



Te Mana Tangata Whakawhanake

MacDiarmid Institute

Advanced Materials & Nanotechnology

2022 saw our people out and about again. Our researchers joined an Iwi and Māori student haerenga to Oxford University, spoke with science groups and schools about how science makes its way into the marketplace, and we enjoyed our first proper get-together in almost two years.

We wish you and your whānau a restful and safe holiday season - Happy reading!



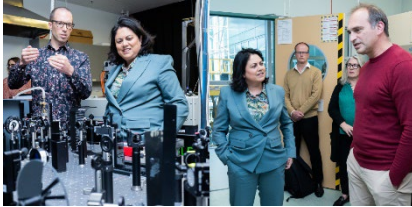
Our Deputy Director Māori, [Associate Professor Pauline Harris](#), [Board Chair Hēmi Rolleston](#), [Professor Duncan McGillivray](#), and [Discovery Scholarship alumna Juliet Nelson](#) went to Oxford in October on a haerenga hosted by the [Rhodes Trust](#), to encourage more Māori to apply for the [Rhodes scholarship](#).



From the lab bench to the marketplace

Our researchers took our annual [Regional Lecture Series](#) to [Hawkes Bay](#), [Nelson](#), [Tauranga](#) and [Rotorua](#), speaking with science groups and schools about how materials science spins into startups in the hi-tech sector.

News and Updates



[Hon. Ayesha Verrall, Minister for Research, Science, and Innovation visits VUW labs](#)

As part of her visit to [Te Herenga Waka - Victoria University of Wellington](#), the Minister for Research, Science, and Innovation, [Hon. Ayesha Verrall](#) checked out the Institute's work in deep-tech and clean-tech, visiting the labs of Co-Director and Principal Investigator [Professor Justin Hodgkiss](#) and Associate Investigator, [Associate Professor Franck Natali](#).



[2022 MacDiarmid Institute Marsden grant successes](#)

Our researchers received \$7.84 million funding across nine projects through the [2022 Te Pūtea Rangahau a Marsden, the Marsden Fund](#). The projects include spectroscopy, superconductors, hydrogen, viruses, solar power as well as energy conversion and storage. [Read about the winners here.](#)



[Principal Investigator Dr Laura Domigan and Dr Olivia Ogilvie](#)

have recently launched their new startup company [Opo Bio](#) to develop and market cell lines to the cultivated meat industry. They have been working on NZ beef and pork, and have a product ready for initial sales to research customers. The recent investment round into [Opo Bio](#) was led by [Matū](#) and syndicated with [University of Auckland Inventors' Fund](#), Booster Innovation Fund, and angel investors. [You can read more about it here.](#)



[Associate Investigator Dr Mat Anker from Te Herenga Waka - Victoria University of Wellington](#)

has been [awarded a 2022 Rutherford Discovery Scholarship](#) for a research programme titled 'Lanthanide(II) Hydrides for Nitrogen Fixation and Ammonia Production', that aims to transform the worldwide economy of fertilisers, placing Aotearoa at the centre of this new renewable, carbon-neutral fertilizer world, with environmentally friendly kai on our tables. Congratulations Mat!



[MacDiarmid Business Scholarships for Alumni](#)

Our 2023 Alumni Business Scholarships for postgraduate study in business-related areas have been awarded to [Dr Vipin Kumar](#) and [Dr Farzana Fadakar](#). You can read about our scholarship recipients and their intended study [here.](#)



[Principal Investigator Associate Professor Geoff Waterhouse](#) was awarded the [Shorland Medal from the New Zealand Association of Scientists](#). The Shorland Medal is awarded in recognition of major and continued contribution to basic or applied research that has added significantly to scientific understanding or resulted in significant benefits to society. Further congratulations are also due to Geoff Waterhouse for again being named on [Clarivate's annual Highly Cited Researcher List](#).



[Ben Roberts](#) has been awarded a [Cambridge-Rutherford Memorial PhD Scholarship](#) for research titled: 'Leveraging Epigenetics for Healthy Ageing' to undertake at [Te Herenga Waka Victoria University of Wellington](#). Ben received a Te Taumata Award - High Achiever Award in 202 as part of our [Discovery Scholarships programme](#) while a conjoint student majoring in medicinal chemistry, molecular pharmacology, physics and mathematics. Congratulations Ben!

We congratulate the following MacDiarmid Investigators who has been successful in recent promotion rounds at our various partner organisations.

- Professor: [Chris Bumby](#) and [Geoff Waterhouse](#)
- Associate Professor: [Natalie Plank](#) and [Anna Garden](#)
- Senior Lecturer above the bar: [Laura Domigan](#), [Cameron Weber](#), [Nate Davis](#)
- Senior Lecturer: [Krista Steenbergen](#), [Mat Anker](#)

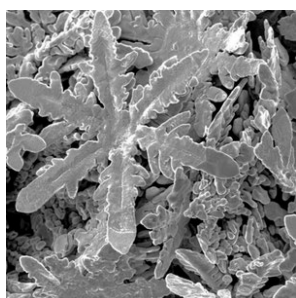


Recent media



[Sunshine science](#)

Two MacDiarmid researchers spoke with [RNZ](#) about the power and peril of the sun's rays, with [Dr Mike Price](#) talking about his recent Nature Comms paper on organic PVs, and [Professor Martin Allen](#) talking about UV dosimetry and its use in sun-smart schools.



[How to make tiny metal snowflakes](#)

In a paper that came out in Science, [Co-Director Professor Nicola Gaston](#), Associate Investigator [Dr Krista Steenbergen](#), and postdoc [Dr Steph Lambie](#), and collaborators from [UNSW](#) showed that liquid gallium could be used as a solvent to grow intricate morphologies of metal nanostructures (including snowflake-like structures!). It is wonderful to see new breakthroughs springing from the deep body of fundamental knowledge that the team has built up.



[Tomorrow's World: On Eumelanin w/ Justin Hodgkiss on 95bFM](#)

Tomorrow's World spoke with Co-Director [Professor Justin Hodgkiss](#), about his research group's new findings on how eumelanin works.



[Co-Director Professor Nicola Gaston](#) said she supported the Government's [white paper on Te Ara Paerangi – Future Pathways](#)' proposed direction of change, but that the challenge would be in implementation, commenting in this [RNZ article](#), and in the [SMC expert reaction](#). She said the white paper correctly raised the need for more funding, particularly the need for higher investment in Māori research (done by and for Māori), but that the key uncertainty was what the national research priorities would be and how they would be chosen. The white paper discusses proposed reforms of research and science funding in New Zealand, starting from next year. The [full paper is available](#) as is and as a briefer [summary document](#).



Our [Deputy Director Māori and Principal Investigator Associate Professor Pauline Harris](#) contributed to this [article on Stuff talking about concerns that Māori voices are being left behind as the nation's space sector grows](#). She also spoke with Te Ao Māori News host Neil Waaka about why Māori [need to have a seat at the table to help grow the Aerospace sector](#). A further interview by Pauline on this topic is also available on [95FM](#).



[NZ deep-tech startup raises \\$3m for zinc recycling](#)

MacDiarmid Institute affiliated spinout, [Zincovery](#) by alumnus [Jono Ring](#) and [Principal Investigator Professor Aaron Marshall](#) from [University of Canterbury](#) are featured in the [Air New Zealand Kia ora magazine as part of an article on upcycling tech companies](#). They also recently were feature in a [Newsroom article](#) on their success in raising \$3m for zinc recycling.

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