

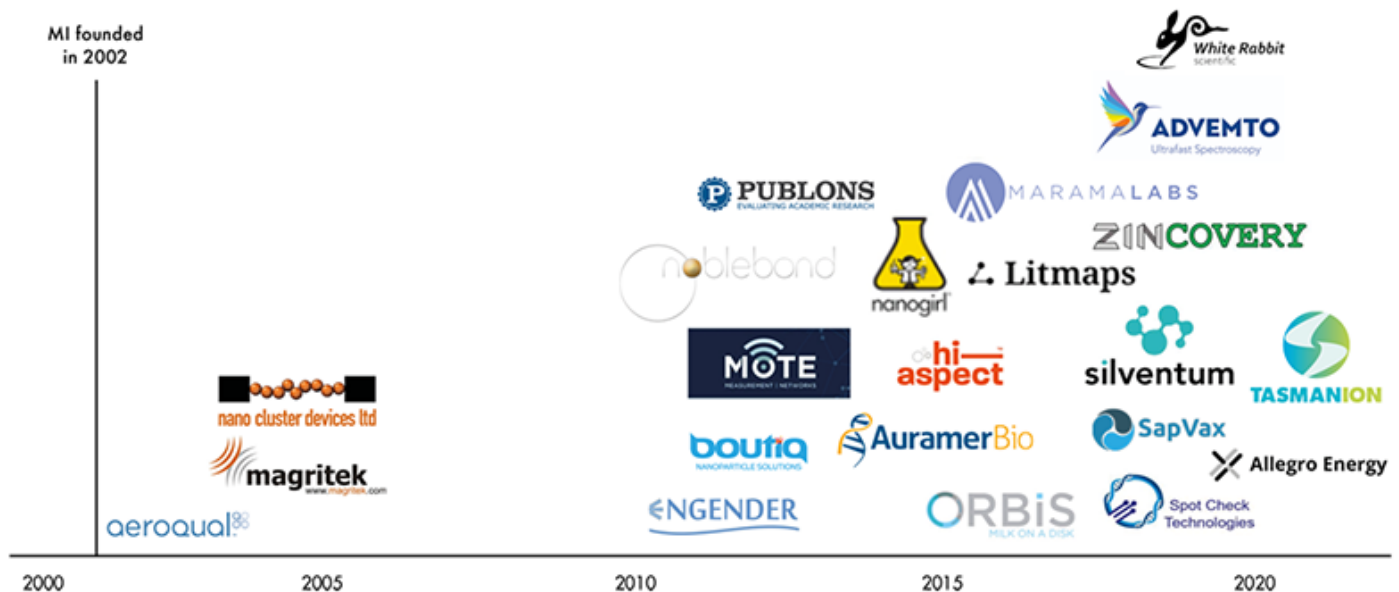


Te Mana Tangata Whakawhanake  
**MacDiarmid Institute**  
 Advanced Materials & Nanotechnology

As we come to the end of what has been extremely challenging year for many people in New Zealand and around the world, we take a look back at the highlights for our researchers in 2021.

July saw the launch of [our new TEC contract](#) - this takes us through to the end of 2028 and takes our researchers even further into the sustainability space – [towards zero carbon, zero waste, low energy computing and sustainable resource use](#).

This year two of our alumni with affiliated spinout companies were finalists at the [KiwiNet Research Commercialisation Awards](#), with one successfully winning her section; three of our researchers were awarded prizes from the [New Zealand Institute of Chemistry \(NZIC\)](#) for excellence and impact of their chemistry, and best paper; [Eric Le Ru won the Royal Society Hector](#) and MacDiarmid researchers received over \$12.1 million funding across eight projects through the [2021 Te Pūtea Rangahau a Marsden, the Marsden Fund](#), and six projects through the [2021 MBIE Endeavour Round](#). We supported 16 Māori and Pacific Island students in tertiary STEM, sustainability, and Mātauranga Māori study. We also supported two new affiliated spinout companies and saw one Investigator join the [inaugural Breakthrough Energy Fellows Program founded by Bill Gates](#). And we funded twelve 3-month internships for our PhD graduates in government, social enterprise and private industry.



Since 2002, our students and Investigators have spun-out 22 new hi-tech startup companies.

## News and Updates



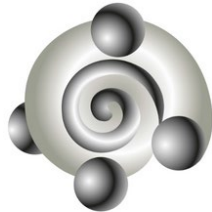
### [RNZ Nights' Sci Fi / Sci Fact – new MacDiarmid Institute and RNZ collaboration](#)

Sci Fi / Sci Fact is RNZ's newest podcast. Each week a MacDiarmid Institute researcher takes a science fiction idea from pop culture to see how it stands up to scientific scrutiny. This is a spinoff of the popular science [Materials: Fact or Fiction](#) segment from RNZ's Nights with Bryan Crump.



[Alumni Business Scholarships](#)

Dr Maryam Shojaei and Dr Samuel Martin Treceño were the [successful recipients of our Alumni Business Scholarships](#) for postgraduate study at the University of Canterbury and Victoria University in 2022! They will both be undertaking Postgraduate Certificates in Business, a formal start to the intersection of science & industry in their careers.



The MacDiarmid Institute  
*for Advanced Materials and Nanotechnology*

[The life of a logo](#)

Everything has a life span, even a logo. Ahead of launching our new logo, we take a look at the whakapapa of our current one. Haere rā to our first logo - thank you for bringing us to where we are today.



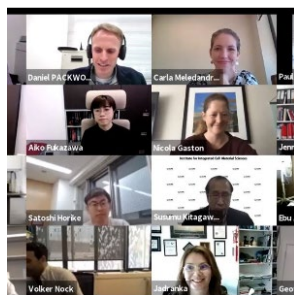
[Discovery Scholarship videos and Co-Sponsorships](#)

Applications for our [Discovery Scholarships for Māori and Pacific Island students](#) closed 10 December. This year we filmed [seven videos about our Discovery Scholarship recipients](#) to inspire others to apply. We also welcomed our first two co-sponsors: [GNS Science/Aotearoa: Green Hydrogen Technology Platform](#) and [Bioprotection Aotearoa](#). If you would like to enquire about supporting our co-sponsor initiative, please email [Vanessa Young](#).



[MOU celebrates ongoing partnership with Whakarewarewa Living Village](#)

Celebrating our existing partnership with Whakarewarewa Living Village, together we signed a second memorandum of understanding (MOU) and a Statement of Intent. The MOU will enable both partners to continue exploring the synergies between the two knowledge systems Mātauranga Māori and materials science.



[New Kyoto University on-site lab opens at Te Herenga Waka—Victoria University of Wellington](#)

Kyoto University's [Institute for Integrated Cell-Material Sciences \(iCeMS\)](#) has opened an on-site lab in Wellington, operated jointly with the MacDiarmid Institute for Advanced Materials and Nanotechnology. A particular focus of the collaboration is solar photovoltaics (PVs) and other materials that respond to light.



We [farewelled our Board Chair Paul Atkins](#) and welcomed [Hēmi Rolleston](#) as new MacDiarmid Institute Board Chair. Paul Atkins was Board Chair from 2018 – 2021, and led the Institute through the successful rebid. He stepped down in November to take up the position of Chief Executive of the Royal Society Te Apārangi. Hemi Rolleston (Ngāti Whakaue, Ngāi Te Rangī, and Ngāti Ranginui) has a wealth of knowledge of and connections within both the science system and Te Aō Māori as well as extensive experience in commercial world of innovation.



[2021 Regional Lecture Series: Science for a Sustainable Future](#)

Our Regional Lecture Series was able to go ahead in-person this year. MacDiarmid Institute researchers travelled to Tauranga, Hawkes Bay, Nelson and Wanaka, speaking about *Science for a Sustainable Future* to science societies and schools.

## Recent media



[House of Science launch](#)

We continue our long-time sponsorship of the House of Science, having been their first national sponsor back in 2016. This time we have sponsored the House of Science Horowhenua Branch (which covers Kapiti, Horowhenua and Manawatu).



[Germans backing South Island green hydrogen research centre](#)

A planned green hydrogen research centre in Dunedin now has the financial backing of both the New Zealand and German governments. Principal Investigator and chemistry Professor [Sally Brooker](#) from [University of Otago](#), will co-lead the project with her German counterpart, [Dr Paul Jerabek](#), from German research institute [Helmholtz-Zentrum Hereon](#).



[Geoffrey Waterhouse was awarded a James Cook fellowship for his 'Green Hydrogen Economy' technology](#)

Principal Investigator, Associate Professor Geoffrey Waterhouse from the University of Auckland, aims to advance Aotearoa New Zealand's path to a Green Hydrogen Economy, whereby hydrogen is generated from water with renewable electricity, with the hydrogen produced then used in fuel cells to generate electricity as required.



[Climate change impact on Māori wellbeing and culture 'sobering' yet 'insightful'](#)

He huringa āhuarangi, he huringa ao: A changing climate, a changing world, a multidisciplinary report from [Ngā Pae o te Māramatanga](#) (NPM) and [Manaaki Whenua Landcare Research](#) highlighted the effects climate change will have on Māori in the coming decades. [Principal Investigator Dr Pauline Harris](#), co-author and member of the advisory team said the report was a good concise summary of relevant major climate change issues from a Māori lens. [Read the full story on Stuff.](#)



[NZ company develops device to test Covid-19 immunity](#)

MacDiarmid Institute affiliated biotech company Orbis Diagnostics is on the brink of releasing a device that can test people's immunity to Covid-19 in just 15 minutes.

[Emeritus Investigator, Professor David](#)

[Williams](#), behind the device and scientific

founder, [spoke to RadioNZ](#) about the devices origins

and it's potential. [Read the full story on RadioNZ](#).