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EDUCATION

Ph.D., Chemistry 2003
California Institute of Technology, Pasadena, CA

B.S., Chemistry 1997
University of Illinois, Urbana-Champaign, IL

EXPERIENCE

The University of Texas, Austin, TX 2009 –
Associate Professor of Chemistry

The University of Texas, Austin, TX 2004 – 2009
Assistant Professor of Chemistry

California Institute of Technology, Pasadena, CA 2003 – 2004
NIH Postdoctoral Fellow
Advisor: David A. Tirrell

California Institute of Technology, Pasadena, CA 1997 – 2002
NSF Predoctoral Fellow
Advisor: Robert H. Grubbs

University of Illinois, Urbana-Champaign, IL 1995 – 1997
Undergraduate Research Fellow
Advisor: Jeffrey S. Moore

MEMBERSHIPS & AFFILIATIONS

Israeli Chemical Society (honorary lifetime member)
American Chemical Society (member since 1996)
Texas Materials Institute, UT-Austin
Center for Nano and Molecular Science and Technology, UT-Austin
Center for Electrochemistry, UT-Austin

AWARDS

Presidential Early Career Award for Scientists and Engineers	2009
<i>J. Phys. Org. Chem.</i> Award for Early Excellence in Physical Organic Chemistry	2009
IUPAC Young Observer Fellowship	2009
Camille Dreyfus Teacher-Scholar Award	2008
College of Natural Sciences Teaching Excellence Award	2008
Office of Naval Research Young Investigator Award	2008
Alfred P. Sloan Research Fellowship	2008
3M Nontenured Faculty Award	2008
DuPont Young Professor Award	2007
Research Corporation Cottrell Scholar Award	2007
Beckman Young Investigator Award	2007
National Science Foundation CAREER Award	2007
National Institutes of Health NRSA Postdoctoral Fellowship	2003
Unilever Award for Outstanding Graduate Research	2003
ICI Student Award in Applied Polymer Science, Finalist	2003
Dow Innovation Recognition Award	2001
ACS Division of Organic Chemistry Graduate Fellowship	2000
Dow Travel Fellowship	1999
National Science Foundation Predoctoral Fellowship	1997
Marvel Research Award for Best Senior Thesis	1997
Proctor and Gamble Research Award	1997
Dow Research Award	1997
American Institute of Chemists Award	1997
Snyder Summer Undergraduate Research Fellowship	1997
Pfizer, Inc. Summer Undergraduate Research Fellowship	1996
Insta-foam Products, Inc. Scholarship	1995

PUBLICATIONSPrimary Literature Contributions

74. Lee, S. H.; Dreyer, D. R.; An, J. H.; Velamakanni, A.; Piner, R. D.; Park, S.; Zhu, Y.; Kim, S. O.; Bielawski, C. W.; Ruoff, R. S. "Polymer Brushes via Controlled Surface-Initiated Atom Transfer Radical Polymerization (ATRP) from Graphene Oxide" *Macromol. Rapid Commun.* **2009**, in press (DOI: 10.1002/marc.200900641).
73. Tennyson, A. G.; Ono, R. J.; Hudnall, T. W.; Khramov, D. M.; Er, J. A. V.; Kamplain, J. W.; Lynch, V. M.; Bielawski, C. W. "Quinobis(imidazolylidene): Synthesis and Study of an Electron-Configurable Bis(N-Heterocyclic Carbene) and its Bimetallic Complexes" *Chem. Eur. J.* **2009**, in press (DOI: 10.1002/chem.200901883).
72. Powell, A. B.; Bielawski, C. W.; Cowley, A. H. "Electropolymerization of a N-Heterocyclic Carbene – Gold (I) Complex" *J. Am. Chem. Soc.* **2009**, in press (DOI: 10.1021/ja908969q).

71. Rosen, E. L.; Varnado, C. D. Jr.; Tennyson, A. G.; Khramov, D. M.; Kamplain, J. W.; Sung, D. H.; Cresswell, P. T.; Lynch, V. M.; Bielawski, C. W. "Redox Active N-Heterocyclic Carbenes: Design, Synthesis, and Evaluation of Their Electronic Properties" *Organometallics* **2009**, in press (DOI: 10.1021/om900698x).
70. Rosen, E. L.; Sung, D. H.; Chen, Z.; Lynch, V. M.; Bielawski, C. W. "Olefin Metathesis Catalysts Containing Acyclic Diaminocarbenes" *Organometallics* **2009**, in press (DOI: 10.1021/om9008718).
69. Hudnall, T. W.; Bielawski, C. W. "An *N,N'*-Diamidocarbene: Studies in C–H Insertion, Reversible Carbonylation, and Transition Metal Coordination Chemistry" *J. Am. Chem. Soc.* **2009**, *131*, 16039 – 16041.
68. Tennyson, A. G.; Khramov, D. M.; Varnado, C. D.; Creswell, P. T.; Kamplain, J. W.; Lynch, V. M.; Bielawski, C. W. "Indirectly Connected Bis(N-Heterocyclic Carbene) Bimetallic Complexes: Dependence of Metal-Metal Communication on Linker Geometry" *Organometallics* **2009**, *28*, 5142 – 5147.
67. Varnado, C. D.; Lynch, V. M.; Bielawski, C. W. "1,1'-Bis(benzimidazolylidene)ferrocene: Synthesis and Study of a Novel Ditopic Ligand and its Transition Metal Complexes" *Dalton Trans.* **2009**, 7253 – 7261.
66. Li, W.; Norris, B. C.; Snodgrass, P.; Prasad, K.; Stockett, A. S.; Pryamitsyn, V.; Ganesan, V.; Bielawski, C. W.; Arumagam, M. "Evaluating the Role of Additive pK_a on the Proton Conductivities of Blended Sulfonated Poly(Ether Ether Ketone) Membranes" *J. Phys. Chem. B* **2009**, *113*, 10063 – 10067.
65. Tennyson, A. G.; Rosen, E. L.; Collins, M. S.; Lynch, V. M.; Bielawski, C. W. "Bimetallic N-Heterocyclic Carbene-Iridium Complexes: Investigating Metal-Metal and Metal-Ligand Communication *via* Electrochemistry and Phosphorescence Spectroscopy" *Inorg. Chem.* **2009**, *48*, 6924 – 6933.
64. Coady, D. J.; Khramov, D. M.; Norris, B. C.; Tennyson, A. G.; Bielawski, C. W.; "Adapting N-Heterocyclic Carbene/Azide Coupling Chemistry for Polymer Synthesis: Enabling Access to Aromatic Polytriazenes" *Angew. Chem. Int. Ed.* **2009**, *48*, 5187 – 5190.
63. Tennyson, A. G.; Kamplain, J. W.; Bielawski, C. W. "Oxidation of Poly(enetetramine)s: A New Strategy for the Synthesis of Conjugated Polyelectrolytes" *Chem. Commun.* **2009**, 2124 – 2126.
62. Er, J. A. V.; Tennyson, A. G.; Kamplain, J. W.; Lynch, V. M.; Bielawski, C. W. "Synthesis and Study of 5,5'-Bibenzimidazolylidenes and Their Bimetallic Complexes" *Eur. J. Inorg. Chem.* **2009**, 1729 – 1738. (*Special Issue on N-Heterocyclic Carbenes*)

61. Aydogan, A.; Coady, D. J.; Aksar, A.; Bielawski, C. W.; Marquez, M.; Sessler, J. L. "Poly(methyl methacrylate)s with Pendant Calixpyrroles and Crown Ethers: A New Class of Polymeric Extractants for Potassium Halides" *Angew. Chem. Int. Ed.* **2008**, *47*, 9648 – 9652.
60. Tang, T.; Coady, D. J.; Boydston, A. J.; Dykhno, O. L.; Bielawski, C. W. "Pro-Ionomers: An Anion Metathesis Approach to Amphiphilic Block Ionomers from Neutral Precursors" *Adv. Mater.* **2008**, *20*, 3096 – 3099.
59. Kelman, S. D.; Raharjo, R.; Bielawski, C. W.; Freeman, B. D. "The Influence of Crosslinking and Fumed Silica Nanoparticles on Mixed Gas Transport Properties of Poly(1-trimethylsilyl-1-propyne)" *Polymer* **2008**, *49*, 3029 – 3041.
58. Kelman, S. D.; Rowe, B. W.; Bielawski, C. W.; Pas, S. J.; Hill, A. J.; Paul, D. R.; Freeman, B. D. "Crosslinking Poly(1-trimethylsilyl-1-propyne) and its Effect on Physical Stability" *J. Membr. Sci.* **2008**, *320*, 123 – 134.
57. Cui, L.; Khramov, D. M.; Bielawski, C. W.; Hunter, D. L.; Yoon, P. J.; Paul, D. R. "Effect of Organoclay Purity and Degradation on Nanocomposite Performance: Part 1. Surfactant Degradation" *Polymer* **2008**, *49*, 3751 – 3761.
56. Khramov, D. M.; Rosen, E. L.; Er, J. A. V.; Vu, P. D.; Lynch, V. M.; Bielawski, C. W. "N-Heterocyclic Carbenes: Deducing σ - and π -Contributions in Rh-Mediated Hydroboration and Pd-Mediated Coupling Reactions" *Tetrahedron* **2008**, *64*, 6853 – 6862. (*Special issue honoring Prof. Hartwig for his receipt of the 2007 Tetrahedron Young Investigator Award*)
55. Coady, D. J.; Norris, B. C.; Lynch, V. M. "An Ionic Dithioester-Based RAFT Agent Derived From an N-Heterocyclic Carbene" *Macromolecules* **2008**, *41*, 3775 – 3778.
54. Boydston, A. J.; Vu, P. D.; Dykhno, O. L.; Chang, V.; Wyatt, A. R., II; Stockett, A. S.; Ritschdorff, E. T.; Shear, J. B.; Bielawski, C. W. "Modular Fluorescent Benzobis(imidazolium) Salts: Syntheses, Photophysical Analyses, and Applications" *J. Am. Chem. Soc.* **2008**, *130*, 3143 – 3156.
53. Khramov, D. M.; Rosen, E. L.; Lynch, V. M.; Bielawski, C. W. "Diaminocarbene [3]ferrocenophanes and Their Transition Metal Complexes" *Angew. Chem. Int. Ed.* **2008**, *47*, 2267 – 2270.
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51. Kamplain, J. W.; Lynch, V. M.; Bielawski, C. W. "Synthesis and Study of Differentially-Substituted Dibenzotetraazafulvalenes" *Org. Lett.* **2007**, *9*, 5401 – 5404.

50. Martínez-García, H.; Morales, D.; Pérez, J.; Coady, D. J.; Bielawski, C. W.; Gross, D. E.; Cuesta, L.; Marquez, M.; Sessler, J. L. "Calix[4]pyrrole as a Promoter of the CuCl-Catalyzed Reaction of Styrene and Chloramine-T" *Organometallics* **2007**, *26*, 6511 – 6514.
49. Boydston, A. J.; Pecinovsky, C. S.; Chao, S. T.; Bielawski, C. W. "Phase-Tunable Fluorophores Based Upon Benzobis(imidazolium) Salts" *J. Am. Chem. Soc.* **2007**, *129*, 14550 – 14551.
48. Rosen, E. L.; Sanderson, M. D.; Saravanakumar, S.; Bielawski, C. W. "Synthesis and Study of the First N-Arylated Acyclic Diaminocarbene and its Transition Metal Complexes" *Organometallics* **2007**, *26*, 5774 – 5777.
47. Khramov, D. M.; Lynch, V. M.; Bielawski, C. W. "N-Heterocyclic Carbene – Transition Metal Complexes: Spectroscopic and Crystallographic Analyses of π -Backbonding Interactions" *Organometallics* **2007**, *26*, 6042 – 6049.
46. Kelman, S. D.; Matteucci, S.; Bielawski, C. W.; Freeman, B. D. "Crosslinking Poly(1-trimethylsilyl-1-propyne) and its Effect on Solvent Resistance and Transport Properties" *Polymer* **2007**, *48*, 6881 – 6892.
45. Vu, P. D.; Boydston, A. J.; Bielawski, C. W. "Ionic Liquids via Efficient, Solvent-Free Anion Metathesis" *Green Chem.* **2007**, *9*, 1158 – 1159.
44. Khramov, D. M.; Bielawski, C. W. "Donor-Acceptor Triazenes: Synthesis, Characterization, and Study of Their Electronic and Thermal Properties" *J. Org. Chem.* **2007**, *72*, 9407 – 9417.
43. Williams, K. A.; Boydston, A. J.; Bielawski, C. W. "Toward Electrically-Conductive, Self-Healing Materials" *J. R. Soc. Interface.* **2007**, *4*, 359 – 362.
42. Sanderson, M. D.; Kamplain, J. A.; Bielawski, C. W. "Quinone-Annulated N-Heterocyclic Carbene – Transition Metal Complexes: Observation of π -Backbonding Using FT-IR Spectroscopy and Cyclic Voltammetry" *J. Am. Chem. Soc.* **2006**, *128*, 16514 – 16515.
41. Coady, D. J.; Bielawski, C. W. "N-Heterocyclic Carbenes: Versatile Reagents for Post-Polymerization Modification" *Macromolecules* **2006**, *39*, 8895 – 8897.
40. Boydston, A. J.; Rice, J. D.; Sanderson, M. D.; Dykhno, O. L.; Bielawski, C. W. "Synthesis and Study of Bidentate-Benzimidazolylidene-Group 10 Metal Complexes and Related Main-Chain Organometallic Polymers" *Organometallics* **2006**, *25*, 6087 – 6098.
39. Khramov, D. M.; Boydston, A. J.; Bielawski, C. W. "Synthesis and Study of Janus Bis(carbene)s and Their Transition Metal Complexes" *Angew. Chem. Int. Ed.* **2006**, *45*, 6186 – 6189.

38. Khramov, D. M.; Boydston, A. J.; Bielawski, C. W. "Highly Efficient Synthesis and Solid-State Characterization of 1,2,4,5-Tetrakis(alkyl- and arylamino)benzenes and Cyclization to Their Respective Benzobis(imidazolium) Salts" *Org. Lett.* **2006**, *8*, 1831 – 1834.
37. Kamplain, J. W.; Bielawski, C. W. "Dynamic Covalent Polymers Based Upon Carbene Dimerization" *Chem. Commun.* **2006**, 1727 – 1729.
36. Boydston, A. J.; Khramov, D. M.; Bielawski, C. W. "An Alternative Synthesis of Benzobis(imidazolium) Salts via a One-Pot Cyclization / Oxidation Reaction Sequence" *Tetrahedron Lett.* **2006**, *47*, 5123 – 5125.
35. Khramov, D. M.; Bielawski, C. W. "Triazene Formation via Reaction of Imidazol-2-ylidenes with Azides" *Chem. Commun.* **2005**, 4958 – 4960.
34. Boydston, A. J.; Williams, K. A.; Bielawski, C. W. "A Modular Approach to Main-Chain Organometallic Polymers" *J. Am. Chem. Soc.* **2005**, *127*, 12496 – 12497.

Reviews and Book Chapters

33. Dreyer, D. R.; Park, S.; Bielawski, C. W.; Ruoff, R. S. "The Chemistry of Graphene Oxide" *Chem. Soc. Rev.* **2010**, in press (DOI:10.1039/b917103g).
32. Bielawski, C. W.; Grubbs, R. H. "Living Ring-Opening Metathesis Polymerization" In: *Controlled/Living Polymerizations*, Matyjaszewski, K.; Müller, A., Eds.; Wiley-VCH: Weinheim, 2009, pp. 297 – 342.
31. Williams, K. A.; Dreyer, D. R.; Bielawski, C. W. "The Underlying Chemistry of Self-Healing Materials" *MRS Bull.* **2008**, *33*, 759 – 765.
30. Boydston, A. J.; Bielawski, C. W. "Synthetic Versatility and Structural Modularity in Organometallic Polymers" In: *Metal-Containing Polymers*, Adb-El-Aziz, A.; Pittman, C., Eds.; Springer: New York, 2008, pp. 1 – 20.
29. Bielawski, C. W.; Willson, C. G. "Polymers for Microelectronics" In: *Macromolecular Engineering*, Vol. 4, Matyjaszewski, K.; Gnanou, Y.; Leibler, L., Eds.; Wiley-VCH: Weinheim, 2007, pp. 2263 – 2293.
28. Williams, K. A.; Boydston, A. J.; Bielawski, C. W. "Main-Chain Organometallic Polymers: Synthetic Strategies, Applications, and Perspectives" *Chem. Soc. Rev.* **2007**, 729 – 744.
27. Bielawski, C. W.; Grubbs, R. H. "Living Ring-Opening Metathesis Polymerization" *Prog. Poly. Sci.* **2007**, *32*, 1 – 29.
26. Boydston, A. J.; Bielawski, C. W. "Frontier: Bis(imidazolylidene)s as Modular Building Blocks for Monomeric and Macromolecular Organometallic Materials" *Dalton Trans.* **2006**, 4073 – 4077.

25. Bielawski, C. W.; Willson, C. G. "Polymers for Microelectronics" In: McGraw-Hill Yearbook of Science and Technology 2006, Blumel, D.; Rappaport, A., Eds.; The McGraw-Hill Companies, Inc.: New York, 2006, pp. 248 – 250.

Preprints

24. Williams, K.; Boydston, A. J.; Bielawski, C. W. "Toward Electrically-Conductive Materials with Self-Healing Capabilities" *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2008**, *49(1)*, 981 – 982.
23. Tang, T.; Coady, D. J.; Boydston, A. J.; Dykhno, O. L., Bielawski, C. W. "An Anion Metathesis Approach to Amphiphilic, Photoluminescent Block Ionomers" *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2008**, *49(1)*, 299 – 300.
22. Khramov, D. M.; Coady, D. J.; Bielawski, C. W. "Applications of the N-Heterocyclic Carbene – Azide Coupling Reaction in Synthetic Polymer Chemistry" *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2008**, *49(1)*, 139 – 140.
21. Bielawski, C. W.; Boydston, A. J. "Design, Synthesis, and Application of Benzobis(imidazolium) Salts as a New Class of Photoluminescent Ionic Liquid Crystals" *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2007**, *48(2)*, 772 – 773.
20. Bielawski, C. W.; Williams, K. A.; Boydston, A. J. "Synthesis and Applications of Structurally-Dynamic Metallopolymers Based upon N-Heterocyclic Carbenes" *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2007**, *48(2)*, 545 – 546.
19. Bielawski, C. W. "Annulated Ditopic N-Heterocyclic Carbenes as Modular Components in Main-Chain Organometallic Polymers" *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2007**, *48(1)*, 276 – 277.
18. Kelman, S. D.; Freeman, B. D.; Bielawski, C. W.; Hill, A. J. "Enhancing the Chemical Resistance of High Fractional Free Volume Vapor-Selective Polymers" *PMSE Preprints* **2006**, *95*, 810 – 811.
17. Boydston, A. J.; Bielawski, C. W. "Modular Main-Chain Organometallic Polymers Based on N-Heterocyclic Carbene Metal Centers" *Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.)* **2006**, *47(1)*, 177 – 178.

Book Reviews

16. Bielawski, C. W. "Organometallics. Third, Completely Revised and Extended Edition By Christoph Elschenbroich (Philipps-Universität Marburg). Wiley-VCH Verlag GmbH & Co. KGaA: Weinheim. 2006. xvi + 804 pp. \$95.00. ISBN 3-527-29390-6." *J. Am. Chem. Soc.* **2006**, *128*, 12029 – 12030.

Publications During Graduate and Undergraduate Studies

15. Bielawski, C. W.; Hillmyer, M. A. "Telechelic Polymers from Olefin Metathesis Methodologies" In *Handbook of Metathesis*; Grubbs, R. H., Ed.; Wiley-VCH: New York, 2003.
14. Bielawski, C. W.; Benitez, D.; Grubbs, R. H. "Synthesis of Cyclic Polybutadiene via Ring-Opening Metathesis Polymerization: The Importance of Removing Trace Linear Impurities" *J. Am. Chem. Soc.* **2003**, *125*, 8424 – 8425.
13. Bielawski, C. W.; Jethmalani, J.; Grubbs, R. H. "Synthesis of Telechelic Polyacrylates with Unsaturated End-Groups" *Polymer* **2003**, *44*, 3721 – 3726.
12. Bielawski, C. W.; Benitez, D.; Grubbs, R. H. "An 'Endless' Route to Cyclic Polymers" *Science* **2002**, *297*, 2041 – 2044.
11. Bielawski, C. W.; Grubbs, R. H. "Increasing the Initiation Efficiency of Ruthenium-Based Ring-Opening Metathesis Polymerization Initiators: The Effect of Excess Phosphine" *Macromolecules* **2001**, *34*, 8838 – 8840.
10. Louie, J.; Bielawski, C. W.; Grubbs, R. H. "Tandem Catalysis: The Sequential Mediation of Olefin Metathesis, Hydrogenation, and Hydrogen Transfer with Single Ruthenium Complexes" *J. Am. Chem. Soc.* **2001**, *123*, 11312 – 11313.
9. Bielawski, C. W.; Benitez, D.; Morita, T.; Grubbs, R. H. "Synthesis of End Functionalized Polynorbornenes via Ring-Opening Metathesis Polymerization (ROMP)" *Macromolecules* **2001**, *34*, 8610 – 8618.
8. Bielawski, C. W.; Scherman, O. S.; Grubbs, R. H. "Highly Efficient Syntheses of Acetoxy and Hydroxy Terminated Telechelic Poly(butadiene)s Using Ruthenium Catalysts Containing N-Heterocyclic Ligands" *Polymer* **2001**, *11*, 4939 – 4945.
7. Bielawski, C. W.; Louie, J.; Grubbs, R. H. "Tandem Catalysis: Three Mechanistically Distinct Reactions from a Single Ruthenium Complex" *J. Am. Chem. Soc.* **2000**, *122*, 12872 – 12873.
6. Bielawski, C. W. "Ruthenium Catalysts Coordinated with N-Heterocyclic Carbenes: Olefin Metathesis in the New Millennium" **2000**, published on the web: http://www.organicdivision.org/fellowship_awardee_bios_00.html#bielawski
5. Bielawski, C. W.; Grubbs, R. H. "Highly Efficient Ring-Opening Metathesis Polymerization Using New Ruthenium Catalysts Coordinated with N-Heterocyclic Carbene Ligands" *Angew. Chem. Int. Ed.* **2000**, *39*, 2903 – 2906.

4. Morita, T.; Maughon, B. R.; Bielawski, C. W.; Grubbs, R. H. "A Ring-Opening Metathesis (ROMP) Approach to Carboxyl and Amino Terminated Telechelic Poly(butadiene)s" *Macromolecules* **2000**, *33*, 6621 – 6623.
3. Maughon, B. R.; Morita, T.; Bielawski, C. W.; Grubbs, R. H. "Synthesis and Controlled Cross-linking of Telechelic Poly(butenylene)s Derived from Ring-Opening Metathesis Polymerization" *Macromolecules* **2000**, *33*, 1929 – 1935.
2. Bielawski, C. W.; Morita, T.; Grubbs, R. H. "A Tandem Ring-Opening Metathesis Polymerization (ROMP) / Atom Transfer Radical Polymerization (ATRP) Approach to Triblock Copolymers" *Macromolecules* **2000**, *33*, 678 – 680.
1. Bielawski, C. W.; Chen, Y.-S.; Zhang, P.; Prest, P.-J. ; Moore, J. S. "A Modular Approach to Constructing Multi-Site Receptors for Isophthalic Acid" *Chem. Commun.* **1998**, 1313 – 1314.