- Complex formation
  - of bovine serum albumin and sodium chondroitin-6-sulfate, 65–81
  - of papain
    - with potassium poly(vinyl alcohol sulfate), spectroscopic studies of, 31–37
    - with strong polyanions, 39–51
  - polyelectrolyte, 1–15
  - stoichiometry and the mechanism of in protein-polyelectrolyte coacervation, 17–29
- Conductivity
  - electrical, of poly(acrylamide-*co*-maleic anhydride)s reacted with phosphorus oxychloride, 507–516
  - single ionic, in poly(sodium 2-methacryloyl 3-[ $\omega$ -methoxyl oligo-(oxyethylene)] propylsulfonate), 543–553
- Controlled radical polymerization, 1561–1578
- Convergent growth route, to globular dendritic macromolecules, 1627–1645
- Copolymerization
  - of acrylamide
    - with acrylonitrile, 1289–1301
    - and *N*-vinylpyrrolidone, 613–627
  - of acrylonitrile with brominated phenylmaleimides, 319–328
  - emulsion, of styrene with butyl acrylate, influence of initiator type on, 835–846
  - of 2-ethyl hexyl acrylate with styrene in the presence of ZnCl<sub>2</sub>, 761–774
  - of ethyl 3-oxo-4-pentenoate in the presence of cobalt(II) acetate, 643–650
  - graft
    - of acrylonitrile onto sodium alginate, 581–591
    - potassium bromate initiated, of methyl methacrylate onto wool fiber, 171–183
  - methyl methacrylate-styrene, in the presence of methyl cyanoacetate, 535–541
  - of poly(acrylamide-*co*-maleic anhydride)s reacted with phosphorus oxychloride, 507–516
  - sequential block, of isobutylene with *p*-methylstyrene, 1985–2000
  - of 2-vinylnaphthalene with benzylidene-malononitrile, 2001–2010
- Copolymers
  - of acrylonitrile with brominated phenylmaleimides, 319–328
  - block and random, synthesis of with 2-chloroethyl vinyl ether and end-functionalized polymers, 937–951
  - with dibenzo-19-crown-6 units, synthesis and cation-binding properties of, 751–759
  - ethylene-vinyl acetate, alcoholysis of with butanol-1 in the extrusion process, 1425–1445
  - glycidyl methacrylate, and homopolymers, polymer gel electrolytes based on, 1121–1134
  - heterophasic ethylene-propylene, kinetics of thermal decomposition of, 413–425

Copolymers (*contd.*)

- poly(methallyl sulfonate-vinyl acetate), fluorescence of pyrene derivatives in the presence of, 439-449
- randomly segmented poly(aryl imide)-poly(dimethyl siloxane), containing triphenylphosphine oxide, 1071-1085
- T- and comb shaped, of poly(ethylene oxide) and polyisobutylene, 1943-1953
- triblock
- poly(styrene-isobutylene-styrene), synthesis and characterization of, 969-987
- polystyrene-polyisobutylene-polystyrene, synthesis and characterization of, 2055-2065
- Coupling products, of stable free radicals, polymerization with, 351-366
- Coupling reactions, metal catalyzed, in the synthesis of conducting polymers, 1893-1902
- Crosslinking
- effect of on the toughness of composite low-density polyethylene/silica, 1455-1467
- radiation, of PVC compounds with surface-treated calcium carbonate, 291-303
- thermal, of poly(2,6-diphenylphenylene ether) containing acetylene moieties, 155-169
- Crystallization, chiral, stereospecific polymerization and, 1501-1517
- Curing reaction, of isocyanate-thickened unsaturated polyester resin, 427-438
- Cyclodextrin, as a catalyst for syntheses of key monomers for advanced polymer materials, 1491-1500
- Cyclopolymerization
- of diallyl malonitrile and the thioether dimer of ethyl  $\alpha$ -chloromethylacrylate, 1867-1879
- of  $\alpha,\omega$ -diepoxide with monoepoxy comonomer, 751-759

## D

- Decomposition, radical induced, of dimethyl-*N*-(2-cyano-2-propyl)-ketenimine, 329-337

## Degradation

- designed thermal, of a polycarbonate, confirmation of by TGA/FT-IR spectroscopy, 1955-1964
- photosensitized, of poly( $\alpha$ -chloroacrylonitrile) under oxygen, 477-486
- thermal, of phosphorylated poly(*N*-vinylcarbazole), study of by thermogravimetry, 883-889
- Diallyl malonitrile, cyclopolymerization of with the thioether dimer of ethyl  $\alpha$ -chloromethylacrylate, 1867-1879
- 4,4'-Diamino-3,3'-dihydroxybiphenyl, and aliphatic dicarboxylic acid chlorides, silylation preparation of aliphatic polybenzoxazoles from, 817-826
- Diaryliodonium salts, photochemistry and photopolymerization activity of, 677-701
- 3,6-Dibromo-9-(2,3-epoxypropyl)-carbazole, polymerization of with Lewis acids, 1303-1313
- $\alpha,\omega$ -Diepoxide, cyclopolymerization of with monoepoxy comonomer, 751-759
- Diethylamine, amination kinetics of bromomethylated poly(2,6-dimethyl-1,4-phenylene oxide) with, 2019-2031
- Dihalides, activated aromatic, synthesis and characterization of aromatic polyethers from, 1975-1983
- Dilute solution properties, of poly(acrylamide-*co*-methyl methacrylate), 231-247
- Dimethyl-*N*-(2-cyano-2-propyl)ketenimine, radical-induced decomposition of, 329-337
- Dimethylformamides, polystyrene supported, as phase-transfer catalysts in a solid-solid-liquid system, 2033-2040
- Diols, tetraphenylated five-membered heterocycle containing, synthesis and characterization of aromatic polyethers from, 1975-1983
- Diphenols, chlorinated, synthesis of polycarbonates and polythiocarbonates from, 283-290
- Diphenyl sulfide, oxidative polymerization of, 1579-1589

- Dispersion, of polyurethane anionomer from ether-type polyols and isophorone diisocyanate, 1241–1257
- Drug targeting, design of nanoscopic vehicles for based on micellization of amphiphilic block copolymers, 1759–1769

## E

- Elastomers  
epoxidized, synthesis and photoinitiated cationic polymerization of, 517–533  
thermoplastic, polyisobutylene based, 2055–2065
- Electrically conductive polymers  
manipulation of multicomponent Langmuir-Blodgett films of, 793–803  
metal-catalyzed coupling reactions in the synthesis of, 1893–1902
- Electrochemical reactions, polymer solvents for, 1881–1891
- Electroinitiated polymerization, of *N*-vinylcarbazole and related conducting polymer composites, 593–611
- Electrooptical properties, of polymer/liquid crystal molecules composite systems, 1847–1865
- Electrophilic reaction, of phenyl bis(phenylthio) sulfonium cation, as an active species for the oxidative polymerization of diphenyl sulfide, 1579–1589
- Emulsion copolymerization, of styrene with butyl acrylate, the influence of initiator type on, 835–846
- End groups, unsaturated, synthesis and characterization of polysulfones with, 219–230
- End-functional multiarmed polymers, living cationic polymerization synthesis of, 1609–1618
- Enolates  
initiation of anionic polymerization by, for the synthesis of graft, block, and star polymers, 1377–1381  
as an intermediate in anion-catalyzed group-transfer polymerization, 927–935
- Enzymatic activities, of the complexes of papain with strong polyanions, 39–51
- Enzymes, genetically engineered with

charged polypeptide tails, a model of the polyelectrolyte precipitation of, 127–153

- Epoxidized elastomers, synthesis and photoinitiated cationic polymerization of, 517–533
- Ethyl  $\alpha$ -chloromethylacrylate, cyclopolymerization of the thioether dimer of with diallyl malononitrile, 1867–1879
- 2-Ethyl hexyl acrylate, copolymerization of with styrene in the presence of  $ZnCl_2$ , 761–774
- Ethyl 3-oxo-4-pentenoate, radical polymerization and copolymerization of in the presence of cobalt(II) acetate, 643–650
- Ethylene-propylene copolymers, heterophasic, kinetics of thermal decomposition of, 413–425
- Ethylene-vinyl acetate copolymers, alcoholysis of with butanol-1 in the extrusion process, 1425–1445
- 1-Ethynyl-1-cyclohexanol, polymerization of by transition metal catalysts, 703–714

## F

- Fibers, undrawn and drawn high-speed spun poly(ethylene terephthalate), the use of sodium hydroxide hydrolysis to study the fine structure of, 1147–1168
- Fluorescence  
of the interaction of polyelectrolytes with albumin, 53–64  
of pyrene derivatives in the presence of poly(methallyl sulfonate-vinyl acetate) copolymers, effect of charge density on, 439–449
- Fluorinated substituents, tailoring macromolecular properties with, 1657–1673
- Fluoropolymers, tailoring macromolecular properties for the synthesis of, 1657–1673
- 5-Fluorouracil, release behavior of from chitosan-gel nanospheres coated with polysaccharides, 629–642
- Free radical polymerization  
living, for synthesis of an A-B-A type block copolymer of methyl methacrylate and styrene, 827–833

- Free radical polymerization (*contd.*)  
 of methyl methacrylate by phase-transfer catalysis using potassium peroxydisulfide/quaternary ammonium salt catalyst system, 847-857
- Free radicals, stable, polymerization with coupling products of, 351-366
- Functional group tolerant ROMP catalysts, development of, 1829-1833

## G

- Gelation, thermoreversible, of a synthetic hydrogel  
 effect of added salts on, 121-125  
 preparation and rheological properties of, 113-120
- Gels, poly(sulfopropyl methacrylate potassium-*co*-hydroxyethyl methacrylate), swelling and release characteristics of, 783-792
- Germynes, as monomers for polymer synthesis, 1835-1845
- Globular dendritic macromolecules, convergent growth route to, 1627-1645
- Glycidyl methacrylate, polymer gel electrolytes based on homopolymer and copolymers of, 1121-1134
- Graft polymers, synthesis of using enolate-initiated anionic polymerization, 1377-1381
- Grafting  
 homogeneous, of cellulose nitrate, 1259-1269  
 surface, onto barium sulfate, 1135-1145
- Group-transfer polymerization, anion catalyzed, involvement of an enolate intermediate in, 927-933

## H

- Hemoglobin, interaction of with phospholipid assemblies, 97-108
- Heteroarm star-branched polymers, scope and limitations of anionic synthesis of, 911-926
- 2,2,4,4,6,6,-Hexakis(2-hydroxyethyl methacrylate), for sensitivity enhancement of polyorganophosphazenes to radiation, 1193-1206
- Hexatriacontane, surface modification of, 1087-1103
- High-performance polymeric membranes,

- molecular and morphological designs of, 1791-1805
- Homogeneous grafting, of cellulose nitrate, 1259-1269
- Homopolymer, glycidyl methacrylate, and copolymers, polymer gel electrolytes based on, 1121-1134
- Hydroboration polymerization, versatile reactions of organoboron polymers prepared by, 1647-1655
- Hydrogel, synthetic, with thermoreversible gelation  
 effect of added salts, 121-125  
 preparation and rheological properties of, 113-120
- Hydroxy functional group, synthesis and properties of poly(1,6-heptadiyne) derivatives containing, 2041-2053
- $\alpha$ -Hydroxyacetylenes, polymerization of by transition metal catalysts, 1177-1191
- 3-Hydroxy-2-phenylpropionic acid, low-temperature polyesterification of, 775-782

## I

- Initiators  
 ester-boron trihalide, of living cationic polymerization, 261-272  
 identification of fragments of in polyisobutylene by NMR spectroscopy, 655-663  
 influence of type of on emulsion copolymerization of styrene with butyl acrylate, 835-846  
 organometallic, for the living polymerization of isocyanates, 1619-1626  
 potassium bromate, of graft copolymerization of methyl methacrylate onto wool fiber, 171-183
- Interfacial interaction, of polymer/liquid crystal molecules, 1847-1865
- Interpenetrating networks, synthesis of and reactive coupling of polymers in the interface, 1399-1424
- Isobutylene, sequential block copolymerization of with *p*-methylstyrene, 1985-2000
- Isocyanates, organometallic initiators for the living polymerization of, 1619-1626
- Isophorone diisocyanate, polyurethane

- anionomer dispersion from, 1241–1257
- Isoprene, polymerization of with ( $\eta^3$ -allyl cerium/alkylaluminum, 273–282

## L

- Langmuir-Blodgett films, multicomponent, of electrically conductive polymers, manipulation of, 793–803
- Lewis acids, polymerization of 3,6-dibromo-9-(2,3-epoxypropyl)-carbazole with, 1303–1313
- Ligands, multivalent, for induction of receptor-receptor interactions, 1519–1533
- Lignin, blends of with poly(vinyl chloride) for outdoor application in building, 555–571
- Liquid-crystalline polyimides, synthesis and characterization of, 1315–1328
- Living carbocationic polymerizations  
comparison of with living radical polymerization, 989–1000  
of p-methylstyrene, 1985–2000  
transfer and termination reactions in, 953–968
- Living cationic polymerization  
by ester-boron trihalide initiators, quantum chemical study of the mechanism of, 261–272  
of  $\alpha$ -methylstyrene, 937–951  
for synthesis of end-functional multiarmed polymers, 1609–1618
- Living polymerization, of isocyanates, organometallic initiators for, 1619–1626
- Living radical polymerization, comparison of living carbocationic polymerization to, 989–1000
- Low-density polyethylene/silica, composite, the effect of crosslinking on the toughness of, 1455–1467
- Low-temperature polyesterification, of 3-hydroxy-2-phenylpropionic acid, 775–782

## M

- Macromolecular design, living cationic polymerization for, 1609–1618
- Macromolecular engineering, applications

- of anionic polymerization to, 891–909
- Macromolecular properties, tailoring of with fluorinated substituents, 1657–1673
- Maleic anhydride, solid-phase functionalization of isotactic polypropylene with, 1447–1454
- Matrix polymerization, of acrylamide, induction of by the interaction between carbonyl and amide groups, 1169–1176
- Mechanical properties, of polymeric materials, the effect of aging on, 1383–1398
- Membranes  
evaluation of porosity of by chronoamperometry, 1271–1288  
high performance polymeric, molecular and morphological designs of, 1791–1805
- Mesophases, chiral smectic C, new architectures for side-chain liquid-crystalline polymers with, 1591–1607
- Metal-catalyzed coupling reactions, in the synthesis of conducting polymers, 1893–1902
- Methyl cyanoacetate, investigation of the methyl methacrylate-styrene copolymerization system in the presence of, 535–541
- Methyl methacrylate  
free radical polymerization of by phase-transfer catalysis using potassium peroxydisulfate/quaternary ammonium salt catalyst system, 847–857  
induction of polymerization of by micellar solution of cationic surfactants, 573–579  
photopolymerization of using 1-(*N,N*-bis-benzoylamino)-4,5-diphenyl-1,2,3-triazole as photoinitiator, 487–494  
potassium-bromate-initiated graft copolymerization of onto wool fiber, 171–183  
and styrene, synthesis of an A-B-A type block copolymer of by living free radical polymerization, 827–833
- Methyl methacrylate-butyl acrylate polymers, submicrometer particle, with multilayer morphology, 1469–1479



- Methyl methacrylate-styrene copolymerization system, investigation of in the presence of methyl cyanoacetate, 535-541
- N,N'*-Methylenebisacrylamide, radical polymerization of by peroxidi-phosphate-Ag<sup>+</sup> redox system, 805-816
- $\alpha$ -Methylstyrene, living cationic polymerization of, 937-951
- p*-Methylstyrene, living carbocationic polymerization of and sequential block copolymerization of isobutylene with, 1985-2000
- Micellar solutions, of cationic surfactants, as inducer of polymerization of methyl methacrylate, 573-579
- Micellization, of amphiphilic block copolymers, design of nanoscopic vehicles for drug targeting based on, 1759-1769
- Molecular architecture, of polymers, 1329-1353
- Molecular weight, effect of on the thermal properties of polystyrene-based side-chain liquid-crystalline polymers, 1221-1232
- Molecular-recognition-directed self-assembly  
 of supramolecular architectures, 1719-1758  
 of supramolecular polymers, 1031-1070
- Monoepoxy comonomer, cyclopolymerization of  $\alpha,\omega$ -diepoxide with, 751-759
- Monomers  
 cationically polymerizable, synthesis and polymerization of, 1001-1029  
 germynes as for polymer synthesis, 1835-1845  
 multifunctional propenyl ether cationic photopolymerization of, 1927-1941  
 synthesis and photopolymerization of, 1105-1119  
 syntheses of for advanced polymer materials using cyclodextrin as a catalyst, 1491-1500  
 synthesis and photopolymerization of, 1807-1827
- Multivalent ligands, for induction of receptor-receptor interactions, 1519-1533

## N

- Nanospheres, chitosan-gel, coated with polysaccharides, release behavior of 5-fluorouracil from and their cell specific cytotoxicity, 629-642
- Negative resists, application of sensitivity enhancement of polyorganophosphazenes to radiation to, 1193-1206
- Networks  
 amphiphilic chameleon, synthesis, characterization, and biological testing of, 1771-1790  
 interpenetrating, synthesis of and reactive coupling of polymers in the interface, 1399-1424
- NMR. *See* Nuclear magnetic resonance
- Nonlinear optical properties, second order, of a polymer exhibiting optical transparency down to 340 nanometers, 2011-2018
- Nuclear magnetic resonance (NMR) spectra, <sup>13</sup>C and <sup>1</sup>H, for poly(*N*-methyl-2-vinyl pyrrole), 1207-1219  
 spectroscopy, for identification of initiator fragments in polyisobutylene, 655-663

## O

- 1-Octene, kinetics of the polymerization of with the Ziegler-Natta catalyst systems, 395-412
- Optical plastic, as a substrate for the production of well-adhered/abrasion-resistant optical coatings, 665-675
- Optical properties, second order nonlinear, of a polymer exhibiting optical transparency down to 340 nanometers, 2011-2018
- Organic substitution, of silicon alkoxides in poly(vinyl acetate) organic-inorganic composites, the effect of, 1965-1973
- Organic-inorganic composites, poly(vinyl acetate), the effect of organic substitution of silicon alkoxides in, 1965-1973
- Organoboron polymers, prepared by hydroboration polymerization, versatile reactions of, 1647-1655
- Organoboron reagents, for chemical modification and improved thermal sta-

- bility of poly(vinyl chloride), 185-198
- Organometallic initiators, for the living polymerization of isocyanates, 1619-1626
- Outdoor application, in building, of poly(vinyl chloride)-lignin blends, 555-571
- Oxidative polymerization, of diphenyl sulfide, 1579-1589
- Oxygen, photosensitized degradation of poly( $\alpha$ -chloroacrylonitrile) under, 477-486
- Oxygen-silicone acrylates, as model systems for radical photopolymerization, 1905-1926

## P

- Papain, complexation of  
with potassium poly(vinyl alcohol sulfate), spectroscopic studies of, 31-37  
with strong polyanions, and enzymatic activities of the resulting complexes, 39-51
- Periodic polypeptides, based on poly(L-alanyl)glycine, 1691-1700
- Peroxidiphosphate-Ag<sup>+</sup> redox system, radical polymerization of *N,N'*-methylenebisacrylamide by, 805-816
- Peroxodiphosphate/different activators redox system, polymerization of acrylamide by in an aqueous medium, 383-394
- Pharmaceutical industries, modification of by specialty polymers, 1355-1376
- Phase-transfer catalysis  
polymerization by, 283-290  
for synthesis of aliphatic and aromatic poly(*S*-dithiocarbonates), 495-505  
using potassium peroxydisulfate/quaternary ammonium salt catalyst system, for free radical polymerization of methyl methacrylate, 847-857
- Phenyl acrylate, solvent effect on radical polymerization of, 715-720
- Phenyl bis(phenylthio) sulfonium cation, electrophilic reaction of, 1579-1589
- Phenylmaleimides, brominated, copolymerization and copolymers of acrylonitrile with, 319-328
- Phospholipid assemblies, interaction of with hemoglobin, 97-108
- Phosphorus oxychloride, reacted with poly(acrylamide-*co*-maleic anhydride)s, syntheses and electric conductivities of, 507-516
- Photochemistry, of diaryliodonium salts, 677-701
- Photocrosslinking, of silicones, 1905-1926
- Photoinitiators  
1-(*N,N*-bis-benzoylamino)-4,5-diphenyl-1,2,3-triazole as, for the photopolymerization of methyl methacrylate, 487-494  
with functional groups, containing silicon, 305-318
- Photoisomerization, of azo aromatic chromophores in poly(vinyl chloride), 1233-1239
- Photopolymerization  
activity, of diaryliodonium salts, 677-701  
cationic  
of epoxidized elastomers, 517-533  
of multifunctional propenyl ether monomers, 1927-1941  
of novel monomers, 1807-1827  
of methyl methacrylate, using 1-(*N,N*-bis-benzoylamino)-4,5-diphenyl-1,2,3-triazole as photoinitiator, 487-494  
of multifunctional propenyl ether monomers, 1105-1119  
radical, under oxygen-silicone acrylates as model systems, 1905-1926
- Polyacetylenes, substituted, design, synthesis, and properties of, 1675-1690
- Poly(acrylamide-*co*-maleic anhydride)s, reacted with phosphorus oxychloride, syntheses and electric conductivities of, 507-516
- Poly(acrylamide-*co*-methyl methacrylate), dilute solution properties of, 231-247
- Poly(L-alanyl)glycine, periodic polypeptides based on, 1691-1700
- Polyanions, strong, complexation of papain with, 39-51
- Poly(aryl imide)-poly(dimethyl siloxane) randomly segmented copolymers, containing triphenylphosphine oxide, 1071-1085
- Polybenzoxazoles, aliphatic, silylation

- Polybenzoxazoles (*contd.*)  
 preparation of from 4,4'-diamino-3,3'-dihydroxybiphenyl and aliphatic dicarboxylic acid chlorides, 817-826
- Polycarbonates  
 confirmation of the designed thermal degradation of by TGA/FT-IR spectroscopy, 1955-1964  
 synthesis of from chlorinated diphenols, 283-290
- Poly( $\alpha$ -chloroacrylonitrile), photosensitized degradation of under oxygen, 477-486
- Poly(2,6-dimethyl-1,4-phenylene oxide), bromomethylated, amination kinetics of with diethylamine, 2019-2031
- Poly(2,6-diphenylphenylene ether), with acetylene moieties, thermal cross-linking of, 155-169
- Poly(*S*-dithiocarbonates), aliphatic and aromatic, synthesis of using a phase-transfer catalyst, 498-505
- Polyelectrolytes  
 binding of ionic pyrene derivatives to, an ultraviolet absorption and fluorescence study of, 859-872  
 complexes  
 of bovine serum albumin and sodium chondroitin-6-sulfate, 65-81  
 formation of and their structures, 1-15  
 of papain with potassium poly(vinyl alcohol sulfate), of papain with strong polyanions, 39-51  
 spectroscopic studies of, 31-37  
 interaction of with albumin, fluorescence measurement of, 53-64  
 precipitation, of genetically engineered enzymes with charged polypeptide tails, 127-153  
 redox reactions of proteins in, 83-95
- Polyesterification, low temperature, of 3-hydroxy-2-phenylpropionic acid, 775-782
- Poly(ester-imide)s, thermotropic aromatic, based on biphenyl-3,3',4,4'-tetracarboxylic imide, 1315-1328
- Polyesters  
 resin, isocyanate thickened unsaturated, the curing reaction of, 427-438  
 side chain liquid crystalline, synthesis and characterization of, 199-217
- Polyether polyols, the kinetics of the polymerization reaction of toluene diisocyanate with, 339-350
- Polyethers, aromatic, synthesis and characterization of from tetraphenylated five-membered heterocycle-containing diols and activated aromatic dihalides, 1975-1983
- Poly(ethyl  $\alpha$ -fluoroacrylate), structural characterization of, 721-736
- Poly(ethylene oxide), T- and comb-shaped copolymers of with polyisobutylene, 1943-1953
- Poly(ethylene terephthalate), the use of sodium hydroxide hydrolysis to study the fine structure of undrawn and drawn high-speed spun fibers of, 1147-1168
- Poly( $\alpha$ -fluoroacrylonitrile), structural characterization of, 721-736
- Poly(1,6-heptadiyne), synthesis and properties of derivatives of containing hydroxy functional group, 2041-2053
- Poly(3-hexylthiophene), manipulation of multicomponent Langmuir-Blodgett films of, 793-803
- Polyimides, liquid crystalline, synthesis and characterization of, 1315-1328
- Polyisobutylene  
 biopolymers based on, 1771-1790  
 identification of initiator fragments in by NMR spectroscopy, 655-663  
 T- and comb-shaped copolymers of with poly(ethylene oxide), 1943-1953  
 thermoplastic elastomers based on, 2055-2065
- Poly(*N*-isopropylacrylamide)-*b*-poly(ethylene glycol), preparation of and calorimetric analysis of its aqueous solution, 109-112
- Polymer composites  
 conducting, electroinitiated polymerization of, 593-611  
 restriction of spin probe motions in due to chemical factors, 1481-1487
- Polymer gel electrolytes, based on glycidyl methacrylate homopolymer and copolymers, 1121-1134
- Polymer/liquid crystal molecules, interfacial interaction of and electrooptical properties of their composite systems, 1847-1865

- Polymeric materials  
the effect of aging on the mechanical properties of, 1383–1398  
advanced, synthesis of key monomers for using cyclodextrin as a catalyst, 1491–1500
- Poly(*N*-methyl-2-vinyl pyrrole), analysis of the <sup>13</sup>C-NMR and <sup>1</sup>H-NMR spectra of, 1207–1219
- Poly[oligo(oxyethylene) methacrylate-*co*-acrylamide], anionic conduction in blends of with poly(pyridinium ethyl methacrylate perchloride), 873–882
- Polyols  
ether type, polyurethane anionomer dispersion from, 1241–1257  
polyether, the kinetics of the polymerization reaction of toluene diisocyanate with, 339–350
- Polyorganophosphazenes, sensity enhancement of to radiation, 1193–1206
- Polypeptide tails, charged, polyelectrolyte precipitation of genetically engineered enzymes with, 127–153
- Polypeptides, periodic, based on poly(L-alanyl)glycine, 1691–1700
- Poly(phenyl propargyl ether), and its homologues, synthesis and properties of, 737–750
- Polypropylene, isotactic, solid-phase functionalization of with maleic anhydride, 1447–1454
- Poly(pyridinium ethyl methacrylate perchloride), anionic conduction in blends of with poly[oligo(oxyethylene) methacrylate-*co*-acrylamide], 873–882
- Polypyrrole, manipulation of multicomponent Langmuir-Blodgett films of, 793–803
- Poly(sodium 2-methacryloyl 3-[ $\omega$ -methoxyl oligo(oxyethylene)] propylsulfonate), single-ionic conductivity in, 543–553
- Polystyrene, the effect of molecular weight on the thermal properties of side-chain liquid-crystalline polymers based on, 1221–1232
- Poly(styrene-isobutylene-styrene) triblock copolymers, synthesis and characterization of, 969–987
- Polystyrene-supported dimethylformamides, as phase-transfer catalysts in a solid-solid-liquid system, 2033–2040
- Polysulfones, with unsaturated end groups, synthesis and characterization of, 219–230
- Poly(sulfopropyl methacrylate potassium-*co*-hydroxyethyl methacrylate) gels, swelling and release characteristics of, 783–792
- Polythiocarbonates, synthesis of from chlorinated diphenols, 283–290
- Polyurethane, anionomer dispersion of from ether-type polyols and isophorone diisocyanate, 1241–1257
- Poly(vinyl acetate) organic-inorganic composites, the effect of organic substitution of silicon alkoxides in, 1965–1973
- Poly(vinyl chloride) (PVC)  
blends of with lignin for outdoor application in building, 555–571  
compounds, radiation crosslinking of with surface-treated calcium carbonate, 291–303  
improved thermal stability of by partial reduction with organoboron reagents, 185–198  
photoisomerization of azo aromatic chromophores in, 1233–1239
- Poly(*N*-vinylcarbazole), phosphorylated, thermogravimetric study of thermal degradation of, 883–889
- Potassium poly(vinyl alcohol sulfate), spectroscopic studies of the complexation of with papain, 31–37
- Propenyl ether monomers, multifunctional cationic photopolymerization of, 1927–1941  
synthesis and photopolymerization of, 1105–1119
- Propylene, magnesium-ethoxide-based titanium catalysts for the polymerization of, 451–463
- Protein-polyelectrolyte coacervation, stoichiometry and the mechanism of complex formation in, 17–29
- Proteins, redox reactions of in polymer electrolytes, 83–95
- PVC. *See* Poly(vinyl chloride)
- Pyrene  
binding of ionic derivatives of to polyelectrolytes, an ultraviolet and fluorescence study of, 859–872

*Pyrene (contd.)*

fluorescence of derivatives of in the presence of poly(methallyl sulfonate-vinyl acetate) copolymers, 439-449

**Q**

Quantum chemical study, of the mechanism of living cationic polymerization by ester-boron trihalide initiators, 261-272

**R**

Radiation, sensitivity enhancement of polyorganophosphazenes to, 1193-1206

Radiation crosslinking, of PVC compounds with surface-treated calcium carbonate, 291-303

*Radical polymerization*

controlled, 1561-1578

of ethyl 3-oxo-4-pentenoate in the presence of cobalt(II) acetate, 643-650

of *N,N'*-methylenebisacrylamide by peroxidiphosphate- $\text{Ag}^+$  redox system, 805-816

of phenyl acrylate, solvent effect on, 715-720

Radical-induced decomposition, of dimethyl-*N*-(2-cyano-2-propyl)-ketenimine, 329-337

Randomly segmented copolymers, poly(aryl imide)-poly(dimethyl siloxane), containing triphenylphosphine oxide, 1071-1085

Reactive coupling, of polymers in the interface of interpenetrating networks, 1399-1422

Receptor-receptor interactions, induction of by multivalent ligands, 1519-1533

Redox reactions, of proteins in polymer electrolytes, 83-95

*Redox systems*

peroxidiphosphate- $\text{Ag}^+$ , radical polymerization of *N,N'*-methylenebisacrylamide by, 805-816

peroxidiphosphate/different activators, polymerization of acrylamide by in an aqueous medium, 383-394

Release behavior, of 5-fluorouracil from

chitosan-gel nanospheres coated with polysaccharides, 629-642

Release characteristics, of poly(sulfopropyl methacrylate potassium-co-hydroxyethyl methacrylate) gels, 783-792

*Resins*

isocyanate thickened unsaturated polyester, the curing reaction of, 427-438  
terpolymer, syntheses and studies of and use of as cation exchangers, 367-382

Rh complex, as the catalyst of stereoregular polymerization of alkyl propionate, 465-475

Ring-opening metathesis polymerization (ROMP) catalysts, functional group tolerant, development of, 1829-1833

ROMP. *See* Ring-opening metathesis polymerization

**S**

Self-assembly, molecular recognition directed

of supramolecular architectures, 1719-1758

of supramolecular polymers, 1031-1070

Side-chain liquid-crystalline polyesters, synthesis and characterization of, 199-217

*Side-chain liquid-crystalline polymers*

with chiral smectic C mesophases, new architectures for, 1591-1607

polystyrene based, the effect of molecular weight on the thermal properties of, 1221-1232

Silanol-containing polymers, and their blends, synthesis of, 1535-1560

Silicon, photoinitiators containing, 305-318

Silicon alkoxides, the effect of organic substitution of in poly(vinyl acetate) or organic-inorganic composites, 1965-1973

Silicones, photocrosslinking of, 1905-1926

Silylation, for preparation of aliphatic polybenzoxazoles from 4,4'-diamino-3,3'-dihydroxybiphenyl and aliphatic dicarboxylic acid chlorides, 817-826

- Sodium alginate, graft copolymerization of acrylonitrile onto, 581–591
- Sodium chondroitin-6-sulfate, formation of a polymer complex of with bovine serum albumin, 65–81
- Sodium hydroxide hydrolysis, for the study of the fine structure of undrawn and drawn high-speed spun poly(ethylene terephthalate) fibers, 1147–1168
- Sol-gel process, for the preparation of hybrid inorganic-organic abrasion-resistant coatings, 249–260
- Solid-phase functionalization, of isotactic polypropylene with maleic anhydride, influence of solvents and additives on the level of the reaction, 1447–1454
- Solid-solid-liquid system, polystyrene-supported dimethylformamides as phase-transfer catalysts in, 2033–2040
- Solvents
- effect of on radical polymerization of phenyl acrylate, 715–720
  - influence of on the level of solid-phase functionalization of isotactic polypropylene with maleic anhydride, 1447–1454
  - polymer, for electrochemical reactions, 1881–1891
- Specialty polymers, modification of the chemical and pharmaceutical industries by, 1355–1376
- Spin probe motions, restriction of in polymer composites due to chemical factors, 1481–1487
- Star polymers, synthesis of using enolate-initiated anionic polymerization, 1377–1381
- Star-branched polymers, heteroarm, scope and limitations of anionic synthesis of, 911–926
- Stereoregular polymerization, of alkyl propiolate, catalysis of by Rh complex, 465–475
- Stereospecific polymerization, and chiral crystallization, 1501–1517
- Styrene
- copolymerization of 2-ethyl hexyl acrylate with in the presence of  $ZnCl_2$ , 761–774
  - influence of the initiator type on emulsion copolymerization of with butyl acrylate, 835–846
  - and methyl methacrylate, synthesis of an A-B-A type block copolymer of by living free radical polymerization, 827–833
- Submicrometer particle methyl methacrylate-butyl acrylate polymers, with multilayer morphology, preparation and properties of, 1469–1479
- Substituted polyacetylenes, design, synthesis, and properties of, 1675–1690
- Sulfation, selective, of chitin derivatives for biomedical functions, 1701–1718
- Supramolecular architectures, molecular-recognition-directed self-assembly of, 1719–1758
- Supramolecular polymers, molecular-recognition-directed self-assembly of, 1031–1070
- Surface grafting, onto barium sulfate, 1135–1145
- Surface modification
- of barium sulfate, by grafting, 1135–1145
  - of hexatriacontane, 1087–1103
- Surfactants, cationic, induction of polymerization of methyl methacrylate by a micellar solution of, 573–579
- Swelling characteristics, of poly(sulfopropyl methacrylate potassium-co-hydroxyethyl methacrylate) gels, 783–792

## T

- Termination reactions, in living carbocationic polymerizations, 953–968
- Terpolymer resins, syntheses and structural studies of and use of as cation exchangers, 367–382
- TGA/FT-IR. *See* Thermogravimetric analysis/Fourier transform infrared
- Thermal crosslinking, of poly(2,6-diphenylphenylene ether) containing acetylene moieties, 155–169
- Thermal decomposition, of heterophasic ethylene-propylene copolymers, 413–425

- Thermal degradation, designed, of a polycarbonate, confirmation of by TGA/FT-IR spectroscopy, 1955-1964
- Thermal properties, of polystyrene-based side-chain liquid-crystalline polymers, the effect of molecular weight on, 1221-1232
- Thermal stability, of poly(vinyl chloride), improvement of by partial reduction with organoboron reagents, 185-198
- Thermogravimetric analysis/Fourier transform infrared (TGA/FT-IR) spectroscopy, for confirmation of the designed thermal degradation of a polycarbonate, 1955-1964
- Thermogravimetry, for the study of degradation of phosphorylated poly(*N*-vinylcarbazole) by, 883-889
- Thermoplastic elastomers, polyisobutylene based, 2055-2065
- Three-dimensional polymers and novel block copolymers, formation of by the convergent growth approach, 1627-1645
- Titanium catalysts, magnesium ethoxide based, for polymerization of propylene, 451-463
- Toluene diisocyanate, the kinetics of the polymerization reaction of with polyether polyols, 339-350
- Toughness, of composite low-density polyethylene/silica, the effect of cross-linking on, 1455-1467
- Transfer reactions, in living carbocationic polymerizations, 953-968
- Transition metal catalysts  
polymerization of 1-ethynyl-1-cyclohexanol by, 703-714

- polymerization of  $\alpha$ -hydroxyacetylenes by, 1177-1191
- Triblock copolymers  
poly(styrene-isobutylene-styrene), synthesis and characterization of, 969-987  
polystyrene-polyisobutylene-polystyrene, synthesis and characterization of, 2055-2065

## V

- N*-Vinylcarbazole, and related conducting polymer composites, kinetic studies of the electroinitiated polymerization of, 593-611
- 2-Vinylnaphthalene, copolymerization of with benzylidenemalononitrile, 2001-2010
- N*-Vinylpyrrolidone, copolymerization of with acrylamide, 613-627
- 1-(*N,N*-Bis-benzoylamino)-4,5-diphenyl-1,2,3-triazole, as photoinitiator for photopolymerization of methyl methacrylate, 487-494

## W

- Wool fiber, potassium-bromate-initiated graft copolymerization of methyl methacrylate onto, 171-183

## Z

- Ziegler-Natta catalyst systems, for polymerization of 1-octene, 395-412
- ZnCl<sub>2</sub>, copolymerization of 2-ethyl hexyl acrylate with styrene in the presence of, 761-774