

ANZMAG NEWS - August 2024

By Prof. Oliver A.H. Jones (RMIT University - oliver.jones@rmit.edu.au)

Dear all, Welcome to August 2023 edition of **ANZMAG News**. I hope you have all had a great month.

ANZMAG NEWS CALL

Before we can start this month just a quick request that if you have any items you would like to see in the newsletter please just send me an e-mail anytime. Even if you just send me a random link to a job or news story or want to recommend your latest paper for paper of the month (which is totally fine) it all helps.

ANZMAGERS IN THE NEWS

Many congratulations to Neil Robinson who was named co-winner of the Early Career Scientist of the Year Award in the 2024 WA Premier's Science Awards this month. Great work Neil!

MEETINGS

- AUS-oMicS will be held 18-21 May 2025 at the Cairns Convention Centre, QLD. This meeting will incorporate the 30th Proteomics Symposium, 30th ANZSMS Meeting, the Australia and New Zealand Metabolomics Society meeting and 6th Australasian Glycoscience Symposium. See https://www.ausomics.com/?mc_cid=c8f7dd396a&mc_eid=ddc7241af9 for more.
- The next ANZMAG webinar will be with Prof. Stephen Fesik and Dr Brooke Kwai presenting their research on fragment-based drug discovery. Prof. Fesik will talk about longevity and undruggable targets while Dr Kwai will explore small molecules for RNA targets. Tuesday 17th of September at 9 am (AEST) via zoom <https://unimelb.zoom.us/j/82375201910?pwd=NOvCv01R3sFNh45E6uj8MgyO3RCuKO.1> (Meeting ID: 82375201910 Password: 361874)
- The joint Experimental Nuclear Magnetic Research Conference (ENC) - ISMAR Conference will be held April 6 - 10, 2025. See <https://www.enc-conference.org/ENC-ISMAR-2025> for details.
- See more at <https://docs.google.com/spreadsheets/d/e/2PACX-1vS4wgRjIhcvePP9CgzHNLAbpWilgGpHxAh2j3aWTBwWfOtsvDj6vOtxoPTe3xy-mTsCJ-G8D5LdOiA/pubhtml>

PAPER OF THE MONTH

Digital twins are all the range at the moment and this month's paper of the month get NMR in on the act. Digital twins are basically virtual representations of real objects or systems within a computer, the idea is you can test things on the digital model that you can't easily do on the real thing. The title of the paper is "A digital twin for parallel liquid-state nuclear magnetic resonance spectroscopy" by He et al. The authors use the digital twin approach to help design new probes with multiple, independent detection sites. In the real world the presence of radio frequency interference poses a challenge in multi-detector systems, particularly in unshielded coil arrays. The authors were able to use electromagnetic simulation with spin-dynamic calculation to design a way around this issue. The scheme was then validated by a 2-channel parallel spectroscopy experiment. These results provide valuable insights for the design of parallel nuclear magnetic resonance hardware and for exploring the limits of parallelization capacity within a fixed magnet system. You can read more on this at <https://www.nature.com/articles/s44172-024-00233-0>

AWARDS

- Nominations for the 2025 Medals and Awards of the [Linnean Society of London](https://www.linnean.org/the-society/medals-awards-prizes-grants) are now open and it is not just UK citizens who are eligible. Nominations must be submitted by 30 September 2024. Find out more and nominate at <https://www.linnean.org/the-society/medals-awards-prizes-grants>
- Nominations are still open for the 2025 [Institution of Chemical Engineers](https://www.icheme.org/sustainable-world/medals-and-prizes) (IChemE) medals and prizes. See <https://www.icheme.org/sustainable-world/medals-and-prizes> for details. The closing date for nominations is 31st October 2024.
- The Shaping Australia Awards, proudly presented by Universities Australia, shine a spotlight on the impactful contributions universities make each day – shaping our nation's future through teaching, research and community service. See <https://www.shapingaustraliaawards.com.au/about>

NB: I know it is hard sometimes for academics to big ourselves up so to speak, but as my PhD supervisor used to tell me, if you don't have confidence in your own work nobody is going to do it for you. Winning awards and prizes is helpful for promotions and grant applications and it gets your CV seen and that can lead to a more opportunities down the way. Sometimes it can take a few goes to get a particular award (sometimes more than a few), so if you don't get it the first time don't worry, don't give up, get some feedback and try again.

Even if you don't want to apply for the above or are not eligible, please consider nominating some worthy junior (or senior) staff. We all had help at some point in our careers or someone who vouched for or helped us, and I think it is important we pay that forward. If you are thinking if nominating people for a New Years of King's birthday honours award you have to do that on the quiet as nominees are not supposed to know. Several chemists won in the last round but you can't apply for these directly - <https://www.pmc.gov.au/honours-and-symbols/australian-honours-system>

SOFTWARE FOR MAKING FIGURES

If you or your students are making figures for papers or presentations, there are three websites that are useful (or at least I have found them handy) as they have built in icons and templates.

- 1) Biorender - <https://www.biorender.com> very useful range of icons and templates for making scientific images. You have to pay for full access but the free version is still useful, does tend to come with a biorender label but you can do a screen grab.
- 2) MindtheGraph - <https://mindthegraph.com> sort of like Biorender but free. Lots of good icons.
- 3) Chemix - <https://chemix.org/> more chemistry focussed but still with useful icons and tools.

STORIES FROM THE WEB

- <https://interestingengineering.com/innovation/epr-on-chip-food-quality-control> – can a low-cost EPR sensor on chip boost quality control of food products?
- <https://healthimaging.com/topics/medical-imaging/magnetic-resonance-imaging-mri/mri-study-questions-links-between-autism-and-brain-connectivity> – A new MRI study questions claims that individuals with autism spectrum disorder have altered connectivity patterns in certain brain regions.
- <https://edu.rsc.org/education-research/improve-your-learners-nmr-interpretation-skills/4019674.article> – Challenge your learners to improve their NMR interpretation on the RSC site.
