nano ontario

Annual Report 2020

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

2020 has been a very special year for all of us. Even though it started well for NanoOntario with the annual Japan nanotech conference followed by the mission in Korea in February where fruitful contacts were established with companies and with local Universities, the world went virtual in mid-March.

Because of the global pandemic, our annual NanoOntario conference scheduled at Ryerson and workshop scheduled at McMaster had to be cancelled.

On a brighter side, NanoOntario organized virtual award lectures highlighting the excellence in Nanoscience and Nanotechnologies by Women researchers, including the new postdoctoral award.

Ontario-based companies have joined NanoOntario in 2020 including Ovensa (Stéphane Gagné), Zen Graphene (Peter Wood and Monique Manaigre) and FlowJem (Jesse Greener). Ontario Ministry of Economic, Development, Job Creation and Trade (Hamid Shirazi) has also joined NanoOntario as a member at large, highlighting their interest in the application of Nanoscience and providing the support of their team.

As the chair of the board of directors, I will continue to work towards the expansion of our not-for-profit organization attracting more small, medium and large companies who are, together with the academic researchers, defining the future of nanoscale science in Ontario. Together we will continue to amplify the excellence of our research in nanoscience and of its critical impact in a post pandemic era.

Summarized in this report are the main events organized by NanoOntario in 2020, as well those in which NanoOntario members participated and represented our organization.

Dr. François Lagugné-Labarthet (Western University)

NanoOntario In Japan (Jan 29th - 31st 2020)

For the fourth time, NanoOntario represented the interests of its members at the NanoTech Conference and Exhibition at Tokyo Big Sight in Japan. The mission was organized by NanoCanada and included a meeting at the Canadian Embassy in Tokyo. The Canadian delegation was composed of 21 members. Delegates had opportunities to present their nanotechnology facilities, products, and initiatives to Japanese stakeholders at both the Canadian Embassy and the Nanotech exhibit with the support of trade commissioners and translators. NanoOntario representatives (F. Lagugné, P Mascher, S. Mitra) also had the possibility to meet with institutes with which they currently collaborate and explore new possibilities with Japanese Universities who are open for researcher exchanges.

The delegation had the opportunity of site visits of FujiFilm Open Innovation hub and the national Institute of Advanced Industrial Science and Technology (AIST) in Tsukuba. These fruitful meetings and visits provided a direct line into top Japanese Institutes that would not be possible without the professional organization by the Canadian Embassy, and NanoOntario's participation in this mission organized by NanoCanada. Noteworthy key contacts were established with Keio University and with Kanazawa University including the Nano Life Science Institute (NanoLSI), two Universities

that have programs to invite foreign researchers. More information can be found on their respective websites:

https://nanolsi.kanazawa-u.ac.jp/n/research/researchers/

https://www.keio.ac.jp/en/

The primary activity for NanoOntario was participation in Japan's NanoTech 2020 Conference and Exhibition. Considered one of the largest events in the world, the tradeshow floor sees over 50,000 registrants visiting hundreds of booths set up by many companies and countries.

The NanoCanada booth was the home to all Canadian delegates and an ideal environment to conduct business-to-business meetings with other international partners.

During this mission, NanoOntario interacted with many companies and institutes, including sever al who expressed interest in becoming members of NanoOntario. NanoCanada indicates that the Canadian companies who participated in this event have made many promising connections and that some positive outcomes were materializing as a result of their meetings in the NanoCanada pavilion.

In conclusion, NanoOntario's participation in this mission and tradeshow is key to raising the profile of its members and representing the interests of Ontario on the national and international scene. It was highly insightful and productive to meet the other key Canadian stakeholders representing other provinces excellence in nanotechnologies. It has allowed for better coordination and planning between provincial and national organizations. NanoOntario was represented by François Lagugné-Labarthet (Western), Peter Mascher (McMaster) and Sushanta Mitra (WIN, Waterloo). Noteworthy, Stéphane Gagné (Ovensa), one of the Canadian delegates in Japan and Korea, became a new member of NanoOntario.

NanoOntario In Korea (Feb 2nd - 4th 2020)

For the first time, NanoOntario (F.Lagugné) joined the mission to Seoul, Korea, following the Japan Nanotech exhibit. Site visits at CEKO and EVERCHEMTECH were organized to these companies specializing in the development of high-tech polymer coatings with hydrophobic, antistatic, antireflection coatings. These coatings are used in a variety of applications including but not limited to electronic devices. CEKO for example provided the screen coatings on Samsung cell phones. These companies are interested in expanding their market beyond Korea.

Meeting at the Canadian Embassy to Korea was also organized with trade commissioners working for the different Canadian provinces and with representation of the main Korea funding agency. A session on the commercialization of research outcomes in nanotechnologies, funding and exchange of researcher possibilities was given by the Nano-Convergence Foundation.

Possibility to meet Korean companies and distributors is facilitated by the trade commissioners working at the Embassies. They have an excellent knowledge of the market and know how to approach the Korean counterparts.

Virtual Poster exhibit in Korea (July 2020)

In lieu of the nanotech meeting scheduled in July 2020, a virtual event was organized. Under the umbrella of NanoCanada, NanoOntario participated in the conference providing a poster of our members and flyers with all our contact information.

2020 NanoOntario Awards in Nanosciences for Scientists and Engineers (Nov 2020 - Feb 2021)

Even though the planned 11th NanoOntario Conference was cancelled due to Covid 19, the call for Awards in NanoScience for minority groups was maintained and all recipients gave a virtual lecture. Each lecture was attended by 30 to 50 attendees. The recipients of the 2020 NanoOntario awards were:

-Professor Eugenia Kumacheva (University of Toronto), Honorary Award for Outstanding Lifetime Achievements in Nanoscience and Nanotechnology in Ontario.

-Dr Eve Tsai, neurosurgeon and scientist at Ottawa Hospital, Outstanding Mid-career achievements in Nanoscience and nanotechnology in Ontario.

-Professor Eva Hemmer, University of Ottawa for outstanding early career achievements in Nanoscience and Nanotechnology in Ontario

-Dr Erin Mc Connell, (Mc Master University), Postdoctoral Award for achievements in Nanoscience and nanotechnology in Ontario.

Eugenia Kumacheva
University of Toronto

Honorary Award for Outstanding Lifetime Achievements

November 6
3-4 pm

"Bridging the gap between molecules and nanoparticles"

Eve Tsai
University of Ottawa

Award for Outstanding Mid-career Achievements

December 2
3-4 pm

" How to advance Nanotechnology in the Medical Field?"

Eva Hemmer
Univeristy of Ottawa

Award for Outstanding Early career Achievements

January 21, 2021
3-4 pm

" Trends and Challenges in Rare-Earth-Based Opto-Magnetic Nanoprobes"

Erin McConnell
McMaster

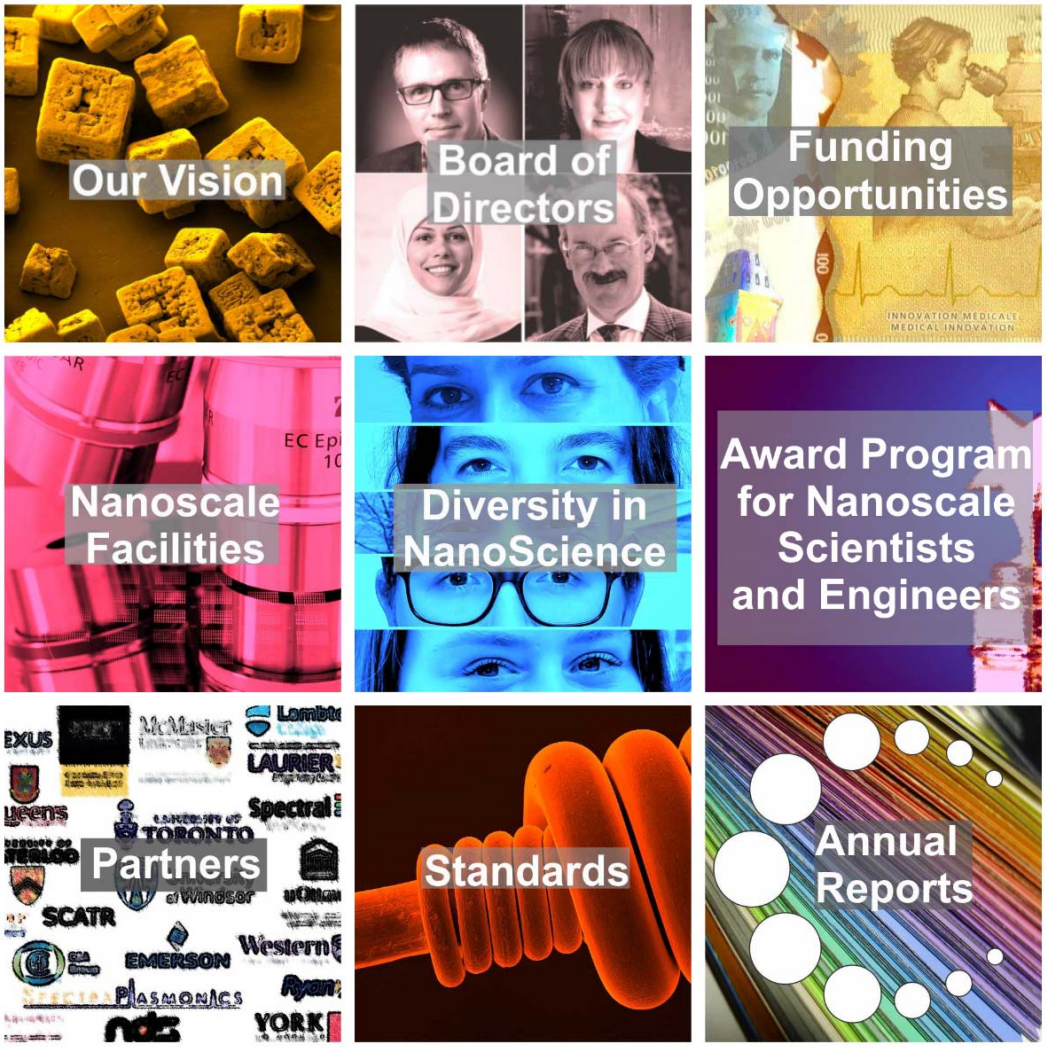
Postdoctoral Award

February 18, 2021
3-4 pm

" DNA as a tool to build molecular recognition elements for biosensing, diagnostics, and therapeutics"

New NanoOntario Website: https://nanoontario.ca/

The NanoOntario Website was redesigned in 2020 highlighting better Ontario's facilities in nanoscale fabrication and characterization, funding opportunities and our researchers. Noteworthy, students looking for a job or a postdoctoral position can have their profiles added to our pool of talent section. All annual reports and programs of our most recent conferences are accessible.

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Executive Directors 2020

F.Lagugné-Labarthet, Peter Mascher, Gordon Harling, Gilbert Walker, John Dutcher, Hind Al-Abadleh, Hamdy Khalil.

Members 2020

Ari Forman (SCATR)
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Phil Whiting (Mirexus)
Jeff Carson (Spectral Devices)
Sami Aslam (Emerson)
Mohamed Parpia (Ryan)

New members 2020

Stéphane Gagné (Ovensa)
Peter Wood and Monique Manaigre (Zen Graphene)
Jesse Greener (FlowJem)
Hamid Shirazi (Ministry of Economic Development, Job Creation and Trade-Strategic Industry Intelligence Branch)

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