ANZMAG NEWS - March 2023

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

CONFERENCES
- ISMAR - A reminder of closing dates for ISMAR2023 to be held 20th to 25th of August in Brisbane, Queensland Australia. Oral abstracts, will close, Friday April 7th Early bird registration, will close, Friday May 5th. See https://www.ismar2023.org for details.

- ANZMAG has a virtual seminar coming up on Tue 28th March at 1 pm AEDT (10 am Perth | 12 am Brisbane | 1 pm pm Sydney |3 pm New Zealand). Talks will be "Spins in organic optoelectronic materials" by Dane McCamey (UNSW) and "Measuring Angstrom scale distances in biomolecules between Gd(III) and trifluoromethyl labels using high field ^{19}F ENDOR spectroscopy" by Martyna Judd (ANU). See https://tinyurl.com/2c3v3js8 for details.

AWARDS
- Nominations are open for the Science Excellence Awards South Australia and will close on 21st April. See details at https://www.scienceawards.sa.gov.au

- There is not a call as such but if you have ever wondered about the process of election to the fellowship of the Australian Academy of Science there is a good outline at https://www.science.org.au/fellowship/election-to-the-academy

- The Australian Academy of Health and Medical Sciences Jian Zhou Medal is awarded annually to a rising star of Australian health and medical science who is making a significant impact in translational medical science, see https://aahms.org/programs/awards/jian-zhou-medal/.

JOBS AND STUDENTSHIPS
- Benchtop NMR powerhouse Magritek is looking for an NMR Chemist with Japanese language skills to help with Benchtop NMR customer applications in the Asia pacific region. More details available at https://www.seek.co.nz/job/62876080 or contact Dr Andrew Coy on andrew@magritek.com **Applications close 02/04/2023.**

- Griffith Uni are looking for a research fellow in Solid-State NMR Spectroscopy. The Research Fellow will support the operations and researchers of the NMR Facility, especially in the area of solid-state NMR for environmental applications. See https://jobs.smartrecruiters.com/GriffithUniversity/743999889197763-research-fellow-in-solid-state-nmr-spectroscopy-grade-1 for details. **Applications close 11/04/2023.**

- The CSIRO are recruiting for a new organic chemistry/materials characterisation specialist. Experience in NMR spectroscopy and mass spectrometry is essential; experience in natural products isolation and structural elucidation would be very highly regarded. See https://jobs.csiro.au/job/Melbourne%2C-VIC-Characterisation-Specialist-Mass-Spectrometry-and-NMR-Spectroscopy/937515810/ for details. NB **Applications close 26/03/2023.**

- The University of Oldenburg in Germany has vacancy for a graduate student to work on Magnetoreception and navigation in vertebrates: from biophysics to brain and behaviour, Informal enquiries can be sent to: ilia.solovyov@uni-oldenburg.de and/or peter.hore@chem.ox.ac.uk Please see https://uol.de/stellen?stelle=69439 for further details. **Applications close 31/03/2023.**

FAMELAB

FameLab is a is an international science communication competition & training scheme currently recruiting postdocs & ECRs around Australia. Entry is #ree as the expert training they provide. You can gain useful skills to build your profile and advance your career! Australia has a great record at FameLab International with the last Aussie winners all being runners up on the world stage. Sound good? Find out more at https://lnkd.in/gFxQScgn

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PAPER OF THE MONTH

This month's Paper of the Month won its authors (Arjun Desai and Beliz Gunel) the best paper award for work on semi-supervised MRI reconstruction at the Medical Imaging with Deep Learning conference last year. The title is "VORTEX: Physics-Driven Data Augmentations Using Consistency Training for Robust Accelerated MRI Reconstruction". The idea behind this paper is that while deep neural networks have enabled improved image quality and fast inference times for various problems, including accelerated magnetic resonance imaging (MRI) reconstruction (see https://www.bmc.com/blogs/deep-neural-network/ if you want to know what a deep neural network is. However, apparently such models require extensive datasets, which are difficult to curate. The authors propose applying a physics-driven data augmentations approach, termed VORTEX, which demonstrates strong improvements over supervised baselines with and without data augmentation in robustness to signal-to-noise ratio change and motion corruption in data-limited regimes; considerably outperforms state-of-the-art purely image-based data augmentation techniques and self-supervised reconstruction methods on both in-distribution and out-of-distribution data; and (3) enables composing heterogeneous image-based and physics-driven data augmentations. The paper, can be found at https://openreview.net/forum?id=WjwUeGh0yMK

NMR WIKI

NMR Wiki is an open, free, non-profit Magnetic Resonance web project (started on Nov 8th 2007). The aim is to promote sharing information, know-how and wisdom among researchers working in the field of Magnetic Resonance and provide a collaborative informational resource to Spectroscopists, Chemists, Biologists and others using magnetic resonance techniques. They collect and share NMR/EPR/MRI teaching materials, lab and software manuals, Ph.D. theses and pulse sequences. You can find them online at http://nmrwiki.org/wiki/index.php?title=NMR_Wiki:About and even on Twitter at https://twitter.com/nmrwiki

Bruker also has a nice website covering an Introduction to MR. You can see this at https://www.bruker.com/en/products-and-solutions/mr/make-mr-more-relevant/mr-made-easy.html

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STORIES FROM THE WEB

- https://www.news-medical.net/life-sciences/Spin-Labels-in-Electron-Spin-Resonance-(ESR)-Spectroscopy.aspx - An overview of spin labels in ESR spectroscopy.

- https://multiplesclerosisnewstoday.com/news-posts/2023/03/21/early-ms-mri-markers-linked-worse-disability-10-years-time-study/ - A new study indicates that MRI scans of the brain acquired early on after the onset of multiple sclerosis may help predict disease severity after 10 years.

- https://www.sciencedaily.com/releases/2023/03/230309125027.htm No Turkish delight this month I'm afraid but an interesting story about the use of HRMAS NMR to study real-time metabolism in living cells.