

ANZMAG NEWS - NOVEMBER 2024

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Dear all, welcome to the November 2024 edition of **ANZMAG News**. As we hurtle towards the end of the year, please don't forget to send me any news items you would like to see in the newsletter.

ANZMAGERS IN THE NEWS

Congratulations to Prof. Frances Separovic, Professor Emeritus of chemistry at the University of Melbourne, who received the title of Doctor *Honoris Causa* from the University of Bordeaux on the 21st of November 2024 for, among other things, her work in nuclear magnetic resonance for the study of membranes - <https://www.u-bordeaux.fr/en/about-us/honoris-causa/frances-separovic-university-melbourne>

SCIENCE GIFTS FOR CHRISTMAS

If you are looking for **science gifts for Christmas presents**. Here are some suggestions. NB I am not affiliated with any of these – although I do have some of the d-orbital games pins and element samples from Luciteria (NB e-Bay is also a good source of elements).

- <https://www.dorbitalgames.org/pins>
- <https://www.madaboutscience.com.au/shop/>
- <https://thecalculatedchemist.com>
- <https://www.luciteria.com>

JOBS

- The **Baker Heart and Diabetes Institute** is an independent, internationally renowned medical research facility in Melbourne. They are currently looking for a lab head. See <https://baker.edu.au/career/lab-head-pmjm01> Applications close 20th Dec 2024.
- **The Snow Centre** for Immune Health at the WEHI and Royal Melbourne Hospital is looking for a Director, see <https://alumniglobal.com/job/director-snow-centre-for-immune-health>
- The **University of Manchester** in the UK is seeking a Research Associate in Light-Induced Electron Paramagnetic Resonance. See <https://www.newscientist.com/nsi/job/1402065411/research-associate-in-light-induced-electron-paramagnetic-resonance/>

PAPER OF THE MONTH

This week's paper of the month is entitled "Portable, low-field magnetic resonance imaging for evaluation of Alzheimer's disease" and is, by Sorby-Adams *et al*. The premise is that portable, low-field magnetic resonance imaging (LF-MRI) of the brain may facilitate point-of-care assessment of patients with Alzheimer's disease (AD). However, image quality in such systems is limited by a lower signal-to-noise ratio. In this paper, the authors optimise LF-MRI acquisition and develop a machine-learning pipeline that is freely available to quantify brain morphometry and white matter hyperintensities (WMH). They then validate the pipeline and apply it to outpatients presenting with mild cognitive impairment or dementia due to AD. They found hippocampal volumes from ≤ 3 mm isotropic LF-MRI scans showed agreement with conventional MRI and were more accurate than anisotropic counterparts. The authors suggest that the increased availability and reduced cost of LF-MRI, combined with machine learning, can potentially increase access to neuroimaging for dementia. You can read more about it at <https://www.nature.com/articles/s41467-024-54972-x>

SAD NEWS

Sadly, we lost several colleagues recently.

- Prof. Lian-Pin Hwang. Prof Bill Price described him as “old school” and “a real character”. Bill kindly wrote an obituary for Prof Hwang, which can be found in Annual Reports on NMR Spectroscopy vol. 113: [https://doi.org/10.1016/S0066-4103\(24\)00035-8](https://doi.org/10.1016/S0066-4103(24)00035-8)
- Prof Peter Caha was an important member of the ANZMAG community, playing a large role in the early years of Bruker (and MR in general) in Australia from the start in 1984 until his retirement in 2014.
- Prof Anil Kumar, Bengaluru, pioneer of the NOESY experiment in proteins and NMR in Quantum Information Processing. <https://ismar.org/2024/11/10/anil-kumar-1941-2024/>
- Sir George Radda of Oxford pioneered the first clinical application of NMR, using phosphorus-31 to follow muscle metabolism in human patients. <https://ismar.org/2024/10/10/george-radda-1936-2024/>

AWARDS

- Nominations are open for **Prof. H S Atreya Award**. The award is given annually to an outstanding scientist working in any area of magnetic resonance under 45. Full details, including how to apply, can be found at <https://nmrs.iisc.ac.in/2024-hsa.pdf> The deadline is 17:00 hrs of 30/12/2024
- The **IUPAC-SOLVAY** International Award for Young Chemists is given for the most outstanding Ph.D. thesis in the general area of the chemical sciences, as described in a short essay. See <https://iupac.org/2025-iupac-solvay-international-award-for-young-chemists-call-for-applicants/>
- Nominations are open for the **RSC 2025** Horizon Prizes, Research & Innovation Prizes, Inclusion & Diversity Prizes and Volunteer Recognition Prizes until 14th January 2025. See <https://www.rsc.org/prizes-funding/prizes/>
- **Prime Minister's Prizes for Science** are annual Australian awards for outstanding achievements in scientific research innovation and teaching. There are multiple categories. Nominations for 2024 are open now at <https://www.industry.gov.au/science-technology-and-innovation/science-engagement/prime-ministers-prizes-science> Congrats again to ANZMAGer Professor Glenn King, who received the 2023 Prime Minister's Prize for Innovation.

STORIES FROM THE WEB

- <https://analyticalscience.wiley.com/content/news-do/bruker-biospin-acquires-bridge12-epr-business> – Bruker BioSpin recently announced the acquisition of the Electron Paramagnetic Resonance business of Bridge12, a Massachusetts-based company conducting cutting-edge research using EPR technology.
- <https://medicalxpress.com/news/2024-12-mri-key-impact-gluten-free.html> – MRI could help improve our understanding of the impact a gluten-free diet has on people with celiac disease
- <https://phys.org/news/2024-11-mysterious-sydney-beach-blobs-scientists.html> – Read about how NMR (and other techniques) helped solve the mystery of the mysterious Sydney beach blobs.
