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Canadian Society for Chemistry | **For Our Future**

Chemists, chemical engineers and chemical technologists are society's problem solvers; from advances in health-care and pharmaceuticals, to energy, the environment, food and water, they find solutions for our future.

The Canadian Society for Chemistry (CSC) is one of three Constituent Societies of the Chemical Institute of Canada (CIC), which is committed to advancing the chemical sciences and engineering. The other two constituent societies are the Canadian Society for Chemical Engineering and the Canadian Society for Chemical Technology.

CIC serves its 5000-plus members and achieves its mission by organizing Canada's two premier annual conferences for the chemical sciences and engineering; publishing *ACCN*, the *Canadian Chemical News*, and *The Canadian Journal of Chemical Engineering*; conferring awards; overseeing a network of Local Sections, Student Chapters and Subject Divisions; lobbying the government on issues of research funding and regulations; accrediting university programs and certifying chemical technologists; and reaching out to the public to advance their understanding and appreciation of the chemical sciences and engineering.

As well as enjoying several benefits such as discounted rates for our conferences and a complimentary subscription to our magazine, members of the constituent societies of the CIC become part of Canada's diverse and prestigious community of chemical scientists, engineers and technologists.

To find out more visit www.cheminst.ca.

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Final Program Book

This program book is produced by the Canadian Society for Chemistry. It provides a general overview of the conference at the time of its printing. Please note that last-minute changes are unavoidable and will be indicated at the session room.

Upcoming CSC Conferences

2013

Quebec City, Que.
May 26-30

2014

Vancouver, B.C.
June 1-5

2015

Ottawa, Ont.
June 13-17

Canadian Society for Chemistry

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“The Chemistry and Character of Athabasca Bitumen and its Products”

Phil Heaton, P. Chem
General Manager, Oil Sands and Upgrading

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Organization	4
Welcome Messages	6
Sponsors	9
Energy Futures Symposium	10
Plenary Lecture	11
General Information	13
Meeting and Event Schedule	14
Special Events	18
CIC Medal Lecture	21
Leaders' Forums	23
Award Lectures	26
CIC Fellows 2012	31
Presentation Information	33
Student Competitions	35
Exhibition	36
Symposia	39
Scientific Program Schedule	42
Author Index	107
CTCC Floor Plan	131

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Karen Burke

Message from the CSC President



On behalf of the Canadian Society for Chemistry, I welcome you to the 95th Canadian Chemistry Conference and Exhibition here in Calgary, Alta. This, the largest annual event organized by the CSC, is a showcase for outstanding science by researchers from Canada and around the world.

This year's theme is "*Energizing Chemistry*," a concept that is of profound global importance. As we have moved from historic approaches to energy, such as coal-based systems, to petroleum and other options, chemists have always played a key role in discovering and developing new solutions to help address our energy needs. One of this year's plenary lectures features Thomas J. Meyer, University of North Carolina at Chapel Hill, in the Energy Futures Symposium, speaking on *Finding the Way to Solar Fuels*, which provides a perfect example of the part that chemistry and chemists can play in solving these issues. As the world's population continues to grow at a staggering rate, our need for energy will only increase, which is why this theme is so critical to us all.

Tuesday evening sees the arrival of the CIC and CSC Awards Banquet, at which exceptional chemists are honoured for their achievements in research. Keep your eye out for the award winners throughout the course of the conference, and offer your congratulations!

During the week, you may find CSC Staff and Executive in the halls of the convention centre. Please say hello, and feel free to ask us questions about the Society and its offerings. Consider becoming more involved in the CSC. There are many options to actively participate in the Society, both locally and nationally. And a special note to our younger chemists: the CSC is a great forum in which to build new contacts, to network, and to hear about opportunities for your career. The CSC is your "home society," whether your career path leads you to academia, government, or industry.

I would like to acknowledge and thank those people without whom this conference would not be possible: the Organizing Committee led by Warren Piers and his colleagues from the University of Calgary, the many tireless and dedicated volunteers, and the valued support of our corporate sponsors and exhibitors.

I encourage each of you to make the most of this week, to learn, discuss, and debate the latest in evolving science. Equally important, be sure to take time to meet new people, develop fresh partnerships, and finally, reconnect with old friends. Get caught in the "energy" — make this CSC conference your best yet!

K Burke



**Warren Piers, FCIC**

Message from the Conference Chair



On behalf of my colleagues and our generous sponsors, I'm delighted to welcome you all to Calgary, gateway to the Canadian Rockies and energy capital of Canada, for the 95th Canadian Chemistry Conference and Exhibition — CSC 2012.

Following last year's very successful conference in Montréal is a tough task, but the momentum that has built from that, and the activities of the International Year of Chemistry, makes this an exciting time for chemists in Canada and around the world. As you will see from the program, chemistry remains a disciplinary force in Canada, which is good news, because society needs chemists more than ever to help address an ever-increasing array of challenges in medicine, environment, technology — and energy.

It has been twelve years since the CSC conference was last held in Cowtown and the city has seen tremendous growth by most metrics — population, economic, cultural diversity — in those dozen years. This growth has largely been fueled by the energy industry and because of Calgary's central position in Canada's emergence as a global energy superpower, we have chosen "*Energizing Chemistry*" as our theme. Woven throughout the broad-based scientific and technical program are several energy-focused symposia in a variety of divisions. You will find these highlighted in green boxes in the scientific program schedule inside. In addition, the program will consist of cutting edge chemical research in and across all disciplines, and a roster of award lectures by those being honoured this year. This includes Raymond Andersen of The University of British Columbia who will get the conference started with his CIC Medal address before the opening reception.

We are also very excited to hold the first Young Investigator Symposium for outstanding graduate students doing energy related research on Tuesday afternoon. Playfully called the "Energy Futures" symposium, this session will showcase research leaders of tomorrow and be capped with a conference plenary lecture by Thomas J. Meyer, Arey Distinguished Professor of Chemistry at the University of North Carolina. Mark your conference calendars for this exciting event!

So, as the 95th installment of the Canadian Chemistry Conference and Exhibition begins, I encourage you to lean back and enjoy the ride. It promises to be a scientifically and socially amazing conference, set in vibrant downtown Calgary. My colleagues and I are eager to show you some western hospitality and hope that your experience at CSC 2012 is a memorable and stimulating one.

Warren R





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Take advantage of your membership at the CSC

- Keep up to date with the latest Canadian chemical innovations by reading *ACCN*, the *Canadian Chemical News*.
- Connect with industry, academia and government both locally and nationally.
- Receive significant discounts to conferences.
- Attend professional development courses.
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- **Utilize our career services**>
- Have your achievements recognized through distinguished awards and scholarships.
- Be part of a strong community of chemists in Canada. The CSC advocates on your behalf and has several outreach programs to increase public awareness of chemistry.
- Receive significant discounts on home, auto, life, accident protection and disability insurance through the CSC's group rate programs.



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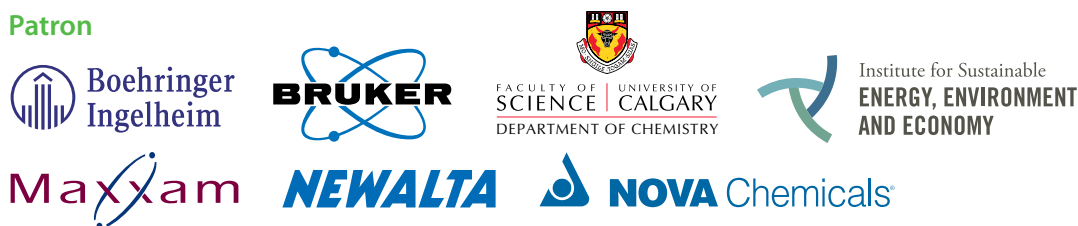
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Tuesday, May 29

13:40-16:40

Calgary TELUS Convention Centre, Macleod D

A multidisciplinary symposium for graduate students involved in energy related chemical research in Canada.

13:40 Keynote Lecture: David Layzell, FRSC, University of Calgary

Professor and Executive Director, Institute for Sustainable Energy, Environment and Economy
Transforming Canada's Energy System: Challenges and Opportunities

14:00 Ashlee A. Jahnke, University of Toronto

Polytellurophenes to Bridge the Gap between Organic and Inorganic Semiconductors

14:20 Christian Diaz-Urrutia, University of Ottawa

Selective C-C and C-O Bond Cleavage in Lignin Models: First Steps to Obtaining Valuable Aromatic Chemicals from Lignocellulose

14:40 Brandon Greer, University of Manitoba

Detection of Phase Heterogeneity in Complex Model Nuclear Waste Glasses Using Solid-State NMR

15:00 Brandy Kinkad, Simon Fraser University

Ordered Porous Nanostructured Thin Films of Platinum for Oxygen Reduction Reaction Electrocatalysis

15:20 Break

15:40 Raymond Dinshaw, University of Toronto

Ultrafast Energy Transfer Dynamics in Light-Harvesting Proteins — Lessons from Nature

16:00 Kevin Shopsowitz, University of British Columbia

Chiral Mesoporous Carbon Derived from Nanocrystalline Cellulose

16:20 Jeffrey Camacho-Bunquin, University of Alberta

Low-coordinate, Homoleptic Clusters of Cobalt and Nickel. High Reactivity Base Metal Catalysts for Hydrodesulfurization and C-O Bond Hydrogenolysis

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Tuesday, May 29

17:00-18:00

Calgary TELUS Convention Centre, Exhibition Hall E

**Thomas J. Meyer****University of North Carolina at Chapel Hill**

This plenary lecture will be presented as part of the Energy Futures Symposium.

Finding the Way to Solar Fuels

Concerns about long-term supply of hydrocarbon fuels (even in Canada) and their environmental impact are creating an impetus for a new energy future. The sun may be the ultimate renewable energy source but it has limits. It will require energy storage on unprecedented, massive scales with daytime generation of solar fuels for storage and later use for nighttime power generation.

Target solar fuel reactions are water splitting into hydrogen and oxygen and CO_2 reduction to CO, other oxygenates, or hydrocarbons. Carrying out these multiple electron/multiple proton reactions with single photon excitation poses a considerable challenge. Natural photosynthesis provides a model but its approximately 1 per cent efficiency for biomass production is too inefficient for solar fuel applications. Multiple approaches are under investigation from solar thermal to direct band gap excitation of semiconductors. A promising approach, based on molecules and molecular level phenomena, is Dye Sensitized Photoelectrosynthesis Cells (DSPECs). They function like dye sensitized solar cells (DSSCs) with redox equivalents produced by molecular-level excitation and injection into wide band gap semiconductors. However, they are used to drive physically separated solar fuel half reactions instead of a photocurrent. DSPECs are based on a “modular approach” with separate components for light absorption/injection, electron/proton transfer through free energy gradients, and catalyst activation and reactivity, studied separately and assembled in integrated structures. Significant progress has been made on the underlying catalytic reactions for water oxidation and CO_2 reduction and gaining an understanding of the dynamics of injection and back electron transfer under conditions appropriate for DSPEC water splitting.

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Même après plus de 125 ans d'expérience, notre curiosité reste intacte, pour le bien des générations futures.

Boehringer Ingelheim est toujours resté fidèle à son image d'entreprise indépendante à capitaux familiaux - aujourd'hui elle opère 145 filiales dans 50 pays. La recherche fait notre force et nous mesurons notre succès en tant que compagnie pharmaceutique par l'introduction continue de médicaments innovateurs. Avec plus de 42 000 employés à travers le monde et une réputation bâtie sur plus de 125 années d'expérience, nous nous dévouons constamment dans le but de contribuer à l'amélioration de la santé de tous.

Even with more than 125 years of experience, we remain intensely curious. For the sake of future generations.

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Language

English is the official language of the conference. No translation or simultaneous interpretation will be provided. French program books are available at registration.

Communication Devices

As a courtesy to speakers and other participants, all cellular phones, smart phones and pagers must be turned off before entering session rooms.

Photography, audio taping, video recording, digital taping or any other form of duplication is strictly prohibited in the session rooms and poster session areas.

Registration

The conference registration desk will be open:

Saturday, May 26 • 12:00–20:00

Sunday, May 27 to Tuesday, May 29 • 07:00–17:00

Wednesday, May 30 • 07:00–13:00

Location: Calgary TELUS Convention Centre, Exhibition Hall Prefunction

Please note registration will be held in Macleod Hall Foyer on Wednesday, May 30.

Name badges are mandatory to gain entry to all activities, both scientific and social, associated with the conference. Tickets for social events were included with name badges.

Scientific Program Schedule and Internet Access

The conference program can be found on page 42 and is also available on the conference website at www.csc2012.ca.

Wireless Internet access is available to all conference participants throughout the Convention Centre:

Username: Chemistry@CTCC

Password: chem13551

Speaker Ready Room

Authors are encouraged to visit the Speaker Ready Room to ensure that their presentation is compatible with the system supplied. The Speaker Ready Room will be open:

Saturday, May 26 • 12:00–19:00

Sunday, May 27 to Tuesday, May 29 • 07:00–17:30

Wednesday, May 30 • 07:00–13:30

Location: Calgary TELUS Convention Centre, Glen 208

Scientific Sessions

Scientific sessions will run:

Sunday, May 27 to Wednesday, May 30 • 08:00–17:40

Location: Calgary TELUS Convention Centre, throughout

Poster Sessions

Poster sessions will be held:

Sunday, May 27 to Tuesday, May 29 • 18:00–19:30

Location: Calgary TELUS Convention Centre, Exhibition Hall CD

Exhibition Hours and Location

The Exhibition will be held:

Saturday, May 26 • 19:30–21:30

Sunday, May 27 and Monday, May 28 • 09:30–19:30

Location: Calgary TELUS Convention Centre, Exhibition Hall CD

Coffee Breaks

Coffee breaks will be held:

Sunday, May 27 to Wednesday, May 30 •

10:00–10:20 and 15:40–16:00

Location: Calgary TELUS Convention Centre, Exhibition Hall CD

Please note that Tuesday's afternoon coffee break will be held at 16:40–17:00. Wednesday's coffee breaks will be held in Macleod Hall Foyer, CTCC.

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Safety

To make the most of your conference experience, the CSC management team would like to offer the following tips during your stay in Calgary.

- Avoid giving your room number to strangers, and take caution when revealing it that no outsiders overhear you;
- Be sure to note the nearest exits to your hotel room and in the conference centre in event of an emergency;
- Avoid wearing your badge in public to ensure the privacy of your name and other personal information.

Social Media

The official hashtag of the conference is #CSC2012.

Conference photos will be available on Flickr through the conference website, www.csc2012.ca.

Saturday, May 26, 2012

08:00–17:30	ACPA: Professional Ethics for Chemists	CTCC, Glen 201
08:00–14:30	CSC Board of Directors Meeting	Marriott, Kensington ABC
12:00–13:30	CSC Board of Directors Lunch	Marriott, Mount Royal
12:00–20:00	Registration	CTCC, Exhibition Hall Prefunction
13:00–17:00	NMR Workshop	CTCC, Chinook 4
14:00–17:00	Canadian Journal of Chemistry Editors / Editorial Board Meeting	Marriott, Kensington D
14:00–17:00	Canadian Council of University Chemistry Chairs (CCUCC)	CTCC, Glen 206
18:00–19:30	Conference Opening and CIC Medal Lecture	CTCC, Exhibition Hall E
19:30–21:30	Opening Reception	CTCC, Exhibition Hall CD
19:30–21:30	Exhibition	CTCC, Exhibition Hall CD
19:30–21:30	CIC and CSC Booth	CTCC, Exhibition Hall CD

Sunday, May 27, 2012

07:00–17:00	Registration	CTCC, Exhibition Hall Prefunction
08:00–12:20	AM Scientific Sessions	CTCC, throughout
08:00–12:00	CIC Board of Directors Meeting	Marriott, Kensington A
09:00–16:00	Canada's Professional Chemists Committee Meeting	Marriott, Inglewood
09:30–19:30	Exhibition	CTCC, Exhibition Hall CD
09:30–19:30	CIC and CSC Booth	CTCC, Exhibition Hall CD
12:20–13:40	Lunch Break	
12:30–13:30	Analytical Chemistry Division Executive Meeting	CTCC, TELUS 103
12:30–13:30	Biological and Medicinal Chemistry Division Executive Meeting	CTCC, TELUS 111
12:30–13:30	Chemical Education Division Executive Meeting	CTCC, TELUS 105
12:30–13:30	Environment Division Executive Meeting	CTCC, Macleod A2,3
12:30–13:30	Inorganic Chemistry Division Executive Meeting	CTCC, Macleod E2
12:30–13:30	Organic Chemistry Division Executive Meeting	CTCC, Macleod E4
12:30–15:00	CNC / IUPAC Committee Meeting	Marriott, Mount Royal
13:40–17:40	PM Scientific Sessions	CTCC, throughout
18:00–19:30	Poster Session and Reception	CTCC, Exhibition Hall CD

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18:00–19:00	Environment Division Annual General Meeting	CTCC, Macleod A2,3
18:00–19:00	Macromolecular Science and Engineering Division Executive Meeting	Offsite Location
18:00–19:00	Organic Chemistry Division Annual General Meeting	CTCC, Macleod E4
18:00–20:00	Dalhousie University Chemistry Reception	CTCC, TELUS 108 and 109
18:00–20:00	University of Windsor Reception (By invitation only)	CTCC, Glen 203
18:00–20:00	Queen's University Reception (By invitation only)	CTCC, Chinook 2 and 3
19:00–22:00	Accreditation Committee Meeting	Marriott, Mount Royal

Monday, May 28, 2012

07:00–17:00	Registration	CTCC, Exhibition Hall Prefunction
07:00–10:00	CIC Local Section Executive Meeting	Marriott, Kensington C
08:00–12:20	AM Scientific Sessions	CTCC, throughout
09:30–19:30	Exhibition	CTCC, Exhibition Hall CD
09:30–19:30	CIC and CSC Booth	CTCC, Exhibition Hall CD
10:00–11:30	CGCEN Board of Directors Meeting	Marriot, Mount Royal
10:00–12:00	NSERC Discovery Grants: Results, Questions and Answers	CTCC, Chinook 4
12:20–13:40	Lunch Break	
12:30–13:00	28th CSC Annual General Meeting	CTCC, Glen 201
13:00–13:30	68th CIC Annual General Meeting	CTCC, Glen 201
13:40–17:40	PM Scientific Sessions	CTCC, throughout
16:30–18:30	Professional Chemists Meet 'n' Greet	Marriott, Acadia B
18:00–19:30	Poster Session and Reception	CTCC, Exhibition Hall CD
18:00–19:00	PODAC Reception (by invitation only)	Marriott, Mount Royal
18:00–19:00	Analytical Chemistry Division Annual General Meeting	Meet at registration 17:45
18:00–19:00	Chemical Education Division Annual General Meeting	CTCC, TELUS 105
18:00–19:00	Physical, Theoretical and Computational Chemistry Annual General Meeting	CTCC, TELUS 111
19:00	GreenCentre Social (By invitation only)	Tickets at GreenCentre Booth
19:00–21:00	Physical, Theoretical and Computational Chemistry Reception	CTCC, TELUS 111
19:30–21:30	Women in Chemistry and Friends Networking Dinner	Double Zero

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Tuesday, May 29, 2012

07:00–17:00	Registration	CTCC, Exhibition Hall Prefunction
07:00–08:00	Subject Division Executive Meeting	Marriott, Kensington C
08:00–12:20	AM Scientific Sessions	CTCC, throughout
10:20–11:40	CIC Chair's Event	CTCC, Glen 204
11:30–18:00	NSERC CREATE – Alberta/McMaster	CTCC, Chinook 4
12:20–13:40	Lunch Break	
12:20–13:40	CSC Science Policy Forum	CTCC, Glen 204
12:30–13:30	Materials Chemistry Division Annual General Meeting	CTCC, Glen 206
12:30–13:30	Macromolecular Science and Engineering Division Annual General Meeting	CTCC, Glen 202
12:30–13:30	Electrochemical Society – Canadian Section – General Meeting	CTCC, TELUS 108 and 109
13:40–16:40	PM Scientific Sessions	CTCC, throughout
13:40–16:40	Energy Futures Symposium	CTCC, Macleod D
17:00–18:00	Plenary Lecture	CTCC, Exhibition Hall E
18:00–19:30	Poster Session and Reception	CTCC, Exhibition Hall CD
18:00–19:00	Biological and Medicinal Chemistry Division Annual General Meeting	CTCC, TELUS 106
18:00–19:00	Inorganic Chemistry Division Annual General Meeting	CTCC, Macleod E2
18:00–19:00	CIC Chair's and CSC President's Reception (By invitation only)	Hyatt, Stephen Room
19:00–19:30	CIC and CSC Awards Reception	Hyatt, Imperial Ballroom Foyer
19:30–22:30	CIC and CSC Awards Banquet	Hyatt, Imperial Ballrooms 5, 7 and 9

Wednesday, May 30, 2012

07:00–13:00	Registration	CTCC, Macleod Hall Foyer
07:30–11:00	CSC Board of Directors Meeting	Marriott, Kensington AB
08:00–12:20	AM Scientific Sessions	CTCC, throughout
09:00–17:00	Raman Spectroscopy – Current Applications and Instrumentation Workshop	CTCC, Macleod D
11:00–12:00	CSC Chemical Education Student Awards Ceremony	CTCC, TELUS 105
12:20–13:40	Lunch Break	
12:20–13:30	Conference Debriefing Meeting	Marriott, Kensington C
13:40–17:40	PM Scientific Sessions	CTCC, throughout

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Saturday, May 26

ACPA: Professional Ethics for Chemists

08:00–17:30

Calgary TELUS Convention Centre, Glen 201

This one-day course will provide an introduction to the ethical framework that guides professional chemists in the conduct of their duties. The objective of this course is two-fold: to ensure a working knowledge of the fundamental ethical concepts embedded in the accreditation of professional chemist and to learn how to analyze work-related ethical situations and make the best possible decisions.

Conference Opening and CIC Medal Lecture

18:00–19:30

Calgary TELUS Convention Centre, Exhibition Hall E

All conference participants are invited to attend the official conference opening of the 95th Canadian Chemistry Conference and Exhibition.

Speakers:

Karen Burke, CSC President

Warren Piers, FCIC, Conference Chair

Daryll Harrison, Vice President of Technology,
NOVA Chemicals

Plenary Lecturer:

Raymond Andersen, 2012 CIC Medal Recipient

Sponsored by:  **NOVA Chemicals**

Opening Reception and Exhibition

19:30–21:30

Telus Convention Centre, Exhibition Hall CD

Following the conference opening, all conference participants are invited to share beverages and hors d'oeuvres with fellow attendees. Cash bar available; a drink ticket was included with name badges.

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Sunday, May 27

Poster Session and Reception

18:00–19:30

Calgary TELUS Convention Centre, Exhibition Hall CD

All conference participants are invited to attend the poster session and reception. Cash bar available.

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Monday, May 28

NSERC Discovery Grants: Results, Questions and Answers

10:00–12:00

Calgary TELUS Convention Centre, Chinook 4

Anne-Marie Thompson, Director of Physical and Mathematical Sciences for Research Grants at NSERC, will provide an overview of program news and results of the 2012 Discovery Grants competition. This will be followed by an information session on the Discovery Grant evaluation process.

28th CSC Annual General Meeting

12:30–13:00

Calgary TELUS Convention Centre, Glen 201

68th CIC Annual General Meeting

13:00–13:30

Calgary TELUS Convention Centre, Glen 201


Poster Session and Reception

18:00–19:30

Calgary TELUS Convention Centre, Exhibition Hall CD

All conference participants are invited to attend the poster session and reception. Cash bar available.

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Women in Chemistry and Friends Networking Dinner

19:30–21:30

Double Zero, Core Shopping Centre, 751 4th Street SW.

This is an informal social event for which participants are responsible for the cost. Pre-registration was required.



Tuesday, May 29

CIC Chair's Event: Careers in the Chemical Profession – An Industrial Perspective

10:20–11:40

Calgary TELUS Convention Centre, Glen 204

This year's Chair's Event will feature members from industry who will explore their own career paths, touching on topics of education, the challenges that they faced, and the importance of the chemical profession within Canada's innovation economy.

CSC Science Policy Forum: Advocating for Science and Technology

12:20–13:40

Calgary TELUS Convention Centre, Glen 204

Join this featured session on issues our community faces with regard to advocating for science research. Discussion and feedback from attendees of this forum is of utmost importance as the CSC increases its involvement in science advocacy.

Energy Futures Symposium

13:40–16:40

Calgary TELUS Convention Centre, Macleod D

All conference participants are invited to attend a multi-disciplinary symposium for graduate students involved in energy related chemical research in Canada.

Sponsored by:  Institute for Sustainable ENERGY, ENVIRONMENT AND ECONOMY  Centre for Advanced Solar Materials

Plenary Lecture

17:00–18:00

Calgary TELUS Convention Centre, Exhibition Hall E

All conference participants are invited to attend a plenary lecture given by Thomas J. Meyer. This will be featured as part of the Energy Futures Symposium.

Sponsored by:  Institute for Sustainable ENERGY, ENVIRONMENT AND ECONOMY

Poster Session and Reception

18:00–19:30

Calgary TELUS Convention Centre, Exhibition Hall CD

All conference participants are invited to attend the poster session and reception. Cash bar available.

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CIC Chair's and CSC President's Reception

18:00–19:00

Hyatt Regency Calgary, Stephen Room

By invitation only

Black tie optional, business attire.

CIC and CSC Awards Reception

19:00–19:30

Hyatt Regency Calgary, Imperial Ballroom Foyer

Banquet ticket is required. Please have it with you.

Black tie optional, business attire.

Sponsored by:  BRUKER

CIC and CSC Awards Banquet

19:30–22:30

Hyatt Regency Calgary, Imperial Ballrooms 5, 7 and 9

Banquet ticket is required. Please have it with you.

Black tie optional, business attire.

Sponsored by:  BRUKER

Wednesday, May 30

Raman Spectroscopy – Current Applications and Instrumentation Workshop

09:00–17:00

Calgary TELUS Convention Centre, Macleod D

ProSpect Scientific Inc. is pleased to offer a free one-day workshop entitled “Raman Spectroscopy — Current Applications and Instrumentation” during the CSC 2012 conference in Calgary. The morning will feature lectures from distinguished Raman researchers discussing the application of Raman spectroscopy to their current research. The afternoon will offer hands-on experience for participants who are encouraged to bring their own samples for analysis. Renishaw Inc. will provide a working inVia Raman spectrometer for participants to use.

Registration was required by May 14, 2012.

CSC Chemical Education Student Awards Ceremony

11:00–12:00

Calgary TELUS Convention Centre, TELUS 105

Awards will be presented for the undergraduate and graduate student oral and poster competitions.

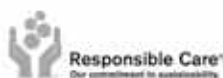
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Saturday, May 26

18:00-19:30

Calgary TELUS Convention Centre, Exhibition Hall E



Raymond Andersen, FCIC
University of British Columbia

This plenary lecture will be presented as part of the CSC Conference opening.

Sponging Off Nature for New Drug Leads

The secondary metabolites found in marine organisms represent an extremely rich source of novel chemical diversity for academic drug discovery and chemical biology programs. Among the marine invertebrates, marine sponges continue to be the most prolific source of new natural products. Our group at UBC has amassed a sizable library of crude extracts from marine sponges, marine microorganisms, and other marine invertebrates collected in many of the world's oceans. In collaboration with biologists, this crude extract library has been screened for activity in a variety of cell-based and pure enzyme assays designed to identify promising lead compounds for the development of drugs. Bioassay-guided fractionation of the crude extracts and extensive spectroscopic analysis is used to identify the structures of the pure natural products active in these assays. Biology-oriented chemical synthesis is used by our group to probe the SAR for new natural product pharmacophores that we discover and to provide material for *in vivo* testing in animal models. Several new drug candidates for the treatment of cancer, inflammation, cystic fibrosis, and infectious diseases have emerged from this research program. Three of them have progressed to phase II clinical trials in humans and others are in preclinical evaluation and development. The lecture will present an overview of chemical and biological results from our academic drug discovery and chemical biology research.

Conference opening sponsored by:  **NOVA Chemicals**



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Chemical Institute of Canada | **Career Services**

CIC Chair's Event

Tuesday, May 29

10:20-11:40

Calgary TELUS Convention Centre, Glen 204

Careers in the Chemical Profession – An Industrial Perspective

The question of what lies after university can often be daunting, but encouragingly, chemical scientists are given incredible opportunities for the future. This year's Chair's Event will feature members from industry who will explore their own career paths, touching on topics of education, the challenges that are faced, and the importance of the chemical profession within Canada's innovation economy. The presentations will be followed by an in-depth panel discussion featuring some of our most accomplished chemical scientists from diverse backgrounds.

Chair:

Russell Boyd, FCIC

Dalhousie University

CIC vice-chair

Participants:

Karen Burke

Amgen Canada, Inc.

Karen Burke is currently the director of Regulatory Affairs, Drug Safety and Quality Assurance at Amgen Canada, Inc., serving as president of the CSC in 2011-2012. Burke obtained her PhD in organometallic chemistry from McMaster University in 1990, and has since worked in the pharmaceutical industry in a career spanning more than 20 years, including roles at Astra Pharma, Inc./AstraZeneca Canada, the industry association Rx&D, and at Amgen.

Lorenzo Ferrari

LANXESS, Inc.

Lorenzo Ferrari, CSC Incoming Vice-President, joined LANXESS in 2000 as Manager of Material Research Innovation Partnerships, holds a BSc, MSc, and MBA from McMaster University. Ferrari has held positions as a research and development scientist and material development manager over his 18 years in industrial polymer chemistry.

Ken Schmidt

Wilson Analytical Services, Inc. and DK³ Scientific

Ken Schmidt is the President of Wilson Analytical Services, Inc. and divides his time between his other enterprises of DK³ Scientific, and Canadian Tool, a company dealing primarily with high-end machining and project management. Schmidt holds a BSc from McMaster University and a PhD in inorganic chemistry from the University of Calgary. He currently stands as the Director of Industrial Liaison for the CSC Board.

George Duncan

A&A Environmental Consultants, Inc.

George Duncan is co-founder of A&A Environmental Consultants, Inc. with over 40 years of experience as an analytical chemist within the mining and environmental fields. Duncan obtained his BSc from the University of Glasgow, followed by a PhD from the University of Salford in 1968. He currently stands as the Director of Professional Status on the CSC Board.

Ravi Ramachandran

Syngenta Canada, Inc.

Ravi Ramachandran is the Manager of Product Chemistry and Chemical Services at Syngenta Canada, Inc. an agribusiness committed to sustainable agriculture, and is the incoming Director of Local Sections on the CSC Board. Ramachandran obtained his PhD in inorganic chemistry from the University of Western Ontario, and BSc and MSc from Bangalore University in India. He has worked in various R&D positions for over 15 years.





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Institute for Sustainable
**ENERGY, ENVIRONMENT
AND ECONOMY**

CSC Science Policy Forum

Tuesday, May 29

12:20-13:40

Calgary TELUS Convention Centre, Glen 204

Advocating for Science and Technology

Now more than ever scientists need to advocate for their work to politicians, administrators, media and the general public. With federal funding increasingly directed towards industry-focused research, giving a voice to basic research is critical. Considering the challenges other countries are facing, this should be a time when Canada invests strongly in research at all levels, to increase our international competitiveness. The CSC Science Policy Forum will focus on issues our community faces with regard to advocating for science research. Discussion and feedback from attendees of this forum is of utmost importance as the CSC increases its involvement in science advocacy.

Chair:

Cathleen Crudden

Queen's University
CSC vice-president

Participants:

Howard Alper, OC, HFCIC

University of Ottawa

Howard Alper is currently Chair of the Government of Canada's Science, Technology, and Innovation Council (STIC), and Distinguished University Professor at the University of Ottawa. He has been Chair of the Partnership Group for Science and Engineering (PAGSE), Council of Canadian Academies, Canadian Research Knowledge Network, and the Steacie Institute of Molecular Sciences. Alper has served on and chaired a number of international organizations, including the InterAmerican Network of Academies of Science, the US NSF Advisory Committee for International Science and Engineering, the Science Advisory Committee on the World Economic Forum and the RIKEN Advisory Council. An Officer of the Order of Canada, he has published 529 research papers, has 37 patents, and has received numerous prestigious awards including the first Gerhard Herzberg Canada Gold Medal in 2000. He is an honorary fellow of the CIC.

Suzanne Fortier, FCIC

Natural Sciences and Engineering Research Council of Canada

Suzanne Fortier has served as President of the Natural Sciences and Engineering Research Council of Canada (NSERC) since January 2006. Before her appointment to this position, Fortier was a member of Queen's University as Professor in both the Department of Chemistry and the School of Computing, and served as Vice President Research and Academic. A crystallographer by training, she specialized in the development of mathematical and artificial intelligence methodologies for protein structure determination. Fortier is currently a member of the Ontario Task Force on Competitiveness, Productivity and Economic Progress, and the Board of Directors of the Canada Foundation for Innovation.

Marye Anne Fox

University of California San Diego

Marye Anne Fox was named the seventh chancellor of the University of California, San Diego in April 2004. Previously, Fox was chancellor and distinguished university professor of chemistry at North Carolina State University, a post she held since 1998. Fox has received numerous research and teaching awards. Fox also serves on numerous boards including the Council on Competitiveness, Building Engineering and Science Talent (BEST), the Association of American Universities (AAU) and World Universities Network (WUN). She also serves on the National Security – Higher Education Advisory Board and several San Diego regional advisory boards.

CIC Award Lectures

All CIC Award Lectures are held in the Calgary TELUS Convention Centre unless otherwise stated.

CIC Medal

Sponsored by the Chemical Institute of Canada



Raymond Andersen, FCIC
University of British Columbia

Saturday, May 26, 2012, 18:00–19:30

Exhibition Hall E

Sponging Off Nature for New Drug Leads

CIC Award for Chemical Education

Sponsored by the CIC Chemical Education Fund



Dietmar Kennepohl, FCIC
Athabasca University

Sunday, May 27, 2012, 13:40–14:20

TELUS 105, Symposium: CE1

**Game Changers: Learning Chemistry
in the 21st Century**

Environment Division Research and Development Award

Sponsored by the Environment Division



Jon Abbatt
University of Toronto

Monday, May 28, 2012, 16:00–16:40

Macleod A4, Symposium: EN6

**Oxidation of Tropospheric Aerosol Particles:
Mechanisms and Potential Impacts**

Macromolecular Science and Engineering Award

Sponsored by NOVA Chemicals Corporation



Françoise Winnik
Université de Montréal

Tuesday, May 29, 2012, 08:00–08:40

Glen 202, Symposium: MS3

**Poly(2-isopropyl-2-oxazoline) and Poly
(N-isopropylacrylamide), Two Responsive
Polymers So Similar ... Yet So Different!**

Montréal Medal

Sponsored by the Montréal CIC Local Section
and the Chemical Institute of Canada



John Grace, FCIC
University of British Columbia

Presenting at the 62nd Canadian
Chemical Engineering Conference,
October 14–17, 2012.

Catalysis Award

Sponsored by the Canadian Catalysis Foundation



Charles Mims
University of Toronto

Presented at the 22nd Canadian
Catalysis Symposium, May 13–16, 2012.



CSC Award Lectures

All CSC Award Lectures are held in the Calgary TELUS Convention Centre unless otherwise stated.

E. W. R. Steacie Award

Sponsored by the Analytical Chemistry, Organic Chemistry, Inorganic Chemistry and Physical, Theoretical and Computational Chemistry Divisions



Janusz Pawliszyn, FCIC
University of Waterloo

Sunday, May 27, 2012, 08:00–08:40
TELUS 103, Symposium: AN6

In Vivo Applications of Solid Phase Microextraction

Fred Beamish Award

Sponsored by the Analytical Chemistry Division



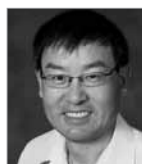
Alan Doucette
Dalhousie University

Sunday, May 27, 2012, 08:40–09:20
TELUS 103, Symposium: AN6

Proteomics Reboot: Classic Approaches to Protein Sample Preparation

W. A. E. McBryde Medal

Sponsored by AB Sciex



Yingfu Li
McMaster University

Sunday, May 27, 2012, 10:20–11:00
TELUS 103, Symposium: AN6

Exploring Functional Nucleic Acids for Bioanalytical Applications

Maxxam Award

Sponsored by Maxxam Analytics



Pierre Thibault
Université de Montréal

Sunday, May 27, 2012, 11:00–11:40
TELUS 103, Symposium: AN6

Mass Spectrometry Tools to Unravel the Molecular Basis of Adaptive Immunity and Cancer Development

Strem Chemicals Award for Pure or Applied Inorganic Chemistry

Sponsored by Strem Chemicals, Inc.



Mark Stradiotto
Dalhousie University

Sunday, May 27, 2012, 13:40–14:20
Macleod E1, Symposium: IN4

New Strategies in P,N Ligand Design: Applications in Challenging Late Metal-Catalyzed Transformations

Rio Tinto Alcan Award

Sponsored by Rio Tinto Alcan



Stephen Loeb, FCIC
University of Windsor

Monday, May 28, 2012, 13:40–14:20
Glen 206, Symposium: IN8

Metal-Organic Framework (MOF) Materials with Dynamic Interlocked Components

Award for Research Excellence in Materials Chemistry

Sponsored by the Materials Chemistry Division



Frank van Veggel
University of Victoria

Monday, May 28, 2012, 15:00–15:40
Glen 209, Symposium: MT3

Ln³⁺ Doped Nanoparticles with Optical and Magnetic Properties: My Perspective of the Past, Present and Future

CCUCC Chemistry Doctoral Award

Sponsored by the Canadian Council of University Chemistry Chairs (CCUCC)



Charles Yeung
For research carried out at the University of Toronto;
Advisor: Vy Dong
Now at Harvard University

Monday, May 28, 2012, 15:00–15:40
Macleod C, Symposium: OR2

Transition Metal Catalysis: Activating CO₂, CH₄ and CO Bonds En Route to Carboxylic Acids, Biaryls, and N-Containing Heterocycles

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Clara Benson Award

Sponsored by Canadian Council of University
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**Rina Carlini**

Tuesday, May 29, 2012, 11:00–11:40
Macleod A1, Symposium: IC2

The Industrial R&D Approach to Design and
Development of Engineered Nanopigments and
Nanostructured Gels for Commercial Applications

John C. Polanyi Award

Sponsored by the Physical, Theoretical
and Computational Chemistry Division

**Dennis Salahub, FCIC**
University of Calgary

Tuesday, May 29, 2012, 11:20–12:20
TELUS 111, Symposium: PT3

Towards the Multiscale Modelling of Chemical Reactions
in Complex Environments from the Hohenberg-Kohn
Theorems to Health, Wealth and Happiness

Keith Laidler Award

Sponsored by the Physical, Theoretical
and Computational Chemistry Division

**Aicheng Chen**
Lakehead University

Tuesday, May 29, 2012, 14:40–15:20
TELUS 108 and 109, Symposium: AN2

Electrochemical and Photochemical
Catalysis Based on Functional Nanomaterials

Alfred Bader Award

Sponsored by Alfred Bader, FCIC

**Yvan Guindon, OC, FCIC**
**Clinical Research Institute of
Montréal and Université de Montréal**

Tuesday, May 29, 2012, 15:00–15:40
Macleod B, Symposium: OR4

From Free-Radicals to Polypropionates

R. U. Lemieux Award

Sponsored by Gilead Alberta ULC

**B. Mario Pinto, FCIC**
Simon Fraser University

Wednesday, May 30, 2012, 10:20–11:00
Macleod C, Symposium: OR7

Look What You Started, Ray! NMR Methods
for Probing Protein-Ligand Interactions

**Boehringer Ingelheim (Canada)
Research Excellence Award**

Sponsored by Boehringer Ingelheim (Canada) Ltd.

**Louis Barriault**
University of Ottawa

Wednesday, May 30, 2012, 11:40–12:20
Macleod B, Symposium: OR4

Harvest in the Natural Product Synthesis
and Gold-Catalyzed Gardens

**Boehringer Ingelheim (Canada)
Doctoral Research Award**

Sponsored by Boehringer Ingelheim (Canada) Ltd.

**David Marcoux**
**For research carried out
at Université de Montréal;
Advisor: André Charette
Now at Bristol-Myers Squibb**

Wednesday, May 30, 2012, 15:00–15:40
Macleod B, Symposium: OR4

Development of Cross-Coupling
and Cycloaddition Reactions

Bernard Belleau Award

Sponsored by Vertex Pharmaceuticals (Canada) Inc.

**Todd Lowary**
University of Alberta

Wednesday, May 30, 2012, 16:00–16:40
Macleod C, Symposium: OR7

Protein Recognition of Bacterial Glycans
Containing Furanose Residues

Nominations are now open for the Chemical Institute of Canada and Canadian Society for Chemistry **2013 AWARDS**

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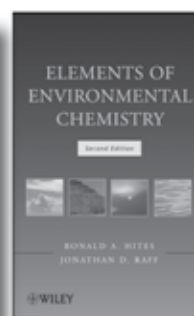
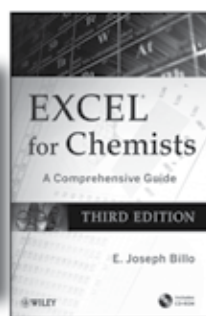
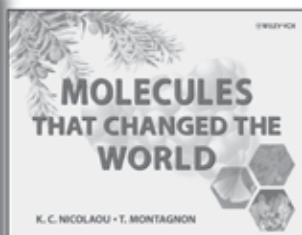
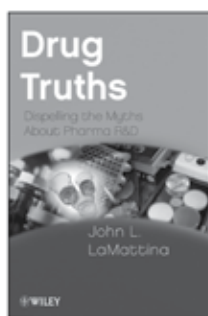
Deadline

July 3, 2012 for the 2013 selection.

Nomination forms and the full terms of reference for these awards are available at:

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The Fellowship of the Chemical Institute of Canada was created as a senior class of membership to recognize outstanding merit of those who have made, or who are clearly in the course of making, a sustained and major contribution to the science or to the profession of chemistry, chemical engineering, or chemical technology.

Here are the distinguished members who have been named CIC Fellows in 2012 by the CIC Fellowship Committee. Fellowships will be presented at the CIC and CSC Awards Banquet.



Pierre Beaumier, FCIC
CanAlt Health Laboratories
Toronto, Ont.

Pierre Beaumier, FCIC, has been a leader in the development of industrial analytical chemistry in Canada. His contributions to the profession of chemistry have been outstanding and include the presidency of both the Association of the chemical Profession of Ontario (ACPO) and the CSC. He brought Maxxam Analytics, up from its infancy as Mann Testing with four employees to becoming the largest private laboratory in Canada with over 2,000 employees. He is now president of CanAlt Health Labs. He is responsible for initiating two major awards of the CSC and personally funded one of them. He initiated the Beaumier-Churcott fund (through the CIC Chemical Education Fund) to aid in the teaching of chemistry at the high school level.



Cathy Cardy, FCIC
Imperial Oil
Sarnia, Ont.

Cathy Cardy, FCIC, has been a tireless promoter of chemical technology and women in chemistry and technology. She is presently on the Board of Directors of the Canadian Society for Chemical Technology (CSCT) and has served at all levels of the CIC, including as first female Chair of the CIC, and President of the CSCT. Cardy's devotion to chemistry extends beyond her professional duties as Quality Assurance Lab Manager at Imperial Oil, to include work on the Canadian Technology Accreditation Board, GoTech Girl and as "Science Lady" to Sarnia area cubs and brownies.



Ajay Dalai, FCIC
University of Saskatchewan
Saskatoon, Sask.

Ajay Dalai, FCIC, is a world-class researcher, covering a wide range of chemical engineering processes including catalyst development for biodiesel production and glycerol utilization, hydrogen/syngas production, gas to liquid technologies, hydroprocessing of heavy gas oil and value-added products from biomass. He has been recognized for his work through awards and fellowships such as the Engineering Institute of Canada Fellowship, Fulbright Fellowships, DAAD fellowships, JSPS fellowships, and the Innovation Award through Saskatoon Chamber of Commerce. Dalai has been a leader and active member of the CIC on a local as well as national level. He has been a Canadian Society for Chemical Engineering (CSChE) Board member, chair of the North Saskatchewan Local Section and presently Chair the Canadian Catalysis Society. He was also chair of the 60th Canadian Chemical Engineering Conference and has participated in many conference and awards committees.



Chemical Institute of Canada | *For Our Future*

Professional Development Courses for Chemical Professionals

Process Safety Course

September 17-18, 2012 | Toronto, ON

Learn working concepts of process safety for engineering and safety professionals who are engaged in process design or plant operations. Learn the meaning and importance of an integrated approach to process safety in high hazard operations.

Risk Assessment Course

September 19-20, 2012 | Toronto, ON

Enhance your knowledge and working experience as a safety, environmental and process safety professional. Learn about risk assessment, development of management systems and providing advice to decision makers.

Lab Safety Course

September 17-18, 2012 | Toronto, ON

Learn best practices for improving operational safety and conducting safety audits in chemical laboratories, chemical plants and research facilities.

Find course outlines and register at: www.cheminst.ca/profdev



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Chemical Institute of Canada | *For Our Future*

General Guidelines

All session rooms are equipped with the following:

- large screen;
- LCD projector;
- laptop;
- laser pointer.

Computers will be running Windows XP with Microsoft Office 2007 and the latest version of Acrobat Reader. Computers will be equipped with MS Media Player, however, authors running .avi movies should consult with the conference program officer to confirm compatibility. It is strongly recommended to bring the video as a separate file.

Please note that authors are free to use their own laptop, in particular in the event different software is required, but must ensure compatibility with the LCD projector prior to the start of their session.

A speaker ready room is available in the convention centre to preview presentations and to ensure that the files provided by the speaker are compatible with the equipment supplied. Refer to page 13 for times and location.

Session Chairs

Sessions will begin at 08:00 and 13:40, running from Sunday through Wednesday. Chairs are encouraged to be in their session rooms 10 minutes prior to start times to meet the speakers. The talks have been carefully scheduled in 20- or 40-minute timeslots; the session chair is responsible for maintaining the schedule as reflected in the scientific program. In the event of a cancellation, the vacant timeslot can be used for general discussion or brief recess.

Each session has been assigned a volunteer for AV assistance.

Oral Presenters

Sessions will begin at 08:00 and 13:40, running from Sunday through Wednesday. Presenters should report to the designated session room 10 minutes

before the start of the session to meet the session chair, fellow speakers, and to upload their presentation. Please note that session rooms will be locked between 12:30–13:00.

Poster Presenters

Sessions will run from 18:00–19:30, Sunday through Tuesday. Presenters must have their posters hung by 12:20 on the day of their session. Presenters should be at their posters during the time of their designated poster session. Posters must be removed immediately following the end of the poster session; any remaining posters will be discarded.

Push pins and Velcro will be provided.

Poster Session Schedule

Sunday, May 27

18:00–19:30

Calgary TELUS Convention Centre, Exhibition Hall CD

Presenting Divisions:

- Chemical Education
- Inorganic Chemistry
- Materials Chemistry

Monday, May 28

18:00–19:30

Calgary TELUS Convention Centre, Exhibition Hall CD

Presenting Divisions:

- Biological and Medicinal Chemistry
- Industrial Chemistry
- Organic Chemistry

Tuesday, May 29

18:00–19:30

Calgary TELUS Convention Centre, Exhibition Hall CD

Presenting Divisions:

- Analytical Chemistry
- Environment
- Macromolecular Science and Engineering
- Physical, Theoretical and Computational Chemistry
- Surface Science





Canadian Society for Chemistry | **For Our Future**

28th CSC Annual General Meeting

Karen Burke, MCIC

Monday, May 28, 2012

12:30-13:00

Glen 201

Calgary Telus Convention Centre

The President of the Canadian Society for Chemistry and the Board of Directors invite all members to attend the CSC Annual General Meeting.

(complimentary sandwich lunch)



Chemical Institute of Canada | **For Our Future**

68th CIC Annual General Meeting

Maja Veljkovic, FCIC

Monday, May 28, 2012

13:00-13:30

Glen 201

Calgary Telus Convention Centre

The Chair of the Chemical Institute of Canada and the Board of Directors invite all members to attend the CIC Annual General Meeting.

(complimentary sandwich lunch)

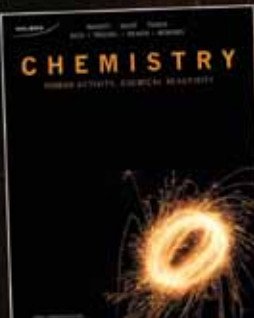
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Awards are presented by CSC Subject Divisions for both undergraduate and graduate student oral or poster presentations.

Student awards will be presented at the CSC Chemical Education Student Awards Ceremony to be held on Wednesday, May 30, 11:00-12:00 in the Calgary TELUS Convention Centre, TELUS 105. As a few oral competitions may not have been finalized by the time of the ceremony, names of all winners will be posted on the CSC website (www.cheminst.ca) under CSC Student Awards and the CSC2012 website (www.csc2012.ca) following the Conference.

Undergraduate Student Poster Competition

This competition is open to current undergraduate students, or students who have graduated within the last four months, in all branches of chemistry. Posters may be based on research done as part of an undergraduate course, co-op project, or summer job in a university, government, or industrial setting. Graduate students who have not completed more than two semesters of their graduate studies program may present a poster on work done as an undergraduate student on the condition that the poster topic is different from their current research topic.

Undergraduate posters will be judged during the corresponding divisional poster session.

Two awards (\$150 and \$50) will be presented in each of the following Divisions:

- Analytical chemistry;
- Biological and medicinal chemistry;
- Chemical education;
- Environment;
- Inorganic chemistry (sponsored by Michel Gagné);
- Organic chemistry;
- Physical, theoretical and computational chemistry;
- Surface science.

Graduate Student Poster Competition

Poster presentation competitions will be held for those who selected to participate when registering. Graduate student posters will be judged during the corresponding divisional poster session.

Two awards (\$200 and \$100) will be presented for posters in each of the following Divisions:

- Analytical chemistry;
- Biological and medicinal chemistry;
- Chemical education;
- Environment;
- Inorganic chemistry;
- Organic chemistry;
- Physical, theoretical and computational chemistry;
- Surface science.

Undergraduate and Graduate Student Oral Competitions

The following awards will be presented for oral presentations:

- Biological and medicinal chemistry: up to three awards (\$100 each) to a graduate student.
- Chemical education: two awards (\$350 and \$150) to the best undergraduate or graduate student. Papers should be of general interest concerning the critical evaluation of their educational experiences, such as innovative learning/teaching strategies and materials or other topics that address chemical education.
- Environment: one award (\$250) to the best undergraduate or graduate student.
- Macromolecular science and engineering: two awards (\$250) to an undergraduate or graduate student. Sponsored by Xerox Research Centre of Canada.
- Materials chemistry: two awards (\$250) for oral or poster presentations by either graduate or undergraduate students. Sponsored by Xerox Research Centre of Canada.
- Organic chemistry: a number of awards for the best undergraduate or graduate students. Only graduate students who are members of the CSC are eligible to apply. The number and amount of awards is subject to the Division's financial situation and are at the discretion of the executive.
- Physical, theoretical and computational chemistry: one award for the best undergraduate or graduate student oral presentation.

Student Travel Award

One \$500 travel award will be granted to an undergraduate or graduate student who is making an oral presentation in a Chemical Education Division symposium. Students are encouraged to present papers pertaining to their experiences as an undergraduate student as it relates to an educational aspect of their chemistry studies. The application deadline was April 16, 2012.



































Calgary TELUS Convention Centre

Exhibition Hall CD

Exhibition Hours

Saturday, May 26: 19:30–21:30 • **Sunday, May 27:** 09:30–19:30 • **Monday, May 28:** 09:30–19:30

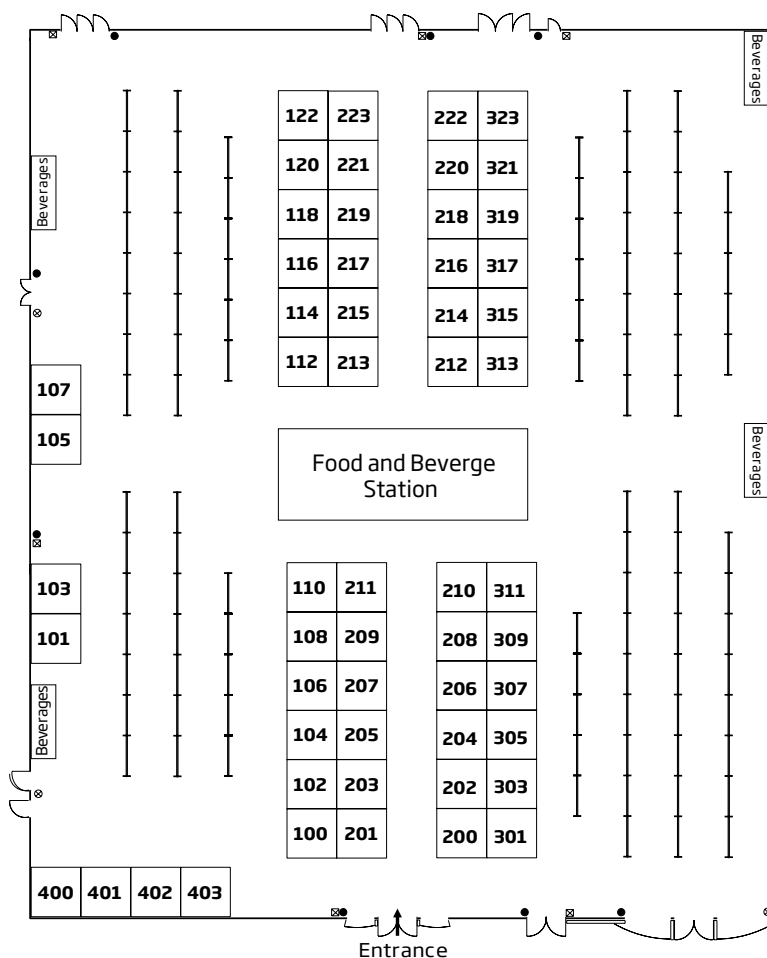
List of Exhibitors

Organizations	Booth nos.	Websites
 Agilent Technologies Agilent Technologies Canada Inc.	309	www.agilent.com
 Anasazi Instruments Anasazi Instruments Inc.	209	www.aiinmr.com
 AnaSpec , Eurogentec Group	216	www.anaspec.com
 Anton Paar Anton Paar	203	www.anton-paar.com
 ACPA Association of the Chemical Profession of Alberta	219	www.pchem.ca
 ATS Scientific ATS Scientific Inc.	218	www.ats-scientific.com
 Biotage Biotage	403	www.biotage.com
 Bruker Corporation Bruker Corporation	206	www.bruker-axs.com
 Bruker Ltd. Bruker Ltd.	208, 210	www.bruker.com
 CAMAG Scientific, Inc. CAMAG Scientific, Inc.	217	www.camag.com
 Canadian Light Source Canadian Light Source	114	www.lightsource.ca
 Canadian Society for Chemistry (CSC)  Chemical Institute of Canada (CIC)	200, 202	www.chemistry.ca www.cheminst.ca
 Canadian Science Policy Conference	220	www.sciencepolicy.ca
 CEDARLANE Cedarlane	223	www.cedarlanelabs.com
 CETAC Technologies CETAC Technologies	305	www.cetac.com
 Cole-Parmer Cole-Parmer Canada Inc.	402	www.coleparmer.ca
 Concepts in Chemistry Concepts in Chemistry	301	www.conceptsinchemistry.ca
 Delta Photonics Delta Photonics	307	www.deltaphotonics.com
 Gamble Technologies Limited Gamble Technologies Limited	110	www.gtl.ca
 Gilead Gilead Alberta ULC	122	www.gilead.com
 GreenCentre Canada GreenCentre Canada	205	www.greencentrecanada.com
 Indigo Instruments Indigo Instruments	106	www.indigo.com
 Institute for Sustainable Energy, Environment and Economy	102	www.iseee.ca
 WILEY John Wiley & Sons Canada, Ltd.	303	www.wiley.ca
 M. Braun, Inc. M. Braun, Inc.	112	www.mbraunusa.com
 Malvern Instruments Malvern Instruments	212	www.malvern.com
 Maxxam Analytics Maxxam Analytics	313, 315	www.maxxam.ca
 McGraw-Hill Ryerson McGraw-Hill Ryerson	108	www.mcgrawhill.ca/highereducation
 Nanalysis Nanalysis	222	www.nanalysis.com
 Nelson Education Ltd. Nelson Education Ltd.	400	www.nelson.com
 Oleotek Oleotek	221	www.oleotek.org
 PANalytical PANalytical Inc.	120	www.panalytical.com
 Pearson Canada Pearson Canada	214	www.pearsoncanada.ca



	PerkinElmer	317	www.perkinelmer.com
	Picosun USA	116	www.picosun.com
	ProSpect Scientific Inc. / Renishaw Inc.	211	www.prospectscientific.com
	Quebec's Nanotechnology Infrastructure	101	www.iqn-qni.ca
	Royal Society Publishing	311	www.royalsocietypublishing.org
	Sanjel Corporation	201	www.sanjel.com
	Sapling Learning	104	www.saplinglearning.com
	Sigma-Aldrich Canada	207	www.sigma.com
	Spectra Research Corporation	118	www.spectraresearch.com
	Strem Chemicals, Inc.	213	www.strem.com
	Systems for Research Corp.	204	www.sfr.ca
	TCI America	215	www.tciamerica.com
	Teledyne Isco	401	www.isco.com
	Thermo Fisher Scientific	321, 323	www.thermoscientific.com
	Vacuum Atmospheres Co.	319	www.vac-atm.com
	W.H. Freeman Company	100	www.whfreeman.com

Exhibition Floor Plan



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Analytical Chemistry

- AN1** • Analytical Separations
- AN2** • Electrochemistry with Chemically Modified Surfaces and Non-traditional Techniques (*joint with PT, SS*)
- AN3** • Developments in ICP Spectrometry and Its Varied Applications
- AN4** • Bioanalytical Mass Spectrometry (*joint with BM*)
- AN5** • General Analytical Chemistry
- AN6** • Analytical Awards
- AN7** • Biosensors

Biological / Medicinal Chemistry

- BM1** • Nucleic Acid Chemistry in Memory of M. O'Neill
- BM2** • Biophysical Chemistry (*joint with PT*)
- BM3** • Radiopharmaceutical Chemistry (*joint with OR*)
- BM4** • Microbial Chemistry of Fossil Fuels (*joint with EN*) *
- BM5** • Antimicrobial and Host-defense Peptides (*joint with PT*)
- BM6** • Macromolecular Crystallography

Chemical Education

- CE1** • Challenges in Teaching Chemistry
- CE2** • Teaching Analytical Chemistry (*joint with AN*)
- CE3** • Teaching Organic Chemistry (*joint with OR*)
- CE4** • Teaching Inorganic Chemistry (*joint with IN*)
- CE5** • Teaching Physical/Theoretical Chemistry (*joint with PT*)
- CE6** • Teaching Introductory Chemistry
- CE7** • Energy in the Chemistry Curriculum *

Environment

- EN1** • Advances in Environmental Analytical Chemistry (*joint with AN*)
- EN2** • Fire and Ice: Atmospheric Chemistry from Biomass Burning to Ice Aerosols (*joint with PT*)
- EN3** • Chemistry of Oil Sands Reclamation and Monitoring (*joint with BM*) *
- EN4** • Metals in the Environment
- EN5** • Current Topics in Environmental Chemistry
- EN6** • Environmental Chemistry Award Session

Industrial Chemistry

- IC1** • Chemistry Behind the Oil Sands *
- IC2** • Innovation in Industrial Chemistry and Technology

Inorganic Chemistry

- IN1** • Hydrogen Activation, Production and Storage *
- IN2** • Metal Mediated Polymerization (*joint with MS*)
- IN3** • Symposium on the Applications of Physical Methods to Coordination Chemistry in Honour of Barry Lever
- IN4** • Ligand Design (*joint with OR*)
- IN5** • Main Group Chemistry
- IN6** • Solar Fuels (*joint with MT*) *
- IN7** • Metal Ions in Biology (*joint with BM*)
- IN8** • General

* Energy-focused symposia are highlighted in green boxes in the scientific program schedule.



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Sponsored by GreenCentre Canada

Ontario Green Chemistry and Engineering Network Award (Individual)
Sponsored by the Ontario Ministry of the Environment

Ontario Green Chemistry and Engineering Network Award (Organizational)
Sponsored by the Ontario Ministry of the Environment

Deadline:
Wednesday, July 4, 2012

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www.cheminst.ca/greenchemistryawards



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Macromolecular Science and Engineering

- MS1** • Polymers for Fuel Cells and Batteries (*joint with MT*) *
- MS2** • Chemistry and Applications of Carbon Nanotubes, Graphene and Other Nanostructures (*joint with MT*)
- MS3** • Responsive Polymer Materials (*joint with MT*)
- MS4** • Modern Methods in Polymer Synthesis (*joint with OR*)
- MS5** • Polymeric Nanotechnology: Applications in Biomedical Imaging and Drug Delivery (*joint with BM*)
- MS6** • Computational Methods and Studies in Polymers and Materials by Non-Computational Chemists (*joint with MT*)
- MS7** • Block Copolymer Fundamentals and Applications (*joint with MT*)

Materials Chemistry

- MT1** • Gas Capture Materials (*joint with IC*) *
- MT2** • Molecular Design of Optical, Photonic and Electronic Materials (*joint with IN, OR*) *
- MT3** • Applied Nanomaterials (*joint with BM, PT*)
- MT4** • Solid State Chemistry (*joint with IN*)
- MT5** • General

Organic Chemistry

- OR1** • The Chemistry & Biology of Natural Products, from Coast to Coast through the Prairies
- OR2** • Symposium on Homogeneous and Heterogeneous Catalysis in Honour of Howard Alper (*joint with IN*)
- OR3** • Symposium in Honour of Edward Piers
- OR4** • Advances in Synthetic Materials
- OR5** • Small Molecule Drug Design and Development
- OR6** • Applied Photochemistry in Health Research (*joint with BM*)
- OR7** • Carbohydrate Chemistry and Glycobiology (*joint with BM*)
- OR8** • General

Physical, Theoretical and Computational Chemistry

- PT1** • Theoretical Approach to Molecular Spectroscopy
- PT2** • Fuel Cell Materials for Clean Energy Options (*joint with MT*) *
- PT3** • Multiscale Bio/Physical/Chemical Modelling (*joint with BM*)
- PT4** • Advances in Laser Analytical and Spectroscopic Techniques
- PT5** • Solid State NMR
- PT6** • Physical/Theoretical Mass Spectrometry
- PT7** • Diversity and Challenges of Inorganic Molecular and Materials Modelling (*joint with IN*)
- PT8** • General

Surface Science

- SS1** • Surfaces of Nanostructures, Nanostructured Surfaces (*joint with PT*)
- SS2** • Chemical Nanopatterning of Surfaces: Fundamentals and Applications (*joint with MT*)
- SS3** • ALD/CVD in Electronics, Photonics and Photovoltaics (*joint with PT*) *

* Energy-focused symposia are highlighted in green boxes in the scientific program schedule.



Scientific Program Schedule

Rooms	Sunday AM 08:00–12:20	Sunday PM 13:40–17:40	Monday AM 08:00–12:20	Monday PM 13:40–17:40	Tuesday AM 08:00–12:20	Tuesday PM 13:40–16:40	Wednesday AM 08:00–12:20	Wednesday PM 13:40–17:40
Macleod A1	MT5	OR8	IC1	IC1	IC2	IC2	OR8	
Macleod A2,3	EN5	EN5	EN2	BM4	EN2	EN2	EN5	
Macleod A4	EN4	EN4	EN4	EN6	EN4	EN1	EN3	
Macleod B	OR5	OR5	OR5	IN6	OR4	OR4	OR4	OR4
Macleod C	OR2	OR2	OR2	OR2	OR3	OR3	OR7	OR7
Macleod D	MT2	MT2	MT2	MT2	MT2	Energy Futures		
Macleod E1	IN4	IN4	IN4	IN4	OR8	IN1	IN1	IN1
Macleod E2	IN3	IN3	IN3	IN3	IN7	IN7		
Macleod E3	IN2	IN2	IN2	MT5	IN5	IN5	IN5	IN5
Macleod E4	OR1	OR1	OR1	OR8	IN6	IN6	IN6	IN6
Glen 201	IN8	IN8	SS3	SS3	IN8	MT4	MT4	MT4
Glen 202	MS4	MS4	MS7	MS7	MS3		MS3	MS3
Glen 203	MS5	MS5	MS2	MS2	MS2	MT1	MT1	MT1
Glen 204	PT2	PT2	PT2	PT2	CIC Chair's Event		MS1	MS1
Glen 205	PT7	PT7	PT7	PT7	PT1	PT1	PT1	PT1
Glen 206	PT6	PT6	PT6	IN8	MT5		IN8	IN8
Glen 209	MT3	MT3	MT3	MT3	SS2	SS1	SS1	SS1
TELUS 102	PT8	PT5	PT5	PT5	PT4	PT8	PT4	PT4
TELUS 103	AN6	AN1	AN1	AN1	AN7	AN7	AN7	MS6
TELUS 104	AN3	AN3	AN3	AN3	AN4	AN4	AN5	
TELUS 105	CE1	CE1	CE3	CE3	CE6	CE6		BM6
TELUS 106	OR6	OR6	BM2	BM2	BM2	BM2	BM3	BM3
TELUS 108,109		CE4	CE5/CE7	CE2	AN2	AN2	AN2	
TELUS 111	BM1	BM1	PT3	PT3	PT3	PT3	BM5	BM5

Energy-focused symposia in green



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