ANZMAG NEWS - June 2024

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Dear all, Welcome to June 2024 edition of ANZMAG. I hope you have all had a great month and that you enjoy the newsletter.

CONFERENCES

I am sure many ANZMAG members with have just finished at EUROMAR 2024. I hope you enjoyed the conference. Other conferences coming up include -

- The Central and Eastern European NMR Symposium and Bruker Users Meeting will be held in Rijeka, Croatia on Sept 18-19. Check the agenda at https://goto.bruker.com/4eRxN9m
- Registration for the 2024 CCPN conference in Kent (10-12 July) is now open. Sessions will be on RNA, Metabolomics and ultra-high field NMR. See https://ccpn.ac.uk/outreach/conferences/

JOBS AND FELLOWSHIPS

- The University of Melbourne is looking for a Lecturer in Environmental Science. Closing date 29th July, https://jobs.unimelb.edu.au/en/job/917453/lecturer-in-environmental-science
- The University of Melbourne are also looking for a Lecturer in Food Science Closing date 29th July, https://jobs.unimelb.edu.au/en/job/917439/lecturer-in-food-science
- UTS are looking for a Lecturer in Analytical Chemistry with a focus on analytical chemistry. See https://recruitment.uts.edu.au/OA_HTML/OA.jsp?OAFunc=IRC_VIS_VAC_DISPLAY&p_svid=284329&p_spid=11250796 for details. Closing date 4th August.
- UNSW are looking for a Lecturer or Senior Lecturer in Biotechnology & Biomolecular Sciences. See the website at https://external-careers.jobs.unsw.edu.au/cw/en/job/525794/lecturersenior-lecturer-biotechnology-biomolecular-sciences Closing date 4th August.
- UNSW are also looking for an Associate Professor/Professor in Chemistry (note this is open to Female applicants only). Closing date 26th August. See https://external-careers.jobs.unsw.edu.au/cw/en/job/525342/associate-professorprofessor-in-chemistry
- Bruker ANZ are looking for a Regional Sales Specialist. Closing date 4th August. Details are on the ANZmAG website at https://anzmag.com.au/jobs/ Please contact Daphne Kok (daphne.kok@bruker.com) or Yas Tesiram (yas.tesiram@bruker.com) for any further information.

GRANTS AND AWARDS

- The Institution for Chemical Engineers has a call out for its awards. See https://www.icheme.org/sustainable-world/medals-and-prizes/ I think the deadline vary between awards but most seem to have a deadline of the 31st October.
- The Education division of the RACI is accepting applications for their medal and citations. See https://www.raci.org.au/events-and-awards/awards/divisional-awards/chemical-education-division. Deadline is 1st August.
- The Engagement Australia Excellence Awards, which celebrate exciting and impactful engagement activities undertaken by the Australian and New Zealand Higher Education sectors, are open. See https://engagementaustralia.org.au/engagement-australia-excellence-awards-2024-applications-now-open/

LAURA BASSI SCHOLARSHIP

One for the PhD students and ECRs. Laura Bassi Scholarship was established in 2018 with the aim of providing editorial assistance to postgraduates and junior academics. All currently enrolled master's and doctoral candidates are eligible to apply, as are academics in the first five years of full-time employment. Applicants are required to submit a completed application form along with their CV through the application portal by the relevant deadline. Further details, including previous winners, and the application portal can be found at https://editing.press/bassi Closing date 24th July.

PAPER OF THE MONTH

This month's Paper of the Month is an home grown work by Enríquez-Mier-y-Terán *et al* from the Bourne group at the University of Sydney. It is a big conceptual innovation in MRI data modelling. The title is "Multi-model sequential analysis of MRI data for microstructure prediction in heterogeneous tissue" The authors propose a general method for combining multiple models to predict tissue microstructure, and provide an example using *in vivo* diffusion-relaxation MRI data. The proposed method obviates the need to select a single 'optimum' structure model for data analysis in heterogeneous tissues where the best model varies according to local environment. The paper breaks signal interpretation into a three-stage sequence: (1) application of multiple semi-phenomenological models to predict the physical properties of tissue water pools contributing to the observed signal; (2) from each Stage-1 semi-phenomenological model, application of a tissue microstructure model to predict the relative volumes of tissue structure components that make up each water pool; and (3) aggregation of the predictions of tissue structure, with weightings based on model likelihood and fractional volumes of the water pools from Stage-1. The multiple model approach is expected to reduce prediction variance in tissue regions where a complex model is overparameterised, and bias where a model is underparameterised. You can read more at https://www.nature.com/articles/s41598-023-43329-x

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CHEMISTRY CONVERSATION

I came across this nice article on the Conversation earlier this month - https://theconversation.com/think-all-chemicals-are-bad-from-our-food-to-your-phone-modern-life-relies-on-them-227768 The conversation aims to make science and other academic topics understandable for a public audience by joining academic rigour to journalists flair. I wonder if it might be worth someone writing an explainer about magnetic resonance and its contribution to the world?

STORIES FROM THE WEB

- https://www.nrel.gov/news/program/2024/advanced-spin-resonance-facility-fundamental-understanding-catalytic-mechanisms-structural-characterization-electrons.html - A nice story about a new electron spin resonance facility at the National Renewable Energy Laboratory (NREL) in the USA.
- https://www.popsci.com/science/mri-iron-magnet/ - Researchers at King's College London collaborated with multiple Japanese universities to design a new, much cheaper iron-based superconducting magnet for MRI
- https://www.utwente.nl/en/news/2024/6/1583798/scientists-solve-century-old-chemistry-riddle An article about how NMR has been used to solve a century old chemistry riddle.