ANZMAG NEWS: MAY 2022

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Hi all, Welcome to the May 2022 edition of ANZMAG News

CONFERENCES/TALKS

The Royal Australian Chemical Institute (RACI) National Congress will be held in Brisbane, Queensland from Sunday 3 July – Friday 8 July 2022 at the Brisbane Convention & Exhibition Centre. Seems a very high registration cost though with even the early bird rego over $1000. Details at https://www.raci2022.com/sponsorship/

HYP23, the International Hyperpolarization Conference will be held at the University of Leipzig, September 24-28, 2023. See https://hyp23.org

NB: This shows my age but there was a debate on Twitter recently about if Powerpoint should be used to make Posters for conferences or not. One alternative that was suggested that looks pretty good is BioRender's Poster Builder. It has a lot to templates built in and it automatically resizes images and icons to fit the poster size and maintain consistent margins. You have to sign up but that is free and you can make a lab team so people can collaborate online. See https://biorender.com/poster-builder for more. Biorender is also helpful for graphical abstracts.

Mestrelab are running an online Webinar on Automated qNMR Data Processing and Analysis next month. Dr. Niccy Tonge will explainhow to get more out of analytical data. See https://mestrelab.com/events/webinar-on-automated-qnmr-data-processing-and-analysis/ for all the details.

JOBS

A/Prof Roger Bourne at the University of Sydney has a casual research assistant position available for 1-2 days/wk, On campus (Camperdown) or work from home.
He is looking for an experienced (MATLAB) programmer to assist with an MRI data modelling project. The majority of the work is coding, but there is potential for some lab work (*ex vivo* tissue imaging) for someone located in Sydney. There is potential for first-author publications. Roger is happy to discuss in person or zoom. You can contact him on roger.bourne@sydney.edu.au

Dr Thoms Ve from the Institute for Glycomics, Griffith University is hiring a postdoc with NMR experience in chemical and structural biology. See https://www.seek.com.au/job/57025961. Thanks to Dr Yun Shi| for letting me know.

There are 5 positions going at the Australian National Phenome Centre at Murdoch University in WA including one in NMR Spectroscopy for small molecule analysis. All details at https://www.nature.com/naturecareers/job/5-x-positions-australian-national-phenome-centre-murdoch-university-757916

GRANTS AND AWARDS

The National RACI awards are closing soon See https://lnkd.in/gf_bgVDs for details. There are several categories, just check under the different category tabs for more info. Deadline for more is the 12th June.

Applications for the Royal Society of Victoria (RSV) Phillip Law Postdoctoral Award open 1st June and close 31st July. In 2022, the award is open to suitably qualified post-doctoral candidates in Category III: Earth Sciences which may those in the environmental area. Please see https://rsv.org.au/awards-and-prizes/phillip-law-award/ for details.

Applications are also open for the RSV Medal for Excellence in Scientific Research 2022 in Category II: Biomedical & Health Sciences. See https://rsv.org.au/awards-and-prizes/research-medal/ for details

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PAPER OF THE MONTH

May's Paper of the month is an elegant work applying NMR to batteries. It is entitled "Direct Detection of Lithium Exchange across the Solid Electrolyte Interphase by 7Li Chemical Exchange Saturation Transfer" and is by Columbus et al. The idea here is that batteries with Lithium metal anodes (rather than lithium ion batteries) offer a big increase in energy density but they are hard to get to work, not least because of dendrite deposition which ishard to study. This paper introduces lithium chemical exchange saturation transfer (Li-CEST) as an efficient (NMR) approach for detecting the otherwise invisible process of Li exchange across the interface. In Li-CEST, the properties of the undetectable SEI are encoded in the NMR signal of the metal resonance through their exchange process. I can see a lot of use for this. See https://pubs.acs.org/doi/10.1021/jacs.2c02494 for the paper.

STORIES FROM THE WEB

- https://www.eurekalert.org/news-releases/953675

Carrying on the battery theme this story is on the use of EPR as part of a study looking at the manufacture of magnesium batteries to complement lithium models

- https://interestingengineering.com/magnetic-resonance-imaging-brain-inflammation

This story is on the use of used MRI to show brain inflammation in vivo for the first time

- https://news.mit.edu/2022/how-tau-proteins-tangle-0527

This story is about the use of NMR to show how two types of tau proteins mix together in a nearly random way to generate the tangles seen in the brains of Alzheimer's patients.