

## ANZMAG NEWS – DECEMBER 2024 & JANUARY 2025

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Dear all, Happy New Year to you all and also Happy Lunar New Year of the Snake. I hope everyone had a great Christmas. Welcome to the joint **December 24/January 25 edition** of **ANZMAG News**.

### AUSTRALIA DAY HONOURS FOR SCIENTISTS

Several scientists and academics were recognised in the **2025 Australia Day Honours list**. Including Professor Bronwyn Fox, Professor Andrew Blakers, Professor Keith Nugent and Professor Veena Sahajwalla. You can find the full list and citations online at <https://www.gg.gov.au/sites/default/files/2025-01/Australia%20Day%202025%20Honours%20List%20-%20Order%20of%20Australia%20Awards.pdf>

Anyone can nominate someone to be recognised. So, if you would like to nominate a deserving scientist for the next honours list (the Kings Birthday honours, I think), please see <https://www.gg.gov.au/australian-honours-and-awards/nominate-someone-award> for details. It is not that onerous; you essentially need to make a good case for your nominee and have good referees who will also make a strong case when asked.

### CONFERENCES

- The **21<sup>st</sup> European Magnetic Resonance Congress** (Euromar) will be held from 6<sup>th</sup>-10<sup>th</sup> July in Oulu, Finland. See <https://euromar2025.org> for details.
- The Joint **66<sup>th</sup> ENC and 24<sup>th</sup> ISMAR Conference** will be held April 6-10, 2025 at the Asilomar Conference Center in Pacific Grove, CA, USA. Details at [www.enc-conference.org/ENC-ISMAR-2025](http://www.enc-conference.org/ENC-ISMAR-2025)
- Registration and abstract submission are open for the **Frontiers of Magnetic Resonance meeting** at the University of Southampton, UK, 31 March 2025 - 1 April 2025 Further details, abstract submission, and registration at <https://www.rsc.org/events/detail/80063/frontiers-of-magnetic-resonance>
- Incorporating the 30<sup>th</sup> Proteomics Symposium, 30<sup>th</sup> ANZSMS Meeting, Australia and New Zealand Metabolomics Society & 6<sup>th</sup> Australasian Glycoscience Symposium the **AUS-oMicS 2025** meeting will be held May 18 21 in Cairns. See <https://www.ausomics.com> for details.
- The **64<sup>th</sup> Annual Rocky Mountain Conference on Magnetic Resonance (RMCMR)** will take place August 3-7, 2025 at the Snowbird Resort & Conference Center, Snowbird, Utah. See <https://rockychem.com>
- The Royal Society of Chemistry's **Annual #RSCPoster Conference** is on LinkedIn again this year, from the 4<sup>th</sup> to the 5<sup>th</sup> of March. I am one of the chairs of the analytical division. See <https://www.rsc.org/our-events/rsc-poster/> for details.
- Keep your eyes on the **ANZMAG website** ([anzmag.com.au](http://anzmag.com.au)) for information about the 2025 Conference to be held on Moreton Island, Queensland, from November 30 to December 4. And while you're there, check out all the other new stuff on our website – for example **the tutorial lectures** - <https://anzmag.com.au/lecture-events/>

### JOBS

- The **University of Melbourne** is looking for a Lecturer or Senior Lecturer in Biotechnology, Deadline is the 13<sup>th</sup> March. See <https://jobs.unimelb.edu.au/mob/en/job/918758/lecturer-or-senior-lecturer-in-biotechnology>
- **The University of Sydney** is looking for a Lead Radiographer Scientist and MRI Facility Manager. See <https://www.seek.com.au/job/81408662> for details.

## FABRUM SOLUTIONS

**Fabrum Solutions** is a New Zealand-based cryogenics company. If any Australian or New Zealand based organisations are interested in liquid Nitrogen for NMR or related research, please contact Rajendran Parthipan (Parthi) on [Raj.Parthipan@fabrum.nz](mailto:Raj.Parthipan@fabrum.nz) See more on the company on their website at <https://fabrum.nz>

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## PAPER OF THE MONTH

This week's paper of the month comes from ACS Applied Energy Materials and is entitled "**Electron Paramagnetic Resonance Monitoring of Sodium Clustering and Its Effect on the Sodium Storage of Biowaste-Derived Carbons**" by Kukeva et al (2024). The idea here is that carbon-based compounds from biowastes can store large amounts of due to factors such as adsorption, intercalation, and pore filling. In this paper the authors report the use of electron paramagnetic resonance (EPR) spectroscopy method to monitor the interaction of sodium with carbons used as electrodes in sodium-ion battery cells. The work shows that EPR can distinguish signals due to sodium intercalation and sodium cluster growth. Correlations between the EPR line width and the metallic particle dimension allowed the size of the clusters to be quantified. The authors test the method on carbon from spent coffee grounds. They found the smallest sodium clusters (below 2 nm) were formed on closed-pore carbons at a potential of 0.01 V, while the largest clusters (around 200 nm) occurred on hydrogen-rich carbons at 0.05 V. I thought it was an interesting application of the technique. You can read the paper at <https://pubs.acs.org/doi/10.1021/acsaem.4c02195>

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## AWARDS AND FELLOWSHIPS

- The Nobel Sustainability Trust **Sustainability awards** recognise distinguished individuals, organisations, or companies in different fields for their contribution to fostering innovation and implementing sustainable solutions for the well-being of our society, economy, and planet at present and in the future. Full details at <https://www.nobelsustainabilitytrust.org/the-sustainability-award-2025>
  - Breakthrough Victoria launched the **Breakthrough Fellowship program**, for research entrepreneurship across Victoria. It offers an investment of \$150,000 in funding for startup companies created by eligible applicants. Between \$60,000 to \$90,000 per annum of this investment must be used on the founder's salary. See <https://breakthroughvictoria.com/breakthrough-victoria-fellowship/>
  - Entries for the **2025 Australian Museum Eureka Prizes** will open on the 11<sup>th</sup> Feb, See <https://australian.museum/get-involved/eureka-prizes/>
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## STORIES FROM THE WEB

- <https://viterbischool.usc.edu/news/2025/01/usc-researchers-develop-first-pulse-mode-electron-paramagnetic-resonance-chip/> – Researchers in the US have developed a single chip can perform both continuous-wave and pulse mode EPR
  - <https://healthimaging.com/topics/medical-imaging/magnetic-resonance-imaging-mri/new-mri-technique-spots-signs-heart-disease-symptoms-emerge> – A new MRI technique could spot signs of heart disease before symptoms emerge
  - <https://phys.org/news/2024-10-digital-quantum-simulation-nuclear-magnetic.html> – Read about how you might be able to use quantum computers to simulate NMR experiments
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PS: Don't forget to send any news items you would like to see in ANZMAG news to [oliver.jones@rmit.edu.au](mailto:oliver.jones@rmit.edu.au) at any time.