



Te Mana Tangata Whakawhanake
MacDiarmid Institute
Advanced Materials & Nanotechnology

Deep tech innovation shone at last month's [KiwiNet Research Commercialisation awards](#). The awards celebrate the heroes in research commercialisation, and this year several MacDiarmid Institute affiliated companies and alumni were finalists.

News and Updates

"Kevin Sheehy has set a very high benchmark for commercialisation leaders" (KiwiNet judges)

Our Commercialisation Manager Kevin Sheehy won the Simpson Grierson Commercialisation Professional Award at this year's KiwiNet awards. The judges said Kevin's contributions to the commercialisation sector, both at the MacDiarmid Institute and beyond, had been hugely impactful. You can see more [reaction here](#), plus the [full list of KiwiNet winners here](#).



Congratulations to our other KiwiNet finalists

We also congratulate our other KiwiNet finalists: BNZ Researcher Entrepreneur Finalist, Principal Investigator [Dr Laura Domigan](#), Sprout Breakthrough Innovator Finalists, alumna [Dr Olivia Ogilvie](#) and alumnus [Dr Jerome Leveneur](#).



[Meet the people taking science to the marketplace](#)

Ahead of the KiwiNet Awards we took a dive into the dark art of spinning out a deep tech company and asked a bunch of startup CEOs why commercialisation managers matter and what they do.

[Bspkl wins at KiwiNet](#)

One of our newest affiliated startup companies, [Bspkl](#), won the KiwiNet PwC Breakthrough Project Award: Activating sustainability through innovative manufacturing. Congratulations to alumnus Dr Jérôme Leveneur and Christina Houlihan.

[Adding new kupu to our mahi](#)

We celebrated Te Wiki o te Reo Māori by sharing some kupu Māori related to the mahi we do:

Toitūtanga = Sustainability

Kaipūtaiao = Scientist

Kairangahau = Researcher

Hangarau = Technology

Hangarau mōkitokito =

Nanotechnology

Hangarau rawa ōkiko = Materials

Technology

[Here is an awesome resource to add to these kupu.](#)

[Applications are now open for our Discovery Scholarship Programme for Māori and Pacific Island students.](#)

An extension of our DiscoveryCamp programme, designed to support students studying in the physical sciences, chemical/materials engineering, Māori sciences or sciences related to sustainable innovation. Please share within your



bspkl.



networks. Applications close 17 December.

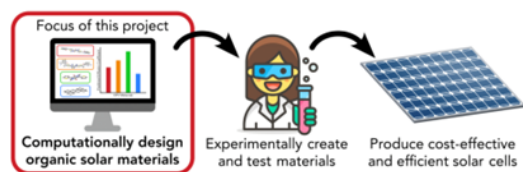
[The invisible hi-tech world of nano-recycling](#)

This week is recycling week, so to celebrate, we spoke to some of our researchers and affiliated startup companies about the world of nano-recycling- a world we literally can't see.



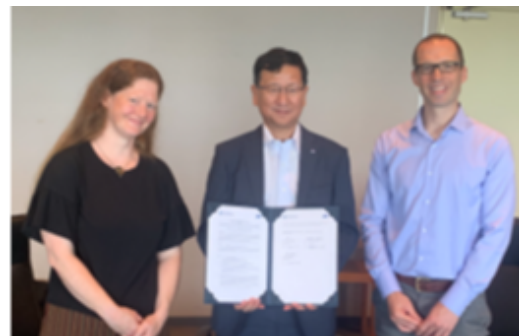
[Kiwi postdoc powers Japanese collaboration for computational discovery of new solar cell materials](#)

Alumnus and 2023 JSPS Fellow Dr Geoffrey Weal will be based at [Kyoto University's on-site integrated data materials lab](#) at [Te Herenga Waka Victoria University of Wellington](#).



[Deepening our connections with Japan](#)

A delegation from the Institute visited Japan in August, holding workshops at [iCeMS at Kyoto University](#) (with which we signed an MOU in 2021 and which [operates an on-site lab at VUW](#)) and at [Japan's National Institute for Materials Science](#) (NIMS, with which we signed an MOU on this visit). Contact [Vanessa Young](#) for more info.



[2023 Regional Lecture Series Good news for a change: Sustainability Tech in Aotearoa New Zealand and the science behind it](#)

This year's series looked at things happening within the sustainability tech ecosystem, with clear potential to address some of the challenges we're facing.

[New Zealand Institute of Physics \(NZIP\) Conference](#)

Three Discovery Scholarship recipients: Maia Dean, Jesse Teumohenga and Chez Panapa attended the New Zealand Institute of Physics (NZIP) conference in June. Deputy Director Māori Pauline Harris gave a keynote on Mātauranga Māori at the conference. You can [read more about the Discovery Scholars here](#).

[Alumnus Nico Hackner received a Fulbright scholarship](#)

Alumnus Nico Hacker will be going to the University of Illinois Urbana-Champaign for a PhD under the scholarship. Nico completed his MSc in Physics at the University of Otago with Associate Investigator Dr Philip Brydon.

[Future Hydrogen Leader Award](#)

Alumnus Dr Mohsin Ijaz has [won the Future Hydrogen Leader Award](#) for his research in the field of converting solar energy into hydrogen.

[Welcome to our first Institute Affiliate!](#)

It is with great pleasure that we announce the appointment of our first Institute Affiliate (IA), Dr Dave Warren from the University of Otago. Dave has longstanding involvement with the Institute, particularly in the area of outreach. Institute Affiliate status recognises outreach partnerships, research collaborations and other contributions that complement and strengthen our activities. To read more about the new IA role and how to apply, [please check our website](#).

[Inaugural Lecture by Professor Derek Kawiti](#)

Principal Investigator [Professor Derek Kawiti](#) of [Te Herenga Waka – Victoria University of Wellington](#) gave his inaugural lecture in Wellington on 3rd October. Professor Kawiti's lecture explored the latent potential of Māori geometry and indigenous computational design.

[Climate Change in the Pacific](#)

Principal Investigator [Professor Derek Kawiti](#) also attended the International Standards Organisation (ISO) conference in Brisbane. Professor Kawiti gave a keynote then moderated a session with four Pacific leaders. The theme was "Preserving Paradise – Climate Change in the Pacific."



[Professor David Williams's Valediction Lecture](#)

[Emeritus Investigator Professor David Williams](#) of [the University of Auckland](#)

will give his Valediction lecture in Auckland on 22 October. Professor Williams' lecture will describe some highlights of an unpredictable journey through electrochemistry, sensors and networks, corrosion and microscopy, medical diagnostics, philosophical struggles with the sociology of measurement, and brushes with the TV news.

[Emeritus Investigator Distinguished Professor Dame Margaret Brimble awarded Davy Medal](#)

[Distinguished Professor Dame Margaret Brimble](#) from [the University of Auckland](#) has been awarded the Davy Medal from the Royal Society (London). The Davy medal is named after the famous chemist Sir Humphrey Davy and is awarded for outstanding contributions in the field of chemistry. Congratulations!

[Science Advisory Panels](#)

We run an online platform for regular engagement between technology companies and our scientists in the form of Science Advisory Panels. Each panel session hosts a company that is interested in pursuing research to overcome a technical challenge with commercial relevance. If you or your company is interested in being part of our Science Advisory Panel, please contact [Kevin Sheehy](#).

[Internships](#)

As you probably know, we offer internships to our affiliated graduates so they can experience working on real industry problems. We have a comprehensive network of companies, start-ups, NGOs and government agencies. If your company or workplace wishes to host an internship, please [contact us](#).

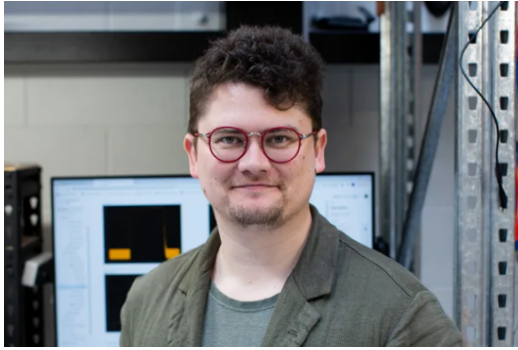
Recent media



[Latest SciGest podcast from Plant & Food Research](#)

We welcome our newest [Associate Investigator, Dr Roshan Khadka](#), who is an alumnus from the lab of Principal Investigator [Professor Jadranka Travas-Sejdic](#). Dr Khadka is now working at [Plant and Food Research](#). [Listen to the latest Plant and Food Research podcast](#), where Dr Khadka is featured talking

about his science journey and his research.

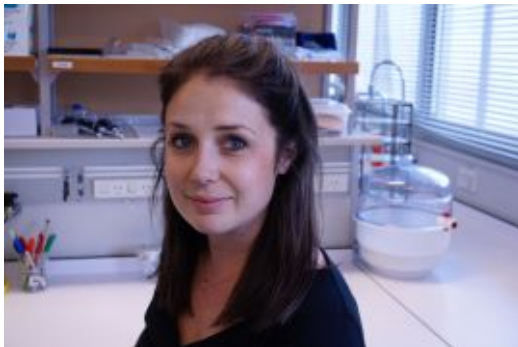


[Young physicist seeking to harness power of the stars](#)

Alumnus Dr Ratu Mataira who studied under [Principal Investigator Professor Chris Bumby](#) at [Paihau – Robinson Research Institute](#), is CEO and founder of [OpenStar Technologies](#), a company developing nuclear fusion technology emerging from the Robinson Research Institute in the Hutt Valley. [Read about his work on 1news.](#)

[Scientists race to validate controversial superconductor claim – Expert Reaction](#)

[Associate Investigator Dr Philip Brydon](#) from [University of Otago](#) added to the Science Media Centre’s subject experts commentary on the LK99 ‘superconductor’ story.



[Dr Laura Domigan: from cells in the lab to steaks on a plate](#)

Principal Investigator [Dr Laura Domigan](#) from [the University of Auckland](#) spoke to Kim Hill on RNZ about her work through MacDiarmid Institute-affiliated start-up [Opo Bio](#) on cell-based meat – check it out [here](#).

[The chemistry of laundry](#)

If you’ve always wondered whether to separate your white clothing from your coloured garments when doing your washing, Associate Investigator [Dr Jack Chen](#) has now answered this for you in his chat with Jim Mora on RNZ National about whether [we no longer need to separate our laundry](#).

[How avoid burns when using your microwave](#)

Principal Investigator [Associate Professor Geoff Willmott](#) was interviewed on Fair Go about microwave ovens and how they heat materials like a coffee cup (at around 18.50 mins).

[The liquid metals giving catalysis a new phase](#)

Co-Director and Principal Investigator [Professor Nicola Gaston](#) from [the University of Auckland](#) spoke with Chemistry World about liquid metals and

their potential as catalysts and more as part of her collaboration with [Professor Kourosh Kalantar-Zadeh](#) from the University of Sydney.

[Sci Fi/Sci Fact - Zero Point Energy](#)

[Professor Cather Simpson](#) Emeritus Investigator with the MacDiarmid Institute and a Professor of Physics & Chemistry at University of Auckland investigates Zero Point Energy from The Incredibles. She tells Bryan Crump that Zero Point Energy is a REAL thing, but that the writers of The Incredibles might have stretched the truth of it somewhat.

[Looking for alternatives to lithium ion batteries](#)

Associate Investigator [Professor Peng Cao](#) spoke about his research into alternatives to Lithium ion batteries on last weekend's TVNZ1's Sunday programme. Here's the [youtube link](#).

[Tackling Energy Shortages](#)

Alumna Dr Shalini Divya who is CEO of affiliated startup Tasmanlon is developing lithium-free battery technology to tackle energy shortages (paywalled).

Thank you for your continued interest and support in the MacDiarmid Institute and if you know anyone who is interested in receiving this General Newsletter [please let us know](#).



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