

**Jaime M. Martell**  
Cape Breton University  
Sydney, Nova Scotia B1P 6L2  
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Web: <http://faculty.cbu.ca/jmartell>

### EDUCATION

- |         |   |   |
|---------|---|---|
| 1991-95 | <b>Dalhousie University</b><br><b>Halifax, Nova Scotia</b><br>Thesis: <i>Ab Initio</i> Studies of Fluorinated Ethanes: Electronic and Energetic Properties and Reactions with Hydroxyl Radicals<br>Supervisor: Dr. Russell J. Boyd<br>External Examiner: Dr. Kenneth B. Wiberg, Yale University | <b>Ph.D. Chemistry</b>                                  |
| 1987-91 | <b>St. Mary's University</b><br><b>Halifax, Nova Scotia</b><br>Thesis: Rydberg Series in the Arc Spectrum of Antimony<br>Supervisor: Dr. William E. Jones   | <b>B.Sc. (Honours) Chemistry</b>                        |
| 1981-82 | <b>Nova Scotia College</b><br><b>of Geographic Sciences</b><br><b>Lawrencetown, Nova Scotia</b>   | <b>Dip.T. Scientific</b><br><b>Computer Programming</b> |
| 1978-80 | <b>University College of Cape Breton</b><br><b>Sydney, Nova Scotia</b>  | <b>Dip.T. Chemical Technology</b>                       |

### ACADEMIC POSITIONS

- |           |                                    |   |
|-----------|------------------------------------|---|
| 2008 -    | <b>Cape Breton University</b>      | <b>Associate Professor</b>              |
| 2004-08   | <b>Cape Breton University</b>      | <b>Assistant Professor</b>              |
| 2003-04   | <b>Acadia University</b>           | <b>Assistant Professor</b>              |
| 1999-2003 | <b>SUNY Potsdam</b>                | <b>Assistant Professor</b>              |
| 1997-99   | <b>Lyon College/ UNC Asheville</b> | <b>Camille and Henry Dreyfus Fellow</b> |
| 1995-97   | <b>University of Guelph</b>        | <b>Postdoctoral Fellow</b>              |

**TEACHING EXPERIENCE**

Sept. – Dec. (2005, '07, '09)	General Chemistry I, Cape Breton University
Jan. – Apr. (2006, 2010)	General Chemistry II, Cape Breton University
Jan. – Apr. (2005, '07) Sept. – Dec. 2008	Advanced Physical Chemistry, Cape Breton University
Jan. – Apr. (2005-10)	Chemical Kinetics and Equilibrium, Cape Breton University
Sept. – Dec. (2004, '06)	Intermediate Physical Chemistry, Cape Breton University
Sept. – Dec. (2004, '06-09)	Chemical Thermodynamics, Cape Breton University
Sept. 2003 – Apr. 2004	Introductory Chemistry for the Physical Sciences, Acadia University
Jan. – Apr. 2004	Physical Chemistry 3 (Quantum Chemistry), Acadia University
Sept. – Dec. 2003	Structure and Bonding, Acadia University
Aug. 1999 – May 2003	Physical Chemistry lectures and labs, SUNY Potsdam
Aug. 2000 – Dec. 2002	Fundamentals of Environmental Science (non-majors course), SUNY Potsdam
Aug. 1999 – May 2000	General Chemistry labs, SUNY Potsdam
Aug. 1998 - May 1999	General Chemistry labs, University of North Carolina at Asheville
Aug. 1997 - May 1998	Physical Chemistry labs, team teaching Physical Chemistry lectures, Lyon College
Sept. - Dec., 1996	Lecturer, Chemistry Today, University of Guelph

(Also significant teaching assistant experience, graduate and undergraduate; included TAing labs and grading assignments, for Physical, General, and Organic Chemistry courses)

**RESEARCH EXPERIENCE\*\***

- Aug. 2004 - present      **Cape Breton University**      **Assistant/Associate Professor**  
Theoretical studies of unimolecular elimination reactions of alcohols, substituted formaldehydes, and hydrohaloethers; redox and photochemistry of potential anti-tumour drugs and vitamins.
- Aug. 1999 - June 2003      **SUNY Potsdam**      **Assistant Professor**  
Theoretical studies of unimolecular elimination reactions of alcohols and substituted formaldehydes; modelling of alkylation reactions.
- Aug. 1997 - Aug. 1999      **Lyon College/UNC Asheville**      **Dreyfus Postdoctoral Fellow**  
Theoretical studies of substituent effects for the unimolecular elimination reactions of gas-phase haloalkanes and haloalcohols.
- June 1996      **Stockholm University**      **Visiting Scientist**  
Computational investigation of hyperfine structures of some sulfur oxides.
- Sept. 1995 - Aug. 1997      **University of Guelph**      **Postdoctoral Researcher**  
Computational investigations of reactions of atmospheric importance, calibration of Density Functional Theory methods for reaction energetics; assist in supervision of graduate students; develop Web page for group.
- July - Aug. 1995      **Saint Mary's University**      **Postdoctoral Researcher**  
Calculation of stacking interactions, training of students in computational chemistry techniques, system administration.
- June 1995      **Dalhousie University**      **Postdoctoral Researcher**  
Topological analyses of reactions.
- Summer 1990      **Saint Mary's University**      **NSERC Summer Student**  
Laser chemistry and surface study experiments.

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\* Also see theses on page 1.

Jaime Martell *curriculum vitae*

Summer 1989	<b>Saint Mary's University</b>	<b>NSERC Summer Student</b>
	Organometallic synthesis.	
1984 - 89	<b>Bedford Institute of Oceanography Dartmouth, Nova Scotia</b>	<b>Computer Programmer/ Data Processor</b>
	Software development and maintenance, user support services, data analysis and production of plots, compilation of data reports for variety of physical oceanography research projects.	
Nov. 1982 - Apr. 1983	<b>Martec Ltd. Halifax, Nova Scotia</b>	<b>Computer Programmer</b>
	Software development and data processing for study of ice conditions in Gulf of St. Lawrence.	
July - Oct. 1980	<b>Technical University of Nova Scotia Halifax, Nova Scotia</b>	<b>Research Assistant</b>
	Assisted supervisor in setting up a solid fuel combustion research and testing laboratory, performed test and wrote report on safety of a new wood stove.	

### **PUBLISHED RESEARCH**

\* = undergraduate research student

### JOURNAL PUBLICATIONS

Meghan M. MacIntyre\*, Jaime M. Martell, and Leif A. Eriksson, "DFT study of five naphthalimide derivatives: Structures and redox properties", *Theochem*, **2010**, 941, 133-137.

Jaime M. Martell, Paul T. Beaton\*, and Bert E. Holmes, "Comparisons between Density Functional Theory and Conventional *ab initio* Methods for 1,2-Elimination of HF From 1,1,1-Trifluoroethane: Test Case Study for HF Elimination From Fluoroalkanes", *J. Phys. Chem. A*, **2002**, 106, 8471 - 8478.

Maria O. Burgin\*, George L. Heard, Jaime M. Martell, and Bert E. Holmes, "Unimolecular Reaction Kinetics of  $\text{CF}_2\text{ClCF}_2\text{CH}_3$  and  $\text{CF}_2\text{ClCF}_2\text{CD}_3$ : Experimental Evidence for a Novel 1,2-FCl Rearrangement Pathway", *J. Phys. Chem. A* **2001**, 105, 1615-1621.

Jaime Martell *curriculum vitae*

Jaime M. Martell, Hengtai Yu and John D. Goddard, "Molecular Decompositions of Acetaldehyde and Formamide: Theoretical Studies Using Hartree-Fock, Møller-Plesset and Density Functional Theories", *Mol. Phys.* **1997**, *92*, 497-502.

Jaime M. Martell, Leif A. Eriksson and John D. Goddard, "Assessment of Basis Set and Functional Dependencies in Density Functional Theory: Studies of Atomization and Reaction Energies", *J. Phys. Chem. A* **1997**, *101*, 1927-1934.

Jaime M. Martell, Leif A. Eriksson, and John D. Goddard, "A Density Functional Study of the Hyperfine Properties of Sulfur Containing Radicals and Radical Ions", *Acta Chem. Scand.* **1997**, *51*, 229-232.

Jaime M. Martell, James B. Tee\* and Russell J. Boyd, "Topological Properties of the Reactants, Transition States, and Products of the Hydroxyl Radical with the Series  $C_2H_nF_{6-n}$ ,  $n = 1-6$ ", *Can. J. Chem.* **1996**, *74*, 786-800.

Jaime M. Martell and Russell J. Boyd, "*Ab Initio* Studies of Reactions of Hydroxyl Radicals with Fluorinated Ethanes", *J. Phys. Chem.* **1995**, *99*, 13402-13411.

Jaime M. Martell, Anil K. Mehta\*, Philip D. Pacey and Russell J. Boyd "Properties of Transition Species in the Reaction of Hydroxyl with Ethane from *ab Initio* Calculations and Fits to Experimental Data", *J. Phys. Chem.* **1995**, *99*, 8661-8668.

Jaime M. Martell, Russell J. Boyd and Leif A. Eriksson, "Hyperfine Structures of the Series  $C_2H_nF_{5-n}$ ,  $n = 0-5$ : A Density Functional Theory Study", *J. Phys. Chem.* **1995**, *99*, 623-629.

Jaime M. Martell, Russell J. Boyd and Zheng Shi, "Effects of Electron Correlation on the Series  $C_2H_nF_{6-n}$  ( $n = 0-6$ ): Geometries, Total Energies and C-C and C-H Bond Dissociation Energies", *J. Phys. Chem.* **1993**, *97*, 7208-7215.

Jaime M. Martell and Russell J. Boyd, "*Ab Initio* Studies of the Series  $C_2H_nF_{6-n}$  ( $n = 0-6$ ): Geometries, Total Energies and C-C Bond Dissociation Energies", *J. Phys. Chem.* **1992**, *96*, 6287-6290.

William E. Jones and Jaime M. Martell\*, "Rydberg Series in the Arc Spectrum of Antimony", *Can. J. Phys.* **1991**, *69*, 891-896.

Jaime M. Martell\* and Michael J. Zaworotko, "Synthesis and Structure of Mixed Chloride-Tetrachloroaluminate Salts", *J. Chem. Soc. Dalton Trans.* **1991**, 1495-1498.

Jaime Martell *curriculum vitae*

### HONOURS THESES SUPERVISED

Alex Lee, “The Ability of DFT Functionals PBE1PBE and BMK to Predict Atomization Energies and Enthalpies of Formation”, 2009

Curtis W. White, “Hydrogen Abstraction from Fluorinated Ethyl Methyl Ether Systems by OH Radicals”, 2007/08.

Meghan M. MacIntyre, “Computational study of the use of naphthalimide derivatives as photosensitizers for selective oxidation of guanine in DNA”, 2006/07.

### CONFERENCE PRESENTATIONS

Qi Xu and Jaime Martell, “Computational Study of the Photodecomposition of Pyridoxine”, 12<sup>th</sup> Atlantic Theoretical Chemistry Symposium, August, 2011, Charlottetown, PEI.

Jaime Martell, Matthias Bierenstiel, and C. Dale Keefe, “Chemical Education Initiatives at Cape Breton University”, Maritimes CIC Section Annual General Conference and Meeting, June 2011, Moncton, NB.

Jaime M. Martell, “Trials, Tribulations and Tribulations of Optimizing Transition States”, 10<sup>th</sup> Atlantic Theoretical Chemistry Symposium, July, 2009, Fredericton, NB.

W. Cory McNeil\* and Jaime M. Martell, “Short Chain Alcohols - Investigation of 1,2 HOH Elimination Pathways”, 9<sup>th</sup> Atlantic Theoretical Chemistry Symposium, August, 2008, Sydney, NS.

Curtis W. White\* and Jaime M. Martell, “Hydrogen Abstraction from Fluorinated Ethyl Methyl Ether Systems by OH Radicals”, 9<sup>th</sup> Atlantic Theoretical Chemistry Symposium, August, 2008, Sydney, NS.

Colin Andrews\* and Jaime M. Martell, “AIM Analyses of Transition States for Hydrogen Abstraction from Fluorinated Ethers”, 9<sup>th</sup> Atlantic Theoretical Chemistry Symposium, August, 2008, Sydney, NS.

Cara Andrews\* and Jaime M. Martell, “DFT Studies of Halogenated Propenes and Butenes”, 9<sup>th</sup> Atlantic Theoretical Chemistry Symposium, August, 2008, Sydney, NS.

Curtis W. White\* and Jaime M. Martell, “Hydrogen Abstraction from Fluorinated Ethyl Methyl Ether Systems by OH Radicals”, 91<sup>st</sup> Canadian Chemistry Conference and Exhibition, May 2008, Edmonton, AB.

Jaime Martell *curriculum vitae*

Jaime M. Martell, Meghan M. MacIntyre\* and Leif A. Eriksson, "Computational study of the use of naphthalimide derivatives as photosensitizers for selective oxidation of guanine in DNA", 16th Canadian Symposium on Theoretical Chemistry, August, 2007, St. John's, NL.

W. Cory McNeil\* and Jaime M. Martell, "Transition States For 1,2 Elimination Of HX From Halogenated Propanes", 8<sup>th</sup> Atlantic Theoretical Chemistry Symposium, August, 2007, St. John's, NL.

Curtis W. White\* and Jaime M. Martell, "Unimolecular Decomposition Pathways of Halogenated Ethylmethyl Ethers: A Density Functional Theory Study", 8<sup>th</sup> Atlantic Theoretical Chemistry Symposium, August, 2007, St. John's, NL.

Jaime M. Martell and John D. Goddard, "Density Functional Theory and Atoms In Molecules Studies of the Molecular Decompositions of FCHO, ClCHO, and HOCHO", 7<sup>th</sup> Atlantic Theoretical Chemistry Symposium, August 2006, Antigonish, NS.

W. Cory McNeil\* and Jaime M. Martell, "1,2 HOH Elimination Pathways for Short Chain Alcohols", 7<sup>th</sup> Atlantic Theoretical Chemistry Symposium, August 2006, Antigonish, NS.

Jaime M. Martell, "Unimolecular Decomposition Pathways of Hydrohaloethers: A Density Functional Theory Study", 89<sup>th</sup> Canadian Chemistry Conference and Exhibition, May 2006, Halifax, NS.

Jaime M. Martell, "Unimolecular Decomposition Pathways of Hydrohaloethers: Preliminary Density Functional Theory Results", 6<sup>th</sup> Atlantic Theoretical Chemistry Symposium, August 2005, Sackville, NB.

Jaime M. Martell, Carl J. LaShomb\* and John D. Goddard, "Density Functional Theory Studies of the Molecular Decompositions of FCHO, ClCHO, and HOCHO", 14th Canadian Symposium on Theoretical Chemistry, August, 2001, Ottawa, Ontario.

Jaime M. Martell, Carl J. LaShomb\* and John D. Goddard, "Density Functional Theory Studies of the Molecular Decompositions of FCHO, ClCHO, and HOCHO", Symposium in Honor of Professor Ernest R. Davidson, July 2001, Seattle, Washington (invited poster).

Eric Sandvig\* and Jaime Martell, "Computational Studies of the Elimination of Water from Ethanol", Learning and Research Fair, SUNY Potsdam, March 30, 2000.

Peter Morgan\*, Anthony Molinero and Jaime Martell, "Modeling Studies on the Asymmetric Alkylation of  $\beta$ -Keto Esters", Learning and Research Fair, SUNY Potsdam, March 30, 2000.

Jaime Martell *curriculum vitae*

Jaime M. Martell and Bert E. Holmes, "Transition States for 1,2 Elimination of HX (X = F, Cl) From Trifluoroethane and Chloroethane: Test Case Studies", 13th Canadian Symposium on Theoretical Chemistry, August, 1998, Vancouver, British Columbia.

Jaime M. Martell and Bert E. Holmes, "Transition States for 1,2 Elimination of HF from Fluoropropanes", 215<sup>th</sup> ACS National Meeting, March 1998, Dallas, Texas.

Jaime M. Martell and John D. Goddard, "Density Functional Theory Studies of the Molecular Decompositions of FCHO, ClCHO, and HOCHO", 7<sup>th</sup> International Congress of Quantum Chemistry, June, 1997, Atlanta, Georgia.

John D. Goddard, Xiao-Qing Chen and Jaime M. Martell, "Application of Density Functional Theory to Free Radical Structures and Energetics", 7<sup>th</sup> International Congress of Quantum Chemistry, June, 1997, Atlanta, Georgia (invited talk).

Wai-To Chan, Jaime M. Martell, John D. Goddard and Ian Hamilton, "An Atoms In Molecules Study of the Dimers of 1,2,3,5-dithiadiazolyl and 1,2,3,5-diselenadiazolyl radicals and Their Fluoro- and Methyl-Substituted Analogues", 80<sup>th</sup> Canadian Chemistry Conference and Exhibition, June, 1997, Windsor, Ont.

Jaime M. Martell and John D. Goddard, "Density Functional Theory Investigations of Molecular Decompositions of Substituted Formaldehydes: Geometries, Barrier Heights and Reaction Enthalpies", 80<sup>th</sup> Canadian Chemistry Conference and Exhibition, June, 1997, Windsor, Ont.

Wai-To Chan, Jaime M. Martell, John D. Goddard and Ian Hamilton, "An Atoms In Molecules study of the 1,2,3,5-dithiadiazolyl and 1,2,3,5-diselenadiazolyl radicals", Symposium on the Occasion of the 65th Birthday of Richard F.W. Bader, October, 1996, Hamilton, Ont.

Jaime M. Martell, "A Study by Density Functional Theory of the Hyperfine Properties of Sulfur Containing Radicals and Radical Ions - A Problem Case", 14<sup>th</sup> International Conference on Radical Ions, July 1996, Uppsala, Sweden (invited poster).

Jaime M. Martell and Russell J. Boyd, "*Ab Initio* Studies of Reactions of Hydroxyl Radicals with Fluorinated Ethanes", 1995 Atlantic Student Chemistry Conference, May 1995, Halifax, N.S.

Jaime M. Martell and Russell J. Boyd, "Environmental Chemistry Meets the Information Highway: Computational Studies of CFC Alternatives", Symposium on Environmental Chemistry, October 1994, Halifax, N.S.

Jaime M. Martell, James B. Tee\* and Russell J. Boyd, "Charge Development in the Transition States of the Reactions of Fluorinated Ethanes with Hydroxyl Radicals", International Conference on Radical Ions, August 1994, Halifax, N.S.



Jaime Martell *curriculum vitae*

Jaime M. Martell and Russell J. Boyd, "*Ab Initio* Studies of the Reactions of OH With Fluorinated Ethanes", 2<sup>nd</sup> Canadian Computational Chemistry Conference, May 1994, Kingston, Ont.

Jaime M. Martell, Russell J. Boyd and Zheng Shi, "*Ab Initio* Studies of Fluorinated Ethanes: Properties and Reactions With Hydroxyl Radicals", Atlantic Division of Chemical Institute of Canada Conference, August 1993, Sydney, N.S.

Jaime M. Martell, Russell J. Boyd and Zheng Shi, "*Ab Initio* Studies of Fluorinated Ethanes", 76<sup>th</sup> Canadian Chemistry Conference and Exhibition, May 1993, Sherbrooke, P.Q.

Jaime M. Martell, "Trials and Tribulations of Optimizing Transition States: the Ethane + OH Reaction", 5<sup>th</sup> Atlantic Theoretical Chemistry Symposium, May 1993, Halifax, N.S.

### SCHOLARSHIPS AND AWARDS

2003	President's Award for Excellence in Teaching, SUNY Potsdam (student nominated; not awarded)
1999	Camille and Henry Dreyfus Fellowship Supplemental Award (\$10,000), SUNY Potsdam
1998-99	Camille and Henry Dreyfus Fellowship, University of North Carolina at Asheville
1997-98	Camille and Henry Dreyfus Fellowship, Lyon College
1994-95	Walter C. Sumner Fellowship, Dalhousie University
1993-95	NSERC PGS B, Dalhousie University
May 1993	Co-winner, best student talk at 5 <sup>th</sup> Atlantic Theoretical Chemistry Symposium
1991-93	NSERC PGS 1&2, Dalhousie University
1991-95	Graduate Scholarship, Dalhousie University
1990-91	Charles Hinman Memorial Bursary, Saint Mary's University
1990-91	Achievement Scholarship, Saint Mary's University
1990	NSERC USRA, Saint Mary's University
1989-90	Dean's List, Saint Mary's University

Jaime Martell *curriculum vitae*

- 1989 NSERC USRA, Saint Mary's University
- 1979-80 Engineering Technology Scholarship, University College of Cape Breton
- 1978-80 Highest academic achievement in Chemical Technology program, University College of Cape Breton

## GRANTS

CBU RP grant (summer 2010), "*Computational Study of the Photodecomposition of Vitamin B3*", \$6987.71.

CBU RP grant (summer 2010), "*Computational Study of the Photodecomposition of Vitamin B6*", \$6115.

CBU RP grant, (2008/09), "*Computational Studies of Pathways of Some Atmospherically Significant Reactions*"; \$1792.

NSERC Atlantic Regional Opportunities Fund (2008), "*Seminar Tour for Dr. Stacey Wetmore*", \$1614.

CBU RP grant, (summer 2008) "*Computational Studies of Pathways of Some Atmospherically Significant Reactions*"; \$5000.

CBU RP grant, (2007/08), "*Computational Studies of Pathways of Some Atmospherically Significant Reactions*"; \$2408.

CBU RP grant, (summer 2007) "*Computational Studies of Pathways of Some Atmospherically Significant Reactions*"; \$5000.

NSERC Discovery Grant, (2007-10) "*Computational Studies of Reactions With Atmospheric Implications Using DFT and AIM Methodologies*"; \$23,500 per annum for 3 years.

NSERC Research Tools and Instrumentation Grant, (2007) "*Compute Nodes for a Linux Cluster for Computational Chemistry Research*"; \$19,803.

CBU RP grant, (2006/07), "*Computational Studies of Pathways of Some Atmospherically Significant Reactions*"; \$3060.

SUNY Potsdam Curriculum Development Program, (2002-03) "*Enhancing Data Analysis in Chemistry Laboratories Through the Use of a Professional Scientific Graphing Program*", co-authored with David Gingrich; \$1000.

Jaime Martell *curriculum vitae*

National Center for Supercomputing Applications Startup Award (07/00-06/01) "*Density Functional Theory Studies on the Asymmetric Alkylation of  $\beta$ -Keto Esters*"; 4000 SGI Origin 2000 hours.

SUNY Potsdam Mini-Grant, (1999-2000) "*Computational Study of the Elimination of Water from Ethanol*"; \$500.

North Carolina Supercomputing Center Campus Visualization Initiative (1999-2001) "*Visualization and HPC as Tools for Undergraduate Research and Curriculum Enhancement*"; Indefinite loan (minimum three years) of an SGI O2 workstation, visualization software (AVS and Unichem), training and support (approximate value \$25,000).

North Carolina Supercomputing Center Allocation Award (09/98-10/99) "*Ab Initio Investigations of the Nature of Transition States for Unimolecular 1,1- and 1,2-Dehydrohalogenations of Haloalkanes*"; 25 T90 Cray and 100 Cluster hours.

North Carolina Supercomputing Center Allocation Award (03/99-02/00) "*Unimolecular Kinetics of Haloalkanes, Haloalcohols and Haloethers*"; 245 T90 Cray and 5,620 SGI Origin hours.

### UNIVERSITY SERVICE WORK SUNY Potsdam

- |                           |  |
|---------------------------|--|
| Sept. 2000 –<br>Aug. 2002 | Chemistry department representative to Faculty Senate.                                       |
| Oct. 2000 -<br>Aug. 2002  | Faculty Senate representative to Teaching and Learning with Technology Roundtable.           |
| April 2001 -<br>May 2003  | Faculty advisor to Chemistry Club.   |
| Aug. 2001 -<br>May 2002   | Member of faculty group designing new major in Environmental Studies                         |
| Oct. 2001 -<br>May 2002   | Advisory Council for Environmental Technician Program,<br>St. Lawrence College, Cornwall, ON |
| Oct. 2001 -<br>June 2002  | At-large member of Arts & Sciences Council.  |

### **Cape Breton University**

July 2006 – June 2008	Recording Secretary of School of Science and Technology
July 2006 – June 2007	Chemistry department representative to Academic Council
Sept. 2006 – June 2007	Teaching and Learning Committee
Sept. 2006 -	Chemistry Honours Thesis Committee
Jan. 2007 -	CBUFA Publicity Committee
Sept. 2007 – Aug. 2008	Research Committee of Senate
February 2008 – June 2009	Recording Secretary of Department of Chemistry
June 2008 -	Research Appeals Board
July 2008 – January 2010	Member-at-Large, CBUFA Executive
July 2008 - June 2009	Vice Chair of School of Science and Technology
Feb. 2009	Travel Policies and Procedures Working Group
March 2009 - January 2010	CBUFA-CBU Association-Employer Committee
July 2009 -	Vice Chair of Department of Chemistry
July 2009 – June 2010	Chair of School of Science and Technology
Sept. 2010 -	Research Assistance Committee
Jan. 2011 -	Chemistry Curriculum Committee

### **OTHER ACADEMIC EXPERIENCE**

#### Service at Scientific Conferences

Session chair and judge of graduate student talks, 80<sup>th</sup> Canadian Society for Chemistry Conference and Exhibition, June, 1997, Windsor, Ont.

Chair of judging of undergraduate student talks, 6<sup>th</sup> Atlantic Theoretical Chemistry Symposium, August 2006, Antigonish, NS.

Jaime Martell *curriculum vitae*

Session chair, 8<sup>th</sup> Atlantic Theoretical Chemistry Symposium, August, 2007, St. John's, NL.

Judge of graduate student posters in Physical Chemistry Division, 91st Canadian Chemistry Conference and Exhibition, May 2008, Edmonton, AB.

**Organizer, 9<sup>th</sup> Atlantic Theoretical Chemistry Symposium, August, 2008, Sydney, NS.**

Session chair, 10<sup>th</sup> Atlantic Theoretical Chemistry Symposium, July 2009, Fredericton, NB.

Chair of Poster Session, Coordinator of Poster Judging, 7<sup>th</sup> Canadian Computational Chemistry Conference, July 2009, Halifax, NS.

Session chair and judge of student talks, 12<sup>th</sup> Atlantic Theoretical Chemistry Symposium, August, 2011, Charlottetown, PEI.

HONOURS THESES EXAMINED (Supervisor's name in parentheses)

Scott Jaspers-Fayer (Dale Keefe) 2010/11.

Cara Andrews (Dale Keefe) 2010/11.

Zuzana Istvankova (Dale Keefe), 2009/10.

Kristen MacDonald (Matthias Bierensiel), 2008/09.

Janet Pickup (Dale Keefe), 2008/09.

Merrill Isenor (Dale Keefe), 2006/07.

School Outreach Service

Wrote, proctored and graded Grade 9 Physical Science exam for 1998 North Central Arkansas Regional Mathematics and Science Competition.

Judged Junior High Chemistry for 1998 North Central Arkansas Regional Science Fair.

Served at the Annual High School Science Saturday, SUNY Potsdam, November 13, 1999, November 16, 2001.

Coordinated Chemistry Magic Show, Science and Technology Open House, Cape Breton University, November 5, 2005.

Judged Junior category projects, Cape Breton Regional Science Fair, March 26, 2008.

Judged Senior category projects, Cape Breton Regional Science Fair, March 25, 2009.

Judged Chemistry category projects, Cape Breton Regional Science Fair, March 30, 2010.

Presented at *Science Rendezvous*, Mayflower Mall, May 7, 2011.

#### Departmental Seminar Presentations

"Assessment of Basis Set and Functional Dependencies in Density Functional Theory: Canadian-Swedish Collaborations", June 12, 1996, Department of Physics, Stockholm University, Stockholm, Sweden.

"Assessment of Basis Set and Functional Dependencies in Density Functional Theory: Canadian-Swedish Collaborations", June 14, 1996, Department of Quantum Chemistry, Uppsala University, Uppsala, Sweden.

"Computational Studies of Halocarbon Reactions", February 26, 1998, Department of Chemistry, Lyon College, Batesville, AR.

"Computational Studies of Halocarbon Reactions: Past, Present, and Future", December 2, 1998, Department of Chemistry, UNC Asheville.

"Computational Studies of Halocarbon Reactions", February 22, 2000, Department of Chemistry, SUNY Potsdam, Potsdam, NY.

"Computational Studies of Some Atmospherically Significant (or Not) Reactions", March 20, 2009, Saint Mary's University, Halifax, NS.

#### Peer Reviewing

Refereed manuscripts for the following journals:

- Journal of the American Chemical Society (1)
- Journal of Physical Chemistry (3)
- Canadian Journal of Chemistry (7)
- Molecular Physics (1)
- Acta Chemica Scandinavica (1)
- Journal of Molecular Spectroscopy- THEOCHEM (11)
- Computational and Theoretical Chemistry (3)

Jaime Martell *curriculum vitae*

Chapter review for:

*Chemistry: A Molecular Approach*, by Nivaldo J. Tro  
*An Introduction to Physical Chemistry*, by William M. Davis

### **STUDENT AND PROFESSIONAL ASSOCIATIONS**

Saint Mary's University Chemistry Society	Vice-President, 1988-89 Treasurer, 1990-91 Departmental Representative, Summer 1989, 1990-91
Dalhousie Chemistry Graduate Students Society	Graduate Student Seminar Coordinator, 1991-92 Safety Committee Representative, 1992-94
Canadian Society for Chemistry	Member since 1990
Chemical Institute of Canada Maritimes Local	Treasurer, 2008-2011
Computational Chemistry Institute of ACENet	Treasurer, 2008-2011