

WIN - Holst Centre/TNO Battery Partnership Workshop

**Oct 27, 2026 10:00 AM - 12:00 PM (EDT)
Oct 27, 2026 15:00 PM - 17:00 PM (CET)**

Online



**UNIVERSITY OF
WATERLOO**



**WATERLOO INSTITUTE FOR
nanotechnology**

**Holst
Centre**
by imec & TNO

TNO

WIN - Holst Centre/TNO Battery Partnership Workshop

Waterloo Institute for Nanotechnology (WIN), Canada

The Waterloo Institute for Nanotechnology (WIN) is Canada's largest nanotechnology institute, and an innovation powerhouse in the four key thematic research areas of smart and functional materials, connected devices, next generation energy systems and therapeutics and theranostics.

Housed in the custom-built Mike and Ophelia Lazaridis Quantum-Nano Centre (QNC), WIN scientists and engineers have access to state-of-art research infrastructure to support their endeavours. Aligning their research with the United Nations Sustainable Development Goals, WIN members are creating new materials and systems to improve the economy, the environment, our health and welfare, and society as a whole.

Holst Centre / TNO, Netherlands

Holst Centre / TNO brings a proven record of turning materials and process technology into products — with battery work crossing over from domains such as semiconductors and solar — and a distinctive focus on industrialization, scaling, and manufacturability.

TNO at Holst Centre is establishing a state-of-the-art pilot facility able to scale promising cell concepts to 25 Ah formats at a rate of hundreds of cells per week — the bridge that new materials and cell concepts need in order to cross from the lab toward the market.

Workshop Purpose

- Identify complementary expertise for future collaboration.
- Explore collaboration in advanced anodes, current collectors, and dry-coating materials and processes for scalable electrode manufacturing.
- Explore opportunities for joint co-development projects and candidate companies.
- Identify potential funding opportunities in Canada and the Netherlands / EU.

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Two Complementary Partners

WIN and Holst Centre approach battery innovation from complementary directions, building on strong materials-engineering foundations. WIN, Canada's largest nanotechnology institute at the University of Waterloo, contributes expertise and a strong pipeline in nanomaterials, advanced materials, and electrochemistry. Holst Centre/TNO brings a proven track record of translating materials and process technologies into products, drawing on experience in semiconductors, solar, and manufacturing scale-up. Both institutes have produced successful spin-offs and are embedded in high-tech ecosystems whose companies can benefit from each other's expertise and networks. Notable TNO battery spin-offs include LeydenJar, LionVolt, and SparkNano.

Initial Focus Areas

A first program would focus on areas where the two institutes are strong and most complementary: advanced anodes and current collectors for high-energy-density cells, and dry-coating materials and processes for scalable, solvent-free electrode manufacturing. These themes combine WIN's strengths in nanomaterials discovery with Holst Centre's industrialization expertise, targeting demanding applications such as aviation, drones, wearables, and robotics, where energy density, weight, and reliability are critical.

The Opportunity

The two strengths meet at the pilot scale. TNO at Holst Centre is establishing a pilot facility capable of scaling promising cell concepts to 25 Ah formats at rates of hundreds of cells per week, providing a critical bridge from lab to market. WIN's concepts can be scaled and validated on this line, while Holst Centre gains access to a frontier materials pipeline. Together, the institutes can co-develop technologies, de-risk innovation, and share knowledge across allied innovation ecosystems.

Why this Matters for Funding Partners

Beyond joint research, the partnership creates a transatlantic incubator where companies on both sides can access complementary expertise, infrastructure, talent, and markets. Canadian and European ventures can leverage international scale-up capacity, shortening time-to-market, de-risking investment, and strengthening supply-chain resilience at a time when secure battery capability is a strategic priority. The initiative also builds on the strong relationship between WIN and the Brainport Eindhoven region established through prior collaborations ([link](#)).

Agenda

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Oct 27, 2026 10:00 AM - 12:00 PM (EDT)
Oct 27, 2026 4:00 PM - 6:00 PM (CET)

Time	Event	Speaker
EDT: 10:00 - 10:10 (10 min) CET: 15:00 - 15:10 (10 min)	Opening Remarks: WIN	Mathieu Doucet WIN
EDT: 10:10 - 10:20 (10 min) CET: 15:10 - 15:20 (10 min)	Opening Remarks: Holst Centre	Auke Kronemeijer Holst Centre
EDT: 10:20 - 10:30 (10 min) CET: 15:20 - 15:30 (10 min)	Background and Meeting Introduction	Sushanta Mitra WIN Rutger van Poppel Holst Centre
EDT: 10:30 - 11:10 (40 min) CET: 15:30 - 16:10 (40 min)	WIN Research Introductions (5-7 min/person)	Jeff Gostick Sushanta Mitra Michael Pope Yuning Li XiaoYu Wu Linda Nazar WIN
EDT: 11:10 - 11:15 (5 min) CET: 16:10 - 16:15 (5 min)	Introduction to OBEC	Linda Nazar Micheal Pope WIN
EDT: 11:15 - 11:40 (25 min) CET: 16:15 - 16:40 (25 min)	Holst Centre and TNO Research Introductions	Mahmoud Ameen Rutger van Poppel Peter-Paul Harks Subhajeet Rath Holst Centre
EDT: 11:40 - 12:00 (20 min) CET: 16:40 - 17:00 (20 min)	Discussion and Closing	All Participants WIN / Holst Centre

WIN Presenters



Mathieu Doucet

Associate Vice-President, Research Oversight and Integrity
Office of Research

Opening Remarks - WIN



Sushanta Mitra

Executive Director of WIN; Professor
Department of Mechanical and Mechatronics Engineering

Liquid-Liquid Encapsulation for Thermal Management



Linda Nazar

Professor
Department of Chemistry

Introduction to OBEC



Micheal Pope

Associate Professor
Department of Chemical Engineering

*Integrating 2D Materials for Improved Electrochemical
Energy Storage*

WIN Presenters



Jeff Gostick

Professor
Department of Chemical Engineering

*Pore-scale modeling of electrochemical devices:
towards optimized structural designs*



Yuning Li

Professor,
Department of Chemical Engineering and WIN

*Functional Organic Materials for Advanced Lithium-Ion
Batteries*



XiaoYu Wu

Associate Professor
Department of Mechanical and Mechatronics Engineering

Battery safety, sustainability, and system integration



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Holst Centre/TNO Presenters



Auke Kronemeijer

Research Division Manager, Thin Film Electronics Group
Holst Centre

Opening Remarks - Holst Centre



Rutger van Poppel

Project Manager Next-Gen Batteries
High Tech Industry (TNO)



Mahmoud Ameen

Energy Program Manager
High Tech Industry (TNO)

*Introduction to Holst Centre & Thin Film Electronics
Research Group*



Peter-Paul Harks

Project Manager
Holst Centre

Dry Coating

Holst Centre/TNO Presenters



Subhajeet Rath

TNO Power Trains
High Tech Industry (TNO)

Physics-based modelling for batteries