

# CV of Jeffery Dahn, Ph.D., FRSC

## Business Address

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## Personal Information

Birthdate: Jan. 9, 1957  
Citizenship: Canadian  
Marital Status: Separated, 3 children

## Education

B.Sc. Honours Physics, Dalhousie University, 1978  
M.Sc., Physics, University of B.C., 1980  
PhD., Physics, University of B.C., 1982

## Employment History

1982-1983	Research Associate, Solid State Chemistry, NRC, Ottawa
1983-1985	Member of Permanent Scientific Staff, Solid State Chemistry, NRC, Ottawa
1985-1987	Project Leader for Materials Science, Moli Energy Ltd., Burnaby, B.C.
1987-1990	Director of Research, Moli Energy Ltd., Burnaby, B.C.
1990-1994	Associate Professor of Physics, Simon Fraser University, Burnaby, B.C.
1994-1996	Professor of Physics, Simon Fraser University, Burnaby, B.C.
1996-2003	NSERC/3M Canada Inc. Industrial Research Chair, Professor of Physics and Professor of Chemistry, Dalhousie University, Halifax, N.S., Canada.
2003-present	NSERC/3M Canada Inc. Industrial Research Chair, Canada Research Chair in Materials for Batteries and Fuel Cells Professor of Physics and Professor of Chemistry, Dalhousie University, Halifax, N.S., Canada

## Awards

1978-1982	NSERC Postgraduate Scholarship
1987	Prize for Innovative Physics from the Division of Industrial and Applied Physics, Canadian Association of Physicists
1993	W. Lash Miller Award, Canadian Section of the Electrochemical Society
1994	SFU Excellence in Teaching Award
1995	International Battery Materials Association (IBA) Research Award
1995	Honorable Mention, NSERC/Conference Board of Canada University-Industry Synergy Award for SFU-Moli Energy (1990) Ltd. collaborative efforts.
1995	Ranked 8th world-wide for impact of publications in the area of Materials Science between 1990 and 1995 by "Science Watch". No other Canadian and no other electrochemical researcher was ranked in the top 25.
1996	Herzberg Medal, Canadian Association of Physicists (awarded to a physicist under 40 years old for career achievement)
1996	Battery Division Research Award, The Electrochemical Society
1996	British Columbia Science Council Gold Medal for "Solutions through Research"
2000	Appointed associate of the Canadian Institute for Advanced Research Nanoelectronics program
2001	Elected a Fellow of the Royal Society of Canada
2003	NSERC University/Industry Synergy Award
2004	Faculty of Science Teaching Award, Dalhousie University

## Selected Accomplishments

- Maintain one of the largest university laboratories in the world devoted to studies of materials for advanced batteries and fuel cells.
- Helped pioneer the development of the lithium-ion battery.
- The world leader in the development and understanding of carbonaceous materials for use in lithium-ion batteries.
- Over 310 publications in refereed journals and 46 separate inventions with associated issued patents and patents pending.
- Ranked 8th world-wide for impact of publications in the area of Materials Science between 1990 and 1995 by "Science Watch". No other Canadian and no other electrochemical researcher was ranked in the top 25. Presently (Sept. 2004) one of only eight Canadian Materials Scientists or Physicists to be included in ISI's [highly cited author list](#).

## Consultant for the following companies

3M Co, 3M Canada Co., Medtronic. Have also consulted in the past for Moli Energy (1990) Ltd., NEC/Moli Energy (Canada) Ltd, Columbian Chemicals, Acheson Colloids, Rayovac, Intel, FMC Corp., BP Amoco and Polystor.

Have acted as an expert witness for Exide, Toshiba America, BYD America and NTT.

## Graduate Students and Postdoctoral Fellows Supervised

Table 1 outlines those persons trained in the last 14 years. Where known, the present position of the person is given.

Table 1.

Person	Joined Group	Position when Joined Group	Completed Program and Date	Current Position	Scholarship Support
Ulrich Von Sacken	1987	NSERC IPDF at Moli Energy	PDF, 1989	General Manager of Research and Development at E-One/Moli Energy, Maple Ridge, B.C.	NSERC IPDF
Neal Golovin	1989	NSERC IPDF at Moli Energy	PDF, 1990	Scientist, AER Energy, Atlanta	NSERC IPDF
George Thomas	1989	BCSC IPDF at Moli Energy	PDF, 1990	Scientist at Motorola, Ft. Lauderdale, Florida	BSCS IPDF
Qiming Zhong	1990	Ph.D. student (K. Colbow) and Post-doc at SFU	PDF, 1992	Scientist at E-One/Moli Energy, Maple Ridge, B.C.	
Michelle Baudais	1990	M.Sc. student	M.Sc., 1993	Unknown	
Hang Shi	1991	Ph.D.	Ph.D., 1993	Battery Consultant, China	
Jan Reimers	1991	NSERC PDF	PDF, 1993	Manager, Materials Science, E-One/Moli Energy, Maple Ridge, B.C.	NSERC PDF
W.J. Weydanz	1992	M.Sc. Student	M.Sc. 1994	Scientist, Sanyo, Germany	

Wu Li	1990	M.Sc. Student	Ph.D., 1994	Scientist, IFIRE, Toronto	
Meijie Zhang	1994	PDF	PDF, 1996	Battery Scientist for A123 Systems, Boston	
Simon Xue	1994	PDF	PDF, 1995	Battery Scientist for A123 Systems, Boston	
Immo Koetschau	1994	M.Sc. Student	M.Sc., 1997	Unknown	NSERC PGSA
Brian Way	1993	M.Sc. Student	Ph. D. 1996	R+D project manager, NEC/Moli Energy, Vancouver	NSERC PGSA
Alf Wilson	1993	M.Sc. Student	Ph. D. 1997	Research Scientist, NEC/Moli Energy, Vancouver, now unknown	BCSC GREAT
Tao Zheng	1993	Ph.D.. Student	Ph.D. 1996	A-123 systems, Boston Mass. LiFePO4 based batteries	BCSC GREAT
Weibing Xing	1995	RA	RA, 1997	Staff Scientist, Wilson Greatbatch, Buffalo	None
Oliver Schilling	1992	Ph.D. Student	Ph.D. 1997	Research Scientist, Chemetals, Baltimore.	None
Ed Buiel	1993	M.Sc. Student	Ph.D. 1998	Research Director, Axion Power, Buffalo	None
Monique Richard	1994	M.Sc. Student	Ph.D. 1998	Scientific Staff, Toyota USA, Michigan	None
Mark Obrovac	1995	M.Sc. Student	Ph.D, 2001	Staff Scientist, 3M, St. Paul, MN	NSERC PGSA+B, Killam
Ian Courtney	1995	M.Sc. Student	Ph.D. 1998	Project Manager, Boston Scientific, Minnesota	NSERC IPGS
Ou Mao	1997 (January)	RA	RA, 1998	Scientific Staff, Duracell, Boston, MA.	FCAR
David Stevens	1997 (January)	Scientist Comalco Ltd. Ph.D. Student (Chemistry)	Ph.D. 2000	Research Associate, Dalhousie	Comalco
Jennifer Seel	1997 (May)	Ph.D. Student	Ph.D. 2004	Math/Physics Prof at Lambton College in Sarnia, Ontario	None

Luc Beaulieu	1997 (Sept.)	M.Sc. Student	Ph.D. 2002	Faculty, Physics Dept., Memorial	NSERC IPGS
Jason Meuller- Neuhaus	1997 (Sept.)	M.Sc. Student	M.Sc. Jan. 2000	Lawyer, Ottawa	NSERC PGSA
Dean McNeil	1997 (Sept.)	M.Sc. Student (Chemistry)	Ph.D. 2001	Staff Scientist, Duracell, Boston	NSERC PGSA
Jens Paulsen	1997 (Sept.)	RA	RA, 1999	Research Scientist, LG Chemical, Korea	None
Dominique Larcher	1998 (March)	PDF	PDF, 1999	Faculty, U. Picardie, France	None
Aaron Davis	1998 (Sept.)	M.Sc. Student	M.Sc. 2000	Ph.D. Student, Geophysics, RMIT, Australia	NSERC PGSA
Tim Hatchard	1999 (May)	M.Sc. Student	Ph.D. 2004	PDF at University of Alberta with Joel Haber	NSERC PGSA, PGSB, Killam
Shane Beattie	1999 (Sept.)	M.Sc. Student	Ph.D. 2004	Research Scientist, Tekion Solutions, Burnaby, B.C., Now PDF at U. Picardie, France	None
Zhonghua Lu	1999 (Nov.)	PDF	PDF (2002)	Staff Scientist, 3M Co., St. Paul, MN	None
Kevin Hewitt	2000 (Feb.)	PDF	PDF, 2001	Faculty, Dalhousie Univ.	None
Arman Bonakdarpour	2000 (Sept)	M.Sc. Student	M.Sc. 2002	Ph.D Student	NSERC PGSB, Killam
Zhonghai Chen	2000 (Sept.)	Ph.D. Student (Chemistry)	Ph.D. March 2004	Scientific Staff, Argonne National Lab, USA	None
Zhaohui Chen	2000 (Sept.)	Ph.D. Student	Ph.D. Aug. 2003	Research Scientist, Umicore, Fort Saskatchewan, Alberta	None
Hubert Fortier	2001 (January)	M.Sc. Student (Chemistry)	M.Sc. Aug. 2003	Research Scientist, Imperial Oil, Sarnia, Ont.	NSERC IPGS with 3M Canada, Killam

Mike Fleischauer	2001 (Sept.)	M.Sc. Student	Ph.D. Dec 2005	Post-Doc at University of Alberta	NSERC PGSA, PGSB, Killam, CGS
Severine Jouanneau	2001 (Dec.)	PDF (from Nantes)	March 2003	Staff Scientist, CEA - France	None
Junwei Jiang	2002 (May)	Ph.D. Student (Chemistry)	May 2005	Staff Scientist, 3M, St. Paul MN	None
Adam Timmons	2002 (July)	M.Sc. Student	Ph.D. Oct 2007	Staff Scientist, General Motors, Warren MI, USA	NSERC PGSA, PGSB
Toni Abdo	2003 (Jan)	M.Sc. Student	Did not complete	Unknown	NSERC PGSA
Jing Li	2003 (Sept.)	M.Sc. (Chemistry)	Not completed yet	Ph.D. Student	None
Lee Moshurchak	2003 (Sept.)	M.Sc. (Chemistry)	Not completed yet	Ph.D. Student	NSERC CGSD
Claudia Buhrmester	March 2004	PDF (from TU Darmstadt)	July 2005	Part-time researcher (from Germany) with Dahn group	None
Thorsten Buhrmester	March 2004	PDF (from TU Darmstadt)	July 2005	Scientific Staff member, Chemetall, Frankfurt, Germany	None
Brad Easton	March 2004	PDF (from Memorial)	June 2006	Faculty member, University of Ontario Institute of Technology	NSERC PDF
Vincent Chevrier	Sept. 2004	M.Sc. Student	Completed M.Sc. 2006	Ph.D. Student	NSERC PGSA, CGSD, Killam
Philippe Westreich	Dec. 2004	PDF (from SFU)	Not completed yet	PDF	None
Greg Rockwell	Sept. 2005	Ph.D. Student	Not completed yet	Ph.D. Student	NSERC Julie Payette, CGSD, Killam

Gary Liu	Sept 2005	M. Sc. Student	Not completed yet	M.Sc. Student	None
Andrew Todd	Sept. 2005	M.Sc. Student	Not completed yet	M.Sc. Student	None
Peng Liao	Sept. 2005	M.Sc. Student	Not completed yet	M.Sc. Student	None
Garett Nickelo	Sept. 2005	M.Sc. (Chemistry)	Did not complete	Unknown	None
Yadong Wang	August 2005	PDF (From Wuhan)	July 2007	PDF	None
Ruizhi Yang	Sept. 2005	PDF (from Chinese Academy of Sciences)	Not Completed Yet	PDF	None
Ye Tian May	2006	M.Sc. Student	Not Completed yet	M.Sc. Student	None
Pierre Ferguson	Sept. 2006	M.Sc. Student	Not Completed yet	M.Sc. Student	None
Trevor Byrne	Sept. 2006	M.Sc. Student	Not Completed yet	M.Sc. Student	None
Jock Smith	Sept. 2006	M.Sc. Student	Not Completed yet	M.Sc. Student	None
Andrew Van Bommel	Sept. 2006	Ph.D. Chemistry	Not Completed yet	Ph.D. Student	NSERC PGSD
Rita Garsuch	Oct 2006	PDF (from Leipzig)	Not Completed yet	PDF	None
Arnd Garsuch	Oct 2006	PDF (from Leipzig)	Not Completed yet	PDF	None
Patrick Bonnick	Sept. 2007	M.Sc. Student	Not Completed yet	M.Sc. Student	NSERC PGSM

Aaron Rowe	Sept. 2007	M.Sc. Student Chemistry	Not Completed yet	M.Sc. Student	None
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### Selected Invited lectures given by Jeff Dahn (1993 - onward)

1. J.R. Dahn, "Research Directions for Li-ion Batteries", Argonne National Laboratories, Jan. 21, 1993.
2. J.R. Dahn, "Carbons and Graphites as Anodes for Lithium Ion Batteries", The Science of Advanced Batteries, Cleveland, Ohio, Nov. 1993.
3. J.R. Dahn, "Carbons and Graphites for Lithium Ion Batteries", Oak Ridge National Labs, February, 1994
4. J.R. Dahn, "Lithium-Ion Batteries - Opportunities for Future Research", General Motors Research, Detroit, MI, Feb. 1994
5. J.R. Dahn, "Electrode Materials for Advanced Li-ion Batteries", Kerr-McGee Corp. Oklahoma City, OK., January 1994.
6. J.R. Dahn, "Lithium-Ion Batteries - Opportunities for Future Research, Electrochemistry Gordon Conference, Ventura, California, January 1994.
7. J.R. Dahn, "In-Situ X-ray Diffraction Studies of Lithium Intercalation Compounds", Solid State Ionics Gordon Conference, New Hampshire, July 1994
8. J.R. Dahn, "Designing, Making, and Understanding High Capacity Carbons for use as Anodes in Lithium-Ion Cells", Electrochemical Society Fall Meeting, Miami, FL, Oct 1994.
9. J.R. Dahn, "Designing, Making, and Understanding High Capacity Carbons for Li-ion Batteries", **Plenary Lecture**, American Carbon Society, San Diego, CA, July 20, 1995
10. J.R. Dahn, "Special 3 Lecture Symposium for the International Battery Materials Association on Carbons and Graphites for Li-ion Batteries", Tokyo, Japan Feb. 27,28 1995.
11. J.R. Dahn, "Carbons and Graphites for Li-ion Batteries", US Naval Surface Warfare Center, Maryland, Jan 18., 1995
12. J.R. Dahn, "New Materials for Better Batteries", McMaster University, Jan. 1995.
13. J.R. Dahn, "New Materials for Better Batteries", 3M Corp., St. Paul, MN, Nov. 7, 1995
14. J.R. Dahn, "Some Alternatives to Carbon as Anodes in Li-Ion Batteries" - **Research Award Address**, Electrochemical Society, San Antonio, Oct. 7, 1996
15. J.R. Dahn, "Carbons for Li-ion Batteries", CIC Congress, St. John's, NF, June 24, 1996.
16. J.R. Dahn, "A Comprehensive Study of Carbons prepared from Natural Precursors for Li-ion Battery Applications", 8<sup>th</sup> International Meeting on Li-Ion Batteries, Nagoya, Japan, June 20, 1996 (presented by A.M. Wilson)
17. J.R. Dahn, "The Physicists Battery", **Herzberg Medal Lecture**, Canadian Association of Physicists, Ottawa, June 18, 1996.
18. J.R. Dahn, "Photoelectron Spectroscopy can lead to Better Understanding of Materials for Li-ion Batteries", CIC Congress, Windsor, Ont., June 1997.



19. J.R. Dahn, "Alternatives to carbon as Anodes in Li-Ion Batteries", CIC Congress, Windsor, Ont. June 1997.
20. J.R. Dahn, "Key Factors Controlling the Reversibility of the Reaction of  $\text{Sn}_2\text{BPO}_6$  and  $\text{SnO}_2$  with Lithium", Electrochemical Society Fall Meeting, Paris, France, Sept. 1997.
21. J.R. Dahn, "Tin-containing materials as anodes for Li-ion cells", 9<sup>th</sup> International Meeting on Li Batteries, Edinburgh, Scotland, July 12-17, 1998.
22. J.R. Dahn, "Quantum leaps in battery technology," CAP Congress, Waterloo, Ontario June 1998.
23. J.R. Dahn, "Batteries in and around us", **Canadian Utilities Distinguished Lectureship**, University of Alberta, February 27, 1998.
24. J.R. Dahn, "New materials for better batteries", California Institute of Technology, February 24, 1999.
25. J.R. Dahn, "Doubling the energy of the Li-ion battery", ECS Local Section, Minneapolis, MN, Feb.4, 1999.
26. J.R. Dahn, "Layered Li-Mn-oxides with unusual oxygen stacking", 3<sup>rd</sup> International Meeting on New Materials for Electrochemical Systems, Montreal, July 4-7, 1999.
27. J.R. Dahn, "New materials for better batteries", McGill University, September 17, 1999.
28. (28-32) J.R. Dahn, "Li-Ion Battery Tutorial and Update" (90 minute invited yearly lecture), POWER 96, POWER 97, POWER 98, POWER 99, POWER 2000, POWER 2001 (each October of 1996-2001), Santa Clara, Ca.
33. J.R. Dahn, "Opportunities for Combinatorial Chemistry in Li-ion Battery Materials", Symyx Corporation, Santa Clara, Ca., Oct. 1999
34. (34-36) J.R. Dahn, "Combinatorial Materials Science", Acadia University, University of PEI and St. Francis Xavier Univ., Feb. 2000
37. J.R. Dahn, "Understanding Thermal Runaway in Li-ion Batteries", 10<sup>th</sup> International Meeting on Li Batteries, Como, Italy, June 2000.
38. J.R. Dahn, " New Layered Cathode Materials  $\text{Li}[\text{Ni}_x\text{Li}_{(1/3-2x/3)}\text{Mn}_{(2/3-x/3)}]\text{O}_2$  and  $\text{Li}[\text{Ni}_x\text{Co}_{1-2x}\text{Mn}_x]\text{O}_2$  for Lithium Ion Batteries", 42<sup>nd</sup> Battery Symposium in Japan, Tokyo, Nov., 2001.
39. J.R. Dahn, " New Layered Cathode Materials  $\text{Li}[\text{Ni}_x\text{Li}_{(1/3-2x/3)}\text{Mn}_{(2/3-x/3)}]\text{O}_2$  and  $\text{Li}[\text{Ni}_x\text{Co}_{1-2x}\text{Mn}_x]\text{O}_2$  for Lithium Ion Batteries" 11<sup>th</sup> International Meeting on Lithium Batteries, Monterey, California, June 23-28, 2002.
40. J.R. Dahn, "Lithium-Ion Battery Update and comments on Microfuel Cells", 20<sup>th</sup> International Seminar on Primary and Secondary Lithium Batteries, Ft. Lauderdale, Florida, March 2003.
41. David Stevens and Jeff Dahn, Possible Degradation Mechanisms for Carbon Supported Catalysts (Invited Oral Lecture) Fuel Cell Gordon Conference (Summer 2003).
42. Jeff Dahn  $\text{Li}[\text{Ni}_x\text{Co}_{1-2x}\text{Mn}_x]\text{O}_2$  and  $\text{Li}[\text{Ni}_x\text{Li}_{(1-2x)/3}\text{Mn}_{(2-x)/3}]\text{O}_2$  positive electrodes for Li-ion batteries (Invited Oral Lecture), Solid-State Studies of Ceramics Gordon Conference (Summer 2003)

43. J.R. Dahn, The "Drug-Store" Li-ion Battery - How do we get there? - 21st International Seminar on Primary and Secondary Lithium Batteries, Ft. Lauderdale, Florida, March 2004.
44. J.R. Dahn - Single Molecule Electronics in Lithium Ion Batteries - CIAR Nanoelectronics Meeting, Mt. Tremblant, Que., March 2004.
45. J.R. Dahn, , Design of Amorphous Alloy Electrodes for Li-ion Batteries: A Big Challenge, 12th International Meeting on Li-ion Batteries, Nara, Japan, June 2004.
46. J.R. Dahn, Combinatorial and High Throughput Materials Science Applied to Battery and Fuel Cell Problems, University of Southampton, March 2005.
47. J.R. Dahn, Combinatorial and High Throughput Materials Science Applied to Battery and Fuel Cell Problems, Medtronic Corporation Central Research Dept., Minneapolis, MN, USA Feb 2005.
48. J.R. Dahn, Chemical Overcharge and Overdischarge Protection for Lithium-ion Batteries with  $\text{LiFePO}_4$  Positive Electrodes, Toyota Technical Center, Ann Arbor, MI, USA, March 2005.
49. J.R. Dahn, Chemical Overcharge and Overdischarge Protection for Lithium-ion Batteries with  $\text{LiFePO}_4$  Positive Electrodes, 22nd International Battery Seminar and Exhibit, Fort Lauderdale, Florida, March 14-17 (2005).
50. J.R. Dahn, Development of Durable and High-Performance Electrocatalysts and Electrocatalyst Support Materials, Invited Lecture (#1164) at the Fall Meeting of the Electrochemical Society, Los Angeles, Oct 16-21, (2005).
51. J.R. Dahn, Studies of the 2,5 ditertbutyl 1,4 dimethoxybenzene Overcharge Shuttle in 18650-sized  $\text{LiFePO}_4$ /Graphite cells, Invited lecture (#217) at the Fall Meeting of the Electrochemical Society, Los Angeles, Oct 16-21, (2005).
52. J.R. Dahn, Combinatorial and High Throughput Studies of Amorphous Sn-M-C Negative Materials ( M= Co, Ti, V, Ni, Fe, Mn, Cu, Cr), 23rd International Battery Seminar and Exhibit, Fort Lauderdale, Florida, March 13-16 (2006).
53. J.R. Dahn, Invited Plenary Lecture: I. Additives for overcharge protection and II. The safety of cells with alloy negatives, 14th International Meeting on Li-ion Batteries, Biarritz, France, June 18-23, (2006).
54. J.R. Dahn, Invited Keynote Lecture: Combinatorial and High Throughput Studies of Amorphous Sn-M-C Negative Materials ( M= Co, Ti, V, Ni, Fe, Mn, Cu, Cr), International Society for Electrochemistry, Edinburgh, Scotland, August 27-31 (2006).
55. J.R. Dahn, Combinatorial and High Throughput Studies of Amorphous Sn-M-C Negative Materials ( M= Co, Ti, V, Ni, Fe, Mn, Cu, Cr), Electrochemical Society Fall meeting, Cancun, Mexico, Oct 29-Nov 3, (2006).
56. J.R. Dahn, Some Thoughts on Our Energy Future, Canadian Technology Leaders Seminar Series, Canadian Embassy, Washington, D.C., USA, Nov 14, (2006).
57. J.R. Dahn, Prospects for Si (only) electrodes for Li-ion batteries, 24th International Battery Seminar and Exhibit, Fort Lauderdale, Florida, March (2007).

58. J.R. Dahn, Combinatorial Studies of Li-ion battery electrode materials and PEM fuel cell catalysts, **Plenary Lecture**, International Society of Electrochemistry, Banff Alberta, Sept 9-14, (2007).

## Conference presentations (last 5 years)

Numerous invited and/or contributed papers were presented at the following conferences:

- Electrochemical Society Fall Meeting, San Antonio Texas, Oct. 1996
- IBA Meeting, Tuscon, Arizona, Oct. 1996
- POWER 96, Santa Clara, Oct 96
- CIC Meeting, Windsor, June 1997
- Carbon Conference, Pennsylvania, July 1997
- Electrochemical Society, Fall Meeting, Paris, Sept. 1997
- POWER 97, Santa Clara, Oct 97
- MRS meeting, Boston, Dec. 1997
- CAP Meeting, Waterloo, June 1998
- 9<sup>th</sup> International Meeting on Lithium Batteries, Edinburgh, July 1998
- POWER 98, Santa Clara, Oct 98
- Electrochemical Society, Fall Meeting, Boston, Nov. 1998.
- New Materials for Batteries and Fuel Cells, Montreal, July 1999
- Carbon Conference, Charleston SC, July 1999
- POWER 99, Santa Clara, Oct 99
- Electrochemical Society, Fall Meeting, Honolulu, Oct. 1999
- 10<sup>th</sup> International Meeting on Lithium Batteries, Como, Italy, June 2000.
- Electrochemical Society, Fall Meeting, Phoenix, AZ, Oct. 2000
- POWER 2000, San Diego, Oct. 2000
- Electrochemical Society Fall Meeting, San Francisco, Ca, Sept. 2001
- 11<sup>th</sup> International Meeting on Lithium Batteries, Monterey, Ca, June 2002
- Gordon Conference on High Throughput Materials Science, New Hampshire, July 2002
- Electrochemical Society Fall Meeting, Salt Lake City, Utah, Oct. 2002.
- Gordon Conference on Solid State Ceramics, August 2003.
- Fuel Cell Gordon Conference, Rhode Island, June 2003.
- Electrochemical Society Fall Meeting, Orlando, Florida, Oct. 2003.
- Materials Research Society, Boston, Mass., Dec. 2003.
- Connecticut Fuel Cell Conference, Storrs, Conn., March 2004.
- 12<sup>th</sup> International Meeting on Lithium Batteries, Nara, Japan, June 2004.
- Electrochemical Society Fall Meeting, Honolulu, Hawaii, Oct. 2004.
- Lithium Battery Discussion, Arcachon, France, May 23-27, 2005.
- Carbon Conference, Korea, June (2005).
- Electrochemical Society Fall Meeting, Los Angeles, Oct 16-21, (2005).
- Canadian Chemical Society, Halifax, N.S., May 27-30, (2006).

- 13th International Meeting on Lithium Batteries, Biarritz, France, June 18-23 (2006).
- Electrochemical Society Fall Meeting, Cancun, Mexico, Oct 29-Nov. 3 (2006).

### Professional affiliations and external committees (last 5 years)

- British Columbia Science Council Energy Grant Selection Panel (1992-1996)
- Member of the Electrochemical Society
- Battery Division Executive Committee, Member (1998-2001)
- Member of the American Physical Society
- NSERC GSC 28 grant selection committee (1999-2001)
- Chair - NSERC GSC 28, 2000-2001.
- Member of the NSERC University-Industry Advisory Panel, 2003-2005.