

E. Bryan Coughlin
Curriculum Vitae

Polymer Science and Engineering Department
Silvio O. Conte National Center for Polymer Research
University of Massachusetts
Amherst, MA 01003-4530

Tel (413) 577-1616
Fax (413) 545-0082
coughlin@mail.pse.umass.edu
www.pse.umass.edu

Professional Positions

University of Massachusetts

<i>Associate Professor of Polymer Science and Engineering</i>	9/2005-Present
<i>Graduate Program Director, Polymer Science & Engineering</i>	8/2005-Present
<i>Assistant Professor of Polymer Science and Engineering</i>	9/1999-8/2005
<i>Adjunct Professor of Chemistry</i>	6/2000-Present

DuPont Central Research & Development Department

<i>Senior Research Chemist</i>	1/1999-5/1999
<i>Research Chemist</i>	1/1995-12/1998

- Polymerization catalysis.
- Co-inventor of DuPont's Versipol™ polyolefin technology platform.

<i>Visiting Research Scientist</i>	9/1993-12/1994
------------------------------------	----------------

- Exploratory catalysis in novel reaction media.
- Mechanistic investigations of fundamental organometallic transformations.

Education

Ph.D., 1993, Chemistry, *California Institute of Technology*; Pasadena, CA

Thesis Title: *Iso-Specific Ziegler-Natta Polymerization of α -Olefins with Single Component Organoyttrium Compounds*

Thesis Advisor: Professor John E. Bercaw

B.A., 1988, Chemistry *Grinnell College*; Grinnell, IA

Honor and Awards

NSF CAREER AWARD (2003-2007)
DuPont Young Faculty Award (2003-2005)
UMass Distinguished Teaching Award Nominee (2003-2004)
3M Non-Tenured Faculty Awards (2000, 2001, 2002)
Mettler-Toledo Edith M. Turri Thermal Analysis Grant (2002)
OMNOVA Solutions Signature University Faculty Award (2000)
UMass Polymer Science and Engineering Dept. Most Outstanding Professor Award (2000)
California Catalysis Society Graduate Student Award (1992)
W.R. Grace Graduate Fellowship (1990)
American Institute of Chemists Outstanding Senior Chemistry Major Award (1988)

Professional Service

American Chemical Society, Polymer Materials: Science and Engineering Division
Vice Chair (2007)
Treasurer (2004-2005)
Membership Chair (2002-2003)
NSF Research Site for Education in Chemistry on Polymer Chemistry in Western Massachusetts
Coordinator (2002-Present)
New England Polymer Chemistry Workshop Series Co-Founder (2003-Present)

E. Bryan Coughlin *Curriculum Vitae*

Northeast Alliance for Graduate Education and the Professoriate, Faculty Mentor (2003-Present)

Current Student Advisees (6 Graduate, 2 Undergraduates)

Polymer Science and Engineering Department-

Yoan Simon	5 th Year Graduate Student
Gunjan Gadodia	4 th Year Graduate Student
Surangkha Martwiset	4 th Year Graduate Student
Chris Scilla	3 rd Year Graduate Student
Shilpi Sanghi	2 nd Year Graduate Student
Justin Fisher	2 nd Year Graduate Student
Sarah White	Undergraduate Student
Mike Beaulieu	Undergraduate Student

Former Graduate Students

Bradley Seurer	Ph.D. Candidate, Polymer Science & Engineering (2007 expected) Winona State University, Winona, MN
Richard Woudenberg	Ph.D., Polymer Science & Engineering (2007) Markem Corporation, Keene, NH
Narupol Intasanta	Ph.D., Polymer Science & Engineering (2007)
Jeanette Craymer	M.S., Polymer Science & Engineering (2006)
Grégoire Cardoen	Ph.D., Polymer Science & Engineering (2006) Ecole Supérieure de Physique et de Chimie Industrielles (ESPCI), Paris, France
Pushkala Krishnamurthy	Ph.D., Polymer Science & Engineering (2005) Intel Corporation, Chandler, AZ
Bernabe Quevedo	Masters, Chemical Engineering (2005) GE, Cartagena, Spain
Rajeswari Kasi	Ph.D., Polymer Science and Engineering (2004) Professor, Chemistry Dept. and Institute for Material Science, University of Connecticut
Gregory Constable	Ph.D., Polymer Science and Engineering (2004) Intel Corporation, Chandler AZ
Ramon Gonzalez-Ruiz	Ph.D., Chemical Engineering (2004) Cargill Process Solutions, Minnetonka MN
Firat Ilker	Ph.D., Polymer Science and Engineering (2004) CNRS, Laboratoire de Recherche sur les Polymères, Paris, France
Lei Zheng	Ph.D., Polymer Science and Engineering (2002) GlaxoSmithKline, Research Triangle Park, NC
Stuart Craig	M.S., Chemistry (2002) Alphora Research, Ontario, Canada

Current Postdoctoral Scholars

Sergio Granados-Fócil	Ph.D., Macromolecular Science & Engineering (2006) Case Western Reserve University, Cleveland, OH
Bon-Cheol Ku	Ph.D. Polymer Science/Plastics Engineering Program (2005) University of Massachusetts, Lowell, MA
Thangamani Ranganathan	Ph.D., Polymer Chemistry (2005) (with Todd Emrick) Indian Institute of Technology, Bombay (Mumbai), India

Former Postdoctoral Scholars

Tarik Eren	Bogazici University, Istanbul, Turkey
Arthur Gavrin	Staff Scientist, Triton Systems, Chelmsford MA
Patrick O'Donnell	Senior Synthesis Chemist, Reichold, Research Triangle Park NC

Visiting Scholars

Makoto Higami	JSR Corporation, Tokyo, Japan
W. Donald Cotter	Associate Professor, Mount Holyoke College

E. Bryan Coughlin
Curriculum Vitae

Sandra L. Burkett Assistant Professor, Amherst College

University of Massachusetts Undergraduate Students

Madeeha Yousuf	B.S. 2001
Elizabeth Haley	B.S. 2002
Sarah Ciampa	B.S. 2003
Christen Bell	B.S. 2004
Nina Nwaroh	B.S. 2005
Jessica Nimmons	B.S. 2006
Bryan Martins	B.S. 2008
Yelena Urgina	B.S. 2008
Sarah White	B.S. 2008
Michael Beaulieu	B.S. 2010

Undergraduate Research Exchange Students

Jorg Thielen	University of Mainz (Germany)
Melanie Zimny	University of Mainz (Germany)
Christian Ohm	University of Mainz (Germany)
Daniel Wilms	University of Mainz (Germany)
Hanna Schule	University of Mainz (Germany)
Tobias Schluess	University of Mainz (Germany)
Frank Dierschke	University of Mainz (Germany)
Lars Conrad	University of Mainz (Germany)
Katarina Baumann	University of Mainz (Germany)
Claire Michalowicz	University of Strasbourg (France)
Francesca Focante	University of Bologna (Italy)

Undergraduate Summer Students

LeRenzo Tolbert-Malcom	University of North Texas
Jeffery Manzer	University of Toronto (Canada)
Diane K. Allen	Massachusetts Institute of Technology
James Camarra	University of Rochester
Anne Forcum	Western New England College
Kelly Burke	University of Connecticut
Valerie Rios	Smith College
Kyle Maurer	Cornell University

Research Funding

University of Massachusetts

Start-up Funding	\$200,000
Faculty Research Grant/Healy Foundation	\$12,000

Federal Sponsorship

National Science Foundation

“Polymer-Inorganic Hybrid Materials” CAREER AWARD
(DMR-0239475) Coughlin PI \$405,000 1/1/2003 to 12/30/2007

“Patchy Sensor Surfaces for Selective Dynamic Adhesion of Micron and Sub-Micron Objects”
(CST-0428455) M. M. Santore PI, \$715,487 11/01/2004 to 9/30/2007
E.B. Coughlin, J. Davis co-Is

Research Site for Educators in Chemistry on Polymer Chemistry in Western Massachusetts (CHEM-0113643)
T. J. McCarthy PI \$190,000 to Coughlin 09/01/2001 to 8/30/2006

E. Bryan Coughlin
Curriculum Vitae

Materials Research Science and Engineering Center (MRSEC) (DMR-0213695 and DMR-9809365)
T. P. Russell PI \$194,000 to Coughlin 4/1/2000 to 3/30/2005

“US-India Workshop: Recent Advances in Organometallic Catalysis and Olefin Polymerization”
(INT-0242938) Coughlin PI \$29,000 3/1/2003 to 2/29/2004

Department of Defense

US Army Center of Excellence on Polymeric Materials

S.P. Gido PI \$106,063 to Coughlin 1/1/2003 to 12/30/2004

United States Navy

“Precision Functionalized Polymers for Studies of Wood-Polymer Composites”
N00014-00-C-0488 (Subcontract from Washington State University)

Coughlin PI \$156,000 1/1/2003 to 12/23/2004

United States Air Force

“POSS Dianiline Synthesis”

Coughlin PI \$20,000 9/01/2004 to 2/28/2005

“POSS based Thermoplastic Elastomers” (FA9301-04-M-5044)

Coughlin PI \$60,000 10/01/2004 to 3/30/2005

“Functional Polyhedral Oligomeric Silsesquioxane Polymers”

Coughlin PI \$10,000 5/12/2000 to 9/30/2000

“Terpolymers Comprising Ethylene Propylene and POSS”

Coughlin PI \$40,000 1/1/2003 to 10/28/2003

Defense Advanced Research Projects Agency (DARPA)

“Space Survivable POSS Polyimides”

Coughlin PI \$108,000 10/01/2004 to 9/30/2005

Department of Energy

“High Temperature Polymer Membranes for Fuel Cell Applications”

Coughlin PI \$180,000 10/01/2004 to 9/30/2006

“Nanotemplate Directed Assembly of Soft Matter and Biomaterials”

Coughlin PI, T. P. Russell co-I \$200,000 1/1/2003 to 12/31/2006

Department of Homeland Security

“Next Generation Structural Fire Fighting PPE with Chemical/Biological Protection” W91CRB-04-C-0027

Coughlin PI, \$120,000 7/15/2004 to 10/14/2005
T.J. McCarthy and A.J. Lesser co-Is

Federal Aviation Administration

“Fire Safe Polymers and Polymer Composites”

Coughlin PI, R.J. Farris co-I \$100,001 6/22/2004 to 6/22/2005

NASA

“Liquid Crystalline Elastomers from ABA Triblock Copolymers” Graduate Student Research Program

Coughlin Faculty Advisor \$48,000 7/01/2002 to 6/30/2004

Industrial Sponsorship

Center for UMass Industry Research on Polymers

E. Bryan Coughlin
Curriculum Vitae

Cluster F “Fire-Safe Polymer and Polymer Composites”
R.J. Farris PI Coughlin co-PI \$351,389 to Coughlin 7/1/2000 to 6/30/2004

Cluster P “Polyolefin Design”
E.B Coughlin and S.L. Hsu co-PIs \$36,872 to Coughlin 7/1/2000 to 6/30/2004

Dayton Research Institute
“POSS Copolymer Research Samples”
Coughlin PI \$9,980 4/7/2004 to 6/30/2005

Unrestricted Funding

3M Non Tenured Faculty Award \$15,000
Non Tenured Faculty Award \$15,000
Non Tenured Faculty Award \$15,000

DuPont Young Professor Award \$75,000

Schlumberger Technologies \$20,000
Honeywell International Inc. \$40,000
Sumitomo Chemical Company \$ 8,000
Metabolix Inc \$ 9,050
Proctor and Gamble \$ 5,000
Milliken & Co. \$30,000
Sekisui Chemical Company, Ltd. \$95,000
Sumitomo Chemical Company \$60,000

Instrumentation Awards

Mettler-Toledo Edith M. Turri Thermal Analysis Grant
Coughlin PI, S.P. Gido co-I \$140,000 6/28/2002

United States Army Research Office Defense-University Research Instrumentation Program
“Macromolecular Sample Characterization” G. N. Tew PI, Coughlin and T.S. Emrick co-Is
\$99,966 1/1/2004 to 12/30/2004

National Science Foundation IMR:
“Acquisition of a Gel Permeation Chromatography with Multiple Detection System for Polymer Research and Education” (CHEM-0414229) S. Thayumanavan PI, Coughlin plus 3 others co-Is
\$ 76,601.00 09/03/2004

Peer-Reviewed Publications

Publications from the University of Massachusetts, Amherst

* Denotes E. Bryan Coughlin as Senior Author

51. “Water-Free Proton Conducting Polysiloxanes: A Study on the Effect of Heterocycle Structure” Sergio Granados-Focil, Richard C. Woudenberg, Ozgur Yavuzcetin, Mark T. Tuoninen, E. Bryan Coughlin, *Macromolecules* submitted.

50.* “Antibacterial and Hemolytic Activities of Quaternary Pyridinium Functionalized Polynorbornenes” Tarik Eren, Abhigyan Som, Jason R. Rennie, Christopher F. Nelson, Yelena Urgina, Klaus Nüsslein, E. Bryan Coughlin and Gregory N. Tew*, *Macromolecular Chemistry and Physics* submitted.

E. Bryan Coughlin
Curriculum Vitae

- 49.* “Nanotemplates from Poly (POSS (isobutyl)-*b*- MMA) and their Interfacial Properties” Narupol Intasanta, E. Bryan Coughlin and Thomas P. Russell, *Langmuir* submitted.
- 48.* “Amphiphilic Carborane-Containing Diblock Copolymers” Yoan C. Simon, Christian Ohm, Melanie J. Zimny and E. Bryan Coughlin, *Macromolecules* submitted.
47. “Highly Ordered Nanoporous Thin Films from Cleavable Polystyrene-*b*-poly(ethylene oxide)” Mingfu Zhang, Ling Yang, Serkan Yurt, Matthew J. Misner, Jiun-Tai Chen, E. Bryan Coughlin, Dhandapani Venkataraman and Thomas P. Russell, *Adv. Mater.* in press.
46. “Intrinsically Proton Conducting Polymers and Copolymers Containing Triazole Moieties” Surangkha Martwiset, Richard C. Woudenberg, Ozgur Yavuzcetin, Mark T. Tuominen and E. Bryan Coughlin, *Solid State Ionics* **2007**, *178*, 1398-1403.
45. “Glycolipid Polymer Synthesized from Natural Lactonic Sphorolipids by Ring-Opening Metathesis Polymerization” Wei Gao, Rene Hagver, Vishal Shah, Wenchun Xie, Richard A. Gross, M. Firat Ilker, Chrissy Bell, Kelly A. Burke and E. Bryan Coughlin, *Macromolecules* **2007**, *40*(2), 145-147.
44. “Online Monitoring of Ring-Opening Metathesis Polymerization of Cyclooctadiene and a Functionalized Norbornene” Alina M. Alb, Pascal Enohnyaket, Jeanette F. Craymer, Tarik Eren, E. Bryan Coughlin and Wayne F. Reed, *Macromolecules* **2006**, *40*(3), 444-451
- 43.* “Manifold Assembly for the Convenient Polymerization of Ethylene Oxide and Butadiene” Grégoire Cardoen, Kurt Brietenkamp, Todd S. Emrick and E. Bryan Coughlin, *Macromolecules* **2006**, *39*, 7170-7173.
42. “Synthesis and Characterization of Halogen-Free Anti-Flammable Polyphosphonates Containing 4,4’-Bishydroxydeoxybenzoin” Thangamani Ranganathan, Joseph Zilberman, Richard J. Farris, E. Bryan Coughlin and Todd S. Emrick, *Macromolecules* **2006**, *39*, 5974-5975.
41. “Deoxybenzoin-Based Polyarylates as Halogen-Free Fire-Resistant Polymers” K. A. Ellzey, Thangamani Ranganathan, Joseph Zilberman, E. B. Coughlin, Richard J. Farris and Todd S. Emrick, *Macromolecules* **2006**, *39*, 3553-3558.
- 40.* “Kinetic Modeling of the Effect of MAO/Zr Ratio and Chain Transfer to Aluminum in Zirconocene Catalyzed Propylene Polymerization” Bernabe Quevedo-Sanchez, Jessica F. Nimmons, E. Bryan Coughlin and Michael A. Henson, *Macromolecules* **2006**, *13*, 4306-4316.
- 39.* “Kinetic Modeling of Slurry Propylene Polymerization using *rac*-Et(Ind)₂ZrCl₂/MAO” Ramon A. Gonzalez-Ruiz, Bernabe Quevedo-Sanchez, Robert L. Laurence, E. Bryan Coughlin and Michael A. Henson, *AIChE Journal* **2006**, *52*, 1824-1835.
38. “Scission of Diblock Copolymers into Their Constituent Blocks” Serkan Yurt, Uche K. Anyanwu, Jocelyn Jocelyn Scheintaub, E. Bryan Coughlin and Dhandapani Venkataraman, *Macromolecules* **2006**, *39*, 1670-1672.
- 37.* “Origin of the Formation of the 4-Butenyl End-Group in Zirconocene-Catalyzed Propylene Polymerization” Bernabe Quevedo-Sanchez, Michael A. Henson and E. Bryan Coughlin, *Journal of Polymer Science: Part A: Polymer Chemistry* **2006**, *44*, 3724-3728.
- 36.* “Copolymerizations of Ethylene and α -Olefins with Supported Piano-Stool Catalysts” Jeanette F. Craymer, Rajeswari M. Kasi and E. Bryan Coughlin, *Polyhedron* **2005**, *24*, 1347-1355.
- 35.* “Selective Nitrogen Protection of Hydroxyalkylbenzimidazoles using 2,2,2-Trichloroethylchloroformate” Richard C. Woudenberg and E. Bryan Coughlin, *Tetrahedron Letters* **2005**, *46*, 6311-6313.

E. Bryan Coughlin
Curriculum Vitae

34. “Duplex Strand Formation using Alternating Copolymers” Hiroshi Nakade, M. Firat Ilker, Brian J. Jordan, Oktay Uzun, Nicholas L. LaPointe, E. Bryan Coughlin and Vincent M. Rotello, *Chem. Commun.* **2005**, *46*, 3271-3273.
- 33.* “Tethered Constrained-Geometry Catalysts in Mesoporous Silica: Probing the Influence of the ‘Second Sphere’ on Polymer Properties” Sandra L. Burkett, Steven Soukasene, Kelly L. Milton, Ryan Welch, Alicia J. Little, Rajeswari M. Kasi and E. Bryan Coughlin, *Chem. Mater.* **2005**, *17*, 2716-2723.
- 32.* “Polymer Nanocomposites through Controlled Self-Assembly of Cubic Silsesquioxane Scaffolds” Lei Zheng, S. Hong, Grégoire Cardoen, E. Burgaz, Samuel P. Gido and E. Bryan Coughlin, *Macromolecules* **2004**, *37*, 8606-8611.
31. “Isotactic Polypropylene Crystallization: Role of Small Fractions of High or Low Molecular Weight” Aadil Elmoumni, Ramon Gonzalez-Ruiz, E. Bryan Coughlin and H. Henning Winter, *Macromolecular Chemistry and Physics* **2005**, *206*, 125-134.
- 30.* “Tuning the Hemolytic Antibacterial Activities of Amphiphilic Polynorbornene Derivatives” M.Firat Ilker, Klaus Nusslein, Gregory N. Tew and E. Bryan Coughlin, *J. Am. Chem. Soc.* **2004**, *126(48)*, 15870-15875.
29. “Synthesis and Characterization of Unsaturated Thermotropic Polyesters Prepared via Acyclic Diene Metathesis Polymerization” Haihu Qin, B. J. Chakulski, Ingrid Rousseau, J. Chen, X. Xie, Patrick T. Mather, Gregory S. Constable and E. Bryan Coughlin, *Macromolecules* **2004**, *37*, 5239-5249.
- 28.* “Hemi-Telechelic Polystyrene-POSS Copolymers as Model Systems for the Study of Well-Defined Inorganic/Organic Hybrid Materials” Grégoire Cardoen and E. Bryan Coughlin, *Macromolecules* **2004**, *37*, 5123-5126.
- 27.* “Morphological and Mechanical Evaluation of Hybrid Organic-Inorganic Thermoset Copolymers of Dicyclopentadiene and Mono- or Tris(norbornenyl)-substituted Polyhedral Oligomeric Silsesquioxanes” Gregory S. Constable, Alan J. Lesser and E. Bryan Coughlin, *Macromolecules* **2004**, *37* 1276-1282.
- 26.* “Modular Norbornene Derivatives for the Preparation of Well-defined Amphiphilic Polymers: Study of the Lipid Membrane Disruption Activities” M. Firat Ilker, Hanna Schule and E. Bryan Coughlin, *Macromolecules* **2004**, *37*, 694-700.
- 25.* “Synthesis and Characterization of the Polyhydroxyamide/Polymethoxyamide Family of Polymers” E. S. Yoo, A. J. Gavrin, Richard J. Farris, E. B. Coughlin, *High Performance Polymers* **2003**, *15*, 519-535.
- 24.* “Crystal Structure of Polyhedral Oligomeric Silsesquioxane (POSS) Nano-materials: A Study by X-ray Diffraction and Electron Microscopy” Alan J. Waddon and E. Bryan Coughlin, *Chem. Mater.* **2003**, *15*, 4555-4561.
- 23.* “Ultrasonic Spectroscopic Evaluation of the Ring-Opening Metathesis Polymerization of Dicyclopentadiene” Gregory S. Constable, Alan J. Lesser and E. Bryan Coughlin, *J. Polym. Sci. Part B: Polym. Phys.* **2003**, *41*, 1323-1333.
- 22a.* “Supported Constrained-Geometry Catalysts on Cross-Linked (Aminomethyl)polystyrene: Studies of Ethylene and 1-Octene Polymerizations” Correction, Rajeswari M. Kasi and E. Bryan Coughlin, *Organometallics* **2003**, *22*, 3792-3792.
- 22.* “Supported Constrained-Geometry Catalysts on Cross-Linked (Aminomethyl)polystyrene: Studies of Ethylene and 1-Octene Polymerizations” Rajeswari M. Kasi and E. Bryan Coughlin, *Organometallics* **2003**, *22*, 1534-1539.

E. Bryan Coughlin
Curriculum Vitae

- 21.* “Linear or Branched Polyethylenes from Supported Aryloxytitanium(IV)-Cyclopentadienyl Complexes” Rajeswari M. Kasi and E. Bryan Coughlin, *Macromolecules* **2003**, *36*, 6300-6304.
20. “Chemically Cross-Linked Polycyclooctene: Synthesis, Characterization and Shape Memory Behavior” C. Liu, S. B. Chun, P. T. Mather, Lei Zheng, E. B. Haley and E. Bryan Coughlin, *Macromolecules* **2002**, *35*, 9868-9874.
- 19.* “Gas Manifold for Olefin Polymerization and a Convenient Reactor Design for the Parallel Screening of Catalyst” Gregory S. Constable, Ramon A. Gonzalez-Ruiz, Rajeswari M. Kasi and E. Bryan Coughlin, *Macromolecules* **2002**, *35*, 9613-9616.
- 18.* “Nanostructured Polyethylene-POSS Copolymers: Control of Crystallization and Aggregation” Alan J. Waddon, Lei Zeng, Richard J. Farris and E. Bryan Coughlin, *Nano Letters* **2002**, *2*, 1149-1155.
17. “Thermal Decomposition and Flammability of Fire-Resistant, UV/Visible-Sensitive Polyarylates, Copolymers and Blends” H. Zhang, P. R. Westmoreland, Richard J. Farris, E. Bryan Coughlin, A. Plichta and Z. K. Brzozowski, *Polymer* **2002**, *43*, 5463-5472.
16. “The Preparation of Cadmium Selenide-Polyolefin Composites from Functional Phosphine Oxides and Ruthenium-based Metathesis” Habib Skaff, M. Firat Ilker, E. Bryan Coughlin and Todd S. Emrick, *J. Am. Chem. Soc.* **2002**, *124*, 5729-5733.
- 15.* “Synthesis and Thermal Properties of Hybrid Copolymers of Syndiotactic Polystyrene and Polyhedral Oligomeric Silsesquioxane” Lei Zheng, Rajeswari M. Kasi, Richard J. Farris and E. Bryan Coughlin, *J. of Poly. Sci., Part A: Polymer Chemistry* **2002**, *40*, 885-891.
- 14.* “X-Ray Characterizations of Polyethylene Polyhedral Oligomeric Silsesquioxane Copolymers” Lei Zheng, Alan J. Waddon, Richard J. Farris and E. Bryan Coughlin *Macromolecules* **2002**, *35*, 2375-2379.
- 13.* “Alternating Copolymerizations of Polar and Non-Polar Cyclic Olefins by Ring-Opening Metathesis Polymerization” M. Firat Ilker and E. Bryan Coughlin, *Macromolecules* **2002**, *35*, 54-58.
- 12.* “Novel Polyolefin Nanocomposites: Synthesis and Characterization of Metallocene Catalyzed Polyolefin Polyhedral Oligomeric Silsesquioxanes (POSS) Copolymers” Lei Zheng, Richard J. Farris and E. Bryan Coughlin, *Macromolecules* **2001**, *34*, 8034-8039.
- 11.* “Highly Efficient Acyclic Diene Metathesis (ADMET) Depolymerization Using a Ruthenium Catalyst Containing a N-Heterocyclic Carbene Ligand” Stewart W. Craig, J. A. Manzer and E. Bryan Coughlin *Macromolecules* **2001**, *34*, 7929-7931.
- 10.* “Synthesis of Polyethylene Copolymers Containing Polyhedral Oligomeric Silsesquioxanes (POSS) Prepared Using Ring-Opening Methathesis Copolymerization” Lei Zheng, Richard J. Farris and E. Bryan Coughlin, *J. Polym. Sci., Part A: Polymer Chemistry* **2001**, *39*, 2920-2928.

Publications from DuPont Central Research and Development

9. “¹³C and 2D NMR Analysis of Propylene Polymers Made with α -Diimine Late Metal Catalysts” E F. McCord, Stephan J. McLain, L. T. Janet Nelson, Samuel D. Arthur, E. Bryan Coughlin, Steven D. Ittel, Lynda K. Johnson, Daniel Tempel, Chris M. Killian and Maurice Brookhart, *Macromolecules* **2001**, *34*, 362-371.
8. “Addition Polymerization of Cyclopentene with Nickel and Palladium Catalysts” Stephan J. McLain, Jerald Feldman, Elizabeth F. McCord, Kennecorwin H. Gardner, Mark F. Teasley, E. Bryan Coughlin, K. Jeff Sweetman, Lynda K. Johnson and Maurice Brookhart, *Macromolecules* **1998**, *31*, 6705-6707.

E. Bryan Coughlin

Curriculum Vitae

Publications from Graduate-Undergraduate Studies

7. "Synthesis and Structural Characterization of $\{(\eta^5\text{-C}_5\text{Me}_4)_5\text{SiMe}_2\}\text{YCH}(\text{SiMe}_3)_2$. Hydrogenation to $[\{(\eta^5\text{-C}_5\text{Me}_4)_2\text{SiMe}_2\}\text{Y}]_2(\mu\text{-H})_2$ and its Facile Ligand Redistribution to $\text{Y}_2[\mu_2\text{-}[(\eta^5\text{-C}_5\text{Me}_4)_2\text{SiMe}_2(\eta^5\text{-C}_5\text{Me}_4)]_2(\mu_2\text{-H})_2]$ " E. Bryan Coughlin, Lawrence M. Henling and John E. Bercaw, *Inorg. Chim. Acta* **1996**, 242, 205-210.
6. " C_2 -Symmetric Ansa Metallocenes of Titanium and Zirconium with a Ligand System that Yields Pure Rac Isomer: Preparation and Crystal Structures of $\text{rac-}\{(\eta^5\text{-C}_5\text{H}_2\text{-2-SiMe}_3\text{-4 CMe}_3)_2\text{SiMe}_2\}\text{MCl}_2$ (M = Ti or Zr)" Stephanie T. Chacon, E. Bryan Coughlin, Lawrence M. Henling and John E. Bercaw, *J. Organomet. Chem.* **1995**, 497, 171-180.
5. "Iso Specific Ziegler Natta Polymerization of α -Olefins with a Single Component Organoyttrium Compound" E. Bryan Coughlin and John E. Bercaw, *J. Am. Chem. Soc.* **1992**, 114, 7606-7607.
4. "A Silicon bridged Bis(substituted Cp) Yttrium Complex" Richard E. Marsh, William P. Schaefer, E. Bryan Coughlin and John E. Bercaw, *Acta Cryst.* **1992**, C48, 1773-1776.
3. "Stereochemistry at Carbon for Alkyl Migration to Oxygen in the Rearrangement of a Tert Butylperoxy-Alkyl Derivative of Permethylhafnocene" E. Bryan Coughlin and John E. Bercaw, *Organometallics* **1992**, 11, 465-467.
2. "HCl-Catalyzed Photoreduction of 4-Bromonitrobenzene as a Concomitant of Nucleophilic Aromatic Photosubstitutions Involving Radical Intermediates" Gene G. Wubbels, Eric J. Snyder and E. Bryan Coughlin, *J. Am. Chem. Soc.* **1988**, 110, 2543-2548.
1. "Acid-Catalyzed Nucleophilic Aromatic Photosubstitution. A Reconsideration of Protonation in Excited States of Nitrobenzenes" Gene G. Wubbels, Douglas P. Susens and E. Bryan Coughlin, *J. Am. Chem. Soc.* **1988**, 110, 2538-2542.

Book Chapters

"Amphiphilic Polymers with Potent Antibacterial Activity." M. Firat Ilker, Gregory N. Tew, E. Bryan Coughlin, *Polymers and Materials for Anti-Terrorism and Homeland Defense*. American Chemical Society, Washington, DC, 2005, 14.

"Metathesis and Polyolefin Growth on Cadmium Selenide Surfaces Using Ruthenium-Based Catalysts" M. Firat Ilker, Habib Skaff, Todd S. Emrick, E. Bryan Coughlin, *Novel Metathesis Chemistry: Well-Defined Initiator Systems for Specialty Chemical Synthesis, Tailored Polymers and Advanced Material Applications* Y. Imamoglu, L. Bencze Eds. Kluwer Academic Publishers, Dordrecht 2003.

"Olefin Polymerization with Single Component Organoscandium and Organoyttrium Catalysts." Barbara J. Burger, W. Donald Cotter, E. Bryan Coughlin, Stephanie T. Chacon, Sharad Hajela, Timothy A. Herzog, Randolph, O. Köhn, Jonathan P. Mitchell, Warren E. Piers, Pamela J. Shapiro, and John E. Bercaw, *Ziegler Catalysis* Fink, Mulhaupt, Brintzinger Eds. Springer-Verlag, Berlin 1995.

United States Patents

Patent #	Date Published	Title
US7173096B2	February 6, 2007	Crosslinked polycyclooctene
US6992153B1	January 31, 2006	Multi-stage process for the (co)polymerization of olefins
US2004122184	June 24, 2004	Crosslinked polycyclooctene
US20030171508A1	September 11, 2003	Alpha-olefins and olefin polymers and processes therefore
US20030058584A1	May 16, 2002	Polymerization of olefins

E. Bryan Coughlin

Curriculum Vitae

US20010031845A1	October 18, 2001	Polymerization of olefins
6,613,915	September 2, 2003	Polymerization of olefins
6,506,920	January 14, 2003	Polymerization of olefins
6,310,163	October 30, 2001	Alpha-olefins and olefin polymers and processes therefore
6,265,507	July 24, 2001	Copolymerization of fluorinated olefins
6,255,414	July 3, 2001	Polymerization of olefins
6,174,975	January 16, 2001	Polymerization of olefins
6,114,483	September 5, 2000	Polymerization of olefins
6,103,920	August 15, 2000	Olefin polymerization process
6,034,259	March 7, 2000	Alpha-olefins and olefin polymers and processes therefore
5,886,224	March 23, 1999	Alpha-diimines for polymerization catalysts
5,866,663	February 2, 1999	Processes of polymerizing olefins
5,714,556	February 3, 1998	Olefin polymerization process

International Patents

Patent #	Date Published	Title
WO0053646A1	September 14, 2004	Multi-stage process for the (co)polymerization of olefins
EP0952997B1	August 11, 2004	Polymerization of olefins
WO2004033553	April 22, 2004	Crosslinked polycyclooctene
EP1400540A8	July 7, 2004	Process for the polymerization of olefins
EP1400540	March 24, 2004	Process for the polymerization of olefins
EP1400540A2	March 24, 2004	Process for the polymerization of olefins
EP1003794B1	November 11, 2003	Copolymerization of fluorinated olefins
EP1068245B1	October 29, 2003	Polymerization of olefins
EP1161465B1	October 22, 2003	Multi-stage process for the (co)polymerization of olefins
EP1348723	October 1, 2003	Alpha-olefins and olefin polymers and processes for their preparation
EP1348723A2	October 1, 2003	Alpha-olefins and olefin polymers and processes for their preparation
EP0805826B1	April 23, 2003	Olefin polymerization
CN1350552t	May 22, 2002	Multi-stage process for the (co) polymerization of olefins
EP1161465	December 12, 2001	Multi-stage process for the (co) polymerization of olefins
EP1161465A1	December 12, 2001	Multi-stage process for the (co) polymerization of olefins
CN1325410t	December 5, 2001	Polymerization of olefins
EP1112292A1	July 4, 2001	Polymerization of olefins
CN1296499t	May 23, 2001	Polymerization of olefins
EP1068245A1	January 17, 2001	Polymerization of olefins
CN1268144t	September 28, 2000	Polymerization of olefins
CN1267309T	September 20, 2000	Copolymerization of fluorinated olefins
EP1012194A1	June 28, 2000	Polymerization of olefins
EP1003794A1	May 31, 2000	Copolymerization of fluorinated olefins
WO0012568A1	February 9, 2000	Polymerization of olefins
EP0952997A1	November 3, 1999	Polymerization of olefins
WO9950318A1	October 7, 1999	Polymerization of olefins
WO991031A1	March 4, 1999	Polymerization of olefins
WO9909078A1	February 2, 1999	Copolymerization of fluorinated olefins
WO9830609A1	July 16, 1998	Polymerization of olefins
EP0835269A1	April 15, 1998	Olefin polymerization process
EP0805826A2	November 11, 1997	Alpha-olefins and olefin polymers and processes therefore
WO9702298A1	January 23, 1997	Olefin polymerization process
WO9623010A3	August 1, 1996	Alpha-Olefins and olefin polymers and processes therefore
WO9623010A2	August 1, 1996	Alpha-Olefins and olefin polymers and processes therefore

Published Meeting Abstracts

The Polymer Chemistry and Polymer Materials: Science and Engineering Divisions of the American Chemical Society publish two page extended abstracts for all invited, or contributed oral and poster presentations at the Spring and Fall National Meetings of the Society. These 'pre-prints' are **not** peer-reviewed prior to publication, however they are intended to serve as a pre-publication notice of work that typically will appear in the literature in

E. Bryan Coughlin
Curriculum Vitae

the next six to twelve months. The authors, title, and keywords of these pre-prints are listed in most major scientific database archives, however **no** citation record is kept by ISI for meeting abstracts

From the University of Massachusetts Amherst

40. "Synthesis and Study of Hybrid Organic-Inorganic POSS-PS-POSS Triblock Copolymers" Gunjan A. Gadodia, Ling Yang, Grégoire Cardoen, Thomas P. Russell and E. Bryan Coughlin *Amer. Chem. Soc., Division of Polymeric Materials: Science and Engineering, PMSE Preprints* **2007**, 96, 41-42.
39. "Preparation of High-Boron Content Diblock Copolymers for BNCT Applications" Yoan C. Simon, Tarik Eren and E. Bryan Coughlin *Amer. Chem. Soc., Division of Polymeric Materials: Science and Engineering, PMSE Preprints* **2007**, 96, 331-332.
38. "Poly(Arylate-CO-Phosphonate): Synthesis and Characterization" Thangamani Ranganathan, Joseph Zilberman, Richard J. Farris, E. Bryan Coughlin and Todd S. Emrick *Amer. Chem. Soc., Division of Polymer Preprints* **2007**, 48(1),617-618.
37. "Metathesis Polymerization of Natural Glycolipids" Sabine R. Wallner, Wei Gao, Rena Hagver, Vishal Shah, Wenchun Xie, Harald Mang, M. Firat Ilker, Christen M. Bell, Kelly A. Burke, E. Bryan Coughlin and Richard A. Gross *Amer. Chem. Soc., Division of Polymer Preprints* **2006**, 47(2), 258.
36. "Controlled Morphology of Nanoporous Polymer Templates" Thomas P. Russell, Ling Yang, Matthew J. Misner, Mingfu Zhang, Serkan Yurt, Dhandapani Venkataraman, E. Bryan Coughlin, Joona Bang and Craig Hawker *Amer. Chem. Soc., Division of Polymeric Materials: Science and Engineering, PMSE Preprints* **2006**, 51, 838.
35. "Norbornene Polymerizations Using Neutral Nickel Salicylaldiminato Catalysts with Borane Activators" E. Bryan Coughlin and Pushkala Krishnamurthy *Amer. Chem. Soc., Division of Polymeric Materials: Science and Engineering, PMSE Preprints* **2005**, 93, 526-527.
34. "Block Copolymer-Derived Nano-Templated Surfaces for Investigation of Nanophysics of Wetting" E. Bryan Coughlin, Narupol Intasanta and Thomas P. Russell *Amer. Chem. Soc., Division of Polymeric Materials: Science and Engineering, PMSE Preprints* **2005**, 93, 725-726.
33. "POSS Containing Multiblock Copolymers as Model of Well-Defined Organic-Inorganic Hybrid Materials" Grégoire Cardoen, Xiaochuan Hu, D. Baskaran, Jimmy W. Mays, Samuel P. Gido, Thomas P. Russell and E. Bryan Coughlin, *Amer. Chem. Soc., Division of Polymer Preprints* **2005**, 46(2), 783-784..
32. "Novel Hybrid Polymeric Materials Incorporating Carboranes" Yoan C. Simon and E. Bryan Coughlin, *Amer. Chem. Soc., Division of Polymer Chemistry, Polymer Preprints* **2005**, 46(2), 771-772.
31. "Ethylene-Propylene-POSS Elastomers" Bradley Seurer and E. Bryan Coughlin, *Amer. Chem. Soc., Division of Polymer Chemistry, Polymer Preprints* **2005**, 46(2), 738-739..
30. "Emulsion Polymerization of Functionalized Norbornenes and Oxanorbornenes" Jeanette F. Craymer and E. Bryan Coughlin, *Amer. Chem. Soc., Division of Polymer Preprints* **2005**, 46(2), 884-885.
29. "Supported Piano-Stool Catalysts for Styrene and Ethylene-Styrene Polymerizations" Jeanette F. Craymer and E. Bryan Coughlin, *Amer. Chem. Soc., Division of Polymer Preprints* **2005**, 46(1), 779-780.
28. "Norbornene Polymerizations using Neutral Nickel Salicylaldiminato Catalysts with Borane Activators" Pushkala Krishnamurthy and E. Bryan Coughlin, *American Chemical Society, Division of Polymeric Materials: Science and Engineering, PMSE Preprints* **2004**, 91, 966-967.

E. Bryan Coughlin
Curriculum Vitae

27. "Small Angle Light Scattering Analysis of Isotactic Polypropylene Blends During Crystallization" Aadil Elmoumni, Ramon Gonzalez-Ruiz, E. Bryan Coughlin and H. Henning Winter, *American Chemical Society, Division of Polymeric Materials: Science and Engineering, PMSE Preprints* **2004**, *91*, 167-168.
26. "Multi-Functional Protective Gear for Emergency First Responders: Combining Thermal with Chemical/Biological Protection" M. Firat Ilker and E. Bryan Coughlin, *American Chemical Society, Division of Polymer Chemistry, Polymer Preprints* **2004**, *45(1)*, 549-550.
25. "Ultrathin Films of Self-Assembled Organic-Inorganic Hybrid Nanoparticle Block Copolymers" Narupol Intasanta, Thomas P. Russell and E. Bryan Coughlin, *American Chemical Society, Division of Polymeric Materials: Science and Engineering, PMSE Preprints* **2004**, *90*, 260-261.
24. "Synthesis of Thermal and Photo Reversible Crosslinked Polycyclooctene as a Shape Memory Thermoplastic" Gregory S. Constable, Alan J. Lesser and E. Bryan Coughlin, *American Chemical Society, Division of Polymer Chemistry, Polymer Preprints* **2003**, *44(2)*, 800-801.
23. "Synthesis and Romp of Modular Norbornene Derivatives for the Preparation of Polymers with Cationic Amphiphilic Repeating Units" M. Firat Ilker, Hanna Schule and E. Bryan Coughlin, *American Chemical Society, Division of Polymer Chemistry, Polymer Preprints* **2003**, *44(2)*, 659-660.
22. "Self-Assembly of Organic-Inorganic Hybrid Copolymers" Grégoire Cardoen, Engin Burgaz, Samuel P. Gido and E. Bryan Coughlin, *American Chemical Society, Division of Polymer Chemistry, Polymer Preprints* **2003**, *44(2)*, 252-253.
21. "Linear or Branched Polyethylenes from Supported Aryloxy Titanium (IV) Cyclopentadienyl Complexes" Rajeswari M. Kasi and E. Bryan Coughlin, *American Chemical Society, Division of Polymer Chemistry, Polymer Preprints* **2003**, *44(2)*, 24-25.
20. "Synthesis of Low Heat Release, High Char Thermoplastic Polymers" Patrick M. O'Donnell, Eui-Sang Yoo, Richard J. Farris and E. Bryan Coughlin, *American Chemical Society, Division of Polymeric Materials: Science and Engineering, PMSE Preprints* **2003**, *89*, 802-803.
19. "Ethylene Polymerization in Aqueous Media" Pushkala Krishnamurthy and E. Bryan Coughlin, *American Chemical Society, Division of Polymeric Materials: Science and Engineering, PMSE Preprints* **2003**, *89*, 660-661.
18. "Hybrid Organic/Inorganic Thermoset Copolymers of Dicyclopentadiene and Mono or Tri Norbornenyl Substituted Polyhedral Oligomeric Silsesquioxanes" Gregory S. Constable, E. Bryan Coughlin and Alan J. Lesser, *American Chemical Society, Division of Polymeric Materials: Science and Engineering, PMSE Preprints* **2003**, *89*, 641-642.
17. "Controlled Production of Isotactic Polypropylene with Unsaturated End Groups Using Parallel Reaction Techniques" Francesca Focante, Ramon A. Gonzalez-Ruiz and E. Bryan Coughlin, *American Chemical Society, Division of Polymeric Materials: Science and Engineering, PMSE Preprints* **2003**, *89*, 553-554.
16. "Dry-jet Wet Spinning of Fire Safe Polymers" Eui-sang Yoo, Arthur J. Gavrin, E. Bryan Coughlin and Richard J. Farris, *American Chemical Society, Division of Polymeric Materials: Science and Engineering, PMSE Preprints* **2003**, *88*, 330-331.
15. "Acyclic Diene Metathesis (ADMET) Polymerization of Unsaturated Thermotropic Polyesters From Liquid Crystalline Dienes" Haihu Qin, Brian J. Chakulski, Patrick T. Mather, Gregory S. Constable and E. Bryan Coughlin, *American Chemical Society, Division of Polymer Chemistry, Polymer Preprints* **2003**, *44(1)*, 40-41.

E. Bryan Coughlin
Curriculum Vitae

14. "Synthesis and Romp of Norbornene Derivatives for the Preparation of Well-Defined Amphiphilic Polymers" M. Firat Ilker and E. Bryan Coughlin, *American Chemical Society, Division of Polymer Chemistry, Polymer Preprints* **2002**, 43(2), 789-790.
13. "Tuning Self-Assembly in Hybrid Inorganic-Organic Polyhedral Oligomeric Silsesquioxane (POSS) Polyolefin Copolymers" E. Bryan Coughlin, *American Chemical Society, Division of Polymer Chemistry, Polymer Preprints* **2002**, 43(2), 368-369.
12. "Ultrasonic Spectroscopic Evaluation of the Ring-Opening Metathesis Polymerization of Dicyclopentadiene" Gregory S. Constable, E. Bryan Coughlin and Alan J. Lesser, *American Chemical Society, Division of Polymeric Materials: Science and Engineering, PMSE Preprints* **2002**, 87, 155-156.
11. "Half Sandwich Versus Metallocene Complex Formation in the Reaction of Monosilyl and Mixed Silyl Substituted Cyclopentadienyl Congeners with Titanium and Zirconium Tetrachlorides" Rajeswari M. Kasi and E. Bryan Coughlin, *American Chemical Society, Division of Polymeric Materials: Science and Engineering, PMSE Preprints* **2002**, 87, 129-130.
10. "Cdse-Polymer Composites Prepared by Surface Initiated Ring-Opening Metathesis Polymerization" Habib Skaff, M. Firat Ilker, E. Bryan Coughlin and Todd S. Emrick, *American Chemical Society, Division of Polymer Chemistry, Polymer Preprints* **2002**, 43(1), 738-739.
9. "Alternating Copolymerizations of Polar and Nonpolar Cyclic Olefins by Ring-Opening Metathesis Polymerization" M. Firat Ilker and E. Bryan Coughlin, *American Chemical Society, Division of Polymer Chemistry, Polymer Preprints* **2002**, 43(1), 736-737.
8. "Fire-Resistant, Uv/Visible Sensitive Polyarylates and Copolymers" Huiqing Zhang, E. Bryan Coughlin, Phillip R. Westmoreland, Richard J. Farris, Andrzej Plichta and Zbigniew K. Brzozowski, *American Chemical Society, Division of Polymer Chemistry, Polymer Preprints* **2002**, 43(1), 340-341.
7. "Novel Thermal Plastic Elastomer: Polybutadiene Graft Polyhedral Oligomeric Silsesquioxane (Poss) Copolymers" Lei Zheng, Richard J. Farris and E. Bryan Coughlin, *American Chemical Society, Division of Polymer Chemistry, Polymer Preprints* **2001**, 42(2), 885-886.
6. "Acyclic Diene Metathesis (Admet) Depolymerization of Elastomers Using Ruthenium Catalysts" Stuart W. Craig and E. Bryan Coughlin, *American Chemical Society, Division of Polymer Chemistry, Polymer Preprints* **2001**, 42(2), 589-590.
5. "Synthesis and Characterization of Fire-Safe Polymers" A. J. Gavrín, E.-S. Yoo, Richard J. Farris and E. Bryan Coughlin, *American Chemical Society, Division of Polymer Chemistry, Polymer Preprints* **2001**, 42(2), 374-375.
4. "Copolymers of Polyethylene, Polypropylene, and Polystyrene Containing Polyhedral Oligomeric Silsesquioxane (POSS)" L. Zheng, R. M. Kasi, Richard J. Farris and E. Bryan Coughlin, *American Chemical Society, Division of Polymeric Materials: Science and Engineering, PMSE Preprints* **2001**, 84, 114-115.
3. "Synthesis and Properties of Polyolefin Hybrid Copolymers Containing Polyhedral Silsesquioxane (POSS)" L. Zheng, Richard J. Farris and E. Bryan Coughlin, *American Chemical Society, Division of Polymer Chemistry, Polymer Preprints* **2000**, 41(2), 1929-1930.

From DuPont Central Research and Development Department

2. "Poly(cyclopentene): A New Processible High-Melting Polyolefin Made from Nickel and Palladium Catalysts" E. Bryan Coughlin, *American Chemical Society, Division of Polymeric Materials: Science and Engineering, PMSE Preprints* **1997**, 76, 20-21.

E. Bryan Coughlin
Curriculum Vitae

From the California Institute of Technology

1. “Synthetic and Mechanistic Approaches to Iso Specific Ziegler Natta Polymerization of α Olefins with Organoscandium and Organoyttrium Compounds” E. Bryan Coughlin, Pamela J. Shapiro and John E. Bercaw, *American Chemical Society, Division of Polymer Chemistry, Polymer Preprints* **1992**, **33**, 1226-1227.

Invited Lectures

Academic Year 2005/2006 Scheduled Lectures

Academic Year 2004/2005 Scheduled Lectures

- September 2004 “Hybrid Inorganic-Organic Copolymers: Macromolecular, Mesoscopic and Macroscopic Structures” University of Akron
- September 2004 “Hybrid Inorganic-Organic Copolymers: Macromolecular, Mesoscopic and Macroscopic Structures” Case Western Reserve University
- February 2005 “Advances in Materials for Proton Exchange Membrane Fuel Cell Systems” Pacific Grove CA
- March 2005 “Ring-Opening Metathesis Polymerization as a Route to Antibacterial Polymers” University of Connecticut
- May 2005 “Recent Advances in Single-Site Olefin Polymerization” Texas A&M University
- May 2005 “Inorganic and Organometallic Polymers” Mid-Atlantic Regional Meeting Rutgers University

Academic Year 2003/2004

- September 2003 “Polymer-Inorganic Composites: Directing the Self-Assembly of Hybrid Copolymers” American Chemical Society 226th National Meeting New York, NY
- October 2003 “Self-Assembly in Polymer-Inorganic Hybrid Materials” University of New Hampshire
- October 2003 “Polyolefin Nanocomposites: Synthesis Processing and Properties” Advances in Polyolefins 2003 Workshop, Sonoma CA
- December 2003 “Polyolefin Nanocomposites: Synthesis Processing and Properties” Recent Advances in Organometallic Catalysis and Olefin Polymerization Joint Indo-US International Conference, Indian Institute of Technology, Chennai India
- December 2003 “Nano Organic-Inorganic Hybrid Materials For Advanced Applications” Indian Institute of Technology Department of Chemical Engineering, Mumbai India
- December 2003 “Organic-Inorganic Hybrid Thermosets and Thermoplastics” Indian Institute of Technology Department of Metallurgy and Material Science, Mumbai India
- March 2004 “Hybrid Inorganic-Organic Copolymers Based on Cubic Silsesquioxane” Virginia Polytechnic Institute, Blacksburg VA March 2004
- March 2004 “Ultrathin Films of Self-Assembled Organic-Inorganic Hybrid Nanoparticle Block Copolymers”, American Chemical Society, 227th National Meeting, Anaheim CA

E. Bryan Coughlin
Curriculum Vitae

- April 2004 “Hybrid Inorganic-Organic Copolymers Based on Cubic Silsesquioxane” Massachusetts Institute of Technology, Cambridge MA
- April 2004 “Hybrid Inorganic-Organic Copolymers Based on Cubic Silsesquioxane” Georgia Institute of Technology, Atlanta GA
- April 2004 “Hybrid Inorganic-Organic Copolymers Based on Cubic Silsesquioxane” National Institute of Standards and Technology, Gaithersburg MD
- May 2004 “Inorganic-Organic Hybrid Copolymers” DuPont Central Research and Development, Wilmington DE
- July 2004 “Fire-Safe Polymers and Polymer Composites for use in Civil Transport, and other Areas of Limited Egress” Green Chemistry Gordon Conference Bristol RI

Academic Year 2002/2003

- September 2002 “POSS™-Polyolefin Nanocomposites” POSS™ Nanotechnology Conference. Huntington Beach CA
- October 2002 “Novel Polyolefin Cubic Silsesquioxane Nanocomposites” NASA Glenn Research Center. Cleveland OH
- October 2002 “Novel Polyolefin Cubic Silsesquioxane Nanocomposites” University of Massachusetts Lowell, Department of Chemistry, Lowell MA
- October 2002 “POSS™-Polyolefin Nanocomposites” General Motors Research and Development Center,. Detroit MI
- October 2002 “Ordered Self-Assembly in Hybrid Inorganic-Organic Copolymers” National Science Foundation Materials Chemistry Workshop Oct. 17-20. Christiana DE
- December 2002 “Tuning Self-Assembly in Hybrid Inorganic-Organic Polyhedral Oligomeric Silsesquioxane (POSS) Polyolefin Copolymers” Engelhard Corporation Iselin NJ
- December 2002 “Tuning Self-Assembly in Hybrid Inorganic-Organic Polyhedral Oligomeric Silsesquioxane (POSS) Polyolefin Copolymers” Dow Corning Corporation Midland MI
- February 2003 “Organo-Transition Metal Catalysts: Routes to Novel Polymers” 26th Asilomar Conference on Polymeric Materials Pacific Grove CA
- February 2003 “POSS Based Copolymers” Edwards Air Force Base, Lancaster CA
- March 2003 “Telechelic and Hemi-Telechelic POSS-Polymer Aggregates” American Chemical Society 225th National Meeting New Orleans LA
- March 2003 “Ordered Self-Assembly in Hybrid Inorganic-Organic Copolymers” United States Army Research Laboratory Aberdeen MD

Academic Year 2001/2002

- September 2001 “Modification of Unsaturated Polymers” University of Connecticut Institute of Material Science

E. Bryan Coughlin
Curriculum Vitae

- September 2001 “Metallocenes and Beyond: Opportunities with Single Site Catalysis” Honeywell Technologies
Morristown NJ
- February 2002 “Novel Polyolefin Nanocomposites” ExxonMobil Annandale NJ
- March 2002 “Organometallic Polymerization Catalysis; Routes to Novel Polyolefin Hybrids” Dartmouth
College
- March 2002 “Organometallic Polymerization Catalysis; Routes to Novel Polyolefin Hybrids” Rensselaer
Polytechnic Institute Troy NY
- June 2002 “Novel Polyolefin Cubic Silsesquioxane Copolymers Nanocomposites” ExxonMobil Baytown TX
- August 2002 “Novel Polyolefin Cubic Silsesquioxane Copolymers Nanocomposites” NASA Langley Research
Center Hampton VA
- August 2002 “Tuning Self-Assembly in Hybrid Inorganic-Organic Polyhedral Oligomeric Silsesquioxane
(POSS) Polyolefin Copolymers” American Chemical Society 224th National Meeting Boston MA

Academic Year 2000/2001

- September 2000 “POSS Polyolefin Copolymers” Nanostructured Chemicals Workshop Huntington Beach CA
- September 2000 “Olefin Polymerization Using Organometallic Catalysts” Bowdoin College
- March 2001 “Polyolefin POSS Nanocomposites” 3M Research Center, Saint Paul MN
- March 2001 “Olefin Polymerization Using Organometallic Catalysts” Amherst College
- March 2001 “Copolymers of Polyethylene, Polypropylene, and Polystyrene Containing Polyhedral Oligomeric
Silsesquioxanes (POSS)” American Chemical Society 221th National Meeting, San Diego CA
- June 2001 “Organo-Transition Metal Catalysts for Polymer Synthesis” Chinese Academy of Science
Beijing, China
- June 2001 “Organo-Transition Metal Catalysts for Polymer Synthesis” Jiaotong University Shanghai, China
- August 2001 “Copolymers of Polyethylene, Polypropylene and Polystyrene Containing Polyhedral Oligomeric
Silsesquioxane (POSS)” American Chemical Society, 22nd National Meeting Chicago IL

Academic Year 1999-2000

- February 2000 “Synthetic Polymer Chemistry” Symyx Technologies San Jose, CA
- February 2000 “Transition Metal Catalyzed Polymerization of Olefins” Mount Holyoke College
- April 2000 “Synthetic Polymer Chemistry” Albemarle, Inc., Baton Rouge LA.