

WATERLOO INSTITUTE FOR NANOTECHNOLOGY

# *Research Celebration*

# 2024



UNIVERSITY OF  
WATERLOO



WATERLOO INSTITUTE FOR  
nanotechnology

# PROGRAM

Quantum Nano Centre  
November 28, 2024  
2:00PM - 5:30PM

<b>2:00 PM</b>	<b>Opening remarks and Territorial Acknowledgment</b> <i>Bernard Duncker, Associate Vice-President, Research and International</i>
<b>2:05 PM</b>	<b>Opening remarks</b> <i>Sushanta Mitra, WIN Executive Director</i>
<b>2:10 PM</b>	<b>Award Ceremony</b> <ul style="list-style-type: none"><li>• 2024 WIN Rising Star Award:<ul style="list-style-type: none"><li>◦ <i>Dr. Fengwang Li, Senior Lecturer, School of Chemical and Biomolecular Engineering, The University of Sydney</i></li></ul></li><li>• 2024 WIN Research Leader Awards</li><li>• 2024 WIN Volunteer Appreciation Award</li><li>• CWSF 2024 Senior Award Winner</li><li>• 2024 Nanofellowship Winners</li></ul>
<b>3:00 PM</b>	<b>Holiday Reception in the QNC Basement</b> Showcase of Research Project Posters from Nanofellowship Awardees and CWSF 2024 1st place Senior Student

# WELCOME

## Welcome to the Waterloo Institute for Nanotechnology (WIN) 2024 Research Celebration!

This afternoon, we are honoring the remarkable achievements of our dedicated members and students. This celebration is not only a time to recognize individual accomplishments but also to reflect on the strides we've made together over the past year—as a pioneering institute, a world-class university, and as members of the Waterloo community.

At WIN, we are driven by the power of interdisciplinary collaboration, uniting Faculties and Schools across the University of Waterloo to address the global challenges that affect us all. Our shared commitment to groundbreaking research and innovation enables us to make an impact on issues across various fields.

Thank you for joining us in celebration, and a special thank you to Charmaine Dean, Vice-President, Research and International, and Bernard Dunkard, Associate Vice-President, Research and International.

### ***Territorial Acknowledgement***

*The University of Waterloo acknowledges that much of our work takes place on the traditional territory of the Neutral, Anishinaabeg and Haudenosaunee peoples. Our main campus is situated on the Haldimand Tract, the land granted to the Six Nations that includes six miles on each side of the Grand River. Our active work toward reconciliation takes place across our campuses through research, learning, teaching, and community building, and is co-ordinated within the Office of Indigenous Relations.*

# GREETINGS FROM THE EXECUTIVE DIRECTOR

The Waterloo Institute for Nanotechnology (WIN) in its 16th year and has now become Canada's largest nanotechnology institute with a vision of meeting the United Nation's Sustainable Development Goals and a more sustainable future. This is all possible because of the extraordinary and talented researchers, graduate students, and staff we have at WIN.

We are excited to welcome you to celebrate the various accomplishments of the WIN community in the last year! In particular we are honouring WIN members who have made outstanding contributions in nanotechnology, graduate students who have won a Nanofellowship, the CWSF 2024 1st place Senior Student, and the volunteer who has supported WIN's activities.

– Sushanta Mitra

# WIN Rising Star Award in Nanoscience and Nanotechnology

*For 2024*



## **Dr. Fengwang Li**

Senior Lecturer

School of Chemical and Biomolecular Engineering,  
The University of Sydney

Dr Fengwang Li is a Senior Lecturer at the University of Sydney. He is an electrochemist by training with particular interest in CO<sub>2</sub> electrocatalysis, green hydrogen and ammonia. Dr Li gained his PhD in Chemistry in 2017 from Monash University and completed postdoctoral training at the University of Toronto. Dr Li has published over 90 research articles in top-tier journals including Nature and Science. His research has been recognized by many prestigious awards, including 2024 Australian Research Council Future Fellowship, 2023 Australian Museum Eureka Prize for Outstanding ECRs, and 2021 MIT Technology Review 35 Innovators Under 35 China list.

**"I am deeply humbled and grateful to receive the WIN Rising Star Award. This recognition is a testament to the dedication and collaborative spirit of our work on green CO<sub>2</sub> electrocatalysis at the University of Sydney."**

**– Fengwang Li**

# WIN RESEARCH LEADERS

*For 2023-2024*



## **Adrian Lupascu**

Department of Physics and Astronomy

Recipient of \$1.2M Quantum Alliance Grant to investigate coherence of superconducting devices with D-Wave Quantum Systems Inc. as industry partner



## **Aiping Yu**

Department of Chemical Engineering

Received the distinction of Clarivate Highly Cited Researcher and also nominated as one of Top 100 Canadian most powerful women



## **Alfred Yu**

Department of Electrical and Computer Engineering

Inducted as Fellow of IEEE and the Canadian Academy of Engineering



## **Carolyn Ren**

Department of Mechanical and Mechatronics Engineering

Inducted as Fellow of the Canadian Academy of Engineering and the Engineering Institute of Canada

# WIN RESEARCH LEADERS

*For 2023-2024*



## **Elisabeth Prince**

Department of Chemical Engineering

Received the prestigious Polanyi Prize for plastic waste research



## **Emmanuel Ho**

School of Pharmacy

Inducted as Fellow of the Canadian Society for Pharmaceutical Sciences



## **Evelyn Yim**

Department of Chemical Engineering

Recipient of \$1.1M CIHR project grant



## **Germán Sciaini**

Department of Chemistry

Recipient of \$1.1M CFI-JELF and also \$1M Chan-Zuckerberg Initiative funding

# WIN RESEARCH LEADERS

*For 2023-2024*



**John Yeow**

Department of Systems Design Engineering

Inducted as Fellow of IEEE



**Juewen Liu**

Department of Chemistry

Received the distinction of Clarivate Highly Cited Researcher



**Komal Habib**

School of Environment, Enterprise and Development

Recipient of significant research funding from NSERC and awarded the Faculty of Environment Best Performance in Research in 2024



**Linda Nazar**

Department of Chemistry

Received the distinction of Clarivate Highly Cited Researcher



# WIN RESEARCH LEADERS

*For 2023-2024*



## **Lyndon Jones**

School of Optometry and Vision Science

Recipient of the prestigious NSERC Brockhouse Canada Prize for Interdisciplinary Research in Science and Engineering



## **Mahla Poudineh**

Department of Electrical and Computer Engineering

Recipient of Ontario Early Researcher Award and Engineering Research Excellence Award, Faculty of Engineering, University of Waterloo. In addition, recipient of Johnson & Johnson WiSTEM2D Scholars Award in the Technology Category



## **Mark Matsen**

Department of Chemical Engineering

Recipient of prestigious Founders' Prize by the Institute of Physics (UK)



## **Melanie Campbell**

Department of Physics and Astronomy

Inducted as Fellow of the Canadian Association Physicists

# WIN RESEARCH LEADERS

*For 2023-2024*



## **Michael Pope**

Department of Chemical Engineering

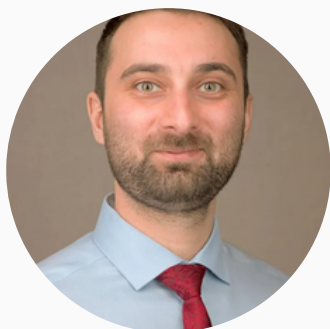
Recipient of more than \$2M funding for his startup Evercloak Inc.



## **Michel Gingras**

Department of Physics and Astronomy

Appointed as University Research Chair



## **Milad Kamkar**

Department of Chemical Engineering

Recipient of the prestigious Polymer Processing Early Career Award, and Journal of Materials Chemistry A Emerging Investigator. Co-applicant of over \$500K in funding from European Cooperation in Science and Technology (COST). Published groundbreaking research in Nature Communications, Advanced Materials, Advanced Functional Materials, Small, and Carbon



## **Rodney Smith**

Department of Chemistry

Recipient of prestigious STREM Award for Pure or Applied Inorganic Chemistry and Alexander von Humboldt Research Fellowship

# WIN RESEARCH LEADERS

*For 2023-2024*



## **Scott Hopkins**

Department of Chemistry

Recipient of \$10M CFI-IF grant for Canadian Free Electron Laser Facility, the first of its kind in Canada



## **Tizazu Mekonnen**

Department of Chemical Engineering

Appointed as Tier 2 Canada Research Chair in Sustainable Multiphase Polymers. Recipient of prestigious Macromolecular Science and Engineering Division (MSED) Early Career Instigator Award from Chemical Institute of Canada



## **William Wong**

Department of Electrical and Computer Engineering

Recipient of over \$500K NSERC Alliance Grant with Teledyne-DALSA as industry partner



## **Xianguo Li**

Department of Mechanical and Mechatronics Engineering

Published an edited book on "Fuel Cells for Transportation, Fundamental Principles and Applications", by Elsevier

# WIN RESEARCH LEADERS

*For 2023-2024*



**Yimin Wu**

Department of Mechanical and Mechatronics Engineering

Published ground breaking research in Nature Communication, Advanced Materials and Advanced Energy Materials



**Youngki Yoon**

Department of Electrical and Computer Engineering

Co-recipient of \$1.69M NSERC Alliance Quantum Grant



**Lan Wei**

Department of Electrical and Computer Engineering

Co-recipient of \$1.69M NSERC Alliance Quantum Grant



**Zbig Wasilewski**

Department of Electrical and Computer Engineering

Appointed as Nanotechnology Research Chair

# WIN VOLUNTEER APPRECIATION AWARD

*For 2024*



## **Utsab Banerjee**

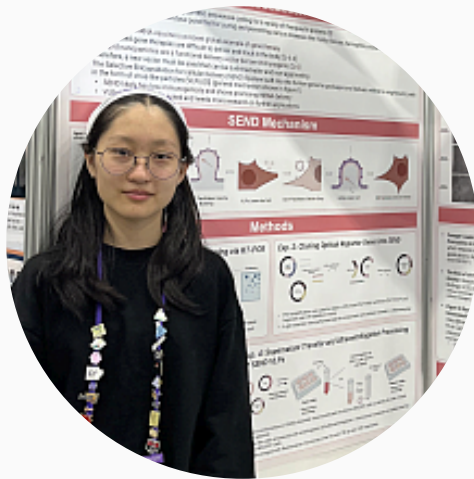
*Post-Doctoral Fellow*

Department of Mechanical & Mechatronics Engineering

In recognition for work in the Quantum Nano Centre going above and beyond the call of duty to help support and advance nanotechnology research

# Senior Award Winner for the Nanotechnology for Sustainability Prize

*For 2024 Canada Wide Science Fair*



**Isabella Bu**

*A SEND-Based Imaging Approach to Track mRNA Delivery  
for Gene Therapy*



# NANOFELLOWSHIP AWARDEES

*For 2024*

**Ahmed Shahin**

Kevin Musselman  
*Department of Mechanical and  
Mechatronics Engineering*

**Aline Braz Ramirez**

Boxin Zhao  
*Department of Chemical  
Engineering*

**Alireza Khoshnevisan**

XiaoYu Wu & Michael Fowler  
*Department of Mechanical and  
Mechatronics Engineering*

**Ayaan Lakhani**

Elizabeth Weckman  
*Department of Mechanical and  
Mechatronics Engineering*

**Bersu Bastug Azer**

Mustafa Yavuz & Michael Pope  
*Department of Mechanical and  
Mechatronics Engineering*

**Bohdan Khromets**

Jonathan Baugh  
*Department of Physics*

**Carlee Montgomery**

Graham Murphy  
*Department of Chemistry*

**Connor MacRobbie**

John Z. Wen & Jean-Pierre Hickey  
*Department of Mechanical and  
Mechatronics Engineering*

**Diogo de Oliveira Livera**

Eric Croiset & Neil Thomson  
*Department of Chemical  
Engineering*

**Dion Grobe**

Linda Nazar  
*Department of Chemistry*

**Do-Yun Park**

David Hawthorn  
*Department of Physics*

**Fatemeh Keyvani**

Mahla Poudineh  
*Department of Electrical and  
Computer Engineering*

**Hesam Abouali**

Mahla Poudineh  
*Department of Electrical and  
Computer Engineering*

**Justin Wong**

Youngki Yoon  
*Department of Electrical and  
Computer Engineering*

**Maryam Soleimani**

Norman Zhou & Peng Peng  
*Department of Mechanical and  
Mechatronics Engineering*

**Matthew Scarfo**

Hamed Shahsavan  
*Department of Chemical  
Engineering*

**Max Walton-Raaby**

Subha Kalyanamoorthy  
*Department of Chemistry*

**Michael McCarvell**

Rodney Smith  
*Department of Chemistry*

**Mohamed Okasha**

Vivek Maheshwari  
*Department of Chemistry*

**Mohammad Nankali**

Peng Peng  
*Department of Mechanical and  
Mechatronics Engineering*

**Mohsen Azadinia**

Hany Aziz  
*Department of Electrical and  
Computer Engineering*

# NANOFELLOWSHIP AWARDEES

*For 2024*

**Natasha Evans**

Thorsten Dieckmann  
*Department of Chemistry*

**Negin Bourzari**

Hamed Shahsavan  
*Department of Chemical  
Engineering*

**Patrick Thomas**

Scott Hopkins  
*Department of Chemistry*

**Ruofei Zheng**

Germán Sciaini  
*Department of Chemistry*

**Sadegh Sadeghzadeh**

Mahla Poudineh  
*Department of Electrical and  
Computer Engineering*

**Saikiran Khamgaonkar**

Vivek Maheshwari  
*Department of Chemistry*

**Samed Kocer**

Eihab Abdel-Rahman  
*Department of Systems Design  
Engineering*

**Shakiba Samsami**

Michael K.C. Tam & Milad Kamkar  
*Department of Chemical  
Engineering*

**Sharafat Ali**

Xianshe Feng & Shunde Yin  
*Department of Civil and  
Environmental Engineering &  
Chemical Engineering*

**Shawn Reeves**

Subha Kalyanamoorthy  
*Department of Chemistry*

**Xander Gouws**

Conrard Feugmo  
*Department of Chemistry*

**Xin Jin**

Yuning Li  
*Department of Chemical  
Engineering*

**Yonglin Wang**

Yuning Li  
*Department of Chemical  
Engineering*

**Zhe Huang**

Yuning Li  
*Department of Chemical  
Engineering*





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