

Please send me your news articles, photos, travel diaries, conference reports or funnys by 9am each Friday.  
 Email [sharlene.wilson@canterbury.ac.nz](mailto:sharlene.wilson@canterbury.ac.nz)  
 You can find previous issues here <https://www.canterbury.ac.nz/science/>

 Facebook(@PhysandChematUC)  
 Twitter (@UCNZ\_PhysChem)  
 WeChat(Physical&ChemicalSciences)

### Rudi's Report.

Kia ora koutou

Hope everyone had a great start to term 2. First of all, I would like to thank everyone for a smooth start to the term. These are challenging times, and I really appreciate everyone's work and dedication.

The new term has also provided us with an opportunity to welcome new colleagues into the SPCS family.

Please join me in welcoming Dr.

Sylwia Kolenderska as a new adjunct fellow in Physics.  
 Welcome Sylwia!

I would like to congratulate Dr. Marwan Katurji, Associate Prof. Laura Revell and Prof. Adrian McDonald for their involvement and co-authorship on a new report for the Ministry for Environment on climate change projections. More information on the report can be found in the newsletter.

I would also like to congratulate Dr. Chris Gordon for co-authoring a couple of excellent papers in short

succession. Chris' work has also been the subject of media attention!  
 Well done Chris!

Finally, please join me in thanking Sharlene and Chris Fitchett for all their hard work on getting the post-graduate space reshuffle completed. Thank you both!



Hope the rest of the term goes well.

Stay safe and look out for each other.

### Publications

X. Li, T.-H. Li, W. Zhou, Y.-P. Li, P. H.-L. Sit, Z. Wu, **O. J. Curnow**, K. C.-W. Wu, J. Choi, A. C. K. Yip, "Unveiling the elusive role of tetraethyl orthosilicate hydrolysis in ionic-liquid-templated zeolite synthesis" *Materials Today Chemistry* 2022, 23, 100658 (13 pages). <https://doi.org/10.1016/j.mtchem.2021.100658>

**Owen J. Curnow, Deborah L. Crittenden**, "Structures and Spectra of Halide Hydrate Clusters in the Solid State: A Link between the Gas Phase and Solution State" *ChemPlusChem* 2022, 87, e202100535 (19 pp). <http://dx.doi.org/10.1002/cplu.202100535>.

**Owen J. Curnow, Rathiga Senthoooran**, "Highly-fluorinated Triaminocyclopropenium Ionic Liquids" *Chem. Asian J.*, 2022, e202200139 (10 pp).

M. Pohl, O. Macias, P. Coleman and **C. Gordon**, "Assessing the Impact of Hydrogen Absorption on the Characteristics of the Galactic Center Excess," *Astrophys. J.* 929, no.2, 136 (2022), doi:10.3847/1538-4357/ac6032

A. Gautam, R. M. Crocker, L. Ferrario, A. J. Ruiter, H. Ploeg, **C. Gordon** and O. Macias, "Millisecond Pulsars from Accretion Induced Collapse as the Origin of the Galactic Centre Gamma-ray Excess Signal," *Nature Astronomy*, (2022), doi:10.1038/s41550-022-01658-3  
<https://www.sciencealert.com/a-new-spin-on-an-old-hypothesis-might-finally-explain-our-galaxy-core-s-weird-glow?>

Recently-published report:

Aotearoa New Zealand climate change projections guidance: Interpreting the latest IPCC WG1 report findings Prepared for Ministry for the Environment by Bodeker, G., Cullen, N., Katurji, M., **McDonald, A.**, Morgenstern, O., Noone, D., Renwick, J., **Revell, L.** and Tait, A. (2022).

Available at <https://environment.govt.nz/publications/aotearoa-new-zealand-climate-change-projections-guidance/>



## Health, Safety and Wellbeing- Sharlene Wilson (H&S Administrator)

[A-Z of Health and Safety at UC](#)

**2022 Professional Development**  
To enrol in Professional Development log in to [UC People](#) and navigate to the Professional Development tile.



[Learning & Development Calendar 2022, including Health & Safety Training](#)

- 24/05/2022  
Tangata Tū, Tangata Ora
- 01/06/2022  
First Aid Refresher
- 07/06/2022  
Finance Seminar - 55 years +
- 08/06/2022  
H&S Rep Initial Training
- 14/06/2022  
Finance Seminar - 25 to 35yrs
- 15/06/2022  
Finance Seminar - 35 to 55yrs
- 16/06/2022  
UC Business Case Workshop
- 28/06/2022  
Tangata Tū, Tangata Ora
- 07/07/2022  
Mental Health 101 Workshop

**Request free COVID-19 RAT Kits.**  
<https://requestrats.covid19.health.nz/>

**Unite against COVID-19**

If you have COVID-19 symptoms, or you're a household contact you can order Rapid Antigen Test (RAT) kits for yourself and your household. RATs need to be picked up from a collection site near you – or someone else can collect on your behalf.

All COVID-19 testing for those with symptoms and/or who are household contacts is free.

You can request RATs on the Request a COVID-19 testing kit website. Follow the step by step instructions for how to order your RATs. To use the website, you will need to have access to a mobile phone to validate your RAT order. You can also request RATs for someone else.

You can also order by phone. Ring 0800 222 478 and choose option 3.

If you are eligible for RATs you will be issued an order number. You can then pick up your RAT order from a collection site or have someone collect your order for you (make sure they have your order number).  
<https://requestrats.covid19.health.nz/>

**Request free COVID-19 RAT kits**

If you have COVID-19 symptoms, or you're a household contact or a critical worker, you can order Rapid Antigen Test (RAT) kits for yourself and your household.

RATs need to be picked up from a collection site near you - someone else can collect on your behalf.

[Start now](#)

**Unite against COVID-19**



## Airborne microplastics and climate change – free UC public lecture

Presented by: **Dr Laura Revell, University of Canterbury**  
Wed 18th May 2022, 7:00 pm - 8:00 pm

Get Tickets



Since large-scale production of plastics began in the 1950s, around 5 gigatons (Gt) of plastic waste has amassed in landfills or the natural environment. As they age, plastics become brittle through exposure to sunlight and break down to produce microplastics (and even smaller nanoplastics). It is a well-established fact that microplastics are in our oceans, rivers, and soils. Over the past five years, we have also learned that microplastics are floating in the air we breathe.

“Because they are so small and lightweight, microplastics are blown with winds to remote regions that are rarely visited by humans and

have been found in the air across a range of locations from the Arctic to the Antarctic. Within Canterbury alone, we have discovered airborne microplastics on the coast and high country, as well as in Christchurch city,” Associate Professor Revell says.

“Initial studies suggest that when inhaled, microplastics are damaging to human health. A second reason to be concerned about airborne microplastics is that they contribute to climate change: microplastics reflect sunlight back to space, but they also trap heat emitted by the Earth.

In her upcoming Tauhere UC Connect public lecture, Airborne microplastics and climate change, on Wednesday 18 May, Associate Professor Revell will discuss “what we know so far about the role of airborne microplastics in a changing climate, along with what is not yet known”.

“I will share results from my research group’s airborne microplastics sampling efforts, as well as the challenges presented by sampling in remote places. Finally, I will share results from preliminary sampling in New Zealand homes during a Covid-19 lockdown, which offer a glimpse into the ubiquity of airborne microplastic in indoor environments.”

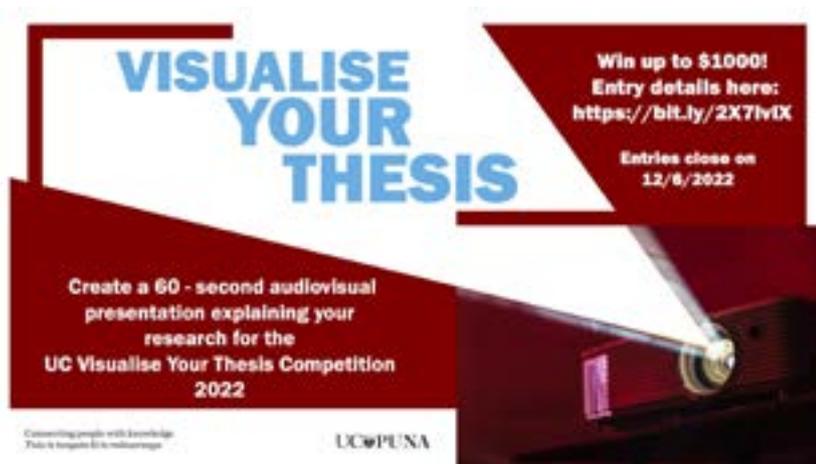
## Visualise Your Thesis Competition- <https://canterbury.libguides.com/visyourthesis>

### What’s Visualise Your Thesis?

Entrants create a short audio-visual presentation that explains their research project to a general audience. It’s an opportunity to be creative and develop digital communication skills, as well as win cash prizes. The first prize winner’s entry will also go into the international Visualise Your Thesis competition.

### What are the prizes?

1st prize - NZ\$1000 (& entry into the international Visualise Your Thesis competition)  
2nd prize - NZ\$500  
3rd prize - NZ\$250  
People’s Choice Award – NZ\$250



### Why enter the UC Visualise Your Thesis competition?

- Chance to develop your digital communication skills
- Opportunity to gain a better understanding of the appropriate use of media in your thesis.
- Chance to be creative
- Opportunity to share your research with an international audience

### How do I enter?

Register to compete at <https://canterbury.libguides.com/visyourthesis> and you will be sent a link to the Competition Pack with all the details. This page also contains information about workshops to support you in developing your presentation as well as the link for submitting your entry.

### When’s the deadline?

Register your interest and get the competition pack.

Click this link to register your interest and get a link to the competition pack that has all the details: [https://canterbury.qualtrics.com/jfe/form/SV\\_be-WK19UGs0Y8EZY](https://canterbury.qualtrics.com/jfe/form/SV_be-WK19UGs0Y8EZY)

[View the entries for the 2021 competition on YouTube.](#)

## Congratulations to Hayley Jensen and Liam Carroll.



Congratulations to Hayley Jensen, who yesterday morning (9th May) successfully defended her PhD thesis entitled “A comparative assessment of lesser-studied trace elements in the soil plant system: implications for environmental quality”. Hayley was supervised by Brett Robinson, Sally Gaw, Nik Lehto (Lincoln) and Peter Almond (Lincoln).



Liam Carroll successfully defended his PhD thesis on 27th April.. Liam’s thesis was titled, ‘Covalently-Bound Organic Modification of Transparent Semiconducting Oxides: Effects on the Electronic Surface Properties’, and carried out under the supervision of Professor Alison Downard and co-supervision of Professor Martin Allen.

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## SUPPORTING YOUR DOCTORAL JOURNEY

**Are you interested in knowing more about strategies that can support your Doctoral journey? You are invited to join other postgraduate students at two interactive workshops facilitated by UC academic staff. These sessions are for postgraduate students at any phase of their research journey.**

### Hacking your Doctoral Journey.

Would you like to know more about new hacks (strategies and tips) for boosting your productivity and emotional wellbeing?

**Date:** Monday 23 May, 12.00pm – 1.30pm

**Facilitators:** Professor Katharina Näswall and Dr Mairin Taylor

### Getting your PhD (back) on track.

This workshop covers three strands of PhD project management: focus and deep work, time management and supervisory interactions.

**Date:** Wednesday 1 June, 12.00pm – 1.30pm

**Facilitator:** Associate Professor Kelly Dombroski

**How to register:** For full details (downloadable document) about the workshops, facilitators and registration, check the Workshops and Events tile/tab Calendar of Upcoming workshops and events on the Postgraduate Research Students’ learn Page.

Venue for both workshops is Rehua 226, Te Moana Nui a Kiwa, and if you cannot attend in person these will be available by zoom (details provided through registration)

Each workshop will run for up to 1.5 hours Beverages and snack food provided.

### Workshop Registration

Contact Alison Stevenson [alison.stevenson@canterbury.ac.nz](mailto:alison.stevenson@canterbury.ac.nz) and indicate which workshop(s) you are registering for:

- Workshop 1 to be held on Monday 23 May(register by 19 May for catering)
- Workshop 2 to be held on Wednesday 1 June(register by 27 May for catering)

Indicate if your registration is for in-person (Rehua 226 ) or by zoom (link will be provided).



## SAVE THE DATE!

### AMN10 Conference, 7 - 10 February 2023, Rotorua, New Zealand

<https://confer.eventsair.com/amn10/>

On behalf of the MacDiarmid Institute for Advanced Materials and Nanotechnology and the conference organising committee, we would like to invite you to join us in New Zealand, for the 10th International Conference on Advanced Materials and Nanotechnology (AMN10).

Since the inaugural conference in Wellington in 2003, the conference has toured the country.

Now, AMN10 welcomes you to Rotorua, a place of lakes, natural beauty and thermal activity.

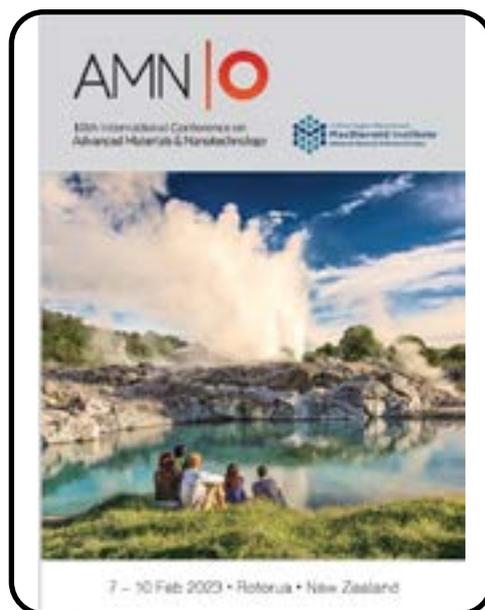
The AMN conference series is interdisciplinary and covers a broad variety of topics in nanotechnology and materials science. It brings together material scientists, chemists, physicists, biologists and engineers resulting in stimulating discussions that bridge the

range from building electronic devices to the study of protein structures.

This in-person conference offers high-impact plenary and keynote presentations as well as invited and contributed presentations at the forefront of their fields. The program's scientific and social events are designed to encourage discussion and new connections between people and research fields.

We hope you will join us at AMN10 and look forward to meeting you at the beginning of 2023!

Jenny Malmström, Chair AMN10  
Simon Brown, Deputy Chair AMN10



## Library News - John Arnold

Please try out the new SciFindern and give us your feedback.

You can find the link to the database, user guides and the survey for feedback at <https://bit.ly/31C33G8> (Biochemistry Subject Guide) or <https://bit.ly/2AuJ7Kg> (Chemistry Subject Guide)

### New books and ebooks:

- \* Astronomy <http://bit.ly/xntPcH>
- \* Chemistry <http://bit.ly/2GYps4U>
- \* Physics <http://bit.ly/wafgjA>
- \* Teaching support from UC Library <https://bit.ly/3C8pCCm>
- \* Adaptable new-titles-list generator <http://bit.ly/1brTI3E>

Visualise Your Thesis Competition Now Open (UC Library News) <https://bit.ly/3sbkmdF>

Can a Theory Ever Die? (Symmetry Magazine) <https://bit.ly/3OS8uHd>

Weaponizing the Research Community (The Scholarly Kitchen) <https://bit.ly/3KIsHfn>

**On the Lighter Side**  
Optimizing Your Life Without Losing Your Soul (Math with Bad Drawings) <https://bit.ly/37WZy2L>

Geiger Counter (xkcd) <https://bit.ly/3vMdmpz>

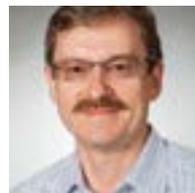
### Assoc. Prof. Greg Russell

Library Liaison Officer for Chemistry <http://bit.ly/2SvmiJd>



### Dr Konstantin Pavlov

Library Liaison Officer for Physics and Astronomy <http://bit.ly/31z5tCP>



### John Arnold

Subject Librarian for Physical and Chemical Sciences <http://bit.ly/johnarnold-uc>

