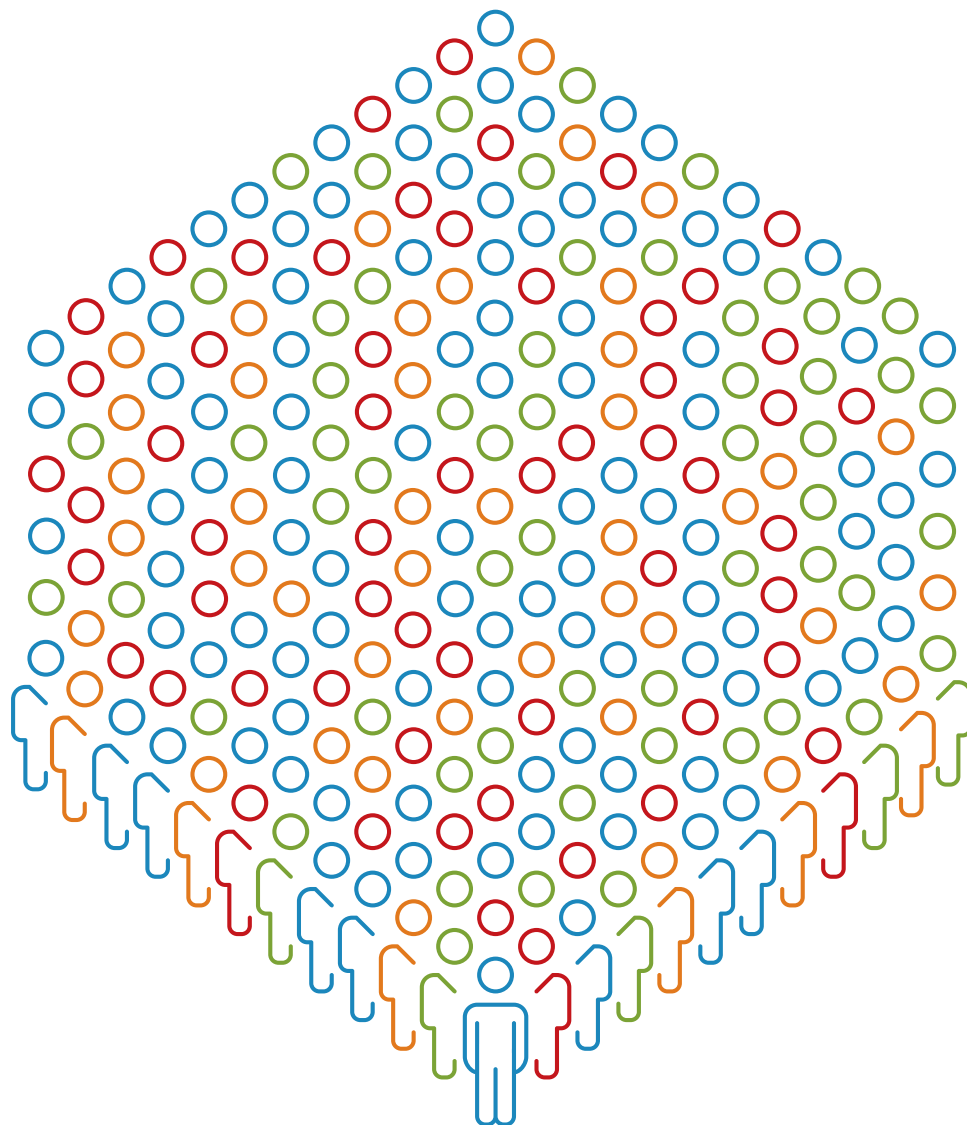


ANNUAL 2019 REPORT



Chemical Institute of Canada | **For Our Future**
Institut de chimie du Canada | **Pour notre avenir**

Vision Statement

We are proud to represent the Canadian chemical sciences community. The **Chemical Institute of Canada (CIC)** refreshed its strategic vision in 2019 to focus on the advancement of understanding, sustainability, as well as national and global prosperity. Our mission is to break new grounds by creating a more inclusive network of chemical science practitioners in Canada: we help you enhance your skills, advance your careers, and recognize outstanding achievements.

We appreciate your support in 2019.
We look forward to continuing this momentum throughout 2020 and beyond, as we grow Canada's chemical sciences community together.

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2019 Highlights / Executive Summary

The **Chemical Institute of Canada (CIC)** is the premier network of chemical professionals that champions the advancement of the chemical sciences. As a member-based not-for-profit association, the prime purpose of the CIC is to serve its members and help them connect, learn, and grow their careers. We have had a productive year in 2019 doing just that, and we would like to take this opportunity to share those achievements in our 2019 Annual Report.



40⁺ awards and
5 fellowships
were presented



The Chemical Education
Fund provided **\$20K**
for **14** initiatives



CIC News had
96 science stories
and **25** contributors



CIC represented
4650⁺ members
for 2019



Can. J. Chem. Eng. had
an impact factor of
1.610 over two years



3000⁺ people attended
our conferences in
Quebec City and Halifax



CIC engaged with local,
national, and global
partnerships

We Represent the Chemical Sciences

While the [Chemical Institute of Canada \(CIC\)](#) was formally established in 1945, the preceding events and societies that led to the modern organization can be dated back to 1901. For nearly 120 years, we have brought chemical sciences professionals together across the country through conferences, recognition, communities, and outreach. Today, we strive to continue to build and support Canada's chemical sciences guided by our four pillars: grow, learn, recognize, and connect.

What We Do

- **Promote** the value and importance of the chemical sciences to the public and the next generation of professionals.
- **Recognize** outstanding achievements in the chemical sciences across Canada.
- **Organize** Canada's premier annual conferences for the chemical sciences and chemical engineering.
- **Connect** members through a network of local sections, student chapters, and subject divisions.
- **Publish** *The Canadian Journal of Chemical Engineering*
- **Accredit** undergraduate-level chemical science programs and certify chemical technologists globally.

Our Membership Serves Three Societies



Canadian Society
for Chemistry
3500+ members



Canadian Society for
Chemical Engineering
1000+ members



Canadian Society for
Chemical Technology
150+ members

Our Communities

16

**SUBJECT
DIVISIONS**

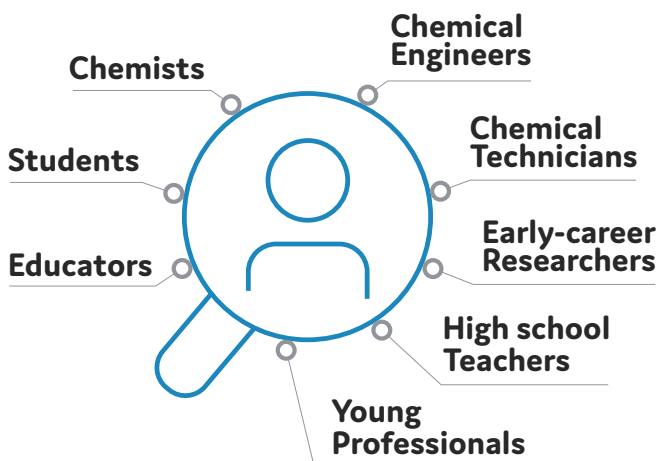
26

**ACTIVE
LOCAL
SECTIONS**

64

**STUDENT
CHAPTERS**

Our Members



NEW in 2019

- **2020 Membership is complimentary** for students attending Canadian institutions and individuals on parental leave.
- An **events calendar** on the CIC website was added to help members find relevant events and submit their own events.
- Our **new website launched in 2019**, and our print magazine became the online *CIC News*.

Recognizing Excellence



Every year, the CIC and its constituent societies present more than forty awards to members who have made exceptional contributions to the chemical sciences. This includes awards for work by promising students, work in green chemistry, and CIC fellowships.

8 Chemical
Institute of Canada
Awards

21 Canadian
Society for
Chemistry
Awards

7 Canadian Society
for Chemical
Engineering
Awards

2 Canadian Green
Chemistry
and Engineering
Network Awards

CIC AWARDS 2019



CIC Medal

Linda Nazar, OC
University of Waterloo

The CIC Medal is the top award from the CIC, which recognizes a distinguished individual who has made an outstanding contribution to chemistry or chemical engineering in Canada.



Montréal Medal

Cathleen M. Crudden, FCIC
Queen's University

The Montréal Medal/Médaille de Montréal is a mark of distinction for an individual who has shown significant leadership or has made an outstanding contribution to chemical sciences in Canada.

CIC Fellowships: Celebrating Members



A CIC Fellowship is a distinctive type of membership that recognizes the merits of a CIC society member who has made an outstanding contribution to their field. In 2019, we were delighted to award fellowships to:

- > **Francois Bertrand, FCIC**
Polytechnique Montreal
- > **Josephine Hill, FCIC**
University of Calgary
- > **Stephen Westcott, FCIC**
Mount Allison University
- > **Mark Workentin, FCIC**
University of Western Ontario
- > **Zhongxin Zhou, FCIC**
Gilead Alberta ULC

Celebrating Student Achievements

Across the three societies, we have 17 awards to recognize the outstanding contributions of students and young professionals at all levels of Canadian post-secondary institutions:



9

**student
awards**



1

**faculty
advisor
award**



6

**student
competitions**



3

**student
scholarships**

Our Charity: Chemical Education Fund

The CIC's [Chemical Education Fund \(CEF\)](#) is a registered charity that promotes education in the fields of chemical sciences, chemical engineering, chemical technology, and related disciplines. CEF's goal is to inspire the next generation of chemical science professionals and engage the public by developing educational materials and through outreach activities, such as seminars and conferences.

Canadian Chemistry Brings the World Together



For the International Year of the Periodic Table, University of Waterloo and Chem 13 News magazine launched the 'Timeline of Elements' project, where students from 118 schools in 28 countries created hexagonal artwork based on the discovery story of each element.

2019 CIC Award for Chemistry Education



Professor **W. Stephen McNeil** is the winner of the 2019 CIC Award for Chemistry Education for his outstanding contribution to post-secondary chemistry education at the University of British Columbia Okanagan.

2019 Lionel High School Chemistry Scholarship

The Lionel High School Chemistry Scholarship is a scholarship to assist high school students in financial need in pursuing post-secondary studies in the chemical sciences up to four years.

Anita Rodrigues,
Frank Hurt Secondary School, Surrey, BC

Josephine Shasko,
Belmont Secondary School, Victoria, BC

Summary of Initiatives in 2019

In 2019, the CEF funded **14** initiatives and projects across Canada with over **\$20K** in funding.

1

Canadian National Committee for IUPAC (CNC-IUPAC) Breakfasts
"Celebrating Women in Chemistry"

2

Chemical Engineering Research Day
(Hosted by McGill, Polytechnique Montréal, and Université Laval)

3

47th Southern Ontario Undergraduate Student Chemistry Conference 2019 (SOUSCC 2019)

4

Chemical Biophysics Symposium
(Hosted by University of Toronto)

5

44th Science Atlantic Chemistry Conference (ChemCon 2019)

6

Canada 2067: Undergraduate Research 3-Minute Talks

7

3rd Leaders Overcoming Gender Inequality in Chemistry (LOGIC) Retreat

9

Working group for Inclusion, Diversity, and Equity (WIDE)

10

Chemistry Outreach in Labrador

11

31e Colloque annuel des étudiantes et étudiants de premier cycle en chimie (Colloque 2019)

12

69th Canadian Society for Chemical Engineering (CCEC 2019) Student Programming

13

Timeline of Elements

14

Toronto Local Section Professional Development and Outreach Programs

JAN

FEB

MAR

APR

MAY

JUN

JUL

AUG

SEP

OCT

NOV

DEC

The Canadian Journal of Chemical Engineering

The Canadian Journal of Chemical Engineering (Can. J. Chem. Eng.) is proudly owned by CSChE and published in partnership with Wiley. Can. J. Chem. Eng. publishes high-quality original research in chemical engineering from around the world.

IMPACT FACTOR

increased to a record HIGH
2-year 1.610 ↑ 5-year 1.495

3,184
published pages
in 13 issues
in 2019
OUR NEW RECORD

30 DAYS
average time to
FIRST
DECISION

210+K
ARTICLE
DOWNLOADS
in 2019
UP 12%
from 2018

Our most cited & downloaded article

"A Comprehensive Review on Emulsions and Emulsion Stability in Chemical and Energy Industries"

Fatemah Goodarzi & Sohrab Zendehboudi, MCIC



The article with the highest publicity



"Experimental Methods in Chemical Engineering: Mass Spectrometry—MS"

Patrice Perreault, Etienne Robert, & Gregory Patience, MCIC

2019 Winner of the Can. J. Chem. Eng. Lectureship Award

Arun Ramachandran
University of Toronto



Best Graduate Student Paper

Khushaal Popli
University of Alberta

“

In 2019 we completed our 97th volume and reached the highest impact factor on record of the Can. J. Chem. Eng. The credit for this achievement goes to our dedicated Associate Editors and IAB members, and above all to all the authors who selected the Can. J. Chem. Eng. to publish their best scientific research results.

”

João B. P. Soares, Editor-in-Chief



Welcome to Our New Associate Editors

For 2019, we welcomed several associate editors, including CIC members:

- > Gisele Azimi
University of Toronto
- > Jan B. Haelssig
Dalhousie University
- > Vikramaditya G. Yadav
University of British Columbia
- > Fouad Azizi
American University of Beirut
- > Sohrab Zendehboudi
Memorial University of Newfoundland

CIC NEWS

Chemistry has been dubbed the “central science” because of the many different facets that link it with so much of what happens in research and development. In much the same way, CIC News can be regarded as the “central medium” for information and insights about chemistry in Canada.

For 2019, we had:

96 ORIGINAL
ARTICLES

25 SCIENCE
CORRESPONDENTS

Our Top 5 Most Read Articles are:

1. [Helium: what should Canada do?](#)
2. [Canadian Chemistry Contest winners announced](#)
3. [Powerful and overlooked: The importance of communication in science](#)
4. [Design Our Climate Simulation: a free interactive program the world can use](#)
5. [Career advice from emerging leaders: a PhD student perspective](#)

“This is where you can come for the people, places, and events that bring the central science to life.”

Tim Loughheed
CIC News Editor

EDITOR'S PICKS



Painting a Picture of Persistence

A look at the long-lived agents that plague Canada's northern environment, and how the presence of these chemicals adds to the complicated effects a changing climate will have on this region.



STEM education meets social priorities

A Q&A encounter with Eugenia Duodu, founder of a Toronto-based group that offers the city's low-income youth an experience of the value of science, technology, engineering, and mathematics.



A call for researchers to speak up

The lead author of a landmark report on Canada's science policy objectives criticizes the lack of progress and calls for widespread vocal demands that the government should do much more.



Measuring milk's many micronutrients

University of Alberta researchers applied the latest analytical technology to compile an unprecedented on-line archive of thousands of metabolites found in a humble glass of milk.



Pursuing policy

A University of Ottawa chemist, and Fellow of the Chemical Institute of Canada, demonstrates how to turn a network of professional connections into an initiative for helping set more effective science policy.



The darker reality behind the brighter alternative

A chemical engineering student at Ryerson University points out the unsettling implications of a lack of life-cycle analysis in the solar panel industry.

Our Premier Conferences

In 2019, the Canadian Chemistry Conference and Exhibition (CCCE) and Canadian Chemical Engineering Conference (CCEC) organizing committees took the opportunity to design events that reflect the increasingly changing face of the chemical sciences.

CCCE 2019 Quebec City

2400+
DELEGATES from
32 COUNTRIES



CCEC 2019 Halifax

650+
DELEGATES from
19 COUNTRIES



New programming to reflect important areas for the chemical sciences and society, such as equity, diversity, and inclusion in chemistry, science advocacy, and the future of chemistry in Canada

The inaugural ChemiSTEAM Content—putting the A(rt) in STEM featured a juried exhibition of original chemistry-inspired art



Career development programming for young professionals to build skills and network

Revitalized industry program on topics relating to sustainability, the changing world of Canadian pharma, cannabis, and transitioning from research to a start-up company



Four plenary sessions featuring industry and government leaders on the challenges and opportunities for chemical engineering in Canada

Highlighted **four leading early career researchers** in the Emerging Leaders in Chemical Engineering session



Student programming focused on career development to help them prepare for the future

Industry programming, which included talks on how to scale-up research for commercialization and the future of work



Partnerships & Community Engagement

The CIC recognizes the valuable roles that industry and government play in the chemical sciences community and we worked to strengthen our partnerships with these sectors in 2019.

Industry and Government Relationships and Partnerships

CRIN

CIC joined **Clean Resource Innovation Network (CRIN)**.

NRC · CMRC

CIC embarked on a collaboration with the **National Research Council of Canada (NRC)** for STEM+ workshop.



CIC/CSChE is actively engaged with the **Chemistry Industry Association of Canada (CIAC)** in the area of chemical process safety.



Increased industry support to and engagement in conferences in 2019.

National and Worldwide Community Engagement

SUSTAINABLE DEVELOPMENT GOALS

UN 2030 Sustainable Development Goals were introduced into conference programming in 2019 and will continue to be crucial to our 2020 plans.



CANADIAN CONSORTIUM FOR RESEARCH
CONSORTIUM CANADIEN POUR LA RECHERCHE

CIC continues to be an active member in two advocacy groups providing a face and voice to the Government of Canada: **Partnership Group for Science and Engineering (PAGSE)** and the **Canadian Consortium for Research (CCR)**.



CSC is actively engaged with the **Royal Society of Chemistry (RSC)** (UK) and **American Chemical Society (ACS)** to advance together the chemistry and chemical sciences professions globally.



CSC is actively engaged in the formation of the **Federation of Commonwealth Chemical Sciences Societies** and in the development of the inaugural **Commonwealth Chemistry Congress (CCC)**.



CSChE is an active member of the **World Chemical Engineering Council (WCEC)** and **Engineering Institute of Canada (EIC)**.



CSCT is connected to **Technology Accreditation Canada (TAC)** and other relevant organizations.



CSC actively supports and engages in the **Canadian National Committee for IUPAC (CNC-IUPAC)**.



INTERNATIONAL UNION OF
PURE AND APPLIED CHEMISTRY

CSC partnered with **International Union of Pure and Applied Chemistry (IUPAC)** to announce four elements for the "Periodic Table for Younger Chemists" from CCCE 2019 Quebec City. These were the last four elements before the final reveal in Paris in July.

Moving Forward into 2020 and beyond

CIC ViRTUAL

Every year, we look forward to seeing everyone at our annual conferences. However, in 2020, one of our goals was to provide other opportunities to foster the chemical sciences community and advance our careers. We are excited to announce that we have launched [CIC ViRTUAL](#)—a series of virtual engagements, events, and webinars.



Creating real connections, virtually



Learn about the research happening in our community.

Topics will include recent findings in the field and other special research-related webinars and discussions.

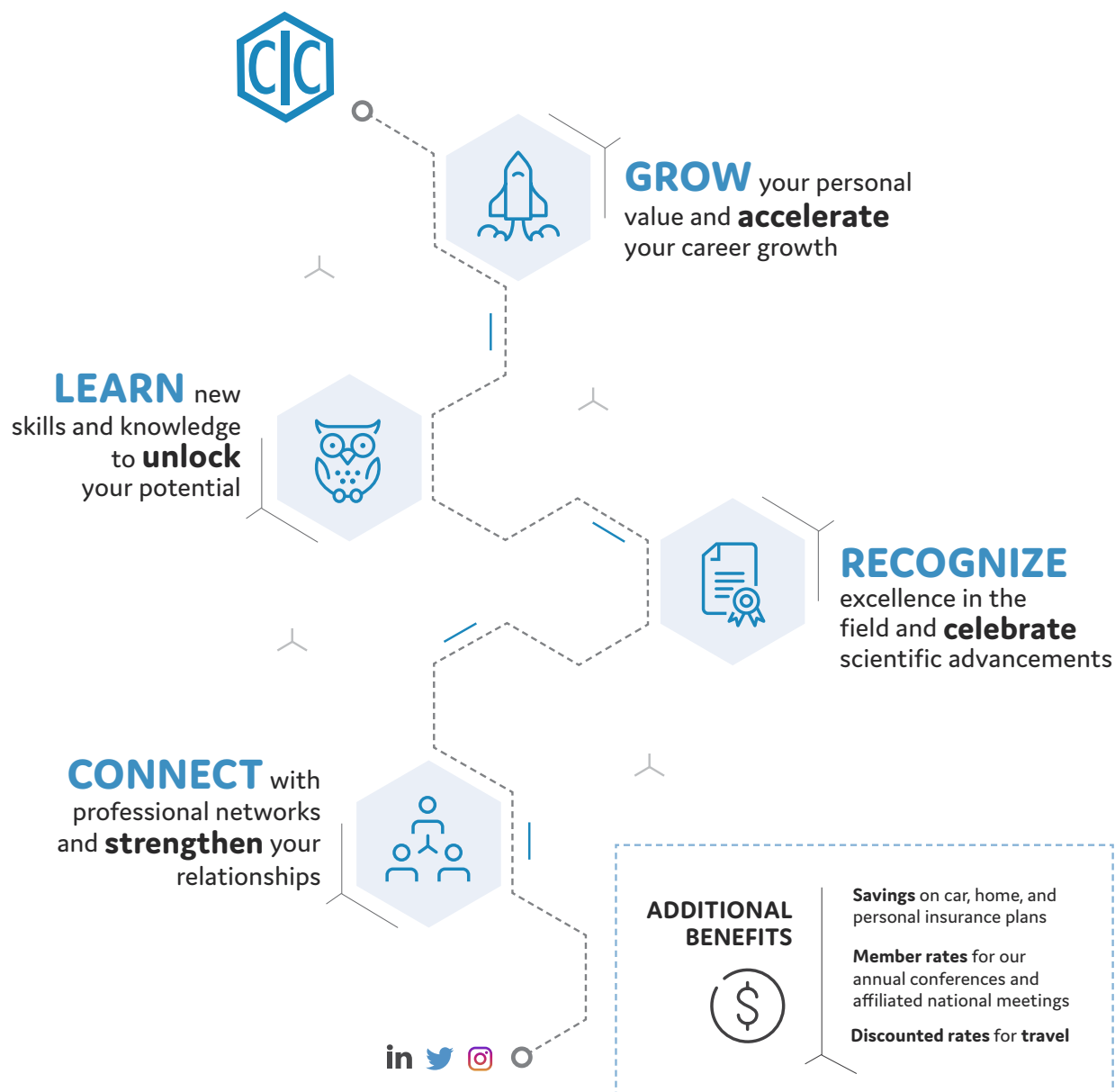


Gain new skills and connect with the community.

The focus of this stream is broader with topics ranging from professional development, open discussions on current issues including COVID-19 and much more.

Value of CIC Membership

JOIN NOW AND TAKE YOUR PLACE IN CANADA'S THRIVING CHEMICAL SCIENCE, ENGINEERING, AND TECHNOLOGY COMMUNITY.



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Institut de chimie du Canada | **Pour notre avenir**

cheminst.ca/membership