




Robert M. Waymouth

Robert Eckles Swain Professor in Chemistry and, by courtesy, of Chemical Engineering

 Curriculum Vitae available Online

CONTACT INFORMATION

• Administrative Contact

Teresa Throckmorton - Administrative Associate

Email tsthrock@stanford.edu

Tel (650) 725-9741

Bio

BIO

Robert Eckles Swain Professor in Chemistry Robert Waymouth investigates new catalytic strategies to create useful new molecules, including sustainable polymers, synthetic fuels, and bioactive molecules. In one such breakthrough, Professor Waymouth and IBM researcher Jim Hedrick opened a new path for production of environmentally sustainable plastics and improved plastics recycling, earning recognition in the 2012 Presidential Green Chemistry Award.

Born in 1960 in Warner Robins, Georgia, Robert Waymouth studied chemistry and mathematics at Washington and Lee University in Lexington, Virginia (B.S. and B.A., respectively, both summa cum laude, 1982). He developed an interest in synthetic and mechanistic organometallic chemistry during his doctoral studies in chemistry at the California Institute of Technology under Professor R.H. Grubbs (Ph.D., 1987). His postdoctoral research with Professor Piero Pino at the Institut für Polymere, ETH Zurich, Switzerland, focused on catalytic hydrogenation with chiral metallocene catalysts. He joined the Stanford University faculty as assistant professor in 1988, becoming full professor in 1997 and in 2000 the Robert Eckles Swain Professor of Chemistry.

Today, the Waymouth Group applies mechanistic principles to develop new concepts in catalysis, with particular focus on the development of organometallic and organic catalysts for the synthesis of complex macromolecular architectures. In organometallic catalysis, the group devised a highly selective alcohol oxidation catalyst that selectively oxidizes unprotected polyols and carbohydrates to alpha-hydroxyketones. The Waymouth group pioneered the development of catalysts that can access multiple kinetic states during a polymerization reaction in order to control sequence distribution. They devised a novel strategy for the synthesis of elastomeric polypropylene utilizing a metallocene catalyst whose structure was designed to interconvert between chiral and achiral coordination geometries on the timescale of the synthesis of a single polymer chain.

In collaboration with Jim Hedrick of IBM laboratories, the Waymouth Group has developed an extensive platform of organic catalysts for the controlled ring-opening polymerization of lactones, carbonates and other heterocyclic monomers. Mechanistic studies of nucleophilic N-heterocyclic carbene catalysts revealed an unusual zwitterionic ring-opening polymerization method which enabled the synthesis of high molecular weight cyclic polymers, a novel topology for these biodegradable and biocompatible macromolecules. In collaboration with the Wender group, the Waymouth group has devised selective organocatalytic strategies for the synthesis

of functional degradable polymers and oligomers that function as "molecular transporters" to deliver drugs and probes into cells. These efforts combine elements of mechanistic organic and organometallic chemistry, polymer synthesis, and homogeneous catalysis to rationally design new macromolecular structures.

ACADEMIC APPOINTMENTS

- Professor, Chemistry
- Professor (By courtesy), Chemical Engineering
- Member, Bio-X
- Faculty Fellow, Stanford ChEM-H
- Affiliate, Stanford Woods Institute for the Environment

ADMINISTRATIVE APPOINTMENTS

- Co-chair: Stanford Task Force on Advancing the Culture of Laboratory Safety, Stanford University, (2013-2014)

HONORS AND AWARDS

- Presidential Green Chemistry Challenge Award, Environmental Protection Agency (2012)
- Cooperative Research Award in Polymer Science and Engineering, American Chemical Society PMSE Division (2009)
- Bass Fellow in Undergraduate Education, Stanford University (2005)
- Alexander von Humboldt Stiftung Award, Alexander von Humboldt Foundation (2001)
- Walter J. Gores Award for Excellence in Teaching, Stanford University (1997)
- Wilhelm Manchot Professorship, Technical University of Munich, Wilhelm Manchot Foundation (1997)
- Alan T. Waterman Award, National Science Foundation (1996)
- Arthur C. Cope Scholar Award, American Chemical Society (1995)
- Fresenius Award, Phi Lambda Upsilon, Honorary Chemical Society (1995)
- Bing Fellowship, Undergraduate Teaching Award, Stanford University (1994)
- A.P. Sloan Fellow, A.P. Sloan Foundation (1993)
- Undergraduate Teaching Award, Phi Beta Kappa, Stanford University (1993)
- Union Carbide Innovation Award, Union Carbide (1993)
- Young Investigator, National Science Foundation (1992)
- James L. Howe Chemistry Award, Blue Ridge Section, American Chemical Society (1982)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Science Advisory Board Member, KAUST Catalysis Center (2014 - 2016)
- International Advisory Board Member, International Symposium on Homogeneous Catalysis (2008 - 2016)
- Editorial Board Member, Journal of Polymer Science, Chemistry (2000 - 2016)

PROFESSIONAL EDUCATION

- Postdoc, Institut für Polymere, ETH Zurich, Switzerland, Catalysis (1988)
- PhD, California Institute of Technology, Chemistry (1987)
- BS, Washington and Lee University, Chemistry (1982)
- BA, Washington and Lee University, Mathematics (1982)

PATENTS

- Robert Waymouth, Gregg Barcan, Xiangyi Zhang. "United States Patent 9556308 B1 Dithiolane Carbonate Monomers and Polymers Thereof", Leland Stanford Junior University, Jan 31, 2017

- Christina Cooley, James Hedrick, Matthew Kiesewetter, Fredrik Nederberg, Robert M. Waymouth, Paul A. Wender. "United States Patent 7,939,621 B2 Cyclic carbonate monomers and oligocarbonate molecular transporters", Leland Stanford Junior University, May 10, 2011

LINKS

- Waymouth Group: <http://waymouthlab.stanford.edu/>

Teaching

COURSES

2017-18

- Advanced Inorganic Chemistry: CHEM 155, CHEM 255 (Spr)
- Chemical Principles I: CHEM 31A (Aut)

2016-17

- Advanced Inorganic Chemistry: CHEM 155, CHEM 255 (Spr)
- Chemical Principles I: CHEM 31A (Aut)

2015-16

- Advanced Inorganic Chemistry: CHEM 155, CHEM 255 (Spr)
- Chemical Principles I: CHEM 31A (Aut)

2014-15

- Advanced Inorganic Chemistry: CHEM 155, CHEM 255 (Spr)
- Chemical Principles I: CHEM 31A (Aut)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Yunhao Bai, Alexander Burckle, Zhihua Chen, David Hanifi, Hsiao-Tieh Hsu, Chao-I Hung, Melanie Huttner, James Mack, Mary Anne Manumpil, Yew Chin Teo

Postdoctoral Faculty Sponsor

Timothy Blake

Doctoral Dissertation Advisor (AC)

Keith Armstrong, Naomi Clayman, Francis Greene, Wilson Ho, Binhong Lin, Rebecca McClellan, Elizabeth McLoughlin, Katherine Walker, Weiwei Wu

Master's Program Advisor

Mark Carrington

Doctoral Dissertation Co-Advisor (AC)

Colin McKinlay

Publications

PUBLICATIONS

- **Expanding the range of polyhydroxyalkanoates synthesized by methanotrophic bacteria through the utilization of omega-hydroxyalkanoate co-substrates.** *AMB Express*
Myung, J., Flanagan, J. C., Waymouth, R. M., Criddle, C. S.
2017; 7 (1): 118-?
- **Multielectron Transfer at Cobalt: Influence of the Phenylazopyridine Ligand** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Waldie, K. M., Ramakrishnan, S., Kim, S., Maclaren, J. K., Chidsey, C. E., Waymouth, R. M.

2017; 139 (12): 4540-4550

- **1,2-Dithiolane-Derived Dynamic, Covalent Materials: Cooperative Self-Assembly and Reversible Cross-Linking.** *Journal of the American Chemical Society*
Zhang, X., Waymouth, R. M.
2017
- **Urea Anions: Simple, Fast, and Selective Catalysts for Ring-Opening Polymerizations** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Lin, B., Waymouth, R. M.
2017; 139 (4): 1645-1652
- **Charge-altering releasable transporters (CARTs) for the delivery and release of mRNA in living animals** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
McKinlay, C. J., Vargas, J. R., Blake, T. R., Hardy, J. W., Kanada, M., Contag, C. H., Wender, P. A., Waymouth, R. M.
2017; 114 (4): E448-E456
- **Electrocatalytic Alcohol Oxidation with Ruthenium Transfer Hydrogenation Catalysts** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Waldie, K. M., Flajslik, K. R., McLoughlin, E., Chidsey, C. E., Waymouth, R. M.
2017; 139 (2): 738-748
- **Fast and selective ring-opening polymerizations by alkoxides and thioureas.** *Nature chemistry*
Zhang, X., Jones, G. O., Hedrick, J. L., Waymouth, R. M.
2016; 8 (11): 1047-1053
- **Zwitterionic Ring-Opening Polymerization of N-Substituted Eight-Membered Cyclic Carbonates to Generate Cyclic Poly(carbonate)s** *ACS MACRO LETTERS*
Chang, Y. A., Rudenko, A. E., Waymouth, R. M.
2016; 5 (10): 1162-1166
- **Catalytic Carbonylative Spirolactonization of Hydroxycyclopropanols.** *Journal of the American Chemical Society*
Davis, D. C., Walker, K. L., Hu, C., Zare, R. N., Waymouth, R. M., Dai, M.
2016; 138 (33): 10693-10699
- **Reversible Electropolymerization of Nickel Complexes Based on Redox-Mediated Ligand Exchange** *CHEMISTRYSELECT*
Rudenko, A. E., Clayman, N. E., Maclaren, J. K., Waymouth, R. M.
2016; 1 (13): 3491-3496
- **Selective Catalytic Oxidation of Unprotected Carbohydrates** *ACS CATALYSIS*
Chung, K., Waymouth, R. M.
2016; 6 (7): 4653-4659
- **Poly(hydroxyalkanoate)s from Waste Biomass: A Combined Chemical-Biological Approach** *CHEMISTRYSELECT*
Flanagan, J. C., Myung, J., Criddle, C. S., Waymouth, R. M.
2016; 1 (10): 2327-2331
- **Methane or methanol-oxidation dependent synthesis of poly(3-hydroxybutyrate-co-3-hydroxyvalerate) by obligate type II methanotrophs** *PROCESS BIOCHEMISTRY*
Myung, J., Flanagan, J. C., Waymouth, R. M., Criddle, C. S.
2016; 51 (5): 561-567
- **Cell-Penetrating, Guanidinium-Rich Oligophosphoesters: Effective and Versatile Molecular Transporters for Drug and Probe Delivery** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
McKinlay, C. J., Waymouth, R. M., Wender, P. A.
2016; 138 (10): 3510-3517
- **Experimental and Theoretical Study of CO₂ Insertion into Ruthenium Hydride Complexes.** *Inorganic chemistry*
Ramakrishnan, S., Waldie, K. M., Warnke, I., De Crisci, A. G., Batista, V. S., Waymouth, R. M., Chidsey, C. E.
2016; 55 (4): 1623-1632
- **Bioorthogonal Catalysis: A General Method To Evaluate Metal Catalyzed Reactions in Real Time in Living Systems Using a Cellular Luciferase Reporter System** *BIOCONJUGATE CHEMISTRY*
Hsu, H., Trantow, B. M., Waymouth, R. M., Wender, P. A.

2016; 27 (2): 376-382

- **Electrooxidation of Alcohols with Electrode-Supported Transfer Hydrogenation Catalysts** *ACS CATALYSIS*
Buonaiuto, M., De Crisci, A. G., Jaramillo, T. F., Waymouth, R. M.
2015; 5 (12): 7343-7349
- **A Simple and Facile Approach to Aliphatic N-Substituted Functional Eight-Membered Cyclic Carbonates and Their Organocatalytic Polymerization** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Venkataraman, S., Ng, V. W., Coady, D. J., Horn, H. W., Jones, G. O., Fung, T. S., Sardon, H., Waymouth, R. M., Hedrick, J. L., Yang, Y. Y.
2015; 137 (43): 13851-13860
- **Catalytic Role of Multinuclear Palladium-Oxygen Intermediates in Aerobic Oxidation Followed by Hydrogen Peroxide Disproportionation** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Ingram, A. J., Walker, K. L., Zare, R. N., Waymouth, R. M.
2015; 137 (42): 13632-13646
- **Catalytic Dimerization of Crotonates** *ACS CATALYSIS*
Flanagan, J. C., Kang, E. J., Strong, N. I., Waymouth, R. M.
2015; 5 (9): 5328-5332
- **Cyclopropenimine Superbases: Competitive Initiation Processes in Lactide Polymerization** *ACS MACRO LETTERS*
Stukenbroeker, T. S., Bandar, J. S., Zhang, X., Lambert, T. H., Waymouth, R. M.
2015; 4 (8): 853-856
- **Structurally Dynamic Hydrogels Derived from 1,2-Dithiolanes** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Barcan, G. A., Zhang, X., Waymouth, R. M.
2015; 137 (17): 5650-5653
- **N-Heterocyclic Carbene-Catalyzed Ring Opening Polymerization of ϵ -Caprolactone with and without Alcohol Initiators: Insights from Theory and Experiment.** *journal of physical chemistry. B*
Jones, G. O., Chang, Y. A., Horn, H. W., Acharya, A. K., Rice, J. E., Hedrick, J. L., Waymouth, R. M.
2015; 119 (17): 5728-5737
- **Organocatalytic Ring-Opening Polymerization of Trimethylene Carbonate To Yield a Biodegradable Polycarbonate** *JOURNAL OF CHEMICAL EDUCATION*
Chan, J. M., Zhang, X., Brennan, M. K., Sardon, H., Engler, A. C., Fox, C. H., Frank, C. W., Waymouth, R. M., Hedrick, J. L.
2015; 92 (4): 708-713
- **Ion pairing effects in the zwitterionic ring opening polymerization of delta-valerolactone** *POLYMER CHEMISTRY*
Chang, Y. A., Waymouth, R. M.
2015; 6 (29): 5212-5218
- **Synthesis and Topological Trapping of Cyclic Poly(alkylene phosphates)** *MACROMOLECULES*
Stukenbroeker, T. S., Solis-Ibarra, D., Waymouth, R. M.
2014; 47 (23): 8224-8230
- **Disassembly and reassembly of polyhydroxyalkanoates: Recycling through abiotic depolymerization and biotic repolymerization** *BIORESOURCE TECHNOLOGY*
Myung, J., Strong, N. I., Galega, W. M., Sundstrom, E. R., Flanagan, J. C., Woo, S., Waymouth, R. M., Criddle, C. S.
2014; 170: 167-174
- **Zwitterionic Ring Opening Polymerization with Isothioureas** *ACS MACRO LETTERS*
Zhang, X., Waymouth, R. M.
2014; 3 (10): 1024-1028
- **Organocatalytic Ring-Opening Polymerization of Morpholinones: New Strategies to Functionalized Polyesters** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Blake, T. R., Waymouth, R. M.
2014; 136 (26): 9252-9255
- **Experimental and Computational Studies on the Mechanism of Zwitterionic Ring-Opening Polymerization of delta-Valerolactone with N-Heterocyclic Carbenes** *JOURNAL OF PHYSICAL CHEMISTRY B*

- Acharya, A. K., Chang, Y. A., Jones, G. O., Rice, J. E., Hedrick, J. L., Horn, H. W., Waymouth, R. M.
2014; 118 (24): 6553-6560
- **Trinuclear Pd₃O₂ intermediate in aerobic oxidation catalysis.** *Angewandte Chemie (International ed. in English)*
Ingram, A. J., Solis-Ibarra, D., Zare, R. N., Waymouth, R. M.
2014; 53 (22): 5648-5652
 - **Zwitterionic Ring-Opening Polymerization: Models for Kinetics of Cyclic Poly(caprolactone) Synthesis** *MACROMOLECULES*
Brown, H. A., Xiong, S., Medvedev, G. A., Chang, Y. A., Abu-Omar, M. M., Caruthers, J. M., Waymouth, R. M.
2014; 47 (9): 2955-2963
 - **Titanium Bis(amidates) Bearing Electron Donating Pendant Arms as Catalysts for Stereospecific Polymerization of Propylene** *ORGANOMETALLICS*
Elkin, T., Botoshansky, M., Waymouth, R. M., Eisen, M. S.
2014; 33 (4): 840-843
 - **Zwitterionic Polymerization to Generate High Molecular Weight Cyclic Poly(Carbosiloxane)s** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Brown, H. A., Chang, Y. A., Waymouth, R. M.
2013; 135 (50): 18738-18741
 - **Zwitterionic Ring-Opening Polymerization for the Synthesis of High Molecular Weight Cyclic Polymers** *ACCOUNTS OF CHEMICAL RESEARCH*
Brown, H. A., Waymouth, R. M.
2013; 46 (11): 2585-2596
 - **A Renewable Lignin-Lactide Copolymer and Application in Biobased Composites** *ACS SUSTAINABLE CHEMISTRY & ENGINEERING*
Chung, Y., Olsson, J. V., Li, R. J., Frank, C. W., Waymouth, R. M., Billington, S. L., Sattely, E. S.
2013; 1 (10): 1231-1238
 - **Electrooxidation of alcohols catalyzed by amino alcohol ligated ruthenium complexes.** *Journal of the American Chemical Society*
Brownell, K. R., McCrory, C. C., Chidsey, C. E., Perry, R. H., Zare, R. N., Waymouth, R. M.
2013; 135 (38): 14299-14305
 - **Chemoselective Pd-catalyzed oxidation of polyols: synthetic scope and mechanistic studies.** *Journal of the American Chemical Society*
Chung, K., Banik, S. M., De Crisci, A. G., Pearson, D. M., Blake, T. R., Olsson, J. V., Ingram, A. J., Zare, R. N., Waymouth, R. M.
2013; 135 (20): 7593-7602
 - **Octahedral Group IV Bis(phenolate) Catalysts for 1-Hexene Homopolymerization and Ethylene/1-Hexene Copolymerization** *MACROMOLECULES*
Kiesewetter, E. T., Waymouth, R. M.
2013; 46 (7): 2569-2575
 - **Chemoselective Oxidation of Polyols with Chiral Palladium Catalysts** *ORGANOMETALLICS*
De Crisci, A. G., Chung, K., Oliver, A. G., Solis-Ibarra, D., Waymouth, R. M.
2013; 32 (7): 2257-2266
 - **Polymerizing Base Sensitive Cyclic Carbonates Using Acid Catalysis** *ACS MACRO LETTERS*
Coady, D. J., Horn, H. W., Jones, G. O., Sardon, H., Engler, A. C., Waymouth, R. M., Rice, J. E., Yang, Y. Y., Hedrick, J. L.
2013; 2 (4): 306-312
 - **Semicrystalline Dihydroxyacetone Copolymers Derived from Glycerol** *MACROMOLECULES*
Simon, J., Olsson, J. V., Kim, H., Tenney, I. F., Waymouth, R. M.
2012; 45 (23): 9275-9281
 - **Amidine-Mediated Zwitterionic Polymerization of Lactide** *ACS MACRO LETTERS*
Brown, H. A., De Crisci, A. G., Hedrick, J. L., Waymouth, R. M.
2012; 1 (9): 1113-1115
 - **Designed guanidinium-rich amphipathic oligocarbonate molecular transporters complex, deliver and release siRNA in cells** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Geihe, E. I., Cooley, C. B., Simon, J. R., Kiesewetter, M. K., Edward, J. A., Hickerson, R. P., Kaspar, R. L., Hedrick, J. L., Waymouth, R. M., Wender, P. A.
2012; 109 (33): 13171-13176

- **Organocatalytic Synthesis of Quinine-Functionalized Poly(carbonate)s** *BIOMACROMOLECULES*
Edward, J. A., Kiesewetter, M. K., Kim, H., Flanagan, J. C., Hedrick, J. L., Waymouth, R. M.
2012; 13 (8): 2483-2489
- **Facile Synthesis of Functionalized Lactones and Organocatalytic Ring-Opening Polymerization** *ACS MACRO LETTERS*
Kim, H., Olsson, J. V., Hedrick, J. L., Waymouth, R. M.
2012; 1 (7): 845-847
- **Stereoselective and Regioselective Propylene Polymerization with Group 4 Bisphenolate Ether Complexes** *JOURNAL OF POLYMER SCIENCE PART A-POLYMER CHEMISTRY*
Randoll, S., Kiesewetter, E. T., Waymouth, R. M.
2012; 50 (13): 2604-2611
- **Transient Ru-methyl formate intermediates generated with bifunctional transfer hydrogenation catalysts** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Perry, R. H., Brownell, K. R., Chingin, K., Cahill, T. J., Waymouth, R. M., Zare, R. N.
2012; 109 (7): 2246-2250
- **Stereocomplexation in Cyclic and Linear Polylactide Blends** *MACROMOLECULES*
Shin, E. J., Jones, A. E., Waymouth, R. M.
2012; 45 (1): 595-598
- **Palladium-Catalyzed Carbonylation of Diols to Cyclic Carbonates** *ADVANCED SYNTHESIS & CATALYSIS*
Pearson, D. M., Conley, N. R., Waymouth, R. M.
2011; 353 (16): 3007-3013
- **Polycondensation of Butenediol: Synthesis of Telechelic 2-Butene-1,4-diol Oligomers** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Kiesewetter, M. K., Edward, J. A., Kim, H., Waymouth, R. M.
2011; 133 (41): 16390-16393
- **Synthesis and Structural Diversity of Mono-, Di- and Trinuclear Complexes with N,N'-Bis[(2-diphenylphosphanyl)phenyl]formamidine** *EUROPEAN JOURNAL OF INORGANIC CHEMISTRY*
Son, K., Pearson, D. M., Jeon, S., Waymouth, R. M.
2011: 4256-4261
- **Thermoresponsive nanostructured polycarbonate block copolymers as biodegradable therapeutic delivery carriers** *BIOMATERIALS*
Kim, S. H., Tan, J. P., Fukushima, K., Nederberg, F., Yang, Y. Y., Waymouth, R. M., Hedrick, J. L.
2011; 32 (23): 5505-5514
- **Crystallization of Cyclic Polymers: Synthesis and Crystallization Behavior of High Molecular Weight Cyclic Poly(epsilon-caprolactone)s** *MACROMOLECULES*
Shin, E. J., Jeong, W., Brown, H. A., Koo, B. J., Hedrick, J. L., Waymouth, R. M.
2011; 44 (8): 2773-2779
- **Oxidatively Resistant Ligands for Palladium-Catalyzed Aerobic Alcohol Oxidation** *ORGANOMETALLICS*
Pearson, D. M., Conley, N. R., Waymouth, R. M.
2011; 30 (6): 1445-1453
- **Stereospecific polymerization and selective oligomerization with coordination catalysts** *241st National Meeting and Exposition of the American-Chemical-Society (ACS)*
Waymouth, R. M., Kiesewetter, E. T., Son, K.
AMER CHEMICAL SOC.2011
- **Organocatalytic Depolymerization of Poly(ethylene terephthalate)** *JOURNAL OF POLYMER SCIENCE PART A-POLYMER CHEMISTRY*
Fukushima, K., Coulembier, O., Lecuyer, J. M., Almegren, H. A., Alabdulrahman, A. M., Alsewailam, F. D., Mcneil, M. A., Dubois, P., Waymouth, R. M., Horn, H. W., Rice, J. E., Hedrick, J. L.
2011; 49 (5): 1273-1281
- **Zwitterionic Copolymerization: Synthesis of Cyclic Gradient Copolymers** *ANGEWANDTE CHEMIE-INTERNATIONAL EDITION*
Shin, E. J., Brown, H. A., Gonzalez, S., Jeong, W., Hedrick, J. L., Waymouth, R. M.

2011; 50 (28): 6388-6391

- **Kinetics of an Air- and Water-Stable Ruthenium(IV) Catalyst for the Deprotection of Allyl Alcohol in Water** *ORGANOMETALLICS*
Kiesewetter, M. K., Waymouth, R. M.
2010; 29 (22): 6051-6056
- **Chemoselectivity Diversity in the Reaction of LiNC₆F₅SiMe₃ with Nitriles and the Synthesis, Structure, and Reactivity of Zirconium Mono- and Tris[2-(2-pyridyl)tetrafluorobenzimidazolate] Complexes** *INORGANIC CHEMISTRY*
Aharonovich, S., Botoshansky, M., Waymouth, R. M., Eisen, M. S.
2010; 49 (20): 9217-9229
- **Selective Ethylene Oligomerization in the Presence of ZnR₂: Synthesis of Terminally-Functionalized Ethylene Oligomers** *ORGANOMETALLICS*
Son, K., Waymouth, R. M.
2010; 29 (16): 3515-3520
- **The Depolymerization of Poly(ethylene terephthalate) (PET) Using N-Heterocyclic Carbenes from Ionic Liquids** *JOURNAL OF CHEMICAL EDUCATION*
Kamber, N. E., Tsujii, Y., Keets, K., Waymouth, R. M., Pratt, R. C., Nyce, G. W., Hedrick, J. L.
2010; 87 (5): 519-521
- **Stereospecific Octahedral Group 4 Bis(phenolate) Ether Complexes for Olefin Polymerization** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Kiesewetter, E. T., Randoll, S., Radlauer, M., Waymouth, R. M.
2010; 132 (16): 5566-?
- **Stereospecific Styrene Polymerization and Ethylene-Styrene Copolymerization with Titanocenes Containing a Pendant Amine Donor** *JOURNAL OF POLYMER SCIENCE PART A-POLYMER CHEMISTRY*
Son, K., Waymouth, R. M.
2010; 48 (7): 1579-1585
- **Organocatalysis: Opportunities and Challenges for Polymer Synthesis** *MACROMOLECULES*
Kiesewetter, M. K., Shin, E. J., Hedrick, J. L., Waymouth, R. M.
2010; 43 (5): 2093-2107
- **Acyclic Guanidines as Organic Catalysts for Living Polymerization of Lactide** *MACROMOLECULES*
Zhang, L., Pratt, R. C., Nederberg, F., Horn, H. W., Rice, J. E., Waymouth, R. M., Wade, C. G., Hedrick, J. L.
2010; 43 (3): 1660-1664
- **Lithium Furyl and Pyridyl Amidinates as Building Blocks in Coordination Polymers, Ladder and Cage Structures** *INORGANIC CHEMISTRY*
Aharonovich, S., Botoshanski, M., Rabinovich, Z., Waymouth, R. M., Eisen, M. S.
2010; 49 (3): 1220-1229
- **Mono- and bis-amidinate 2,6-xylylimido vanadium chlorides: synthesis, structure, and reactivity** *DALTON TRANSACTIONS*
Aharonovich, S., Botoshansky, M., Tumanskii, B., Nomura, K., Waymouth, R. M., Eisen, M. S.
2010; 39 (24): 5643-5649
- **Selective Catalytic Oxidation of Glycerol to Dihydroxyacetone** *ANGEWANDTE CHEMIE-INTERNATIONAL EDITION*
Painter, R. M., Pearson, D. M., Waymouth, R. M.
2010; 49 (49): 9456-9459
- **Cyclic Guanidine Organic Catalysts: What Is Magic About Triazabicyclodecene?** *JOURNAL OF ORGANIC CHEMISTRY*
Kiesewetter, M. K., Scholten, M. D., Kirn, N., Weber, R. L., Hedrick, J. L., Waymouth, R. M.
2009; 74 (24): 9490-9496
- **Oligocarbonate Molecular Transporters: Oligomerization-Based Syntheses and Cell-Penetrating Studies** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Cooley, C. B., Trantow, B. M., Nederberg, F., Kiesewetter, M. K., Hedrick, J. L., Waymouth, R. M., Wender, P. A.
2009; 131 (45): 16401-?
- **Mechanistic Studies of the Oxidative Dehydrogenation of Methanol Using a Cationic Palladium Complex** *ORGANOMETALLICS*
Pearson, D. M., Waymouth, R. M.
2009; 28 (13): 3896-3900

- **Hierarchical Supermolecular Structures for Sustained Drug Release** *SMALL*
Tan, J. P., Kim, S. H., Nederberg, F., Appel, E. A., Waymouth, R. M., Zhang, Y., Hedrick, J. L., Yang, Y. Y.
2009; 5 (13): 1504-1507
- **Simple Approach to Stabilized Micelles Employing Miktoarm Terpolymers and Stereocomplexes with Application in Paclitaxel Delivery** *BIOMACROMOLECULES*
Nederberg, F., Appel, E., Tan, J. P., Kim, S. H., Fukushima, K., Sly, J., Miller, R. D., Waymouth, R. M., Yang, Y. Y., Hedrick, J. L.
2009; 10 (6): 1460-1468
- **Zwitterionic Polymerization: A Kinetic Strategy for the Controlled Synthesis of Cyclic Poly(lactide)** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Jeong, W., Shin, E. J., Culkun, D. A., Hedrick, J. L., Waymouth, R. M.
2009; 131 (13): 4884-4891
- **N-Heterocyclic Carbenes for the Organocatalytic Ring-Opening Polymerization of epsilon-Caprolactone** *MACROMOLECULES*
Kamber, N. E., Jeong, W., Gonzalez, S., Hedrick, J. L., Waymouth, R. M.
2009; 42 (5): 1634-1639
- **Mixed Micelle Formation through Stereocomplexation between Enantiomeric Poly(lactide) Block Copolymers** *MACROMOLECULES*
Kim, S. H., Tan, J. P., Nederberg, F., Fukushima, K., Yang, Y. Y., Waymouth, R. M., Hedrick, J. L.
2009; 42 (1): 25-29
- **Copolymerization of Styrene and Ethylene at High Temperature with Titanocenes Containing a Pendant Amine Donor** *MACROMOLECULES*
Son, K., Joege, F., Waymouth, R. M.
2008; 41 (24): 9663-9668
- **Application of Block-Copolymer Supramolecular Assembly for the Fabrication of Complex TiO₂ Nanostructures** *SMALL*
Kim, S. H., Park, O., Nederberg, F., Topuria, T., Krupp, L. E., Kim, H., Waymouth, R. M., Hedrick, J. L.
2008; 4 (12): 2162-2165
- **Organocatalytic Approach to Amphiphilic Comb-Block Copolymers Capable of Stereocomplexation and Self-Assembly** *BIOMACROMOLECULES*
Fukushima, K., Pratt, R. C., Nederberg, F., Tan, J. P., Yang, Y. Y., Waymouth, R. M., Hedrick, J. L.
2008; 9 (11): 3051-3056
- **Group Transfer Polymerization of Acrylates Catalyzed by N-Heterocyclic Carbenes** *MACROMOLECULES*
Scholten, M. D., Hedrick, J. L., Waymouth, R. M.
2008; 41 (20): 7399-7404
- **Copolymerization behavior of titanium imidazolin-2-iminato complexes** *JOURNAL OF POLYMER SCIENCE PART A-POLYMER CHEMISTRY*
Stelzig, S. H., Tamm, M., Waymouth, R. M.
2008; 46 (18): 6064-6070
- **Structure-reactivity relationships of amido-pyridine-supported rare-earth-metal alkyl complexes** *ORGANOMETALLICS*
Zimmermann, M., Tornroos, K. W., Waymouth, R. M., Anwender, R.
2008; 27 (17): 4310-4317
- **The reaction mechanism for the organocatalytic ring-opening polymerization of L-lactide using a guanidine-based catalyst: Hydrogen-bonded or covalently bound?** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Chuma, A., Horn, H. W., Swope, W. C., Pratt, R. C., Zhang, L., Lohmeijer, B. G., Wade, C. G., Waymouth, R. M., Hedrick, J. L., Rice, J. E.
2008; 130 (21): 6749-6754
- **POLY 125-Stereocomplex interactions in cyclic and linear poly(lactides)** *235th American-Chemical-Society National Meeting*
Jones, A. E., Shin, E. J., Waymouth, R. M.
AMER CHEMICAL SOC.2008
- **POLY 277-Organocatalytic ring-opening polymerization approach to fully degradable amphiphilic copolymers** *235th American-Chemical-Society National Meeting*
Fukushima, K., Pratt, R. C., Nederberg, F., Waymouth, R. M., Hedrick, J. L.
AMER CHEMICAL SOC.2008
- **POLY 129-Living ring-opening polymerization of cyclic esters with phosphazene organocatalysts** *235th American-Chemical-Society National Meeting*

- Kester, B. S., Logan, J. W., Nederberg, F., Pratt, R. C., Wade, C. G., Waymouth, R. M., Hedrick, J. L.
AMER CHEMICAL SOC.2008
- **New bimetallic complexes of late transition metals involving pyrazole-bridged bis N-heterocyclic carbene ligands** *DALTON TRANSACTIONS*
Jeon, S., Waymouth, R. M.
2008: 437-439
 - **Tagging alcohols with cyclic carbonate: a versatile equivalent of (meth)acrylate for ring-opening polymerization** *CHEMICAL COMMUNICATIONS*
Pratt, R. C., Nederberg, F., Waymouth, R. M., Hedrick, J. L.
2008: 114-116
 - **Hierarchical assembly of nanostructured organosilicate networks via stereocomplexation of block copolymers** *NANO LETTERS*
Kim, S. H., Nederberg, F., Zhang, L., Wade, C. G., Waymouth, R. M., Hedrick, J. L.
2008; 8 (1): 294-301
 - **Organocatalytic ring-opening polymerization** *CHEMICAL REVIEWS*
Kamber, N. E., Jeong, W., Waymouth, R. M., Pratt, R. C., Lohmeijer, B. G., Hedrick, J. L.
2007; 107 (12): 5813-5840
 - **Synthesis of biomimetic poly(hydroxybutyrate): Alkoxy- and carboxytriazolines as latent ionic initiator** *MACROMOLECULES*
Coulembier, O., Delva, X., Hedrick, J. L., Waymouth, R. M., Dubois, P.
2007; 40 (24): 8560-8567
 - **Aerobic alcohol oxidation with cationic palladium complexes: insights into catalyst design and decomposition** *ORGANOMETALLICS*
Conley, N. R., Labios, L. A., Pearson, D. M., McCrory, C. C., Waymouth, R. M.
2007; 26 (23): 5447-5453
 - **New ground for organic catalysis: A ring-opening polymerization approach to hydrogels** *BIOMACROMOLECULES*
Nederberg, F., Trang, V., Pratt, R. C., Mason, A. F., Frank, C. W., Waymouth, R. M., Hedrick, J. L.
2007; 8 (11): 3294-3297
 - **N-Alkoxyimidazolyliidene transition-metal complexes: Application to [5+2] and [4+2] cycloaddition reactions** *ORGANOMETALLICS*
Gomez, F. J., Kamber, N. E., Deschamps, N. M., Cole, A. P., Wender, P. A., Waymouth, R. M.
2007; 26 (18): 4541-4545
 - **POLY 556-Group transfer polymerization of acrylates and methacrylates using N-heterocyclic carbene catalysts**
Scholten, M. D., Hedrick, J. L., Waymouth, R. M.
AMER CHEMICAL SOC.2007
 - **POLY 260-Polyesters from renewable resources: Organocatalytic strategies for controlled polymerization reactions**
Waymouth, R. M., Hedrick, J. L., Pratt, R. C., Nederberg, F., Lohmeijer, B. G., Culkin, D. A., Coulembier, O., Kamber, N. E., Jeong, W., Kiesewetter, M. K., Shin, E. J.
AMER CHEMICAL SOC.2007
 - **POLY 538-An organocatalytic route to functional and biodegradable hydrogels**
Nederberg, F., Pratt, R. C., Mason, A. F., Waymouth, R. M., Hedrick, J. L.
AMER CHEMICAL SOC.2007
 - **N-Heterocyclic carbene-mediated zwitterionic polymerization: An expedient organocatalytic route to cyclic polyesters**
Jeong, W., Shin, E. J., Culkin, D. A., Hedrick, J. L., Waymouth, R. M.
AMER CHEMICAL SOC.2007
 - **POLY 484-Phosphazene bases for the organocatalytic living ring-opening polymerization of cyclic esters**
Zhang, L., Nederberg, F., Pratt, R., Waymouth, R., Hedrick, J. L., Wade, C. G.
AMER CHEMICAL SOC.2007
 - **POLY 508-Functionalizing polyesters and polycarbonates: Covalent tagging of alcohols for ring-opening polymerization**
Pratt, R. C., Nederberg, F., Waymouth, R. M., Hedrick, J. L.
AMER CHEMICAL SOC.2007

- **Synthesis and reactivity of allyl nickel(II) N-heterocyclic carbene enolate complexes** *JOURNAL OF POLYMER SCIENCE PART A-POLYMER CHEMISTRY*
Benson, S., Payne, B., Waymouth, R. M.
2007; 45 (16): 3637-3647
- **Organic spirocyclic initiators for the ring-expansion polymerization of beta-lactones** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Jeong, W., Hedrick, J. L., Waymouth, R. M.
2007; 129 (27): 8414-?
- **Phosphazene bases: A new category of organocatalysts for the living ring-opening polymerization of cyclic esters** *MACROMOLECULES*
Zhang, L., Nederberg, F., Pratt, R. C., Waymouth, R. M., Hedrick, J. L., Wade, C. G.
2007; 40 (12): 4154-4158
- **Zwitterionic polymerization of lactide to cyclic poly(lactide) by using N-heterocyclic carbene organocatalysts** *ANGEWANDTE CHEMIE-INTERNATIONAL EDITION*
Culkin, D. A., Jeong, W., Csihony, S., Gomez, E. D., Balsara, N. R., Hedrick, J. L., Waymouth, R. M.
2007; 46 (15): 2627-2630
- **Organocatalytic ring opening polymerization of trimethylene carbonate** *BIOMACROMOLECULES*
Nederberg, F., Lohmeijer, B. G., Leibfarth, F., Pratt, R. C., Choi, J., Dove, A. P., Waymouth, R. M., Hedrick, J. L.
2007; 8 (1): 153-160
- **A distinctive organocatalytic approach to complex macromolecular architectures** *ANGEWANDTE CHEMIE-INTERNATIONAL EDITION*
Coulembier, O., Kiesewetter, M. K., Mason, A., Dubois, P., Hedrick, J. L., Waymouth, R. M.
2007; 46 (25): 4719-4721
- **Guanidine and amidine organocatalysts for ring-opening polymerization of cyclic esters** *MACROMOLECULES*
Lohmeijer, B. G., Pratt, R. C., Leibfarth, F., Logan, J. W., Long, D. A., Dove, A. P., Nederberg, F., Choi, J., Wade, C., Waymouth, R. M., Hedrick, J. L.
2006; 39 (25): 8574-8583
- **Well-controlled living polymerization of perylene-labeled polyisoprenes and their use in single-molecule Imaging** *MACROMOLECULES*
Gavranovic, G. T., Csihony, S., Bowden, N. B., Hawker, C. J., Waymouth, R. M., Moerner, W. E., Fuller, G. G.
2006; 39 (23): 8121-8127
- **Exploration, optimization, and application of supramolecular thiourea-amine catalysts for the synthesis of lactide (co)polymers** *MACROMOLECULES*
Pratt, R. C., Lohmeijer, B. G., Long, D. A., Lundberg, P. N., Dove, A. P., Li, H., Wade, C. G., Waymouth, R. M., Hedrick, J. L.
2006; 39 (23): 7863-7871
- **Effects of temperature and chemical modification on polymer Langmuir films** *JOURNAL OF PHYSICAL CHEMISTRY B*
Gavranovic, G. T., Smith, M. M., Jeong, W., Wong, A. Y., Waymouth, R. M., Fuller, G. G.
2006; 110 (44): 22285-22290
- **Organocatalytic living ring-opening polymerization of cyclic carbosiloxanes** *ORGANIC LETTERS*
Lohmeijer, B. G., Dubois, G., Leibfarth, F., Pratt, R. C., Nederberg, F., Nelson, A., Waymouth, R. M., Wade, C., Hedrick, J. L.
2006; 8 (21): 4683-4686
- **POLY 612-Organocatalytic polymerization of ethylene oxide and the controlled synthesis of PEO-based hydrogel networks**
Mason, A. F., Lohmeijer, B. G., Li, H., Pratt, R. C., Liao, Q., Frank, C. W., Kingsbury, K., Waymouth, R. M., Hedrick, J. L.
AMER CHEMICAL SOC.2006
- **POLY 264-Organocatalytic ring opening polymerization: Activation through hydrogen bonding**
Lohmeijer, B. G., Pratt, R. C., Li, H., Dove, A. P., Nederberg, F., Mason, A. F., Eade, G. F., Choi, J., Waymouth, R. M., Wade, C., HEDRICK, J. L.
AMER CHEMICAL SOC.2006
- **POLY 407-Organocatalysis: A powerful strategy for controlled polymerization reactions**
Waymouth, R. M., Hedrick, J. L., Culkin, D. A., Pratt, R. C., Jeong, W., Kamber, N. E., Lohmeijer, B. G., Coulembier, O.
AMER CHEMICAL SOC.2006
- **PMSE 337-Covalently tailoring the surface properties of a self-assembling protein scaffold for materials applications**
Jeong, W., Culkin, D. A., Coulembier, O., Hedrick, J. L., Waymouth, R. M.
AMER CHEMICAL SOC.2006: 315-315

- **PMSE 617-Effect of counterions on the liquid properties of aqueous polyurethane dispersions prepared through the acetone process**
Nederberg, F., Lohmeijer, B. G., Pratt, R. C., Mason, A. F., Eade, G., Choi, J., Balsara, N. P., Waymouth, R. M., HEDRICK, J. L.
AMER CHEMICAL SOC.2006: 247-247
- **POLY 261-N-heterocyclic carbenes as organocatalysts for the ring-opening polymerization of ϵ -caprolactone**
Kamber, N. E., Kiesewetter, M. K., Hedrick, J. L., Waymouth, R. M.
AMER CHEMICAL SOC.2006
- **POLY 646-Organocatalytic ring-opening polymerizations of morpholine-2,6-diones: A route to functionalized poly(lactide)s and pseudopeptides**
Pratt, R. C., Lohmeijer, B. G., Mason, A. F., Waymouth, R. M., Hedrick, J. L.
AMER CHEMICAL SOC.2006
- **Alcohol adducts of N-heterocyclic carbenes: Latent catalysts for the thermally-controlled living polymerization of cyclic esters** *MACROMOLECULES*
Coulembier, O., Lohmeijer, B. G., Dove, A. P., Pratt, R. C., Mespouille, L., Culkin, D. A., Benight, S. J., Dubois, P., Waymouth, R. M., Hedrick, J. L.
2006; 39 (17): 5617-5628
- **Monolayered organosilicate toroids and related structures: A phase diagram for templating from block copolymers** *NANO LETTERS*
Choi, J., Hermans, T. M., Lohmeijer, B. G., Pratt, R. C., Dubois, G., Frommer, J., Waymouth, R. M., Hedrick, J. L.
2006; 6 (8): 1761-1764
- **Density functional theory calculations of Ti-TEMPO complexes: Influence of ancillary ligation on the strength of the Ti-O bond** *ORGANOMETALLICS*
Huang, K., Han, J. H., Musgrave, C. B., Waymouth, R. M.
2006; 25 (14): 3317-3323
- **Metal-free catalyzed ring-opening polymerization of, beta-lactones: Synthesis of amphiphilic triblock copolymers based on poly(dimethylmalic acid)** *MACROMOLECULES*
Coulembier, O., Mespouille, L., Hedrick, J. L., Waymouth, R. M., Dubois, P.
2006; 39 (12): 4001-4008
- **Metal and ligand K-edge XAS of titanium-TEMPO complexes: Determination of oxidation states and insights into Ti-O bond homolysis** *INORGANIC CHEMISTRY*
George, S. D., Huang, K., Waymouth, R. M., Solomon, E. I.
2006; 45 (11): 4468-4477
- **N-Heterocyclic carbenes: Effective organic catalysts for living polymerization** *POLYMER*
Dove, A. P., Pratt, R. C., Lohmeijer, B. G., Culkin, D. A., Hagberg, E. C., Nyce, G. W., Waymouth, R. M., Hedrick, J. L.
2006; 47 (11): 4018-4025
- **Triazabicyclodecene: A simple bifunctional organocatalyst for acyl transfer and ring-opening polymerization of cyclic esters** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Pratt, R. C., Lohmeijer, B. G., Long, D. A., Waymouth, R. M., Hedrick, J. L.
2006; 128 (14): 4556-4557
- **Synthesis, structure, and polymerization activity of a titanium complex with a chelating [(hydroxy-kappa O)amino-kappa N]phenolato(2-)-kappa O ligand** *HELVETICA CHIMICA ACTA*
Kraft, B. M., Huang, K., Cole, A. P., Waymouth, R. M.
2006; 89 (8): 1589-1595
- **Stereoselective polymerization of rac- and meso-lactide catalyzed by sterically encumbered N-heterocyclic carbenes** *CHEMICAL COMMUNICATIONS*
Dove, A. P., Li, H., Pratt, R. C., Lohmeijer, B. G., Culkin, D. A., Waymouth, R. M., Hedrick, J. L.
2006: 2881-2883
- **Application of solvent-directed assembly of block copolymers to the synthesis of nanostructured materials with low dielectric constants** *ANGEWANDTE CHEMIE-INTERNATIONAL EDITION*
Hermans, T. M., Choi, J., Lohmeijer, B. G., Dubois, G., Pratt, R. C., Kim, H., Waymouth, R. M., Hedrick, J. L.
2006; 45 (40): 6648-6652
- **Dynamic NMR studies of cationic bis(2-phenylindenyl) zirconium pyridyl complexes: Evidence for syn conformers in solution** *ORGANOMETALLICS*
Lincoln, A. L., Wilmes, G. M., Waymouth, R. M.
2005; 24 (24): 5828-5835

- **Thiourea-based bifunctional organocatalysis: Supramolecular recognition for living polymerization** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Dove, A. P., Pratt, R. C., Lohmeijer, B. G., Waymouth, R. M., Hedrick, J. L.
2005; 127 (40): 13798-13799
- **[H(OEt₂)(2)](+) and [Ph₃C](+) salts of the borate anions [B(CF₃)(4)](-), [(CF₃)(3)BCN](-), and [B(CN)(4)](-)** *ORGANOMETALLICS*
Finze, M., Bernhardt, E., Berkei, M., Willner, H., Hung, J., Waymouth, R. M.
2005; 24 (21): 5103-5109
- **Unconstrained geometry complexes: Ethylene/alpha-olefin copolymerizations with a tetramethyldisilyl-bridged Cp-amido titanium complex** *JOURNAL OF POLYMER SCIENCE PART A-POLYMER CHEMISTRY*
Hung, J., Waymouth, R. M.
2005; 43 (17): 3840-3851
- **Single-component catalyst/initiators for the organocatalytic ring-opening polymerization of lactide** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Csihony, S., Culkun, D. A., Sentman, A. C., Dove, A. P., Waymouth, R. M., Hedrick, J. L.
2005; 127 (25): 9079-9084
- **Amine bis(phenolate) zirconium complexes: Influence of ligand structure and cocatalyst on copolymerization behavior** *MACROMOLECULES*
Reybuck, S. E., Lincoln, A. L., Ma, S. D., Waymouth, R. M.
2005; 38 (7): 2552-2558
- **Homolysis of weak Ti-O bonds: Experimental and theoretical studies of titanium oxygen bonds derived from stable nitroxyl radicals** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Huang, K. W., Han, J. H., Cole, A. P., Musgrave, C. B., Waymouth, R. M.
2005; 127 (11): 3807-3816
- **Silver(I)-carbene complexes/ionic liquids: Novel N-heterocyclic carbene delivery agents for organocatalytic transformations** *JOURNAL OF ORGANIC CHEMISTRY*
Sentman, A. C., Csihony, S., Waymouth, R. M., Hedrick, J. L.
2005; 70 (6): 2391-2393
- **Latent, thermally activated organic catalysts for the on-demand living polymerization of lactide** *ANGEWANDTE CHEMIE-INTERNATIONAL EDITION*
Coulembier, O., Dove, A. P., Pratt, R. C., Sentman, A. C., Culkun, D. A., Mespouille, L., Dubois, P., Waymouth, R. M., HEDRICK, J. L.
2005; 44 (31): 4964-4968
- **Synthesis, structure, and olefin polymerization with nickel(II) N-heterocyclic carbene enolates** *CHEMICAL COMMUNICATIONS*
Ketz, B. E., Ottenwaelder, X. G., Waymouth, R. M.
2005; 5693-5695
- **Cyclopentadienyl titanium hydroxylaminato complexes as highly active catalysts for the polymerization of propylene** *CHEMICAL COMMUNICATIONS*
Dove, A. P., Xie, X. J., Waymouth, R. M.
2005; 2152-2154
- **A neutron scattering study of the structure and water partitioning of selectively deuterated copolymer micelles** *LANGMUIR*
Stancik, C. M., Lavoie, A. R., Achurra, P. A., Waymouth, R. M., Gast, A. P.
2004; 20 (21): 8975-8987
- **A general and versatile approach to thermally generated N-heterocyclic carbenes** *CHEMISTRY-A EUROPEAN JOURNAL*
Nyce, G. W., Csihony, S., Waymouth, R. M., HEDRICK, J. L.
2004; 10 (16): 4073-4079
- **Catalytic syntheses of alternating, stereoregular ethylene/cycloolefin copolymers** *TETRAHEDRON*
Lavoie, A. R., Waymouth, R. M.
2004; 60 (34): 7147-7155
- **Bredereck's reagent revisited: Latent anionic ring-opening polymerization and transesterification reactions** *ADVANCED SYNTHESIS & CATALYSIS*
Csihony, S., Beaudette, T. T., Sentman, A. C., Nyce, G. W., Waymouth, R. M., Hedrick, J. L.
2004; 346 (9-10): 1081-1086
- **Ethylene/1-hexene copolymerization with tetramethyldisiloxane-bridged bis(indenyl) metallocenes** *JOURNAL OF POLYMER SCIENCE PART A-POLYMER CHEMISTRY*

- Reybuck, S. E., Waymouth, R. M.
2004; 42 (13): 3323-3331
- **Structure and reactivity of an allylpalladium N-heterocyclic carbene enolate complex** *ORGANOMETALLICS*
Ketz, B. E., Cole, A. P., Waymouth, R. M.
2004; 23 (12): 2835-2837
 - **Effects of ligand substitutions on the rotation rate of indenyl ligands in bis(2-aryindenyl)zirconocenes by NMR line-shape analysis and relaxation in the rotating frame** *ORGANOMETALLICS*
Wilmes, G. M., France, M. B., Lynch, S. R., Waymouth, R. M.
2004; 23 (10): 2405-2411
 - **Investigation of bridge and 2-phenyl substituent effects on ethylene/alpha-olefin copolymerization behavior with 1,2'-bridged bis(indenyl)zirconium dichlorides** *MACROMOLECULES*
Reybuck, S. E., Waymouth, R. M.
2004; 37 (7): 2342-2347
 - **Silver(I)-carbene complexes ionic liquids: Novel N-heterocyclic carbene delivery agents for living polymerization** *227th National Meeting of the American-Chemical Society*
Sentman, A., Csihony, S., Nyce, G. W., Waymouth, R. M., HEDRICK, J. L.
AMER CHEMICAL SOC.2004: U456-U456
 - **Synthesis, structure, and reactivity of hydroxylamino alkyltitanium complexes** *ORGANOMETALLICS*
Mahanthappa, M. K., Cole, A. P., Waymouth, R. M.
2004; 23 (6): 1405-1410
 - **Synthesis, structure, and ethylene/alpha-olefin polymerization behavior of (cyclopentadienyl),(nitroxide)titanium complexes** *ORGANOMETALLICS*
Mahanthappa, M. K., Cole, A. P., Waymouth, R. M.
2004; 23 (4): 836-845
 - **Heterogeneous composition and microstructure of elastomeric polypropylene from a sterically hindered 2-aryindenylhafnium catalyst** *MACROMOLECULES*
Wiyatno, W., Chen, Z. R., Liu, Y. X., Waymouth, R. M., Krukoni, V., Brennan, K.
2004; 37 (3): 701-708
 - **Micelles of imidazolium-functionalized polystyrene diblock copolymers investigated with neutron and light scattering** *LANGMUIR*
Stancik, C. M., Lavoie, A. R., Schutz, J., Achurra, P. A., Lindner, P., Gast, A. P., Waymouth, R. M.
2004; 20 (3): 596-605
 - **Hydrolysis of CpTiCl₂(TEMPO) and its application on one-pot syntheses of CpTiCl(OR)₂ complexes** *DALTON TRANSACTIONS*
Huang, K. W., Waymouth, R. M.
2004: 354-356
 - **Propylene polymerization with 1,2'-bridged bis(indenyl)zirconium dichlorides** *MACROMOLECULES*
Finze, M., Reybuck, S. E., Waymouth, R. M.
2003; 36 (25): 9325-9334
 - **The dual-site alternating cyclocopolymerization of 1,3-butadiene with ethylene** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Choo, T. N., Waymouth, R. M.
2003; 125 (30): 8970-8971
 - **Synthesis and characterization of [TiF₂(NMe₂)₂](4) and its use for olefin polymerizations** *INORGANICA CHIMICA ACTA*
Straus, D. A., Kamigaito, M., Cole, A. P., Waymouth, R. M.
2003; 349: 65-68
 - **High comonomer selectivity in ethylene/hexene copolymerization by unbridged indenyl metallocenes** *MACROMOLECULES*
Dankova, M., Waymouth, R. M.
2003; 36 (11): 3815-3820
 - **Sequence and stereoselectivity of the C-1-symmetric metallocene Me₂Si(1-(4,7-Me₂)Ind)(9-Flu)ZrCl₂** *MACROMOLECULES*
Fan, W., Waymouth, R. M.

2003; 36 (9): 3010-3014

- **In vitro epithelialization of a synthetic polymer for generation of corneal onlay/keratoprosthesis** *Annual Meeting of the Association-for-Research-in-Vision-and-Ophthalmology*
Pilyugina, S. A., Lavoie, A., Huie, P., Derr, K., SMITH, A. J., Noolandi, J., Waymouth, R. M., Ta, C.
ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2003: U321-U321
- **Nucleation and crystallization of low-crystallinity polypropylene followed in situ by hot stage atomic force microscopy** *MACROMOLECULES*
Schonherr, H., Waymouth, R. M., Frank, C. W.
2003; 36 (7): 2412-2418
- **Control of sequence distribution of ethylene copolymers: Influence of comonomer sequence on the melting behavior of ethylene copolymers** *MACROMOLECULES*
Hung, J., Cole, A. P., Waymouth, R. A.
2003; 36 (7): 2454-2463
- **In situ generation of carbenes: A general and versatile platform for organocatalytic living polymerization** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Nyce, G. W., Glauser, T., CONNOR, E. F., Mock, A., Waymouth, R. M., Hedrick, J. L.
2003; 125 (10): 3046-3056
- **Component stress-strain behavior and small-angle neutron scattering investigation of stereoblock elastomeric polypropylene** *MACROMOLECULES*
Wiyatno, W., Fuller, G. G., Pople, J. A., Gast, A. P., Chen, Z. R., Waymouth, R. M., Myers, C. L.
2003; 36 (4): 1178-1187
- **Ring opening metathesis polymerization on non-covalently functionalized single-walled carbon nanotubes** *CHEMICAL COMMUNICATIONS*
Gomez, F. J., Chen, R. J., Wang, D. W., Waymouth, R. M., Dai, H. J.
2003: 190-191
- **Alternating stereospecific copolymerization of cyclopentene and ethylene with constrained geometry catalysts** *CHEMICAL COMMUNICATIONS*
Lavoie, A. R., Ho, M. H., Waymouth, R. M.
2003: 864-865
- **Synthesis of polyethylene graft block copolymers from styrene, butyl acrylate, and butadiene** *MACROMOLECULES*
Bowden, N. B., Dankova, M., Wiyatno, W., Hawker, C. J., Waymouth, R. M.
2002; 35 (25): 9246-9248
- **Dynamic response of stereoblock elastomeric polypropylene studied by rheooptics and X-ray scattering. 1. Influence of isotacticity** *MACROMOLECULES*
Wiyatno, W., Pople, J. A., Gast, A. P., Waymouth, R. M., Fuller, G. G.
2002; 35 (22): 8488-8497
- **Dynamic response of stereoblock elastomeric polypropylene studied by rheooptics and X-ray scattering. 2. Orthogonally oriented crystalline chains** *MACROMOLECULES*
Wiyatno, W., Pople, J. A., Gast, A. P., Waymouth, R. M., Fuller, G. G.
2002; 35 (22): 8498-8508
- **Expanding the catalytic activity of nucleophilic N-heterocyclic carbenes for transesterification reactions** *ORGANIC LETTERS*
Nyce, G. W., Lamboy, J. A., CONNOR, E. F., Waymouth, R. M., Hedrick, J. L.
2002; 4 (21): 3587-3590
- **Synthesis of fluorescently labeled polymers and their use in single-molecule imaging** *MACROMOLECULES*
Bowden, N. B., Willets, K. A., Moerner, W. E., Waymouth, R. M.
2002; 35 (21): 8122-8125
- **2-arylidene metallocenes: Conformationally dynamic catalysts to control the structure and properties of polypropylenes** *ACCOUNTS OF CHEMICAL RESEARCH*
Lin, S., Waymouth, R. M.
2002; 35 (9): 765-773
- **Influence of cocatalyst on the stereoselectivity of unbridged 2-phenylindenyl metallocene catalysts** *MACROMOLECULES*
Wilmes, G. M., Polse, J. L., Waymouth, R. M.

2002; 35 (18): 6766-6772

- **Synthesis of polyethylene graft block copolymers from butyl acrylate, styrene, and butadiene.**
Bowden, N. B., Waymouth, R. M., Dankova, M., Wiyatno, W.
AMER CHEMICAL SOC.2002: U153-U153
- **Rotation rates of bis(2-aryindenyl)zirconocenes: Effects of ligands and implications for formation of stereoblock polypropylene.**
Wilmes, G. M., France, M. B., Lynch, S. R., Waymouth, R. M.
AMER CHEMICAL SOC.2002: U685-U686
- **Coordination chemistry of stable radicals: Homolysis of a titanium-oxygen bond** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Huang, K. W., Waymouth, R. M.
2002; 124 (28): 8200-8201
- **Propylene polymerization with sterically hindered unbridged 2-arylidene metallocenes** *MACROMOLECULES*
Wilmes, G. M., Lin, S., Waymouth, R. M.
2002; 35 (14): 5382-5387
- **Effect of tacticity on coil dimensions and thermodynamic properties of polypropylene** *MACROMOLECULES*
Jones, T. D., Chaffin, K. A., Bates, F. S., Annis, B. K., HAGAMAN, E. W., Kim, M. H., Wignall, G. D., Fan, W., Waymouth, R.
2002; 35 (13): 5061-5068
- **Cyclocopolymerization: A mechanistic probe for dual-site alternating copolymerization of ethylene and alpha-olefins** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Choo, T. N., Waymouth, R. M.
2002; 124 (16): 4188-4189
- **Syndiospecific propylene polymerization using C-1-symmetric ansa-metallocene catalysts: Substituent and bridge effects** *MACROMOLECULES*
Gomez, F. J., Waymouth, R. M.
2002; 35 (9): 3358-3368
- **Crystallization of the alpha and gamma forms of isotactic polypropylene as a tool to test the degree of segregation of defects in the polymer chains** *MACROMOLECULES*
De Rosa, C., Auriemma, F., Circelli, T., Waymouth, R. M.
2002; 35 (9): 3622-3629
- **Models for conformationally dynamic metallocenes. Copolymerization behavior of the unbridged metallocene (1-methyl-2-phenylindenyl)(2-phenylindenyl)zirconium dichloride** *MACROMOLECULES*
Dankova, M., Kravchenko, R. L., Cole, A. P., Waymouth, R. M.
2002; 35 (8): 2882-2891
- **Morphology of thermoplastic elastomers: Elastomeric polypropylene** *MACROMOLECULES*
Schonherr, H., Wiyatno, W., Pople, J., Frank, C. W., Fuller, G. G., Gast, A. P., Waymouth, R. M.
2002; 35 (7): 2654-2666
- **Copolymerization behavior of unbridged indenyl metallocenes: Substituent effects on the degree of comonomer incorporation** *MACROMOLECULES*
Reybuck, S. E., Meyer, A., Waymouth, R. M.
2002; 35 (3): 637-643
- **Polymer synthesis - Catalysts rise to the challenge** *SCIENCE*
Gomez, F. J., Waymouth, R. M.
2002; 295 (5555): 635-636
- **Synthesis and molecular structure of titanium complexes containing a reduced TEMPO radical** *CHEMICAL COMMUNICATIONS*
Mahanthappa, M. K., Huang, K. W., Cole, A. P., Waymouth, R. M.
2002: 502-503
- **Polystyrene-supported 2-arylidene zirconocene catalysts for propylene polymerization** *ISRAEL JOURNAL OF CHEMISTRY*
Diehl, S. C., Waymouth, R. M.
2002; 42 (4): 393-401

- **Titanium-mediated syndiospecific styrene polymerizations: Role of oxidation state** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Mahanthappa, M. K., Waymouth, R. M.
2001; 123 (48): 12093-12094
- **Alternating copolymerization of ethylene and propylene: Evidence for selective chain transfer to ethylene** *MACROMOLECULES*
Fan, W., Waymouth, R. M.
2001; 34 (25): 8619-8625
- **Alternating stereospecific copolymerization of ethylene and propylene with metallocene catalysts** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Fan, W., Leclerc, M. K., Waymouth, R. M.
2001; 123 (39): 9555-9563
- **Rheo-optics and X-ray Scattering study of elastomeric polypropylene.**
Wiyatno, W., Pople, J. A., Gast, A. P., Waymouth, R., Fuller, G. G.
AMER CHEMICAL SOC.2001: U365-U365
- **Chain end functionalization in nitroxide-mediated "Living" free radical polymerizations** *MACROMOLECULES*
Harth, E., Hawker, C. J., Fan, W., Waymouth, R. M.
2001; 34 (12): 3856-3862
- **Syndiospecific propylene polymerization with C-1 symmetric group 4 ansa-metallocene catalysts** *MACROMOLECULES*
LEINO, R., Gomez, F. J., Cole, A. P., Waymouth, R. M.
2001; 34 (7): 2072-2082
- **Kinetics of propylene polymerization using bis(2-phenylindenyl)zirconium dichloride/methylaluminoxane** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Lin, S., Tagge, C. D., Waymouth, R. M., Nele, M., Collins, S., PINTO, J. C.
2000; 122 (46): 11275-11285
- **Two-state models for olefin polymerization using metallocene catalysts. 1. Application to fluxional metallocene catalyst systems** *MACROMOLECULES*
Nele, M., Collins, S., Dias, M. L., PINTO, J. C., Lin, S., Waymouth, R. M.
2000; 33 (20): 7249-7260
- **Ethylene and hydrogen effects in propylene polymerization with 2-aryindenyl zirconocenes** *International Zamarayev Conference on Physical Methods for Catalytic Research at the Molecular Level*
Lin, S., Kravchenko, R., Waymouth, R. M.
ELSEVIER SCIENCE BV.2000: 423-27
- **Ring-opening reactions of oxabicyclic alkene compounds: enantioselective hydride and ethyl additions catalyzed by group 4 metals** *JOURNAL OF ORGANIC CHEMISTRY*
Millward, D. B., Sammis, G., Waymouth, R. M.
2000; 65 (13): 3902-3909
- **Catalytic carboalumination of olefins with cyclopentadienylamidotitanium dichloride complexes** *ORGANOMETALLICS*
Millward, D. B., Cole, A. P., Waymouth, R. M.
2000; 19 (10): 1870-1878
- **Accurate structural control and block formation in the living polymerization of 1,3-dienes by nitroxide-mediated procedures** *MACROMOLECULES*
Benoit, D., Harth, E., Fox, P., Waymouth, R. M., Hawker, C. J.
2000; 33 (2): 363-370
- **Ring-opening reactions of oxabicyclic alkene compounds: enantioselective hydride and ethyl additions catalyzed by group 4 metals** *The Journal of organic chemistry*
Millward, D. B., Sammis, G., Waymouth, R. M.
2000; 65 (13): 3902-9
- **Olefin polymerization with Me₄Cp-amido complexes with electron-withdrawing groups** *US-Japan Seminar on Polymer Synthesis*
Kamigaito, M., Lal, T. K., Waymouth, R. M.
WILEY-BLACKWELL.2000: 4649-4660

- **Regioirregular propene insertion in polypropenes synthesized with unbridged bis(2-aryl)indenyl zirconium dichloride catalysts: Implications on activity** *MACROMOLECULES*
Lin, S., Waymouth, R. M.
1999; 32 (25): 8283-8290
- **Component relaxation processes within elastomeric polypropylene** *MACROMOLECULES*
Carlson, E. D., Fuller, G. G., Waymouth, R. M.
1999; 32 (24): 8100-8106
- **Influence of trialkylaluminum reagents on the propylene polymerization behavior of bridged and unbridged 2-arylidene metallocene polymerization catalysts** *MACROMOLECULES*
Petoff, J. L., Myers, C. L., Waymouth, R. M.
1999; 32 (24): 7984-7989
- **Transient birefringence of elastomeric polypropylene subjected to step shear strain** *MACROMOLECULES*
Carlson, E. D., Fuller, G. G., Waymouth, R. M.
1999; 32 (24): 8094-8099
- **Synthesis of unbridged bis(2-R-indenyl)zirconocenes containing functional groups and investigations in propylene polymerization** *ORGANOMETALLICS*
Witte, P., Lal, T. K., Waymouth, R. M.
1999; 18 (20): 4147-4155
- **Elastomeric polypropylenes from unbridged 2-phenylindene zirconocene catalysts: Temperature dependence of crystallinity and relaxation properties** *MACROMOLECULES*
Hu, Y. R., Carlson, E. D., Fuller, G. G., Waymouth, R. M.
1999; 32 (10): 3334-3340
- **Ethylene norbornene copolymerizations with titanium CpA catalysts** *MACROMOLECULES*
McKnight, A. L., Waymouth, R. M.
1999; 32 (9): 2816-2825
- **Mixed ligand metallocenes as catalysts for elastomeric polypropylene** *ORGANOMETALLICS*
Tagge, C. D., Kravchenko, R. L., Lal, T. K., Waymouth, R. M.
1999; 18 (3): 380-388
- **Metallocene/borate-catalyzed copolymerization of 5-N,N-diisopropylamino-1-pentene with 1-hexene or 4-methyl-1-pentene** *MACROMOLECULES*
Stehling, U. M., Stein, K. M., Fischer, D., Waymouth, R. M.
1999; 32 (1): 14-20
- **Steric and electronic effects of R in (2-(4-R-C6H4)indenyl)(2)ZrCl2 catalysts on the synthesis of elastomeric polypropylene** *JOURNAL OF MOLECULAR CATALYSIS A-CHEMICAL*
Lin, S., Hauptman, E., Lal, T. K., Waymouth, R. M., Quan, R. W., Ernst, A. B.
1998; 136 (1): 23-33
- **Elastomeric polypropylene from unbridged 2-arylidene zirconocenes: Modeling polymerization behavior using ansa-metallocene analogues** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Petoff, J. L., Agoston, T., Lal, T. K., Waymouth, R. M.
1998; 120 (44): 11316-11322
- **Group 4 ansa-cyclopentadienyl-amido catalysts for olefin polymerization** *CHEMICAL REVIEWS*
McKnight, A. L., Waymouth, R. M.
1998; 98 (7): 2587-2598
- **Elastomeric polypropylenes from unbridged (2-phenylindene)zirconocene catalysts: Thermal characterization and mechanical properties** *MACROMOLECULES*
Hu, Y. R., Krejchi, M. T., Shah, C. D., Myers, C. L., Waymouth, R. M.
1998; 31 (20): 6908-6916
- **Rheological and thermal properties of elastomeric polypropylene** *MACROMOLECULES*
Carlson, E. D., Krejchi, M. T., Shah, C. D., Terakawa, T., Waymouth, R. M., Fuller, G. G.

1998; 31 (16): 5343-5351

- **Synthesis of poly(olefin) graft copolymers by a combination of metallocene and "living" free radical polymerization techniques** *MACROMOLECULES*
Stehling, U. M., Malmstrom, E. E., Waymouth, R. M., Hawker, C. J.
1998; 31 (13): 4396-4398
- **Statistical analysis and simulation of pentad distributions of stereoblock polypropylenes** *MACROMOLECULES*
BRUCE, M. D., Waymouth, R. M.
1998; 31 (9): 2707-2715
- **Alternating ethene/propene copolymerization with a metallocene catalyst** *ANGEWANDTE CHEMIE-INTERNATIONAL EDITION*
Leclerc, M. K., Waymouth, R. M.
1998; 37 (7): 922-925
- **Metallocene/borate-catalyzed polymerization of amino-functionalized alpha-olefins** *MACROMOLECULES*
Stehling, U. M., Stein, K. M., Kesti, M. R., Waymouth, R. M.
1998; 31 (7): 2019-2027
- **Strategies for synthesis of elastomeric polypropylene: Fluxional metallocenes with C-1-symmetry** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Kravchenko, R., Masood, A., Waymouth, R. M., Myers, C. L.
1998; 120 (9): 2039-2046
- **Ethylene-propylene copolymerization with 2-arylidene zirconocenes** *MACROMOLECULES*
Kravchenko, R., Waymouth, R. M.
1998; 31 (1): 1-6
- **Group 4 ansa-Cyclopentadienyl-Amido Catalysts for Olefin Polymerization.** *Chemical reviews*
McKnight, A. L., Waymouth, R. M.
1998; 98 (7): 2587-98
- **Propylene polymerization with unbridged metallocenes: Ligand effects on the selectivity for elastomeric polypropylene** *ORGANOMETALLICS*
Petoff, J. L., BRUCE, M. D., Waymouth, R. M., Masood, A., Lal, T. K., Quan, R. W., Behrend, S. J.
1997; 16 (26): 5909-5916
- **Effect of metal on the stereospecificity of 2-arylidene catalysts for elastomeric polypropylene** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
BRUCE, M. D., COATES, G. W., Hauptman, E., Waymouth, R. M., Ziller, J. W.
1997; 119 (46): 11174-11182
- **Propylene polymerization with chiral and achiral unbridged 2-arylidene metallocenes** *ORGANOMETALLICS*
Kravchenko, R., Masood, A., Waymouth, R. M.
1997; 16 (16): 3635-3639
- **Selectivity in propylene polymerization with group 4 Cp-amido catalysts** *ORGANOMETALLICS*
McKnight, A. L., Masood, M. A., Waymouth, R. M., Straus, D. A.
1997; 16 (13): 2879-2885
- **The effect of ligand structure on the polymerization behavior of unbridged metallocenes**
Petoff, J. L., BRUCE, M. D., Waymouth, R. M., Masood, A.
*AMER CHEMICAL SOC.*1997: 156-INOR
- **Zirconocene-mediated cyclization of 2-bromo alpha,omega-dienes** *ORGANOMETALLICS*
Millward, D. B., Waymouth, R. M.
1997; 16 (6): 1153-1158
- **Homo-, co- and terpolymerization of 1,5-hexadiene using a methylalumoxane activated mono-Cp-amido-complex** *POLYMER BULLETIN*
Sernetz, F. G., Mulhaupt, R., Waymouth, R. M.
1997; 38 (2): 141-148
- **Pd²⁺-catalyzed cyclocopolymerization of 1,5-hexadiene and CO: Regioselectivity of olefin insertion** *MACROMOLECULES*
BORKOWSKY, S. L., Waymouth, R. M.

1996; 29 (20): 6377-6382

- **Effect of metal in the production of elastomeric polypropylene**
BRUCE, M. D., COATES, G. W., Waymouth, R. M.
AMER CHEMICAL SOC.1996: 88-INOR
- **Temporal chirality: Dynamic stereocontrol in the polymerization of propylene**
Coates, G., Hauptman, E., Bruce, M., Waymouth, R.
AMER CHEMICAL SOC.1996: 234-POLY
- **Influence of polymerization conditions on the copolymerization of styrene with ethylene using Me(2)Si(Me(4)Cp)(N-tert-butyl)TiCl₂ methylaluminoxane Ziegler-Natta catalysts** *MACROMOLECULAR CHEMISTRY AND PHYSICS*
Sernetz, F. G., Mulhaupt, R., Waymouth, R. M.
1996; 197 (3): 1071-1083
- **Polymer synthesis and stereochemistry with transition metal catalysts** *NATO Advanced Study Institute on Chemical Synthesis - Gnosis to Prognosis*
Waymouth, R., COATES, G. W., Ciardelli, F., Carlini, C., Altomare, A.
KLUWER ACADEMIC PUBL.1996: 453-473
- **METALLOCENE CATALYSTS FOR STEREOSELECTIVE POLYMERIZATION**
Coates, G., MOGSTAD, A. L., Hauptman, E., Bruce, M., KREJCHE, M., Kravchenko, R., Waymouth, R.
AMER CHEMICAL SOC.1995: 167-ORGN
- **STEREOSPECIFIC OLEFIN POLYMERIZATION WITH CHIRAL METALLOCENE CATALYSTS** *ANGEWANDTE CHEMIE-INTERNATIONAL EDITION IN ENGLISH*
Brintzinger, H. H., Fischer, D., Mulhaupt, R., Rieger, B., Waymouth, R. M.
1995; 34 (11): 1143-1170
- **OSCILLATING CATALYSTS FOR PROPYLENE POLYMERIZATION**
Coates, G., MOGSTAD, A. L., Hauptman, E., Bruce, M., Waymouth, R.
AMER CHEMICAL SOC.1995: 191-POLY
- **ENVIRONMENTALLY BENIGN POLYMER SYNTHESIS - POLYSILANE PHOTORESISTS**
Hsiao, Y. L., Waymouth, R. M., Beach, J. V., Loy, D. A.
AMER CHEMICAL SOC.1995: 127-ORGN
- **ENVIRONMENTALLY FRIENDLY POLYSILANES - AN ALTERNATIVE ROUTE TO POLYSILANE PHOTORESISTS**
Beach, J. V., Loy, D. A., Hsiao, Y. L., Waymouth, R. M.
AMER CHEMICAL SOC.1995: 121-PMSE
- **CONSTRUCTING CYCLICS FROM SIMPLE OLEFINS** *CHEMTECH*
WAYMOUTH, R. H., Knight, K. S.
1995; 25 (4): 15-21
- **THERMAL AND STRUCTURAL CHARACTERIZATION OF POLY(METHYLENE-1,3-CYCLOPENTANE) SAMPLES OF DIFFERENT MICROSTRUCTURES** *MACROMOLECULES*
DEBALLESTEROS, O. R., Venditto, V., Auriemma, F., Guerra, G., RESCONI, L., Waymouth, R., MOGSTAD, A. L.
1995; 28 (7): 2383-2388
- **OSCILLATING STEREOCONTROL - A STRATEGY FOR THE SYNTHESIS OF THERMOPLASTIC ELASTOMERIC POLYPROPYLENE** *SCIENCE*
COATES, G. W., Waymouth, R. M.
1995; 267 (5195): 217-219
- **Environmentally friendly polysilane photoresists** *Symposium on Microelectronics Technology - Polymers for Advanced Imaging and Packaging, at the 209th National Meeting of the American-Chemical-Society*
Beach, J. V., Loy, D. A., Hsiao, Y. L., Waymouth, R. M.
AMER CHEMICAL SOC.1995: 355-366
- **FREE-RADICAL HYDROSILYLATION OF POLY(PHENYLSILANE) - SYNTHESIS OF FUNCTIONAL POLYSILANES** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*

Hsiao, Y. L., Waymouth, R. M.
1994; 116 (21): 9779-9780

● **A NEW ROUTE TO FUNCTIONALIZED POLY(PHENYLSILANES)**

Hsiao, Y. L., Waymouth, R. M.
AMER CHEMICAL SOC.1994: 52-INOR

● **SYNTHESIS OF CONTROLLED POLYMER STRUCTURES USING TRANSITION-METAL CATALYSTS**

Coates, G., MOGSTAD, A. L., Bruce, M., Stein, K., BORKOWSKY, S., Waymouth, R.
AMER CHEMICAL SOC.1994: 125-ORGN

● **SYNTHESIS OF FUNCTIONALIZED POLYOLEFINS USING GROUP-4 METALLOCENE CATALYSTS**

Coates, G., Stein, K., Fischer, D., Waymouth, R.
AMER CHEMICAL SOC.1994: 271-INOR

● **MECHANISM AND STEREOCHEMISTRY OF THE ZIRCONOCENE-CATALYZED CYCLOMAGNESIATION OF DIENES** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*

Knight, K. S., Wang, D., Waymouth, R. M., Ziller, J.
1994; 116 (5): 1845-1854

● **SUBSTITUENT EFFECTS ON UV ABSORPTION OF SIGMA-CONJUGATED POLYSILANES** *Symposium on Inorganic and Organometallic Polymers II - Advanced Materials and Intermediates, at the 205th National Meeting of the American-Chemical-Society*

Hsiao, Y. L., BANOVELTZ, J. P., Waymouth, R. M.
AMER CHEMICAL SOC.1994: 55-63

● **FUNCTIONALIZATION OF POLY(PHENYL)SILANE**

BANOVELTZ, J. P., Hsiao, Y. L., Waymouth, R. M.
AMER CHEMICAL SOC.1993: 161-POLY

● **SELECTIVE FREE-RADICAL HALOGENATION OF POLYPHENYLSILANE** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*

BANOVELTZ, J. P., Hsiao, Y. L., Waymouth, R. M.
1993; 115 (6): 2540-2541

● **MODEL CATALYTIC SITES FOR OLEFIN POLYMERIZATION AND DIASTEREOSELECTIVITY IN THE CYCLOPOLYMERIZATION OF 1,5-HEXADIENE** *MACROMOLECULES*

Cavallo, L., Guerra, G., Corradini, P., RESCONI, L., Waymouth, R. M.
1993; 26 (2): 260-267

● **CRYSTAL-STRUCTURES OF (ETA-5-C5ME5)(ETA-5-2,4-C7H11)CR AND (ETA-5-C5ME5)-(ETA-5-2,4-C7H11)CRCO - AN EXAMPLE OF S 2,4-DIMETHYLPENTADIENYL LIGAND GEOMETRY** *INORGANICA CHIMICA ACTA*

BOVINO, S. C., COATES, G. W., BANOVELTZ, J. P., Waymouth, R. M., Straus, D. A., Ziller, J. W.
1993; 203 (2): 179-183

● **ENANTIOSELECTIVE CYCLOPOLYMERIZATION OF 1,5-HEXADIENE CATALYZED BY CHIRAL ZIRCONOCENES - A NOVEL STRATEGY FOR THE SYNTHESIS OF OPTICALLY-ACTIVE POLYMERS WITH CHIRALITY IN THE MAIN CHAIN** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*

COATES, G. W., Waymouth, R. M.
1993; 115 (1): 91-98

● **STEREOSELECTIVE CYCLOMAGNESIATION OF 1,6-HEPTADIENES CATALYZED BY ZIRCONOCENES - EFFECTS OF SUBSTITUENTS, SOLVENT AND MAGNESIUM REAGENTS** *TETRAHEDRON LETTERS*

WISCHMEYER, U., Knight, K. S., Waymouth, R. M.
1992; 33 (50): 7735-7738

● **CHIRAL POLYMERS VIA CYCLOPOLYMERIZATION** *9TH INTERNATIONAL SYMP ON OLEFIN METATHESIS*

COATES, G. W., Waymouth, R. M.
ELSEVIER SCIENCE BV.1992: 189-94

● **FREE-RADICAL HALOGENATION OF POLYPHENYLSILANE**

BANOVELTZ, J. P., Hsiao, Y. L., Waymouth, R. M.
AMER CHEMICAL SOC.1992: 382-ORGN

- **FUNCTIONALIZATION OF POLY(PHENYLSILANE)**

BANOVETZ, J. P., Hsiao, Y. L., Waymouth, R. M.
AMER CHEMICAL SOC.1992: 118-INOR

- **GROUP-4 METALLOCENE OLEFIN HYDROSILYLATION CATALYSTS** *ORGANOMETALLICS*

Kesti, M. R., Waymouth, R. M.
1992; 11 (3): 1095-1103

- **STEREOSPECIFIC CYCLOPOLYMERIZATION WITH GROUP-4 METALLOCENES** *JAPAN / UNITED-STATES SEMINAR ON ADVANCED MATERIALS BASED ON MACROMOLECULES*

RESCONI, L., COATES, G. W., MOGSTAD, A., Waymouth, R. M.
MARCEL DEKKER INC.1991: 1225-34

PRESENTATIONS

- IBM Smarter Planet Blog: Meet Robert Waymouth - IBM (December 12, 2012)
- GCEP Symposium, Synthetic Fuels Technical Talk: Molecular Designs for Electrocatalysis - Stanford Percourt Institute for Energy (October 14, 2014)