

James D. Wuest

Curriculum Vitae

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Education

- A.B., Chemistry and Mathematics, Cornell University (1969)
- Ph.D., Chemistry, Harvard University (1973, with Prof. R.B. Woodward)

Academic Positions

- Assistant Professor of Chemistry, Harvard University (1973-1979)
- Fellow, Harvard Medical School (1980)
- Associate Professor of Chemistry, Université de Montréal (1981-1986)
- Professor of Chemistry, Université de Montréal (1986-)

Overview of Research

The Wuest group is broadly interested in the design, synthesis, structure, and properties of molecular materials. The unifying goal of our research is to learn how to use weak interactions to control molecular association and produce new materials with predetermined properties. We rely on a special understanding of organic chemistry and synthesis, but our approach is highly interdisciplinary. Aided by creation of the Canada Research Chair in Molecular Materials in 2001, we have broadened the scope of our research well beyond the traditional frontiers of organic chemistry. We have become an interdisciplinary team of organic chemists, inorganic chemists, surface scientists, materials scientists, and other specialists working in close collaboration. Our recent work shows that we have created a particular exciting environment for research in molecular science.

Research Publications

(FP = full paper, COM = communication, REV = review)

- Voisin, E.; Maris, T.; Wuest, J. D. "Crystal Structures of Spiroborates Derived from 2,2'-Dihydroxybiphenyl." *Cryst. Growth Des.* **2008**, *8*, 308-311 (FP).
- Helzy, F.; Maris, T.; Wuest, J. D. "Engineering Hydrogen-Bonded Molecular Crystals Built from 1,3,5-Substituted Derivatives of Benzene: 6,6',6''-(1,3,5-Phenylene)tris-1,3,5-triazine-2,4-diamines." *Cryst. Growth Des.* **2008**, *8*, 1547-1553 (FP).
- Tu, T.; Maris, T.; Wuest, J. D. "Crystal Structures of Spiroborates Derived from [1,1'-Binaphthalene]-2,2'-diol (BINOL)." *Cryst. Growth Des.* **2008**, *8*, 1541-1546 (FP).
- Variola, F.; Yi, J.-H.; Richert, L.; Wuest, J. D.; Rosei, F.; Nanci, A. "Tailoring the Surface Properties of Ti6Al4V by Controlled Chemical Oxidation." *Biomaterials* **2008**, *29*, 1285-1298 (FP).
- Richert, L.; Vetrone, F.; Yi, J.-H.; Zalzal, S. F.; Wuest, J. D.; Rosei, F.; Nanci, A. "Surface nanopatterning to control cell growth." *Adv. Mater.* **2008**, *20*, 1488-1492 (FP).
- Ryan, P. E.; Lescop, C.; Laliberté, D.; Maris, T.; Wuest, J. D. "Engineering New Networks Built from Flexible Tetrapyrindines Coordinated to Cu(I) and Cu(II)." *Inorg. Chem.*, submitted for publication (FP).
- Telfer, S. G.; Wuest, J. D. "Metallotectons: Comparison of Molecular Networks Built from Racemic and Enantiomerically Pure Tris(dipyrrinato)cobalt(III) Complexes." *Cryst. Growth Des.*, submitted for publication (FP).
- Rochefort, A.; Wuest, J. D. "Interaction of Substituted Aromatic Compounds with Graphene." *Langmuir*, in press (FP).
- Tu, T.; Maris, T.; Wuest, J. D. "Synthesis and Structure of Spirocyclic Tetraethers Derived from [1,1'-Binaphthalene]-2,2'-diol (BINOL) and Pentaerythritol." *J. Org. Chem.* **2008**, *73*, 5255-5263 (FP).
- Vetrone, F.; Variola, F.; Tambasco de Oliveira, P.; Zalzal, S. F.; Yi, J.-H.; Sam, J.; Bombonato-Prado, K. F.; Sarkissian, A.; Perepichka, D. F.; Wuest, J. D.; Rosei, F.; Nanci, A. "Nanoscale Oxidative Patterning of Metal Surfaces to Modulate Cell Activity and Fate." *Nano Lett.*, submitted for publication (FP).
- Variola, F.; Vetrone, F.; Richert, L.; Jedrzejowski, J. H.; Yi, J.-H.; Zalzal, S.; Clair, S.; Sarkissian, A.; Perepichka, D. F.; Wuest, J. D.; Rosei, F.; Nanci, A. "Nanoscale Modification of Biomaterial Surfaces," submitted for publication (REV).

- Zhou, H.; Dang, H.; Yi, J.-H.; Nanci, A.; Rochefort, A.; Wuest, J. D. "Frustrated 2D Molecular Crystallization." *J. Am. Chem. Soc.* **2007**, *129*, 13774-13775 (COM).
- Gagnon, E.; Maris, T.; Maly, K. E.; Wuest, J. D. "The potential of intermolecular N...O interactions of nitro groups in crystal engineering, as revealed by structures of hexakis(4-nitrophenyl)benzene." *Tetrahedron* **2007**, *63*, 6603-6613 (FP).
- Dang, H.; Maris, T.; Yi, J.-H.; Rosei, F.; Nanci, A.; Wuest, J. D. "Ensuring Homology Between 2D and 3D Molecular Crystals." *Langmuir* **2007**, *23*, 11980-11985 (COM).
- Telfer, S. G.; Wuest, J. D. "Metallotectons: Using Enantiopure Tris(dipyrrinato)cobalt (III) Complexes to Build Chiral Molecular Materials," *Chem. Commun.* **2007**, 3166-3168 (COM).
- Nath, K. G.; Ivasenko, O.; MacLeod, J. M.; Miwa, J. A.; Wuest, J. D.; Nanci, A.; Perepichka, D. F.; Rosei, F. "Crystal Engineering in Two Dimensions: An Approach to Molecular Nanopatterning." *J. Phys. Chem. C* **2007**, *111*, 16996-17007 (FP).
- Gagnon, E.; Maly, K. E.; Maris, T.; Wuest, J. D. "A new pseudopolymorph of hexakis(4-cyanophenyl)benzene." *Acta Crystallogr.* **2007**, *C63*, o4-o6 (FP).
- Maly, K. E.; Gagnon, E.; Maris, T.; Wuest, J. D. "Engineering Hydrogen-Bonded Molecular Crystals Built from Derivatives of Hexaphenylbenzene and Related Compounds." *J. Am. Chem. Soc.* **2007**, *129*, 4306-4322 (FP).
- Trolliet, C.; Poulet, G.; Tuel, A.; Wuest, J. D.; Sautet, P. "A Theoretical Study of Cohesion, Structural Deformation, Inclusion, and Dynamics in Porous Hydrogen-Bonded Molecular Networks." *J. Am. Chem. Soc.* **2007**, *129*, 3621-3626 (FP).
- Maly, K. E.; Dauphin, C.; Wuest, J. D. "Self-Assembly of Columnar Mesophases from Diaminotriazines." *J. Mater. Chem.* **2006**, *16*, 4695-4700 (FP).
- Nath, K. G.; Ivasenko, O.; Miwa, J. A.; Dang, H.; Wuest, J. D.; Nanci, A.; Perepichka, D. F.; Rosei, F. "Rational Modulation of the Periodicity in Linear Hydrogen-Bonded Assemblies of Trimesic Acid on Surfaces." *J. Am. Chem. Soc.* **2006**, *128*, 4212-4213 (COM).
- Lebel, O.; Maris, T.; Perron, M.-È.; Demers, E.; Wuest, J. D. "The Dark Side of Crystal Engineering: Creating Glasses from Small Symmetric Molecules that Form Multiple Hydrogen Bonds." *J. Am. Chem. Soc.* **2006**, *128*, 10372-10373 (COM).
- Maly, K. E.; Malek, N.; Rodríguez-Cuamatzi, P.; Maris, T.; Wuest, J. D. "Engineering Crystals Built from Molecules Containing Boron." *Pure Appl. Chem.* **2006**, *78*, 1305-1321 (REV).
- LeBel, O.; Maris, T.; Wuest, J. D. "Hydrogen-Bonded Networks in Crystals Built from Bis(biguanides) and Their Salts." *Can. J. Chem.* **2006**, *84*, 1426-1433 (FP).

- Maly, K. E.; Maris, T.; Wuest, J. D. "Two-Dimensional Hydrogen-Bonded Networks in Crystals of Diboronic Acids." *CrystEngComm* **2006**, *8*, 33-35 (COM).
- Laliberté, D.; Maris, T.; Ryan, P. E.; Wuest, J. D. "Weak Interactions in the Crystal Structures of Tetraacetylenes Derived from Pentaerythrityl Tetraphenyl Ether." *Cryst. Growth Des.* **2006**, *6*, 1335-1340 (FP).
- Yi, J.-H.; Bernard, C.; Variola, F.; Zalzal, S. F.; Wuest, J. D.; Rosei, F.; Nanci, A. "Characterization of a Bioactive Nanotextured Surface Created by Controlled Chemical Oxidation of Titanium." *Surf. Sci.* **2006**, *600*, 4613-4621 (FP).
- Maly, K. E.; Maris, T.; Gagnon, E.; Wuest, J. D. "Inclusion Compounds of Hexakis(4-cyanophenyl)benzene: Open Networks Maintained by C-H...N Interactions." *Cryst. Growth Des.* **2006**, *6*, 461-466 (FP).
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- Laliberté, D.; Maris, T.; Wuest, J. D. "Molecular Tectonics. Porous Hydrogen-Bonded Networks Built from Derivatives of Pentaerythrityl Tetraphenyl Ether." *J. Org. Chem.* **2004**, *69*, 1776-1787 (FP).
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Patents

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- Breton, M. P.; Boils-Boissier, D. C.; Titterington, D. R.; Thomas, J. W., Jr.; Banning, J. H.; Bedford, C. E.; Wuest, J. D. "Phase Change Inks Containing Gelator Additives." U. S. Patent 6,872,243 (Granted March 29, 2005).
- Boils-Boissier, D. C.; Breton, M. P.; Thomas, J. W., Jr.; Titterington, D. R.; Banning, J. H.; Goodbrand, H. B.; Wuest, J. D.; Perron, M.-È.; Monchamp, F.; Duval, H. "Alkylated Tetrakis(triaminotriazine) Compounds and Phase Change Inks Containing Same." U. S. Patent 6,835,833 (Granted December 28, 2004).
- Boils-Boissier, D. C.; Breton, M. P.; Thomas, J. W., Jr.; Titterington, D. R.; Banning, J. H.; Goodbrand, H. B.; Wuest, J. D.; Perron, M.-È.; Duval, H. "Guanidinopyrimidinone Compounds and Phase Change Inks Containing Same." U. S. Patent 6,811,595 (Granted November 2, 2004).
- Boils-Boissier, D. C.; Breton, M. P.; Thomas, J. W., Jr.; Titterington, D. R.; Banning, J. H.; Goodbrand, H. B.; Wuest, J. D.; Perron, M.-È.; Monchamp, F.; Duval, H. "Alkylated Tetrakis(triaminotriazine) Compounds and Phase Change Inks Containing Same." U. S. Patent 6,761,758 (Granted July 13, 2004).
- Nanci, A.; McKee, M. D.; Sacher, E.; Savadogo, O.; Wuest, J. D. "Modification of Implant Surface with Bioactive Conjugates for Improved Integration." EP0697896 (Granted January 13, 1999).

- Nanci, A.; McKee, M. D.; Sacher, E.; Savadogo, O.; Wuest, J. D. "Process for Modification of Implant Surface with Bioactive Conjugates for Improved Integration." USP 5,824,651 (Granted October 20, 1998).

Current Research Group and Former Members (1988-2008)

The Wuest Group currently consists of two postdoctoral fellows, seven Ph. D. students, and four M. Sc. students (September 2008). Recent graduates include:

- **Sara R. Eisler** (NSERC Postdoctoral Fellow, 2006-2008): Assistant Professor of Chemistry, University of New Brunswick, Fredericton, New Brunswick, Canada.
- **Tamara Hamilton** (NSERC Postdoctoral Fellow, 2006-2008): Assistant Professor, Department of Physical Sciences, Barry University, Miami Shores, Florida, USA.
- **Kenneth E. Maly** (NSERC Postdoctoral Fellow, 2003-2006): Assistant Professor of Chemistry at Wilfred Laurier University, Waterloo, Ontario, Canada.
- **Patrick E. Ryan** (M. Sc. 2007): "Chimie supramoléculaire : des interactions faibles à la liaison de coordination." Currently Ph. D. student in the group of Prof. Claude Piguet at the Université de Genève.
- **Michael Lautman (Ph. D. 2007)**: "Molecular Tectonics: Functional Materials for Crystal Engineering." Professor of Chemistry at John Abbott College, Ste Anne-de-Bellevue, Québec.
- **Olivier Lebel** (Ph. D. 2006): "Application de la tectonique moléculaire à des systèmes auto-assemblés non cristallins à l'aide des diarylbiguanides et des diarylaminotriazines." Former postdoctoral fellow at the University of Michigan with Prof. Adam J. Matzger and now Assistant Professor in the Department of Chemistry and Chemical Engineering, Royal Military College, Kingston, Ontario, Canada.
- **Shane Telfer** (Postdoctoral Fellow, 2004-2006): Lecturer in Chemistry at Massey University, Palmerston North, New Zealand.
- **Emilie Voisin** (M. Sc. 2006): "Étude des interactions faibles et de leur influence sur l'assemblage des borates dérivés du 2,2'-biphénol." Currently Ph. D. student in the group of Prof. Vance Williams at Simon Fraser University.
- **Ulrich Darbost** (Postdoctoral Fellow, 2004-2006): Maître de Conférences, Université Lyon I, Villeurbanne, France.
- **Eric Demers** (Ph. D. 2005): "Utilisation du 9,9'-spirobifluorène comme unité centrale en génie cristallin et réactions à l'intérieur de cristaux poreux en tectonique moléculaire." Professor of Chemistry at Collège Champlain, Montréal, Québec.

- **Tao Tu** (Postdoctoral Fellow, 2003-2005): Currently postdoctoral fellow with Prof. Dr. Karl Heinz Dötz at Kekulé-Institut für Organische Chemie und Biochemie, Rheinische Friedrich-Wilhelms Universität Bonn, Germany.
- **Marie-Ève Perron** (Research Associate, 2000-2004): Professor of Chemistry at Collège de Valleyfield, Salaberry-de-Valleyfield, Québec.
- **Greg W. Patenaude** (Postdoctoral Fellow, 2002-2004): Lecturer in the Department of Chemistry and Biochemistry at the University of Lethbridge, Lethbridge, Alberta.
- **Fatima Helzy** (Ph. D. 2004): "Tectonique moléculaire: Introduction de la géométrie trigonale et de la chiralité." Currently postdoctoral fellow in the group of Prof. James D. Wuest (Département de Chimie, Université de Montréal).
- **Dominic Laliberté** (Ph. D. 2003): "Développement de nouvelles unités de reconnaissance et d'unités centrales flexibles en tectonique moléculaire." Former Châteaubriand Postdoctoral Fellow at Université Louis Pasteur with Prof. Jean-Marie Lehn and now research chemist at American Dye Source, Montréal, Québec.
- **Cédric Trolliet** (Ph. D. 2003): "Caractérisations physico-chimiques et études théoriques de cristaux moléculaires poreux synthétisés par la stratégie de la tectonique moléculaire."
- **Jean-Sébastien Mailloux** (M. Sc. 2003): "La tectonique moléculaire et ses applications: Utilisation de centres moléculaires luminescents comme nouvelles unités de construction." Research chemist at American Dye Source, Montréal, Québec.
- **Hugues Duval** (Postdoctoral Fellow, 2000-2003): Presently self-employed.
- **Jean-Hugues Fournier** (Ph. D. 2003): "Élaboration de réseaux poreux par la stratégie de la tectonique moléculaire." Former postdoctoral fellow at the University of Pittsburgh with Prof. Dennis P. Curran and now research chemist at ProMetic BioSciences Inc., Montréal, Québec.
- **Francis Monchamp** (M. Sc. 2002): "Tectonique moléculaire. Étude de l'association de nouveaux composés à l'état liquide par ponts hydrogène." Research chemist at BioQuadrant Inc., Laval, Québec.
- **Lionel Dumas** (M. Sc. 2002): "Corrélation entre la structure moléculaire d'un tectonophosphine et l'architecture du réseau tectonique généré par son association utilisant des groupes diaminotriazine ou acide carboxylique." Research chemist at Gemin X Biotechnologies Inc., Montréal, Québec.
- **Christophe Lescop** (Postdoctoral Fellow, 2001-2002): Chargé de recherche, Laboratoire Organométalliques et Catalyse, UMR 6509 CNRS, Université de Rennes, France.

- **Gerson Gonzalez Gonzalez** (M. Sc. 2001): "Construction de réseaux cationiques à partir de sels phosphonium." Research chemist at Gemin X Biotechnologies Inc., Montréal, Québec.
- **Erwan Le Fur** (M. Sc. 2001): "Augmentation de la porosité d'un réseau supramoléculaire par diffusion intraréticulaire d'un agent clivant." Independent scientific journalist.
- **Joël Desharnais** (Ph. D. 2001): "Tectonique moléculaire. Construction de réseaux poreux organiques possédant une activité catalytique." Former postdoctoral fellow with Prof. Dale L. Boger at Scripps Research Institute and now research chemist at Acidophil LLP, La Jolla, California.
- **Nadia Malek** (Ph. D. 2001): "Construction supramoléculaire de réseaux tridimensionnels chargés par la stratégie de la tectonique moléculaire." Currently postdoctoral fellow in the group of Prof. James D. Wuest (Département de Chimie, Université de Montréal).
- **Hélène Sauriat-Dorizon** (Postdoctoral Fellow, 1999-2000): Maître de Conférences, Université de Paris XI.
- **Pascal Deschatelets** (Ph. D. 1999): "Utilisation des interactions entre les acides et les bases de Lewis en chimie supramoléculaire." Former postdoctoral fellow at Harvard University with Prof. George M. Whitesides and now research chemist at Potentia Pharmaceuticals, Louisville, Kentucky.
- **Okba Saied** (Ph. D. 1998): "Étude de la complexation simultanée d'un groupe carbonyle par deux sites acides de Lewis." Currently postdoctoral fellow in the group of Prof. James D. Wuest (Département de Chimie, Université de Montréal).
- **Louis Vaillancourt** (Ph. D. 1998): "Conception de tectons incorporant de multiples pyrimidinones et pyridinones pouvant former de nouvelles structures supramoléculaires." Former postdoctoral fellow at the University of Illinois with Prof. Peter Beak and now research chemist at Neurochem, Montréal.
- **Xian Xian Du** (Ph. D. 1997): "Molecular Self-Assembly Directed by Hydrogen Bonding. Design, Synthesis, and Structural Characterization of New Tectons." Former postdoctoral fellow at Los Alamos National Laboratory and now research chemist at MCP Industries, Inc., Pittsburgh, Kansas.
- **Jean Vaugeois** (Ph. D. 1996): "Synthèses et études d'acides de Lewis uni- et bicoordinants dérivés de phénylmercure et phénylènedimercure." Former postdoctoral fellow at the University of Illinois with Prof. Scott E. Denmark and now research chemist at QuebePharma Recherche Inc., Montréal.

- **Hélène Gagnon** (M. Sc. 1996): "Tectonique moléculaire: Synthèse d'une série d'hexa- et de tétrapyrindones flexibles conçues pour pouvoir former des agrégats tridimensionnels." Research chemist at Boehringer Ingelheim Ltd., Laval, Québec.
- **Dan Su** (Ph. D. 1995): "Use of Hydrogen Bonds to Control Molecular Aggregation: Self-Assembly of Three-Dimensional Networks with Large Chambers." Former postdoctoral Fellow at Emory University with Prof. F. M. Menger and now research chemist at Schering-Plough Research Institute.
- **Philippe Brunet** (Ph. D. 1995): "Design de molécules susceptibles de subir une protonolyse d'un lien carbone-hydrogène." Professor of Chemistry at Vanier College, Montréal, Québec.
- **Martin Poirier** (M. Sc. 1994): "Synthèse de nouveaux acides de Lewis bidentates dérivés du 1,8-naphtalènediol et étude de la complexation avec cétones." Research chemist at Boehringer Ingelheim Ltd., Laval, Québec.
- **Benoit Bachand** (Ph. D. 1992): "Acides de Lewis monodentates et bidentates de titane: Caractérisation de complexes avec des cétones." Former NSERC Postdoctoral Fellow at the University of California, Irvine with Prof. Larry E. Overman and now research chemist at Neurochem, Montréal.
- **Luc Richard** (M. Sc. 1992): "Synthèse de pyridones capables de s'associer fortement par la formation de ponts hydrogène multiples." Research chemist at Wyeth-Ayerst Canada. Inc., Montréal.
- **François Persico** (M. Sc. 1992): "Les pyridones comme agents autoreproducteurs par la formation dirigée de ponts hydrogène." Research chemist at Wyeth-Ayerst Canada. Inc., Montréal.
- **Michio Kobayashi** (Ph. D., 1991): "New Organometallic Chemistry of Iron, Tin, Lead." Former postdoctoral fellow at Duke University with Prof. Ned A. Porter and now employed by Chemical Abstracts Service (CAS), Columbus, Ohio.
- **Michel Gallant** (Ph. D. 1990): "Agrégation moléculaire des dipyrindones par la complémentarité structurelle d'un ensemble de ponts hydrogène." Former NSERC Postdoctoral Fellow at Yale University with Prof. Samuel J. Danishefsky and now research chemist at Merck Frosst Canada Ltd., Montréal.
- **Stéphan Latour** (Ph. D. 1989): "Activation des liens carbone-hydrogène et carbone-carbone par plusieurs liens carbone-métal adjacents." Employed by Pall Corporation, Philadelphia.
- **François Nadeau** (M. Sc. 1989): "Les acides de Lewis multidentates. Synthèse et étude de macrocycles organométalliques tétradentates." Formerly employed by ConjuChem Inc., Montréal and now deceased

- **Louis Plamondon** (Ph. D. 1989): "Les organostannanes en synthèse organique. Applications des réactions d'élimination-1,3 et -1,4." Former NSERC Postdoctoral Fellow at Harvard University with Prof. Stuart L. Schreiber and now research chemist at Millenium Pharmaceuticals, Inc., Cambridge, Massachusetts.
- **Yves Ducharme** (Ph. D. 1988): "Les pyridones comme agents de contrôle de l'agrégation moléculaire par la formation dirigée de ponts hydrogène." Former postdoctoral fellow at Harvard University with Prof. Yoshito Kishi and now research chemist at Merck Frosst Canada Ltd., Montréal.

Honors and Awards

- Canada Research Chair in Molecular Materials (2008)
- Prix Urgel-Archambault (Association francophone pour le savoir, 2008)
- Arthur C. Cope Scholar Award (American Chemical Society, 2005)
- Canada Research Chair in Supramolecular Materials (2001)
- Alfred Bader Award in Organic Chemistry (Canadian Society for Chemistry, 2001)
- Guggenheim Fellowship (1999)
- Fellow of the Royal Society of Canada (1996)
- Rutherford Memorial Medal (Royal Society of Canada, 1992)
- Killam Research Fellowship (Canada Council, 1992)
- Merck Sharp & Dohme Award (Canadian Society for Chemistry, 1988)

Recent Invited Lectures (1995-2008)

- **2008:** DuPont Discovery Seminar Series (Wilmington), Symposium on Conjugated Materials and Heterocycles (91st Canadian Chemistry Conference, Edmonton)
- **2007:** European Crystallographic Meeting (Marrakech)
- **2006:** University of South Carolina, International Symposium on Macrocyclic and Supramolecular Chemistry (Victoria, Canada)
- **2005:** Fourth International Symposium on Nanoporous Materials (Niagara Falls), 12th International Meeting on Boron Chemistry (Sendai, Japan), University of Tokyo, Arthur C. Cope Symposium (230th American Chemical Society National Meeting, Washington, D. C.), European Science Foundation Research Conference on Supramolecular Chemistry (Strasbourg), University of Minnesota (Etter Lecture), Concordia University, Symposium on Designed π -Electronic Systems (Pacifichem, Honolulu), Symposium on Supramolecular Materials Chemistry (Pacifichem, Honolulu)
- **2004:** Xiangshan Science Conference on Functional Supramolecular Systems (Jilin University, China), Xerox Distinguished Lecturer Series, Symposium on Crystals in Supramolecular Chemistry (American Crystallographic Association Meeting, Chicago), Journées de Chimie France-Canada (Nice), McGill University, Bruker AXS (Madison, Wisconsin)

- **2003:** Colorado State University, University of Guelph, Colloquium on Molecules and Nanoscience (Montpellier), Symposium on Crystal Engineering: Supramolecular Synthesis of Advanced Materials (IUPAC Congress, Ottawa)
- **2002:** Simon Fraser University, University of Colorado, University of British Columbia, University of Victoria (Merck-Frosst Lecturer), Centre de recherche d'Alcan International Limitée
- **2001:** Horizons in Hydrogen Bond Research Conference (Torino), Symposium on Organic Reactions and Processes (Canadian Society for Chemistry Conference, Montréal)
- **2000:** Symposium on Precision Polymerizations and Controlled Supramolecular Architectures (Pacifichem, Honolulu), Symposium on Separation Science: Trends for the New Century (Pacifichem, Honolulu), Entretiens du Centre Jacques Cartier, Symposium on Functional Extended Solids (Canadian Society for Chemistry Conference, Calgary), Université de Sherbrooke (CIC Lecture), Boston College, University of Michigan, Xerox Research Centre of Canada, Michigan State University, Rice University, Texas A & M University, University of Texas at Austin, University of British Columbia
- **1999:** National Research Council of Canada, New Horizons in Science Briefing (Council for the Advancement of Science Writing), Princeton University, University of Alberta, Okazaki Conference on Structural Hierarchy in Molecular Science (Okazaki, Japan)
- **1998:** NSF Materials Chemistry Workshop, University of California at Irvine, Gordon Research Conference on Organic Structures and Properties (Fukuoka, Japan), Indiana University, PPG Industries, Symposium on Molecular Recognition (Canadian Society for Chemistry Conference, Whistler), Northwestern University, McGill University
- **1997:** Fifth Chemical Congress of North America (Cancun), University of Pennsylvania, Yale University
- **1996:** Emory University, Queen's University, NATO Advanced Research Workshop on Self-Assembly in Synthetic Chemistry (Québec), International Conference on Coordination Chemistry (Vancouver), University of Wisconsin
- **1995:** University of Minnesota, NATO Advanced Research Workshop on Modular Chemistry (Colorado), ACS Symposium on the Synthesis of Well-Defined Macromolecules (Anaheim), Symposium on Molecular Recognition and Supramolecular Assemblies (Pacifichem, Honolulu), University of Western Ontario

Other Major Recent Activities (1997-2008)

- Directeur, *Réseau québécois de recherche en synthèse organique (RQRSO)* (2002-2006)
- Director, *Centre for Innovation in the Synthesis of Molecules (CISM)* (2007-)
- Directeur, *Major Central Research Facility for the Study of Nanostructured Molecular Materials* (2007-)
- Member, Selection Panel, Steacie Prize for Natural Sciences (2007-)
- Holder of the Canada Research Chair in Supramolecular Materials (2001-)
- Member, Selection Committee, NSERC AGENO Program (2003)
- Member, Scientific Advisory Board, NanoQuébec (2005-)
- Editor, *Canadian Journal of Chemistry* (1992-1997)
- Membre, Comité d'évaluation, Établissement de nouveaux chercheurs, FCAR (1996-1999)
- Member, Advisory Board of the *Journal of Organic Chemistry* (1995-1999)
- Membre, Comité de planification, Université de Montréal (1999-)
- Member, Consulting Board of Editors, *Tetrahedron* and *Tetrahedron Letters* (2002-)
- Member, Selection Committee (Mathematical and Physical Sciences), Royal Society of Canada

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