

## Author Index Volumes 101-123

*Author Index Vols. 1-100 see Vol. 100*

- Adolf, D. B.* see Ediger, M. D.: Vol. 116, pp. 73-110.
- Aharoni, S. M. and Edwards, S. F.*: Rigid Polymer Networks. Vol. 118, pp. 1-231.
- Améduri, B. and Boutevin, B.*: Synthesis and Properties of Fluorinated Telechelic Monodispersed Compounds. Vol. 102, pp. 133-170.
- Amselem, S.* see Domb, A. J.: Vol. 107, pp. 93-142.
- Angiolini, L.* see Carlini, C.: Vol. 123, pp. 127-214.
- Anseth, K. S., Newman, S. M. and Bowman, C. N.*: Polymeric Dental Composites: Properties and Reaction Behavior of Multimethacrylate Dental Restorations. Vol. 122, pp. 177-218.
- Arnold Jr., F. E. and Arnold, F. E.*: Rigid-Rod Polymers and Molecular Composites. Vol. 117, pp. 257-296.
- Arshady, R.*: Polymer Synthesis via Activated Esters: A New Dimension of Creativity in Macromolecular Chemistry. Vol. 111, pp. 1-42.
- Bahar, I., Erman, B. and Monnerie, L.*: Effect of Molecular Structure on Local Chain Dynamics: Analytical Approaches and Computational Methods. Vol. 116, pp. 145-206.
- Baltá-Calleja, F. J., González Arche, A., Ezquerra, T. A., Santa Cruz, C., Batallón, F., Frick, B. and López Cabarcos, E.*: Structure and Properties of Ferroelectric Copolymers of Poly(vinylidene) Fluoride. Vol. 108, pp. 1-48.
- Barshtein, G. R. and Sabsai, O. Y.*: Compositions with Mineralorganic Fillers. Vol. 101, pp. 1-28.
- Batallón, F.* see Baltá-Calleja, F. J.: Vol. 108, pp. 1-48.
- Barton, J.* see Hunkeler, D.: Vol. 112, pp. 115-134.
- Bell, C. L. and Peppas, N. A.*: Biomedical Membranes from Hydrogels and Interpolymer Complexes. Vol. 122, pp. 125-176.
- Berry, G.C.*: Static and Dynamic Light Scattering on Moderately Concentrated Solutions: Isotropic Solutions of Flexible and Rodlike Chains and Nematic Solutions of Rodlike Chains. Vol. 114, pp. 233-290.
- Bershtein, V. A. and Ryzhov, V. A.*: Far Infrared Spectroscopy of Polymers. Vol. 114, pp. 43-122.
- Bigg, D. M.*: Thermal Conductivity of Heterophase Polymer Compositions. Vol. 119, pp. 1-30.
- Binder, K.*: Phase Transitions in Polymer Blends and Block Copolymer Melts: Some Recent Developments. Vol. 112, pp. 115-134.
- Biswas, M. and Mukherjee, A.*: Synthesis and Evaluation of Metal-Containing Polymers. Vol. 115, pp. 89-124.
- Boutevin, B. and Robin, J. J.*: Synthesis and Properties of Fluorinated Diols. Vol. 102, pp. 105-132.
- Boutevin, B.* see Amédouri, B.: Vol. 102, pp. 133-170.
- Bowman, C. N.* see Anseth, K. S.: Vol. 122, pp. 177-218.

- Boyd, R. H.*: Prediction of Polymer Crystal Structures and Properties. Vol. 116, pp. 1-26.  
*Bruza, K. J.* see Kirchhoff, R. A.: Vol. 117, pp. 1-66.  
*Burban, J. H.* see Cussler, E. L.: Vol. 110, pp. 67-80.
- Candau, F.* see Hunkeler, D.: Vol. 112, pp. 115-134.  
*Capek, I.*: Kinetics of the Free-Radical Emulsion Polymerization of Vinyl Chloride. Vol. 120, pp. 135-206.  
*Carlini, C.* and *Angiolini, L.*: Polymers as Free Radical Photoinitiators. Vol. 123, pp. 127-214.  
*Casas-Vazquez, J.* see Jou, D.: Vol. 120, pp. 207-266.  
*Chen, P.* see Jaffe, M.: Vol. 117, pp. 297-328.  
*Choe, E.-W.* see Jaffe, M.: Vol. 117, pp. 297-328.  
*Chow, T. S.*: Glassy State Relaxation and Deformation in Polymers. Vol. 103, pp. 149-190.  
*Chung, T.-S.* see Jaffe, M.: Vol. 117, pp. 297-328.  
*Connell, J. W.* see Hergenrother, P. M.: Vol. 117, pp. 67-110.  
*Criado-Sancho, M.* see Jou, D.: Vol. 120, pp. 207-266.  
*Curro, J.G.* see Schweizer, K.S.: Vol. 116, pp. 319-378.  
*Cussler, E. L., Wang, K. L.* and *Burban, J. H.*: Hydrogels as Separation Agents. Vol. 110, pp. 67-80.
- Dimonie, M. V.* see Hunkeler, D.: Vol. 112, pp. 115-134.  
*Dodd, L. R.* and *Theodorou, D. N.*: Atomistic Monte Carlo Simulation and Continuum Mean Field Theory of the Structure and Equation of State Properties of Alkane and Polymer Melts. Vol. 116, pp. 249-282.  
*Doelker, E.*: Cellulose Derivatives. Vol. 107, pp. 199-266.  
*Domb, A. J., Amselem, S., Shah, J.* and *Maniar, M.*: Polyanhydrides: Synthesis and Characterization. Vol. 107, pp. 93-142.  
*Dubrovskii, S. A.* see Kazanskii, K. S.: Vol. 104, pp. 97-134.  
*Dunkin, I. R.* see Steinke, J.: Vol. 123, pp. 81-126.
- Economy, J.* and *Goranov, K.*: Thermotropic Liquid Crystalline Polymers for High Performance Applications. Vol. 117, pp. 221-256.  
*Ediger, M. D.* and *Adolf, D. B.*: Brownian Dynamics Simulations of Local Polymer Dynamics. Vol. 116, pp. 73-110.  
*Edwards, S. F.* see Aharoni, S. M.: Vol. 118, pp. 1-231.  
*Erman, B.* see Bahar, I.: Vol. 116, pp. 145-206.  
*Ezquerria, T. A.* see Baltá-Calleja, F. J.: Vol. 108, pp. 1-48.
- Fendler, J.H.*: Membrane-Mimetic Approach to Advanced Materials. Vol. 113, pp. 1-209.  
*Fetters, L. J.* see Xu, Z.: Vol. 120, pp. 1-50.  
*Förster, S.* and *Schmidt, M.*: Polyelectrolytes in Solution. Vol. 120, pp. 51-134.  
*Frick, B.* see Baltá-Calleja, F. J.: Vol. 108, pp. 1-48.  
*Fridman, M. L.*: see Terent'eva, J. P.: Vol. 101, pp. 29-64.
- Ganesh, K.* see Kishore, K.: Vol. 121, pp. 81-122.  
*Geckeler, K. E.* see Rivas, B.: Vol. 102, pp. 171-188.  
*Geckeler, K. E.*: Soluble Polymer Supports for Liquid-Phase Synthesis. Vol. 121, pp. 31-80.  
*Gehrke, S. H.*: Synthesis, Equilibrium Swelling, Kinetics Permeability and Applications of Environmentally Responsive Gels. Vol. 110, pp. 81-144.

- Godovsky, D. Y.*: Electron Behavior and Magnetic Properties Polymer-Nanocomposites. Vol. 119, pp. 79-122.
- González Arche, A.* see Baltá-Calleja, F. J.: Vol. 108, pp. 1-48.
- Goranov, K.* see Economy, J.: Vol. 117, pp. 221-256.
- Grosberg, A. and Nechaev, S.*: Polymer Topology. Vol. 106, pp. 1-30.
- Grubbs, R., Risse, W. and Novac, B.*: The Development of Well-defined Catalysts for Ring-Opening Olefin Metathesis. Vol. 102, pp. 47-72.
- van Gunsteren, W. F.* see Gusev, A. A.: Vol. 116, pp. 207-248.
- Gusev, A. A., Müller-Plathe, F., van Gunsteren, W. F. and Suter, U. W.*: Dynamics of Small Molecules in Bulk Polymers. Vol. 116, pp. 207-248.
- Guillot, J.* see Hunkeler, D.: Vol. 112, pp. 115-134.
- Guyot, A. and Tauer, K.*: Reactive Surfactants in Emulsion Polymerization. Vol. 111, pp. 43-66.
- Hadjichristidis, N.* see Xu, Z.: Vol. 120, pp. 1-50.
- Hall, H. K.* see Penelle, J.: Vol. 102, pp. 73-104.
- Hammouda, B.*: SANS from Homogeneous Polymer Mixtures: A Unified Overview. Vol. 106, pp. 87-134.
- Hedrick, J. L.* see Hergenrother, P. M.: Vol. 117, pp. 67-110.
- Heller, J.*: Poly (Ortho Esters). Vol. 107, pp. 41-92.
- Hemielec, A. A.* see Hunkeler, D.: Vol. 112, pp. 115-134.
- Hergenrother, P. M., Connell, J. W., Labadie, J. W. and Hedrick, J. L.*: Poly(arylene ether)s Containing Heterocyclic Units. Vol. 117, pp. 67-110.
- Hirasa, O.* see Suzuki, M.: Vol. 110, pp. 241-262.
- Hirotsu, S.*: Coexistence of Phases and the Nature of First-Order Transition in Poly-N-isopropylacrylamide Gels. Vol. 110, pp. 1-26.
- Hunkeler, D., Candau, F., Pichot, C., Hemielec, A. E., Xie, T. Y., Barton, J., Vaskova, V., Guillot, J., Dimonie, M. V., Reichert, K. H.*: Heterophase Polymerization: A Physical and Kinetic Comparison and Categorization. Vol. 112, pp. 115-134.
- Ichikawa, T.* see Yoshida, H.: Vol. 105, pp. 3-36.
- Ilavsky, M.*: Effect on Phase Transition on Swelling and Mechanical Behavior of Synthetic Hydrogels. Vol. 109, pp. 173-206.
- Inomata, H.* see Saito, S.: Vol. 106, pp. 207-232.
- Irie, M.*: Stimuli-Responsive Poly(N-isopropylacrylamide), Photo- and Chemical-Induced Phase Transitions. Vol. 110, pp. 49-66.
- Ise, N.* see Matsuoka, H.: Vol. 114, pp. 187-232.
- Ivanov, A. E.* see Zubov, V. P.: Vol. 104, pp. 135-176.
- Jaffe, M., Chen, P., Choe, E.-W., Chung, T.-S. and Makhija, S.*: High Performance Polymer Blends. Vol. 117, pp. 297-328.
- Jou, D., Casas-Vazquez, J. and Criado-Sancho, M.*: Thermodynamics of Polymer Solutions under Flow: Phase Separation and Polymer Degradation. Vol. 120, pp. 207-266.
- Kaetsu, I.*: Radiation Synthesis of Polymeric Materials for Biomedical and Biochemical Applications. Vol. 105, pp. 81-98.
- Kammer, H. W., Kressler, H. and Kummerloewe, C.*: Phase Behavior of Polymer Blends - Effects of Thermodynamics and Rheology. Vol. 106, pp. 31-86.

- Kandyrin, L. B. and Kuleznev, V. N.*: The Dependence of Viscosity on the Composition of Concentrated Dispersions and the Free Volume Concept of Disperse Systems. Vol. 103, pp. 103-148.
- Kaneko, M.* see Ramaraj, R.: Vol. 123, pp. 215-242.
- Kang, E. T., Neoh, K. G. and Tan, K. L.*: X-Ray Photoelectron Spectroscopic Studies of Electroactive Polymers. Vol. 106, pp. 135-190.
- Kazanskii, K. S. and Dubrovskii, S. A.*: Chemistry and Physics of „Agricultural“ Hydrogels. Vol. 104, pp. 97-134.
- Kennedy, J. P.* see Majoros, I.: Vol. 112, pp. 1-113.
- Khokhlov, A., Starodybtzev, S. and Vasilevskaya, V.*: Conformational Transitions of Polymer Gels: Theory and Experiment. Vol. 109, pp. 121-172.
- Kilian, H. G. and Pieper, T.*: Packing of Chain Segments. A Method for Describing X-Ray Patterns of Crystalline, Liquid Crystalline and Non-Crystalline Polymers. Vol. 108, pp. 49-90.
- Kishore, K. and Ganesh, K.*: Polymers Containing Disulfide, Tetrasulfide, Diselenide and Ditelluride Linkages in the Main Chain. Vol. 121, pp. 81-122.
- Klier, J.* see Scranton, A. B.: Vol. 122, pp. 1-54.
- Kobayashi, S., Shoda, S. and Uyama, H.*: Enzymatic Polymerization and Oligomerization. Vol. 121, pp. 1-30.
- Kokufuta, E.*: Novel Applications for Stimulus-Sensitive Polymer Gels in the Preparation of Functional Immobilized Biocatalysts. Vol. 110, pp. 157-178.
- Konno, M.* see Saito, S.: Vol. 109, pp. 207-232.
- Kopecek, J.* see Putnam, D.: Vol. 122, pp. 55-124.
- Kressler, J.* see Kammer, H. W.: Vol. 106, pp. 31-86.
- Kirchhoff, R. A. and Bruza, K. J.*: Polymers from Benzocyclobutenes. Vol. 117, pp. 1-66.
- Kuleznev, V. N.* see Kandyrin, L. B.: Vol. 103, pp. 103-148.
- Kulichkhin, S. G.* see Malkin, A. Y.: Vol. 101, pp. 217-258.
- Kuchanov, S. I.*: Modern Aspects of Quantitative Theory of Free-Radical Copolymerization. Vol. 103, pp. 1-102.
- Kummerloewe, C.* see Kammer, H. W.: Vol. 106, pp. 31-86.
- Kuznetsova, N. P.* see Samsonov, G. V.: Vol. 104, pp. 1-50.
- 
- Labadie, J. W.* see Hergenrother, P. M.: Vol. 117, pp. 67-110.
- Laso, M.* see Leontidis, E.: Vol. 116, pp. 283-318.
- Lazár, M. and Rychlý, R.*: Oxidation of Hydrocarbon Polymers. Vol. 102, pp. 189-222.
- Lenz, R. W.*: Biodegradable Polymers. Vol. 107, pp. 1-40.
- Leontidis, E., de Pablo, J. J., Laso, M. and Suter, U. W.*: A Critical Evaluation of Novel Algorithms for the Off-Lattice Monte Carlo Simulation of Condensed Polymer Phases. Vol. 116, pp. 283-318.
- Lesec, J.* see Viovy, J.-L.: Vol. 114, pp. 1-42.
- Liang, G. L.* see Sumpter, B. G.: Vol. 116, pp. 27-72.
- Lin, J. and Sherrington, D. C.*: Recent Developments in the Synthesis, Thermostability and Liquid Crystal Properties of Aromatic Polyamides. Vol. 111, pp. 177-220.
- López Cabarcos, E.* see Baltá-Calleja, F. J.: Vol. 108, pp. 1-48.
- 
- Majoros, I., Nagy, A. and Kennedy, J. P.*: Conventional and Living Carbocationic Polymerizations United. I. A Comprehensive Model and New Diagnostic Method to Probe the Mechanism of Homopolymerizations. Vol. 112, pp. 1-113.

- Makhija, S.* see Jaffe, M.: Vol. 117, pp. 297-328.
- Malkin, A. Y.* and *Kulichkhin, S. G.*: Rheokinetics of Curing. Vol. 101, pp. 217-258.
- Maniar, M.* see Domb, A. J.: Vol. 107, pp. 93-142.
- Matsumoto, A.*: Free-Radical Crosslinking Polymerization and Copolymerization of Multivinyl Compounds. Vol. 123, pp. 41-80.
- Matsuoka, H.* and *Ise, N.*: Small-Angle and Ultra-Small Angle Scattering Study of the Ordered Structure in Polyelectrolyte Solutions and Colloidal Dispersions. Vol. 114, pp. 187-232.
- Mays, W.* see Xu, Z.: Vol. 120, pp. 1-50.
- Mikos, A. G.* see Thomson, R. C.: Vol. 122, pp. 245-274.
- Miyasaka, K.*: PVA-Iodine Complexes: Formation, Structure and Properties. Vol. 108, pp. 91-130.
- Monnerie, L.* see Bahar, I.: Vol. 116, pp. 145-206.
- Morishima, Y.*: Photoinduced Electron Transfer in Amphiphilic Polyelectrolyte Systems. Vol. 104, pp. 51-96.
- Müllen, K.* see Scherf, U.: Vol. 123, pp. 1-40.
- Müller-Plathe, F.* see Gusev, A. A.: Vol. 116, pp. 207-248.
- Mukerherjee, A.* see Biswas, M.: Vol. 115, pp. 89-124.
- Mylnikov, V.*: Photoconducting Polymers. Vol. 115, pp. 1-88.
- Nagy, A.* see Majoros, I.: Vol. 112, pp. 1-113.
- Nechaev, S.* see Grosberg, A.: Vol. 106, pp. 1-30.
- Neoh, K. G.* see Kang, E. T.: Vol. 106, pp. 135-190.
- Newman, S. M.* see Anseth, K. S.: Vol. 122, pp. 177-218.
- Noid, D. W.* see Sumpter, B. G.: Vol. 116, pp. 27-72.
- Novac, B.* see Grubbs, R.: Vol. 102, pp. 47-72.
- Novikov, V. V.* see Privalko, V. P.: Vol. 119, pp. 31-78.
- Ogasawara, M.*: Application of Pulse Radiolysis to the Study of Polymers and Polymerizations. Vol. 105, pp. 37-80.
- Okada, M.*: Ring-Opening Polymerization of Bicyclic and Spiro Compounds. Reactivities and Polymerization Mechanisms. Vol. 102, pp. 1-46.
- Okano, T.*: Molecular Design of Temperature-Responsive Polymers as Intelligent Materials. Vol. 110, pp. 179-198.
- Onuki, A.*: Theory of Phase Transition in Polymer Gels. Vol. 109, pp. 63-120.
- Osad'ko, I.S.*: Selective Spectroscopy of Chromophore Doped Polymers and Glasses. Vol. 114, pp. 123-186.
- de Pablo, J. J.* see Leontidis, E.: Vol. 116, pp. 283-318.
- Padias, A. B.* see Penelle, J.: Vol. 102, pp. 73-104.
- Penelle, J., Hall, H. K., Padias, A. B.* and *Tanaka, H.*: Captodative Olefins in Polymer Chemistry. Vol. 102, pp. 73-104.
- Peppas, N. A.* see Bell, C. L.: Vol. 122, pp. 125-176.
- Pichot, C.* see Hunkeler, D.: Vol. 112, pp. 115-134.
- Pieper, T.* see Kilian, H. G.: Vol. 108, pp. 49-90.
- Pospíšil, J.*: Functionalized Oligomers and Polymers as Stabilizers for Conventional Polymers. Vol. 101, pp. 65-168.
- Priddy, D. B.*: Recent Advances in Styrene Polymerization. Vol. 111, pp. 67-114.

- Priddy, D. B.*: Thermal Discoloration Chemistry of Styrene-co-Acrylonitrile. Vol. 121, pp. 123-154.
- Privalko, V. P. and Novikov, V. V.*: Model Treatments of the Heat Conductivity of Heterogeneous Polymers. Vol. 119, pp 31-78.
- Putnam, D. and Kopecek, J.*: Polymer Conjugates with Anticancer Acitivity. Vol. 122, pp. 55-124.
- Ramaraj, R. and Kaneko, M.*: Metal Complex in Polymer Membrane as a Model for Photo-synthetic Oxygen Evolving Center. Vol. 123, pp. 215-242.
- Rangarajan, B.* see Scranton, A. B.: Vol. 122, pp. 1-54.
- Reichert, K. H.* see Hunkeler, D.: Vol. 112, pp. 115-134.
- Risse, W.* see Grubbs, R.: Vol. 102, pp. 47-72.
- Rivas, B. L. and Geckeler, K. E.*: Synthesis and Metal Complexation of Poly(ethyleneimine) and Derivatives. Vol. 102, pp. 171-188.
- Robin, J. J.* see Boutevin, B.: Vol. 102, pp. 105-132.
- Roe, R.-J.*: MD Simulation Study of Glass Transition and Short Time Dynamics in Polymer Liquids. Vol. 116, pp. 111-114.
- Rusanov, A. L.*: Novel Bis (Naphtalic Anhydrides) and Their Polyheteroarylenes with Improved Processability. Vol. 111, pp. 115-176.
- Rychlý, J.* see Lazár, M.: Vol. 102, pp. 189-222.
- Ryzhov, V. A.* see Bershtein, V. A.: Vol. 114, pp. 43-122.
- Sabsai, O. Y.* see Barshtein, G. R.: Vol. 101, pp. 1-28.
- Saburov, V. V.* see Zubov, V. P.: Vol. 104, pp. 135-176.
- Saito, S., Konno, M. and Inomata, H.*: Volume Phase Transition of N-Alkylacrylamide Gels. Vol. 109, pp. 207-232.
- Samsonov, G. V. and Kuznetsova, N. P.*: Crosslinked Polyelectrolytes in Biology. Vol. 104, pp. 1-50.
- Santa Cruz, C.* see Baltá-Calleja, F. J.: Vol. 108, pp. 1-48.
- Scherf, U. and Müllen, K.*: The Synthesis of Ladder Polymers. Vol. 123, pp. 1-40.
- Schmidt, M.* see Förster, S.: Vol. 120, pp. 51-134.
- Schweizer, K. S.*: Prism Theory of the Structure, Thermodynamics, and Phase Transitions of Polymer Liquids and Alloys. Vol. 116, pp. 319-378.
- Scranton, A. B., Rangarajan, B. and Klier, J.*: Biomedical Applications of Polyelectrolytes. Vol. 122, pp. 1-54.
- Sefton, M. V. and Stevenson, W. T. K.*: Microencapsulation of Live Animal Cells Using Polycrylates. Vol.107, pp. 143-198.
- Shamanin, V. V.*: Bases of the Axiomatic Theory of Addition Polymerization. Vol. 112, pp. 135-180.
- Sherrington, D. C.* see Lin, J.: Vol. 111, pp. 177-220.
- Sherrington, D. C.* see Steinke, J.: Vol. 123, pp. 81-126.
- Shibayama, M.* see Tanaka, T.: Vol. 109, pp. 1-62.
- Shoda, S.* see Kobayashi, S.: Vol. 121, pp. 1-30.
- Siegel, R. A.*: Hydrophobic Weak Polyelectrolyte Gels: Studies of Swelling Equilibria and Kinetics. Vol. 109, pp. 233-268.
- Singh, R. P.* see Sivaram, S.: Vol. 101, pp. 169-216.
- Sivaram, S. and Singh, R. P.*: Degradation and Stabilization of Ethylene-Propylene Copolymers and Their Blends: A Critical Review. Vol. 101, pp. 169-216.
- Starodubtzev, S.* see Khokhlov, A.: Vol. 109, pp. 121-172.

- Steinke, J., Sherrington, D. C. and Dunkin, I. R.*: Imprinting of Synthetic Polymers Using Molecular Templates. Vol. 123, pp. 81-126.
- Stenzenberger, H. D.*: Addition Polyimides. Vol. 117, pp. 165-220.
- Stevenson, W. T. K.* see Sefton, M. V.: Vol. 107, pp. 143-198.
- Sumpter, B. G., Noid, D. W., Liang, G. L. and Wunderlich, B.*: Atomistic Dynamics of Macromolecular Crystals. Vol. 116, pp. 27-72.
- Suter, U. W.* see Gusev, A. A.: Vol. 116, pp. 207-248.
- Suter, U. W.* see Leontidis, E.: Vol. 116, pp. 283-318.
- Suzuki, A.*: Phase Transition in Gels of Sub-Millimeter Size Induced by Interaction with Stimuli. Vol. 110, pp. 199-240.
- Suzuki, A. and Hirasa, O.*: An Approach to Artificial Muscle by Polymer Gels due to Micro-Phase Separation. Vol. 110, pp. 241-262.
- Tagawa, S.*: Radiation Effects on Ion Beams on Polymers. Vol. 105, pp. 99-116.
- Tan, K. L.* see Kang, E. T.: Vol. 106, pp. 135-190.
- Tanaka, T.* see Penelle, J.: Vol. 102, pp. 73-104.
- Tanaka, H. and Shibayama, M.*: Phase Transition and Related Phenomena of Polymer Gels. Vol. 109, pp. 1-62.
- Tauer, K.* see Guyot, A.: Vol. 111, pp. 43-66.
- Terent'eva, J. P. and Fridman, M. L.*: Compositions Based on Aminoresins. Vol. 101, pp. 29-64.
- Theodorou, D. N.* see Dodd, L. R.: Vol. 116, pp. 249-282.
- Thomson, R. C., Wake, M. C., Yaszemski, M. J. and Mikos, A. G.*: Biodegradable Polymer Scaffolds to Regenerate Organs. Vol. 122, pp. 245-274.
- Tokita, M.*: Friction Between Polymer Networks of Gels and Solvent. Vol. 110, pp. 27-48.
- Uyama, H.* see Kobayashi, S.: Vol. 121, pp. 1-30.
- Vasilevskaya, V.* see Khokhlov, A., Vol. 109, pp. 121-172.
- Vaskova, V.* see Hunkeler, D.: Vol. 112, pp. 115-134.
- Verdugo, P.*: Polymer Gel Phase Transition in Condensation-Decondensation of Secretory Products. Vol. 110, pp. 145-156.
- Viovy, J.-L. and Lesec, J.*: Separation of Macromolecules in Gels: Permeation Chromatography and Electrophoresis. Vol. 114, pp. 1-42.
- Volsken, W.*: Condensation Polyimides: Synthesis, Solution Behavior, and Imidization Characteristics. Vol. 117, pp. 111-164.
- Wake, M. C.* see Thomson, R. C.: Vol. 122, pp. 245-274.
- Wang, K. L.* see Cussler, E. L.: Vol. 110, pp. 67-80.
- Wunderlich, B.* see Sumpter, B. G.: Vol. 116, pp. 27-72.
- Xie, T. Y.* see Hunkeler, D.: Vol. 112, pp. 115-134.
- Xu, Z., Hadjichristidis, N., Fetters, L. J. and Mays, J. W.*: Structure/Chain-Flexibility Relationships of Polymers. Vol. 120, pp. 1-50.
- Yannas, I. V.*: Tissue Regeneration Templates Based on Collagen-Glycosaminoglycan Copolymers. Vol. 122, pp. 219-244.

*Yamaoka, H.*: Polymer Materials for Fusion Reactors. Vol. 105, pp. 117-144.

*Yaszemski, M. J.* see Thomson, R. C.: Vol. 122, pp. 245-274.

*Yoshida, H.* and *Ichikawa, T.*: Electron Spin Studies of Free Radicals in Irradiated Polymers. Vol. 105, pp. 3-36.

*Zubov, V. P., Ivanov, A. E.* and *Saburov, V. V.*: Polymer-Coated Adsorbents for the Separation of Biopolymers and Particles. Vol. 104, pp. 135-176.



# Subject Index

- Absorption properties 27, 30, 33, 36  
Absorption spectrum 228, 230  
Abzymes 106, 108  
Ac-D-tryptophane 108  
Acetophenone, dialkoxyl 157, 166-168  
-, hydroxyalkyl 180  
Acetophenones 167  
Acrylamide 194  
Acrylamido-2-methylpropane sulfonic acid 115  
Acrylonitrile 134, 146, 159, 161, 206  
Adrenergic blockers 99  
Albumin, bovine serum 107  
Aldol-condensation, polymer-analogous 19  
Allyl resins, network formation 44  
Aluminum ion dopant 97  
Amine-derived radicals 145, 147, 150-155, 185  
Amino acid anhydrides 203-205  
L-Amino acid oxidase 108  
Anthraquinone 129, 150  
Antibodies 83  
-, catalytic 108  
Antigens 83  
Aromatic substitution, nucleophilic 34  
Aromatization, polymer-analogous 13, 15  
Arylboronic acids 114  
Azo derivatives 194-198, 202, 203
- Benzil** 155  
Benzil ketals 167  
Benzoin-containing polymers 171-185, 196, 199, 202, 208  
- derivatives 157, 174, 177-184, 195  
Benzophenones 129-145, 146, 150, 158, 159  
-/amine 146, 150-155  
Binding interactions 92  
Bio-imprinting 108  
Biopolymers, imprinting 107  
Bisacryloyl-L-phenylalaninol 117
- Bisphenol-A 176, 206  
Block copolymers 194-208  
Bovine serum albumin 107
- Cadmium sulfide 239  
Cage formation 11  
Camphorquinone 150  
Camphorsulfonic acid 96  
Carbonyl olefination 36  
Catalysis, enantioselective 106  
Catenanes 84  
Cavities, catalytic 103  
-, chiral 115  
Cellophane 193  
Cellulose 193, 194  
-, chromatography-modified 94  
Cellulose esters 204, 205  
Cerium ion (Ce IV) 223, 234  
Chain transfer, degradative 44, 47  
-, intramolecular 50, 58  
Charge transfer complex 156  
Chlorophyll a 218  
Chloroprene 203-205  
Chromatography, separations 114  
Chymotrypsin 108  
Cinnamic esters 104  
Claisen rearrangement 111  
 $\alpha$ -Cleavage 169, 180  
Cluster, hydrophobic 236  
Coatings, pigmented 148, 195-187, 208-210  
Co<sup>3+</sup>-complex, chiral octahedral salicylidene 102  
Coenzyme-substrate analogue 104  
Condensation, reductive 34  
Conjugated polymers, ladder-type 28, 37, 38  
Covalent bonding 92  
Cross-coupling, Suzuki-type 21, 24, 33, 34  
Crosslink ratio 94  
Crosslinkage, multiple 59, 68

- Crosslinker levels 117  
 Crosslinkers 115  
 Crosslinking 2, 3, 8, 16, 17, 25  
   -, intermolecular 59, 67, 68  
   -, intramolecular 58, 67, 71  
 Crown ether-type interactions with ions 92  
   Cu<sup>2+</sup> complex 102  
 Cyclization, incomplete 4, 8, 27  
   -, intramolecular 53, 58, 68, 69  
   -, of open-chain precursors 2  
   -, polymer-analogous 15, 25  
   -, thermal 17  
 Cycloaddition, Diels-Alder-type 2, 11, 12, 15  
   -, repetitive 9, 11, 12, 24, 37  
   -, [2+2+2] 15  
 Cyclobutane dicarboxylic acid 103  
 Cyclohexene oxide 202, 203  
 Cyclohexyl phenyl ketone, triplet state 165  
 Cyclopolymerization 53  
 Cyclopropane dicarboxylic acid 103  
 Cytochrome P-450 111
- D**ehydroxytetrahydrofuran dimethacrylate 116  
 Dextrans 108  
 Dialkoxy acetophenones 157, 166-168  
 Dianhydro-D-sorbitol 117  
 Diazepam 99  
 Diels-Alder reactions 111  
   - - -, repetitive 3, 9, 10, 14, 15  
 Diethylaniline 97  
 Dimethoxyphenyl acetophenone/amine 184  
 Dimethylaniline 97  
 Dioxygen 217, 223  
 Disulfides 203-205  
 Dithiocarbamates 199-201  
 DNA 82  
   - primer 83  
 Doping of conjugated ladder polymers 7, 31, 32
- E**lectroluminescence 28, 38  
 Enantioselectivity 108  
 Energy transfer 137, 159, 210  
 Entanglement 71  
 Entropic effect 97  
 Enzyme, bio-imprinted 108  
 Enzyme, "lock-and-key" 98  
   -, mimic 103  
 Enzyme-analogue built polymers 98, 103  
 1-Ethoxy-2-methylpyridinium hexafluorophosphate 202  
 Ethoxyethylmethacrylate 104  
 Ethyl adenine 99  
 Ethylene glycol dimethacrylate 102  
 Exciplex 145, 146  
 Excluded volume effect, thermodynamic 61, 74  
 Excluded volume effect, steric 71
- F**lash photolysis 149, 167, 180, 191  
 Flory-Stockmayer theory 45, 66  
 Fluorenone 146-148, 195  
 Footprints, chiral 106  
 Fructose-6-phosphate 108  
 Fumarate esters 200, 201
- G**el, definition 47  
 Gel point, actual, determination 47, 67  
   - - -, theoretical, estimation 48, 55, 68  
 Genetic engineering 82  
 Glass transition 161, 163, 202  
 Glutathione 108  
 Gordon's equation 45
- H**apten 110  
   -/antibody interactions 96  
 Helicates 84  
 $\alpha$ -Helices 84  
 High pressure conditions 12  
 Hybridoma technology 110  
 Hydrogen bonding 93  
   - -, multiple 108  
   - -, receptors 102  
   - donation 130-139, 142-145, 149, 185  
   - transfer 130, 145, 147, 152, 155, 182  
 Hydrophobic/hydrophilic domain 227  
 Hydroxyalkylphenone 169, 180  
   -, derivatives 168-171, 192
- I**mprinting, hydrophobic interactions 102  
   -, molecular 89  
 Indium tin oxide 228  
 Induced fit 98

- Iniferter 200  
Initiation, quantum yield 143, 169, 180  
-, thermal 194-200, 202  
Initiation rate 143  
Interchain interactions, intermolecular interactions 3, 5  
Ionic bonding 92
- Ketones, aliphatic** 159-161  
Ketyl radicals 132, 133, 143, 145, 149
- Lactic acid** 108  
Light scattering 52, 72, 73, 76  
Loop structure 54, 59, 68, 69
- Macrocycles** 10  
Macrogel 63  
Maleic acid 108  
Maleic anhydride 146, 200, 201  
Maltohexose 108  
Mandelic acid 96, 104  
Manganese carbonyls 198  
Membrane, polymer 217, 226, 237  
Metal oxide catalyst 221  
Metalloporphyrins 111  
Methacrylamide 204, 205  
Methacrylic monomers 150, 189, 190, 193, 199  
Methyl orange 96, 97  
Methylene blue 97  
Methylenebisacrylamide 97  
Microenvironment 218  
Microgel 60, 63, 104  
Microgelation 60, 72  
Microheterogeneous environment 236  
Microheterogenization 62  
Microsyneresis 60  
Mn complex 220, 223, 238  
-, dinuclear 223  
-, monomeric 237  
-, Schiff base 237  
Mn ion 220  
Mn porphyrin complex 223  
Mn protein complex 217, 218  
Morpholino ketones 157, 208-210  
Multielectron metal complex 224  
- transfer 217  
Multifunctional condensation 2-8
- Multifunctional monomers 2-4  
Mutagenesis, site-directed 111  
MWD curve 50, 58, 67, 70, 76
- Nafion membrane 227, 228, 237, 239  
Naphthoquinone-4-sulfonic acid 97  
Network formation, control 75  
-, reaction scheme 67  
Networks, macroporous gel-type 94  
-, natural polymer 94  
Nitrophenylphosphate 105  
Nonlinear-optical (NLO) measurements 22, 33
- Octadecylsilyl monolayers 102  
Oxime 157, 161-164, 178, 206  
Oxygen evolution, electrocatalytic 234  
Oxygen evolving catalyst 217  
- - center (OEC) 217-220, 226, 230  
- - system 219
- P 680** 218  
PCR 82  
Peroxides 158, 159, 197, 198  
Peroxy radicals 132, 158, 185  
Phenyl ketones, triplet state 157, 165, 168, 170, 180, 210  
Phenyl-D-mannoside 117  
Phosphinioxides 157, 186-189  
Phosphofructokinase 108  
Photoanode 239  
Photoelectrode 239  
Photooxidation of water 221  
Photosensitizers 158, 172, 210  
Photosynthesis 217, 219  
-, artificial 217  
Photosystem *LII* 217, 218  
Pigmented coatings 148, 195-187, 208-210  
Polar effect 76  
Poly(L-aspartic acid) 108  
Poly(arylenemethide) 29-33  
Poly(benzimidazophenanthroline) (BBL) 6-7  
Poly(ethyleneglycol) imprinted 108  
Poly(ethylenimine) 97, 108  
Poly( $\alpha$ -methylstyrene-*p*-trichloroacetyl) 193  
Poly(para-phenylene), ladder-type (LPPP) 24-33

- Poly(peri-naphthalene) 20-23  
Poly(propylene) 193  
Poly(silane)s 190  
Poly(siloxane)s 166, 167, 171, 172, 194, 201, 202  
Poly(urethane) 199  
Poly(4,5-vinylimidazole) 105  
Polyacene, angularly annulated 34  
-, linear 13, 14, 18, 22  
Polydispersity coefficient 50, 51, 61  
Polymer membrane 217, 226, 237  
Polymerase chain reaction (PCR) 82  
Polymerization rate 142, 160, 169, 180, 185  
Pore structure 94  
Porogen 94  
Post-copolymerization 56, 57  
Post-polymerization 59, 61  
Primary chain, length 44-48, 52, 69  
Protein lyophilization 108  
Protein receptor, abiotic 108  
Pyridoxal-5'-phosphate 104  
Pyridoxyl-L-phenylalanineanilide 104
- Radius of gyration 61, 71-73, 76  
Reactivity, cyclized/uncyclized radical 56  
-, prepolymer 57, 58  
Receptor, abiotic 107  
Recognition process 97  
Rhenium carbonyls 198  
Rigidity, main chain 76  
Ring-closure, polymer-analogous 3, 26  
RNA 82  
Rotaxanes 84  
Ru complex 224  
-, dimeric 227  
-, dinuclear 224, 232  
-, trinuclear 225, 233  
Ru-brown 233  
Ru-red 225, 233, 239  
RuO<sub>2</sub> 221
- Salicylidene, chiral octahedral 102  
SEC-LALLS 60, 70, 72  
SEC-MALLS 66, 72, 76  
Second virial coefficient 61, 71, 76  
Semipinacol, radical 130, 132, 147, 150, 153, 195  
Separation 96
- Shielding effect 71  
Side-chain ordering *see* Supramolecular ordering  
Side-groups, flexible 10  
-, length of 28  
-, solubilizing 5, 12, 21, 24  
Side-reactions 7, 8, 16  
-, exclusion of 2, 25  
Silica 193, 194  
- "footprints" 96, 105  
SnO<sub>2</sub> electrode 102  
Solar energy conversion 217  
Solvent effect, gelation 74  
Spectroscopic voltammetry 228, 234  
Spin coating 192  
Spiro-type ladder polymer 12, 13  
Starch 97, 108  
Step-ladder" structures 8, 23  
Stepwise synthesis of ladder polymers 2, 15, 16, 20  
Steric effect, long-chain alkyl group 75  
Steroid reduction 106  
Subtilisin 107  
Succinic acid 108  
Sulfonyl ketones 157  
Supramolecular ordering 28, 38  
Surface area 94  
Suspension polymerization 113  
Swelling ratio 60, 63
- Tartaric acid 108  
Telomerization 64  
Template assembled synthetic protein (TASP) 83  
Tetraethylthiuram disulfide 200  
Theophylline 99  
Thiobutyrolactone 97  
Thioxanthone 129, 149, 150, 210  
Thylacoid membrane 220  
TiO<sub>2</sub> 239  
Transition metal/ligand binding 92  
Trefoil knot 84  
Trimethylolpropanetrimethacrylate 116  
Truxillic acid 104
- van der Waal's interactions 92  
Vinyl acetate 134, 159, 160, 200, 201  
Vinyl chloride 197  
Vinyl ethers 200, 201

*N*-Vinyl imidazole 204, 205

*N*-Vinyl pyrrolidone 97, 190, 194, 204,  
205

Vinylbenzoic acid 115

Voltammogram, cyclic 234

Water oxidation 217

- -, mechanism 224

- -, photoinduced 239

Water oxidation catalyst 221, 222, 233

- - redox cycle 226

Water splitting 239

Xanthate 190, 191

Xanthone 146

"Zipping-up" process 16-18