

2022 GLOBAL SUMMIT

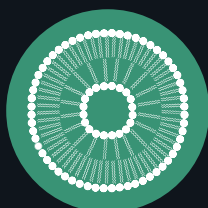
Nanotechnology for a Healthier and Sustainable Future

Program Guide

 10-11 AUGUST 2022



Digital Health & AI Diagnostics



Nanomedicine



Agricultural Nanotechnology



ED&I and Sustainability



[N4NSNANO.ORG](https://www.n4nsnano.org)

HYBRID EVENT!

SUPPORTING
SUSTAINABLE DEVELOPMENT **GOALS**

3 GOOD HEALTH AND WELL-BEING



LOCATION:



UNIVERSITY OF
WATERLOO



WATERLOO INSTITUTE FOR
nanotechnology



2022

GLOBAL SUMMIT
NANOTECHNOLOGY FOR A
HEALTHIER & SUSTAINABLE FUTURE

SATELLITE:



THE UNIVERSITY OF
SYDNEY

Nano Institute

About

The International Network for Sustainable Nanotechnology



The International Network for Sustainable Nanotechnology (N4SNano) is a consortium of leading organizations in the field of nanotechnology representing institutes, universities, non-profit and governmental agencies.

The Network originated from the International Workshop on Nanotechnology for a Sustainable Future, a virtual event held in November 2020, co-organized with the Consulate of the Netherlands in Canada. The workshop featured 26 speakers from five countries spanning four continents, and was attended by 244 people from 15 different countries. Follow-up discussions with the workshop organizers led to the formation of this network.

Founding members of the Network are from the Waterloo Institute for Nanotechnology (WIN) in Canada, MESA+ Institute for Nanotechnology from the Netherlands, the University of Sydney Nano Institute (Sydney Nano), and the University of California Los Angeles (UCLA). The Japan Science & Technology Agency (JST) has been a supporting member since its inception. The Network now has 10 academic members from: Argentina, Botswana, Czech Republic, Canada, Israel, Mauritius, New Zealand, South Africa, Spain & United Kingdom.

**UNIVERSITY
OF TWENTE.** | **MESA+
INSTITUTE**

UCLA

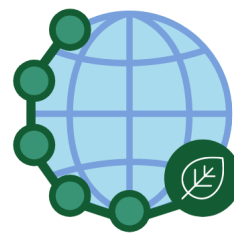


THE UNIVERSITY OF
SYDNEY



About

2022 Global Summit on Nanotechnology for a Healthier and Sustainable Future



2022

GLOBAL SUMMIT
NANOTECHNOLOGY FOR A
HEALTHIER & SUSTAINABLE FUTURE

The 2022 Global Summit is hosted by the Network for Sustainable Nanotechnology and is focused on UN SDG#3 Good Health and Well-being. It is a small but important step towards achieving the larger ambitious vision of creating a world free of hunger, poverty, and disease where all life can thrive.

This Global Summit will raise awareness and support capacity-building for the UN SDGs and their related thematic issues. Through this Global Summit we hope all attendees will appreciate the opportunities that nanotechnology can provide along with understanding its limitations so that they can be addressed.

The Global Summit will bring together people from all over the world who are interested in improving global health in terms of nanotechnology, sustainability, digital health, and equity, diversity & inclusion (ED&I).

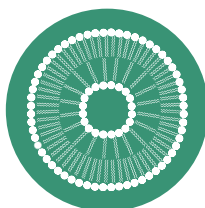
The Global Summit 2022 had a very successful launch event in February 2022 with keynote talks by Professors Dean Ho, Kishor Wasan, Teri Odom, and Christine Allen and panel discussions moderated by distinguished scholars. Building on this momentum, the Global Summit 2022 is a two-day event with the following sessions:



**Digital Health &
AI Diagnostics**



**Agricultural
Nanotechnology**



Nanomedicine

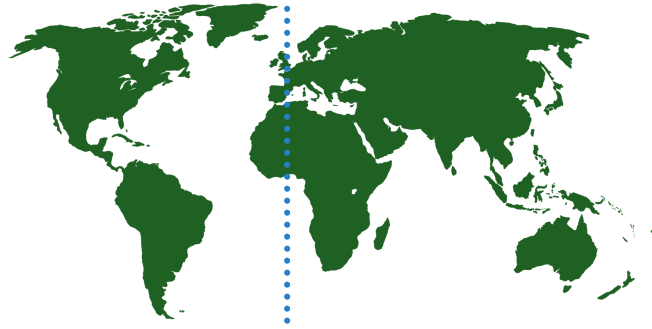


**ED&I and
Sustainability**



Agenda

Day 1: 10 Aug EST/11 Aug AEDT



10 Aug (-UTC)

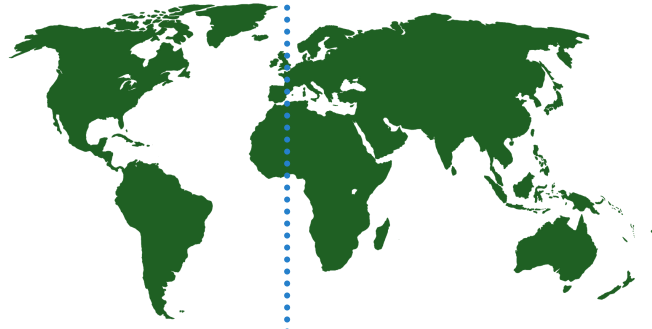
11 Aug (+UTC)

Start	End	Topic	Location
9:00	9:45	Registration and Coffee	QNC 0101 Lobby
9:45	9:50	Opening Remarks & Territorial Acknowledgement, University of Waterloo <i>- Virtual</i> Charmaine Dean, Vice-President, Research & International	QNC 0101 Lecture Hall
9:50	9:55	Opening Remarks, University of Waterloo Lili Liu, Dean of Faculty of Health	QNC 0101 Lecture Hall
9:55	9:57	Opening Remarks, N4SNano Sushanta Mitra, Executive Director of Waterloo Institute for Nanotechnology	QNC 0101 Lecture Hall
9:57	10:00	Opening Remarks, N4SNano Benjamin J. Eggleton, Director - The University of Sydney Nano Institute <i>- Virtual</i>	QNC 0101 Lecture Hall
Session 1: Nanomedicine - Chaired by Emmanuel Ho			
10:00	10:50	Plenary Speaker Operating Biological Logic Gates by Gold Nanoparticle-Fluorophore Conjugates - Dror Fixler <i>Director of the Institute of Nanotechnology and Advanced Materials (BINA) at Bar-Ilan University</i>	QNC 0101 Lecture Hall



Agenda

Day 1: 10 Aug EST/11 Aug AEDT



10 Aug (-UTC)

11 Aug (+UTC)

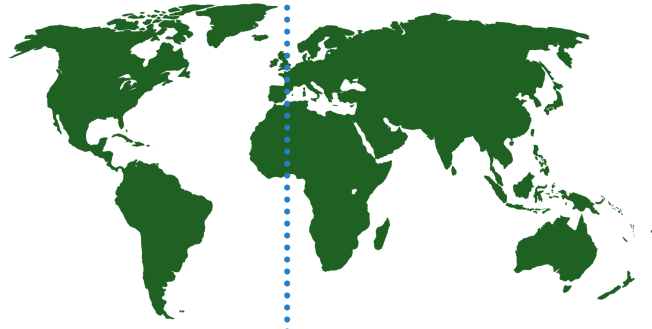
Start	End	Topic	Location
10:50	11:05	- Coffee Break -	
11:05	11:25	Pathogenic virus detection using upconversion luminescence nanomaterial-based biosensor toward point-of-care diagnostics By <u>Jianhua Hao</u> , <i>The Hong Kong Polytechnic University</i>	QNC 0101 Lecture Hall
11:25	11:45	Plant-based Synthesis of Gold Nanoparticles for the Next Generation of Colon Cancer Treatment - Virtual By <u>Itumeleng Zosela</u> , <i>Nelson Mandela University</i>	QNC 0101 Lecture Hall
11:45	12:05	Next-Generation Enabling Technologies for Health Monitoring By <u>Mahla Poudineh</u> , <i>University of Waterloo</i>	QNC 0101 Lecture Hall
12:05	12:25	Oral Nanotherapeutic Formulations of Insulin - Virtual By <u>Nicholas Hunt</u> , <i>University of Sydney</i>	QNC 0101 Lecture Hall
12:25	13:30	- Lunch Break - Industry Exhibition and Posters Competition	QNC 1501

Session 2: Agricultural Nanotechnology - Chaired by Lisa Pokrajac

13:30	14:05	Keynote Speaker Nanotechnology-enabled agriculture: A path to global food security? - <u>Jason C. White</u> - Virtual <i>Director, The Connecticut Agricultural Experiment Station</i>	QNC 0101 Lecture Hall
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Agenda

Day 1: 10 Aug EST/11 Aug AEDT



10 Aug (-UTC)

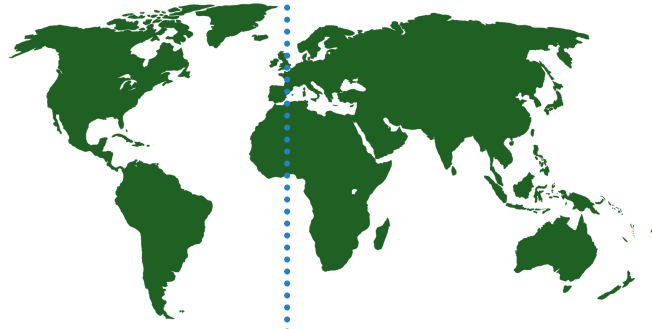
11 Aug (+UTC)

Start	End	Topic	Location
14:05	14:25	Seaweeds and Microformulations as a Strategy for Food Security <i>- Virtual</i> By <u>Devesh Bekah</u> , <i>Center for Biomedical and Biomaterials Research, University of Mauritius</i>	QNC 0101 Lecture Hall
14:25	14:30	End of Day One Presentations Lisa Pokrajac, Assistant Director, Research Programs of Waterloo Institute for Nanotechnology	QNC 0101 Lecture Hall
14:30	17:15	- Midday Break - Industry Exhibition Optional: Poster Competition judging for trainees Optional: 1 hour Campus Tour - Leaves Registration Desk @ 14:45	QNC 1st Floor Atrium
17:15	19:30	Conference Banquet	Federation Hall
19:30	20:30	Debate Viewing @ University of Sydney Nano Institute	Federation Hall
20:30	20:40	Day One Closing Remarks Sushanta Mitra, Executive Director of Waterloo Institute for Nanotechnology	Federation Hall



Agenda

Day 2: 11 Aug EST/12 Aug AEDT



10 Aug (-UTC)

11 Aug (+UTC)

Start	End	Topic	Location
9:30	9:50	Morning Welcome and Coffee	QNC 0101 Lobby
9:50	10:00	Housekeeping Items Emmanuel Ho, <i>N4SNano Program Chair</i>	QNC 0101 Lecture Hall

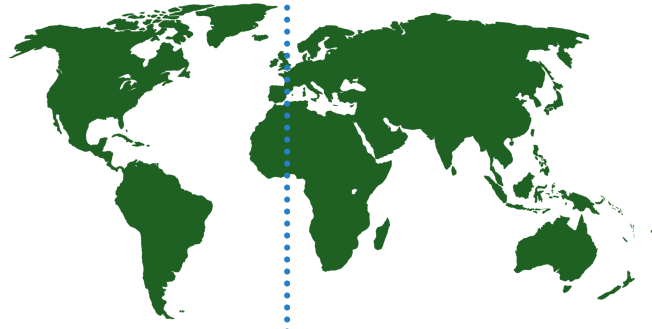
Session 3: Digital Health and AI Diagnostics - Chaired by Oleg Stukalov

10:00	10:50	Plenary Speaker Intelligent Design Through Explainability and Trusted AI-Driven Design for Healthcare - <u>Alexander Wong</u> <i>Canada Research Chair in Artificial Intelligence and Medical Imaging</i>	QNC 0101 Lecture Hall
10:50	11:05	- Coffee Break -	QNC 0101
11:05	11:25	A Hydrogel Microneedle-Assisted Assay Integrating Aptamer Probes and Fluorescence Detection for Reagentless Biomarker Quantification By <u>Hanjia Zheng</u> , <i>University of Waterloo</i>	QNC 0101 Lecture Hall
11:25	11:45	3D printing personalized medical hydrogel mask By <u>Lukas Bauman</u> , <i>University of Waterloo</i>	QNC 0101 Lecture Hall



Agenda

Day 2: 11 Aug EST/12 Aug AEDT



10 Aug (-UTC)

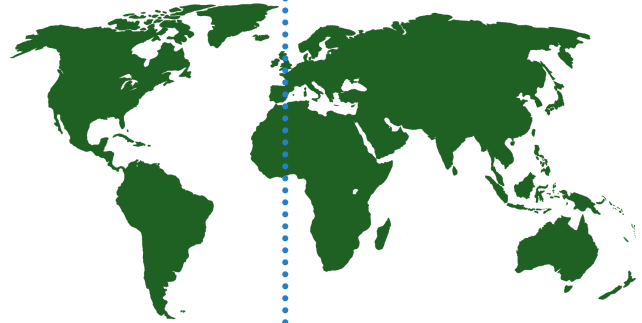
11 Aug (+UTC)

Start	End	Topic	Location
11:45	12:05	Antihyperlipidemic activity of silver and gold nanoparticles synthesized from aqueous extract of <i>Persea americana</i> Peel on high cholesterol diet-induced hyperlipidemia rats <i>- Virtual</i> By <u>Morenikeji Abel OKE</u> , <i>Ladoke Akintola University of Technology (LAUTECH)</i>	QNC 0101 Lecture Hall
12:05	12:25	An integrated microfluidic electrochemical assay for cervical cancer detection at point-of-care testing By <u>Fatemeh Keyvani</u> , <i>University of Waterloo</i>	QNC 0101 Lecture Hall
12:25	12:45	Cold microplasmias for bio-medical applications: A brief review <i>- Virtual</i> By <u>Vassili Karanassios</u> , <i>University of Waterloo</i>	QNC 0101 Lecture Hall
12:45	13:45	- Lunch Break -	QNC 1501
Session 4: ED&I and Sustainability - Chaired by Lisa Pokrajac			
13:45	14:15	Keynote Speaker <u>Palesa Sekhejane</u> <i>- Virtual</i> <i>Strategic Partnerships Director at the Human Sciences Research Council</i>	QNC 0101 Lecture Hall



Agenda

Day 2: 11 Aug EST/12 Aug AEDT



11 Aug (-UTC)

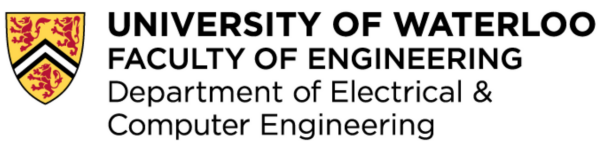
12 Aug (+UTC)

Start	End	Topic	Location
14:15	14:35	Suppression of Electrode Material Degradation by Using Surface Modifications Techniques By <u>Malachi Noked</u> , <i>Bar Ilan University</i>	QNC 0101 Lecture Hall
14:35	14:55	Fabrication of Hybrid Composite from False Banana Fiber and Sisal Fiber for Vehicle Dashboard Application <i>- Virtual</i> By <u>Dawit Wami</u> , <i>Assosa University</i>	QNC 0101 Lecture Hall
14:55	15:00	Closing Remarks, University of Waterloo Emmanuel Ho, <i>N4SNano Program Chair</i>	QNC 0101 Lecture Hall
15:00	15:05	Closing Remarks, N4SNano Sushanta Mitra, <i>Executive Director of Waterloo Institute for Nanotechnology</i>	QNC 0101 Lecture Hall



Sponsors

Thank you to our generous sponsors for their support of the 2022 Global Summit on Nanotechnology for a Healthier and Sustainable Future!



Industry Exhibition

On August 10th and 11th, our industry sponsors will be exhibiting in QNC 1501. The exhibition is open to all! Stop by to learn more and grab coffee and cookies.



Nanomedicine

Plenary



Dror Fixler

Director of the Institute of Nanotechnology and Advanced Materials (BINA) at Bar-Ilan University

Dr. Dror Fixler is the Director of the Institute of Nanotechnology and Advanced Materials (BINA) at Bar-Ilan University, and Professor in the Faculty of Engineering.

Dr. Fixler is a BIU-educated expert in electro-optics and photonics research including the emission, transmission, detection, and sensing of light for biomedical properties. His primary focus is on developing new technologies for super resolution microscopy, medical testing, and communications networks.

Dr. Fixler is a plenary speaker at the 2022 Global Summit on Nanotechnology for a Healthier and Sustainable Future in the Nanomedicine session.

Presentation:

Operating Biological Logic Gates by Gold Nanoparticle-Fluorophore Conjugates



Nanomedicine: Day 1

Technical Presentations

Jianhua Hao, PhD

Hong Kong Polytechnic University

Pathogenic virus detection using upconversion luminescence nanomaterial-based biosensor toward point-of-care diagnostics

Prof. Jianhua Hao is currently a Chair Professor of Materials Physics and Devices in the Hong Kong Polytechnic University (PolyU). He has published more than 350 international journal papers, including Nature, Nature Materials, Nature Commun., Adv. Mater., JACS, ACIE, Adv. Energy Mater., ACS Nano, Nano Energy and Nano Lett.. He serves as an Associate Editor of InfoMat (Wiley, IF~24.798) and Editorial Board Member of international journals (Advanced Optical Materials, etc.). Prof. Hao has received Natural Science Award by MoE, TechConnect Global Innovation Award, Special Merit Award and Gold Medal of Geneva, and President's Award in PolyU. He is conferred as RGC Senior Research Fellow, and elected as Optica (formerly known as OSA) Fellow, Fellow of Royal Society of Chemistry, and Fellow of Institute of Physics. His research focuses on luminescence and nanophosphors for photonic, biomedical and nano energy applications, functional thin-films, 2D materials and heterostructures for devices.

Itumeleng Zosela, PhD Candidate

Nelson Mandela University

Plant-based Synthesis of Gold Nanoparticles for the Next Generation of Colon Cancer Treatment

Itumeleng Zosela is a Nelson Mandela University PhD Physiology candidate. Her PhD research focuses on the use of green-synthesised metallic nanoparticles to treat colon cancer. She was born and raised in the Alice, Ntselamanzi location. She graduated from the University of Pretoria with a BSc (Microbiology), the University of the Western Cape with a BSc (Hons) Medical Biosciences, and Nelson Mandela University with an MSc Nanoscience (Cum Laude). As part of her postgraduate studies, she has also taken on several leadership positions, including mentoring first- and second-year Nanoscience Masters students, coordinating journal club sessions and serving as a brand ambassador for Nelson Mandela University's Global Challenges University Alliance (GCUA2030).

Mahla Poudineh, PhD

University of Waterloo

Next-Generation Enabling Technologies for Health Monitoring

Mahla Poudineh is an Assistant Professor at the University of Waterloo and the founding director of IDEATION Lab since January 2020. She received her Ph.D. degree in Electrical Engineering from the University of Toronto and completed postdoctoral training at Stanford University. Her research interests include developing biosensing approaches for diagnostic and therapeutic purposes. Her research has been selected as Science Translational Medicine Editor's choice article and highlighted in the Nature News&Views. She was the recipient of the best poster award during the Micro- and Nanotechnologies for Medicine Workshop held at UCLA (July 2019). She has been also selected as an Inaugural Contributor to the themed collection of Emerging Investigators, Nanoscale.

Nicholas Hunt, PhD

University of Sydney

Oral Nanotherapeutic Formulations of Insulin

Dr Nicholas (Nick) J. Hunt is a Lecturer based at the Concord Clinical School, within the Faculty of Medicine and Health (FMH) at the University of Sydney, Australia. Nick is a 2022 University of Sydney SOAR prize winner and the 2021 Australian Diabetes Society – Skip Martin ECR Fellow. His group has examines the use of nanotechnology for the targeted drug delivery of therapeutic agents for metabolic disease and diabetes. Nick is also co-chair of the NanoPharma cluster of the Sydney Nano-Health Network, an ECR Ambassador for Sydney Nano and secretary of the FMH EMCR committee. He has received publication awards from the American Physiological Society and Sydney Nano, has received innovation and best ECR presentation awards from Griffith Hack and the 10th International Nanomedicine Conference.

Agricultural Nanotechnology

Keynote



Jason C. White

Director of the Connecticut
Agricultural Experiment Station

Dr. Jason C. White is the Director of the Connecticut Agricultural Experiment Station, the oldest Agricultural Experiment Station in the country. In addition to managing the annual agency budget of \$14 million and approximately 115 scientific staff, Dr. White has a research program of \$5.1 million in competitive funding/research.

His primary research program focuses food safety and security, with specific interests on the impact of nanomaterials on agricultural plants and on the use of nanoscale materials to increase food production through sustainable nano-enabled agriculture.

Dr. White was elected to the Connecticut Academy of Science and Engineering in 2021 and is a member of the European Science Foundation (ESF) College of Experts. He is also a Commissioned Official of the United States Food and Drug Administration (US FDA). He received his Ph.D. in Environmental Toxicology from Cornell University in 1997 and has secondary appointments as a Clinical Professor of Epidemiology Yale School of Public Health and as an Adjunct Faculty Member of the University of Massachusetts Stockbridge School of Agriculture.

Presentation:

Nanotechnology-enabled agriculture: A path to global food security?



Agricultural Nanotechnology

Technical Presentations

Devesh Bekah, PhD

Centre for Biomedical and Biomaterials Research

Seaweeds and Microformulations as a Strategy for Food Security

Devesh did a BSc. in biophysics at the University of Toronto, followed by a MSc. in medical physics at Ryerson University, working under the supervision of Dr. Michael Kolios to study the mechanical properties of cancer cells using particle tracking microrheology. Then, he started a PhD. in biomedical engineering at McGill University, supervised by Dr. Jay Nadeau and worked on the synthesis of lanthanum fluoride nanoparticles conjugated to a photosensitizer for radiation therapy.

He is now working at the Centre for Biomedical and Biomaterials Research (University of Mauritius). Some of the projects he is involved in are: 1. Green synthesis of polymer stabilized metal nanoparticles 2. Characterization of local algae and exploration of their potential as nutraceuticals.

Digital Health & AI Diagnostics

Plenary



Alexander Wong

Canada Research Chair in Artificial Intelligence and Medical Imaging

Dr. Alexander Wong is currently the Canada Research Chair in Artificial Intelligence and Medical Imaging, Member of the College of the Royal Society of Canada, co-director of the Vision and Image Processing Lab, and a professor in the Department of Systems Design Engineering at the University of Waterloo.

Dr. Wong's research focuses on integrative computational imaging systems for biomedical imaging and operational artificial intelligence. His work in Generative Synthesis has led to the founding of DarwinAI, a leading-edge AI company focused on accelerated deep learning development.

Dr. Wong is a plenary speaker at the 2022 Global Summit on Nanotechnology for a Healthier and Sustainable Future in the Digital Health & AI Diagnostics session.

Presentation:

Intelligent Design Through Explainability and Trusted AI-Driven Design for Healthcare



Digital Health & AI Diagnostics

Technical Presentations

Hanjia Zheng, PhD Candidate

University of Waterloo

A Hydrogel Microneedle-Assisted Assay Integrating Aptamer Probes and Fluorescence Detection for Reagentless Biomarker Quantification

Hanjia Zheng graduated from the Biomedical Science program from University of Waterloo with a Bachelor of Science. She completed her Master of Applied Science in Electrical and Computer Engineering from the University of Waterloo in May, 2022. She worked on the development of fluorescent hydrogel microneedle based transdermal biosensor targeting the biomarkers in skin interstitial fluid, with the supervision of Dr. Mahla Poudineh. Now She start her PhD at the IDEATION lab at the University of Waterloo, and will focus on the development of electrochemical microneedle based biosensor.

Lukas Bauman, PhD Candidate

University of Waterloo

3D printing personalized medical hydrogel mask

Lukas Bauman is a Ph.D. candidate in chemical engineering at the University of Waterloo (Canada). He received his B.A.Sc. in chemical engineering from the University of Western Ontario in 2017, where he focused on the development of self-immolative polymer blends for fertilizer coatings. His research interests focus on the use of thermo-responsive polymers as a surface graft agent on microtextured surfaces as well as their applications in 3D printing thermo-responsive hydrogels for biomedical applications.

Nanomedicine: Day 2

Technical Presentations

Morenikeji Abel Oke, PhD

Ladoke Akintola University of Technology

Antihyperlipidemic activity of silver and gold nanoparticles synthesized from aqueous extract of Persea americana Peel on high cholesterol diet-induced hyperlipidemia rats

Morenikeji Able Oke is an Association Professor (Reader), an Industrial Microbiology and Biotechnology/Nanotechnology and lecturer in the Department of Pure and Applied Biology, Ladoke Akintola University of Technology, Nigeria.

Fatemeh Keyvani, PhD Candidate

University of Waterloo

An integrated microfluidic electrochemical assay for cervical cancer detection at point-of-care

I am a Ph.D. student in the Biomedical Engineering program at the University of Waterloo. I have a background in Biology and Physiology, during which I realized the great need for advanced technologies to address health care challenges. Therefore, I decided to do my graduate studies in Biomedical Engineering and contribute to developing such technologies and bringing them to the hands of the final users- eg health care providers.

Vassili Karanassios, PhD

University of Waterloo

Cold microplasmas for bio-medical applications: A brief review

Vassili Karanassios is a Professor of Chemistry at the University of Waterloo (Ontario, Canada) and a co-founder of a degree-program in nano-technology engineering at the same University. Professor Karanassios received his Ph. D. from the University of Alberta (Edmonton, Canada) and was a Post Doctoral Fellow at McGill University (Montreal, Canada). In 2009, he held a Leverhulme award in the UK where he was a visiting Professor in Chemistry (Sheffield University), an

Overseas Fellow of Churchill college (Cambridge University, UK), and a visiting Professor of Engineering (Cambridge University, UK) in the Center for Advanced Photonics and Electronics (CAPE). Professor Karanassios and his group published extensively (among others) on microplasmas, microfluidics and nanofluidics, on 3D printing and on rapid prototyping, on spectral interference correction using Artificial Neural Networks (ANNs) and Deep Learning, and on smartphone-enabled data acquisition and signal-processing from a variety of sensors for on-site chemical analysis and (potentially) for IoT applications.

ED&I and Sustainability

Keynote



Palesa Sekhejane

Strategic Partnerships Director at
the Human Sciences Research
Council

Dr. Palesa Sekhejane is the Strategic Partnerships Director at the Human Sciences Research Council (HSRC) in South Africa. She holds MTech and DTech degrees in health sciences from the University of Johannesburg and is a medical technologist specialised in biophotonics (ex. the application of light-based medicine to a biological system in a simulated diabetic model) and photodynamic therapy for cancer treatment. Her current research interests are in bioeconomy policy, biosciences, biomedical innovation and technology.

Additionally, she is the co-founder and the co-chairperson of the UJ-led maiden international conference on Food Security and Safety. She was recently nominated to participate at the BRICS Young Scientist's Forum in Brazil (2019), as one of the bioeconomy scientists. And through her work, she champions and addresses the obstacles faced by women in developing countries.

Dr. Sekhejane is a keynote speaker at the 2022 Global Summit on Nanotechnology for a Healthier and Sustainable Future in the Equity, Diversity & Inclusion (ED&I) and Sustainability session.



ED&I and Sustainability

Technical Presentations

Malachi Noked, PhD

Bar-Ilan University

Suppression of Electrode Material Degradation by Using Surface Modifications Techniques

Malachi Noked is an Associate professor in the chemistry department at Bar-Ilan university. Noked lab is located in Bar-Ilan center for nano technology and advanced materials, and focuses on new processes for synthesis of functional thin films and energy storage materials.

Malachi received his PhD from BIU (electrochemistry group of Prof. Doron Aurbach), and then moved as a Fulbright Ilan Ramon fellow to the University of Maryland EFRC. Noked published more than 80 papers and won multiple awards and fellowships, including Alon fellowship for young scientists, Krill award and IVS award for young scientists.

Noked is the Israeli leading PI of UISEC – US Israel Solid energy consortium, and his group is involved in multiple international consortium and collaboration related to energy storage materials and devices.

Dawit Wami, MSc

Assosa University

Fabrication of Hybrid Composite from False Banana Fiber and Sisal Fiber for Vehicle Dashboard Application

I have BSc degree from Arba Minch University, Arba Minch, Ethiopia in Mechanical Engineering and MSc degree from Adama Science and Technology University, Adama, Ethiopia. I have been working at Assosa University, department of Mechanical Engineering since 2015 G.C. I have 2 publications under Scopus data base and 1 patent.

Poster Session

Title	Presenter	Organization
Development of a low-cost lateral flow assay for the detection of <i>Vibrio cholerae</i>	Jonathan Mayry	University of Waterloo
Electrooxidation of ammonia to recycled fertilizers catalyzed by nanostructured Ni(OH) ₂ xerogel	Kseniia Medvedeva	University of Waterloo
Design of microRNA receptor probes to enable reversible binding	Soumyadeep Saha	University of Waterloo
Epigenomic Monitoring of Cancer Stem Cell using Ultrasmall Gold Nanoprobes	Anish Hiresha Verma	Toronto Metropolitan University
Cellulose-Based POC Device for Detection of SARS-CoV-2 Nucleoprotein using Aptamers as Probe	Sunil Walia	University of Waterloo
Exosome-Encapsulated Pirfenidone and their effects on wound healing	Jin Wang	University of Waterloo
A Programmable Room Temperature Quantum-Nano Analog (QNA) simulator based on carbon nanotubes	HeeBong Yang	University of Waterloo
Degradable Multifunctional Gold-Liposomes as an All-in-One Platform for Cancer Radiotherapy	Brian Youden	University of Waterloo
Peptides for Anthocyanins Encapsulation and Stability Enhancements	Lei Zhang	University of Waterloo

Committees

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