



nano ontario

Annual Report 2021



nano ontario is a not-for-profit corporation representing the interests of academic, industrial, government and financial community members in the development of nanotechnologies in Ontario.

nano ontario members work together to raise the profile, increase the research, build the investment and drive economic returns from nanotechnology in the province and across Canada.

VISION

- To be the trusted source of information for nanotechnology activity in Ontario.
- To be the recognized authority to advise government on economic opportunities, policy, standards and regulations that enable Ontario to benefit and capitalize on its research, development and commercial capacity in nanotechnology.

OBJECTIVES

- Map Ontario's capacity in nanotechnology research development and commercialization.
- Promote and facilitate interaction between nanotechnology groups in universities, industry and government.
- Coordinate public outreach activities to advocate societal benefits enabled by nanoscience and nanotechnology.



Message from the Chair



2021 was a virtual year for NanoOntario like for many of us.

Nevertheless, NanoOntario organized two major events during this year.

The NanoOntario annual conference was organized at Ryerson -now Toronto Metropolitan University- giving our students the opportunity to present their work and to attend a career panel.

We have also launched the first nanoOntario Pitch award to support two start-up companies and their use of nanotechnologies for the conception of devices with potential for commercialization. This \$30,000 cash award was supported by CMC microsystems who provided a one-year free subscription to the Virtual Incubator Environment to further support the selected start up entrepreneurs.

The 2021 NanoOntario Awards in NanoScience and Nanotechnology lectures were programmed in the winter 2022 highlighting again the Excellence and Diversity of our best talents in Nanoscale science and technologies.

Summarized in this report are the main events organized by NanoOntario in 2021 as well those in which NanoOntario members participated and represented our organization.

Dr. François Lagurné-Labarthet (Western University)



NanoOntario Annual Conference, Nov 4th 2021.

Cancelled in 2020 because of the global pandemic, the 11th NanoOntario conference took place virtually using the ludic GaterTown platform and was organized by Dr Stefania Impellizzeri, Dr. Hadis Zarrin and Dr Nariman Yousefi at Toronto Metropolitan University. The conference focused on the applications of nanotechnologies in photonics, bioelectronics, smart materials, and material for green applications such as CO₂ capture and solar harvesting. Keynote speakers were Professor Catherine J. Murphy from the University of Illinois at Urbana Champaign and Professor Prashant V. Kamat from University of Notre Dame.



A Career Panel provided the 70 attendees useful information and advice for finding a job in a post-pandemic time. Dr Gregory Hodgson (Shift Health), Dr Camila Londoño (Ryerson University Science Discovery zone) and Dr. Kazim Agha (Ridout & Maybee) kindly participated in this debate providing many good tips to our freshly graduated students. In addition, 7 students were awarded monetary prize for their posters and flash presentations.

NanoOntario Inc. wish to acknowledge all our sponsors who made this conference possible. CMC Microsystems, Systems for Research (SFR), Ryerson University, CIC division of surface chemistry and Ministry of Economic Development, Job Creation and Trade all supported the conference making possible to cover all associated costs, to support the poster and flash talk prizes and to waive all the students registration fees.



NanoOntario Virtual Pitch Award (Aug 2021)

NanoOntario Inc. and CMC microsystems supported the creation of a pitch award to support Ontario-based startup companies. A total prize of \$30,000 was assigned to the creation of the pitch. In the first phase (August 2021) two companies, Aquasensing and Spectra Plasmonic each won \$10,000 to develop their idea and projects. In a second phase organized in June 2022, these two companies will compete to obtain an additional \$10,000. Over 10 applications were received as 20 min videos that were evaluated by a committee of 5 participants. This also highlights the need of fast turnaround research award necessary to leverage more funds from these startups.

Nanomaterials Virtual Pitch Contest

\$30,000

total prize pot

\$10,000 for 2 winners + 1 year VIE subscription

Applications due on 30th June 2021

www.cmc.ca/pitch-contest

Eligibility

Entries must be for the use of a nanomaterial to create or to improve a commercial product.

Applicants must be Ontario-based start-ups or small or medium enterprises.

Virtual pitch contest, 10 minutes and 10 slides per company to determine 2 winners. The virtual pitches will be scheduled the third week of July and winners will be announced by the end of July.

Scoring

A judging panel will judge the pitches on a scale of 1 to 5 for:

- Clarity of pitch
- Size of market
- Benefit to Ontario
- Expertise of team
- Financial model of the business

Plus any other criteria the judging panel may decide.

Prizes

2 winners receive a \$10,000 prize plus a 1-year VIE subscription. VIE is the Virtual Incubator Environment for Startups. For more details: www.cmc.ca/vie/

Zero conditions as to the use of the prize money.

The judging panel will review the winning companies progress in 6 months time and will award a further \$10,000 to the company with the most progress.



www.cmc.ca

CMC helps researchers and industry across Canada's National Design Network® develop innovations in microsystems and nanotechnologies.

Presented by



www.nanoontario.ca

NanoOntario is a not-for-profit corporation that promotes academic, government, and industrial members using nanotechnology in Ontario.

Have a question? Send an email to awards@nanoontario.ca



2021 NanoOntario Awards in Nanosciences for Scientists and Engineers (Jan-March 2022)

The recipients of the 2021 NanoOntario awards were:

-Professor **Muhammad Yusaf** (York University), Honorary Award for Outstanding Lifetime Achievements in Nanoscience and Nanotechnology in Ontario.

-Professor **Tricia Carmichael** (University of Windsor), Outstanding mid-career achievements in Nanoscience and Nanotechnology in Ontario.

-Professor **Emilio Alarcon**, (University of Ottawa) for outstanding early career achievements in Nanoscience and Nanotechnology in Ontario

-Dr **Isobel Bicket**, (Mc Master University), Postdoctoral Award for achievements in Nanoscience and Nanotechnology in Ontario.



Muhammad Yusaf
York U

Honorary Award
for Outstanding
Lifetime
Achievements

January 27, 2022
3 - 4 pm ET

*"Rewiring Cell
Surfaces with
Click Chemistry
for Applications
in Tissue
Engineering"*



Tricia Carmichael
U of Windsor

Award for
Outstanding
Mid-career
Achievements

February 17, 2022
3 - 4 pm ET

*"Wearable e-textiles
using a textile-
centric design
approach"*



Emilio Alarcón
U of Ottawa

Award for
Outstanding
Early-career
Achievements

March 17, 2022
3 - 4 pm ET

*"From chemical
kinetics to
nanostructures for
biomedical uses"*



Isobel Bicket
McMaster U

Award for
Outstanding
Postdoctoral
Achievements

April 14, 2022
3 - 4 pm ET

*"Probing hybridized
polaritonic resonances
using high resolution
electron energy loss
spectroscopy"*





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New members 2021-Winter 2022

Kazim Agha (Ridout & Maybee)
Lora Field (Ministry of Economic Development, Job Creation and Trade)
Norman Zhou (Aquasensing)





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