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NEWSLETTER
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Australian Academy of Science

Message from the President—August 2022

August 31, 2022

Welcome to the August newsletter.

This month, we celebrated the international networks and collaborations that underpin all modern science.

It has been over 40 years since the bilateral science and technology treaty was signed between Japan and Australia, and we celebrated our achievements together in a short video. You can also watch a video all about the Japanese Society for Promotion of Science's HOPE meetings, which bring together Nobel Laureates, graduate students and young researchers from countries around the Asia-Pacific region.

Similarly, we are very fortunate to have a close scientific research relationship between India and Australia. With the support of the Department of Foreign Affairs and Trade and CSIRO, we have produced a series of videos showcasing an inspiring cohort of Indian-Australian scientists – including Academy Fellows Professor Mahananda Dasgupta, Professor Veena Sahajwalla and Dr Surinder Singh – to celebrate India's 75th anniversary of independence.

We have also celebrated important research taking place across the Asia-Pacific region which has been supported by the Australian Government's Regional Collaborations Programme in a series of videos. These videos, which span the themes of health, environmental sustainability and science solutions in developing countries, demonstrate the immense value of strong and enduring international relationships.

Closer to home, I would like to extend my personal thanks to David Anstice AO, whose generous contribution towards the digitisation of the collections stored in the Basser Library and Fenner Archives will have an enormous impact on our ability to preserve and make available these important histories of Australian science.

And on the topic of donations, the captivating Celebrate Science campaign continues, enabling us to celebrate scientific excellence by dedicating a roof tile of the iconic Shine Dome to an Australian scientist, a team of scientists, or a teacher who has made an impact on a scientist's career.

I'm pleased to introduce a new interactive online experience as part of this campaign, which will take you through the stories of dedicated tiles and help you to dedicate a tile yourself. Visit Celebrate Science and click on 'Make a Dedication' to catch a glimpse.

I wish to thank Fellows and supporters again for their contributions to the **Celebrate Science**[1] campaign and I look forward to growing the number of dedications to create a true celebration of Australian science.

I hope you enjoy reading the August newsletter.

Professor Chennupati Jagadish AC PresAA FTSE

1 https://www.science.org.au/about-us/philanthropy-and-partnerships/philanthropy/celebrate-science

A long, fruitful history of Japanese-Australian collaboration in STEM

August 02, 2022

Japan and Australia, two global leaders in science, have a rich history of working together. It is now over 40 years since the bilateral science and technology treaty between the two countries was signed. While science collaboration between Japan and Australia was well established prior to this, the treaty formalised and built on the relationship to the great benefit of both countries.

Since then, important initiatives have been established to provide opportunities for Australian and Japanese researchers of varied career levels to learn, research and innovate alongside each other. These initiatives include the Japan Society for the Promotion of Science Alumni Association in Australia, Fellowships and the HOPE meeting for Nobel Laureates. These initiatives are administered by the Australian Academy of Science on behalf of the Australian Government Department of Industry, Science and Resources.

Natural partners as leaders in science and technology

Watch on Vimeo[2]

Nobel Laureate, astrophysicist and ANU Vice Chancellor Professor Brian Schmidt has experienced the value of Australia's relationship with Japan firsthand.

"When we're trying to unlock the secrets of the universe – whether it be at the biological level, the nanoscale, or on the scale of the cosmos – they are natural partners," Professor Schmidt said.

Japanese and Australian scientific institutions each bring diverse cultural perspectives that, when combined, make our collective knowledge stronger. This is also helped by the geographic proximity of the two nations which means that time zones are similar, movement between people is simple and the economies are linked.

Professor Schmidt says collaborations that started in 1999 when he first visited Japan have continued to this day.

"We just had a big Nature paper last year that was built on that trip in 1999, interestingly enough. And it came to fruition 23 years later," he said.

Similarly, Professor James Sullivan from ANU has had a decades-long connection with Japan.

He was able to use a synchrotron in Japan for his research in atomic and molecular physics as a postdoctoral fellow 20 years ago, and now is returning to Japan to undertake a fellowship with the Tokyo University of Science. Professor Sullivan's work is now focusing on advancements in medical imaging technology, which will likely benefit both Australia and Japan in the future.

"Collaboration is critical. You can't just look up a textbook to tell you what to do when you're working right at the cutting edge of science and technology. So being able to discuss those ideas with other experienced people, use their experience with yours to develop new ideas is absolutely the key to doing excellent research," Professor Sullivan said.

Dr Graziella Caprarelli is the inaugural President of the Japan Society for the Promotion of Science Alumni Association in Australia. She was born in Italy but moved to Japan for a postdoctoral fellowship to study volcanic activity for five years, before then moving to Australia. She agrees that Japan and Australia are perfect partners for scientific research.

"Australians are highly productive. They have a great record of high-impact research in all of the areas of science," she said.

"Japan is certainly a world power in scientific knowledge. It has great technology, great equipment, and so it's basically a great marriage."

2 https://vimeo.com/681156850

HOPE for future collaborations

Watch on Vimeo[3]

As Professor Schmidt, Professor Sullivan and Dr Caprarelli's stories demonstrate, networks forged as a young scientist can result in connections that continue across a whole career.

Each year the Japanese Society for Promotion of Science hosts the HOPE meeting with Nobel Laureates and around 100 outstanding graduate students and young researchers. Participants are specially selected from countries around the Asia-Pacific region.

"The HOPE meeting was an excellent platform to meet and engage in scientific discussions with Nobel laureates and brilliant young researchers from diverse fields of science," one of the Australian participants, Dr Harini Hapuarachchi from RMIT University, said.

"I was truly inspired by the lectures and mentoring sessions by the Nobel laureates, where each story highlighted the importance of perseverance and collaboration in endeavours for the advancement of science."

The title 'HOPE' signifies the promise held for young scientists and optimism for a bright future for science and technology in the Asia-Pacific and Africa region. HOPE meetings give opportunities for excellent doctoral students and young researchers in the areas of physics, chemistry, physiology or medicine and related fields to connect and build relationships and gain valuable advice that will strengthen their careers. The 13th HOPE Meeting with Nobel Laureates was originally scheduled for March 2021 in Yokohama, Japan. Due to the COVID-19 pandemic it was held virtually from 7 to 11 March 2022.

Another participant from Australia, Dr Sharman Tan Tanny from the University of Melbourne, found connecting with her international peers in a collaborative project a truly valuable part of the online meeting. She noted that the diversity of team members created an inspiring and creative environment for problem-solving.

"It truly felt like a meeting of great minds, and what we were able to come up with was more than any individual in the team could have done alone, given the interdisciplinary nature of the team and the presentation," Dr Tan Tanny said.

"Further, there were lots of candid and personal moments, as we shared about personal anecdotes throughout, such as aspects of our country or culture, took a team photo, and extended the invitation to each other, to host anyone of us should the opportunity arise in the future to meet in person … we had come a long way from day one."

Tweet via @DoctorSharman[4]

Dr Joe Kaczmarsk from the Australian National University, the third of Australia's participants at the 13th Japan HOPE meeting, agreed that the opportunities to learn and collaborate with others were a highlight.

"The feedback I got from Nobel Laureates and peers when discussing my research was encouraging and reminded me that people from a range of backgrounds are interested in what we are working on," Dr Kaczmarsk said.

"One of the most memorable sessions for me was our small group discussion with Sir Tim Hunt, who was awarded the Nobel Prize in Physiology or Medicine in 2001 for his work on protein molecules that control the division of cells," he said.

3 https://vimeo.com/695343347
4 https://twitter.com/DoctorSharman/status/1501534845477941255?s=20&t=xycinURwio02gnUDRrk_1g

"Tim was calling in from his living room in his home in Japan and he gave us lots of advice and anecdotes about building a life in science … It was a very nice session and one that I will remember for a long time – it's not every day that you get to talk to a Nobel Laureate about life and science!"

Similarly, Dr Hapuarachchi was moved by the generosity and wisdom shared by the Nobel laureates, and said, "I will always cherish these memories and I believe that the lessons shared by the laureates will inspire me throughout my scientific career."

Thanks to the long-standing collaboration between Japan and Australia in science and technology, our scientists are able to share resources, cultures and knowledge. This collaboration leads to better science and a brighter future for all.

Find out more:

Japan HOPE meeting with Nobel Laureates[5]

Japan Society for the Promotion of Science Alumni Association in Australia[6]

Increasing international collaboration on science and research[7]

Australia and Japan: 40 years of international collaboration on science, technology and innovation[8]

Partnering with Australia on innovation, science and research[9]

Australian science celebrates 75th anniversary of India's independence

August 15, 2022

India became an independent nation 75 years ago today. In celebration of the **India@75 anniversary**[10] and the close bilateral relationship between Australia and India, the Australian Government Department of Foreign Affairs and Trade (DFAT) has partnered with the Academy to share stories of the close scientific research relationship between the two nations.

Watch on Vimeo[11]

The result is a series of six videos showcasing an inspiring cohort of Indian-Australian scientists and the varied and valuable research they are working on. The videos convey how these researchers value science and its importance to our future.

Academy Fellows Professor Mahananda Dasgupta (ANU), Dr Surinder Singh (CSIRO) and Professor Veena Sahajwalla (UNSW Sydney) are some of the Indian-Australian scientists at the forefront of groundbreaking research and feature in the video 'The scientists creating a better future for Australia and India'.

From new technology that revolutionises cancer treatment to developing sustainable omega-3 oil and green steel, their work is changing the world.

For Professor Sahajwalla, her passion for recycling waste – which led to inventing sustainable materials – originated in her upbringing in Mumbai.

"It's one of those things that once it's in your DNA it never leaves you," she says.

Similarly, Dr Singh was selected for India's National Science Talent Program while at school, which harnessed his innate curiosity and guided him to a career path in science, in particular in plant molecular biology.

5 https://www.science.org.au/supporting-science/awards-and-opportunities/hope-meeting-nobel-laureates
6 https://www.science.org.au/supporting-science/other-initiatives/japan-society-promotion-science-alumni-association-australia
7 https://www.industry.gov.au/science-technology-and-innovation/international-collaboration-science-and-research
8 https://www.industry.gov.au/news/australia-and-japan-40-years-international-collaboration-science-technology-and-innovation
9 https://www.industry.gov.au/publications/partnering-australia-innovation-science-and-research
10 https://www.dfat.gov.au/geo/india/australia-celebrates-india75
11 https://vimeo.com/733835878/93efe5b69b

Nuclear physicist, Professor Dasgupta, also cannot separate her Indian past from her successes in Australia.

“I carry India with me at all times, because of the fundamental principles and the outlook that India instilled in me,” Professor Dasgupta says.

The other videos in the series detail collaborative research projects such as improving water quality, mapping bushfire prone areas and slowing the transmission of mosquito-borne disease. The benefits of this research are felt in Australia, India and across the globe.

Drought-proofing crops in Australia and India

Dr Gupta Vadakattu is a Senior Research Scientist at CSIRO Food and Agriculture who is looking into ways to improve crop health, and ultimately increase crop yield.

Watch on **Vimeo**[12]

Australian science tackling water quality in the Ganges

Dr Anu Kumar is a Principal Research Scientist at CSIRO Land and Water. Her team is looking at the impacts that chemicals from sewage and industries have on our health and the environment. This research is an example of scientific collaboration between Australia and India that is helping to tackle global health and environmental challenges.

Watch on **Vimeo**[13]

Better data to fight fires in Australia and India

Scientific collaboration between Australia and India is strengthening bushfire adaptation efforts in both countries. Dr Chandrama Sarker is a scientist on @CSIRO’s bushfire adaptation team. She is improving the way Australia maps bushfire-prone areas and understanding how we can lessen their impact.

Watch on **Vimeo**[14]

12 https://vimeo.com/734191325
13 https://vimeo.com/734225555
14 https://vimeo.com/734594435

The Australian technology slowing the spread of dengue fever

Dr Prasad Paradkar is a senior research scientist at CSIRO's Australian Centre for Disease Preparedness. His team is working on research to genetically engineer mosquitoes, preventing them from transmitting diseases such as dengue or Zika.

Watch on **Vimeo**[15]

The Indian-Australian scientist improving climate and air quality predictions

Dr Ashok Luhar works at @CSIRO's Climate Science Centre and has been studying the impact of greenhouse gases and pollutants in our atmosphere for more than three decades. His pioneering work has helped improve climate models in Australia and around the world.

Watch on **Vimeo**[16]

This series was funded by DFAT and produced by the Australian Academy of Science. We would like to acknowledge CSIRO for its participation in producing this suite of content.

Find out more about Australia's India@75 celebrations at **DFAT's website**.

Outstanding scientists don't work alone: collaborations in the Asia-Pacific region

August 17, 2022

In a global world, the future of science depends on strong and enduring international relationships.

According to Professor Sharon Lewin from the Doherty Institute, "Collaboration across borders in science is hugely important, especially when you're trying to tackle really big and important problems."

Watch on **Vimeo**[17]

Professor Lewin is one of several researchers highlighted in a series of six short videos about research collaboration in the Asia-Pacific region, produced by the Academy in partnership with the Australian Government Department of Industry, Science and Resources.

Across the themes of health, environmental sustainability and science solutions in developing countries, the series of videos emphasises the difference that collaborating makes to science and technology outcomes. It also shows us the value of removing barriers for scientific

15 https://vimeo.com/734260176
16 https://vimeo.com/733941285
17 https://vimeo.com/719800266

collaboration throughout the Asia-Pacific and celebrates the achievements of our region's researchers.

Professor Sharon Lewin features in one of six videos about research collaboration in the Asia-Pacific region.

For example, Professor Lewin's work in finding treatments for hepatitis B was supercharged thanks to connecting with the International Coalition for the Elimination of Hepatitis B. The coalition linked researchers in different parts of the world, ensuring the same methods are used to study people receiving various treatments, and allowing for the best possible solutions to be found to cure this infectious disease.

Another important collaboration highlighted is the work of the Asbestos Diseases Research Institute in sharing Australia's knowledge in asbestos removal, safety and disease with developing countries, some of which do not yet have bans on the dangerous substance. While Australia banned asbestos in 2003, its impact continues: 4000 Australians lose their lives to asbestos-related illness every year. In this video, Associate Professor Sonja Klebe, who leads the Asbestos Diseases Research Institute, says, "We have to take a leadership role for the region, given the experience that we have in that field, to help other countries avoid the problems we have experienced here."

Each project outlined in the video series was made possible by the Regional Collaborations Programme. The programme, which closed this year, assisted Australian researchers and businesses to build stronger linkages in the Asia-Pacific region to support inclusive and sustainable economic growth and prosperity. The programme was a funding initiative of the Australian Government's **Global Innovation Strategy**[18] under the **National Innovation and Science Agenda**[19]. It has been succeeded by the **Global Science and Technology Diplomacy Fund**[20], which has similar objectives.

As becomes obvious after watching these videos – whether they are in medicine, archaeology, biology or any other discipline – outstanding scientists don't work alone.

Teeth reveal secrets of the past

Watch on **Vimeo**[21]

Personal mission to improve stroke outcomes

Watch on **Vimeo**[22]

18 https://www.industry.gov.au/science-technology-and-innovation/industry-innovation
19 https://www.industry.gov.au/science-technology-and-innovation/industry-innovation
20 https://www.industry.gov.au/science-technology-and-innovation/international-collaboration-science-and-research
21 https://vimeo.com/719755822
22 https://vimeo.com/719727622

Every island ‘has a story to tell’

Watch on **Vimeo**[23]

Small devices solving big problems

Watch on **Vimeo**[24]

Tackling asbestos beyond borders

Watch on **Vimeo**[25]

Find out more about the **Regional Collaborations Programme**[26].

Academy archive digitisation project boosted by generous donation

August 17, 2022

David Anstice AO.
Photo: supplied.

A $100,000 donation by philanthropist and former pharmaceutical executive David Anstice AO will support the digitisation of the historic scientific collections held at the Australian Academy of Science.

The archives, housed in the Academy’s Shine Dome, contain the unique collections of some of **Australia’s most famous scientists**[27] and have been declared of ‘**immense research significance**’.[28]

“It seems important to me to keep the torch of science, in my case medical science, burning brightly,” Mr Anstice said, who is originally from Wagga Wagga, NSW but is now based in the United States.

The Academy’s **digitisation of the archives program**[29], which began in late 2020, is primarily funded by donations from Fellows and friends of the Academy and would not be possible without this support.

“The Australian Academy of Science, as the pre-eminent Australian scientific body which crosses numerous scientific disciplines, is eminently worthy of support from all who understand just how important science is to humankind, and how significant Australia’s past contributions have been in medicine, globally.”

23 https://vimeo.com/719678509
24 https://vimeo.com/720909372
25 https://vimeo.com/722425163
26 https://www.science.org.au/supporting-science/awards-and-opportunities/rcp
27 https://www.science.org.au/news-and-events/news-and-media-releases/diaries-australian-virologist-who-helped-eradicate-smallpox
28 https://www.science.org.au/academy-newsletter/november-2021-155/academy-manuscript-collection-immense-research-significance
29 https://www.science.org.au/about-us/philanthropy-and-partnerships/philanthropy/make-history-us

Watch on Vimeo[30]

Mr Anstice said he has a keen interest in history and archival work and is a collector of cricket memorabilia and family genealogy. “I think that preserving the history of any serious organisation or topic is an important cultural undertaking, so that the present can always be informed by the wisdom – or follies – of the past,” he said.

“What [scientists] learned and achieved, and what they found was unproductive, saves today’s scientific leaders from unfruitful pathways or opens up new avenues based on new insights.”

Mr Anstice worked for over 50 years in the biopharmaceuticals industry, both in Australia and the United States. He retired as a senior executive of Merck & Co in September 2008, having played a critical role in securing the global development and commercialisation rights to the HPV vaccine.

He also served on the board of CSL for 10 years and was appointed an Officer of the Order of Australia in 2018 for his service to Australia–America business relations.

“My respect for medicine in Australia was established early in my career, when I had the opportunity to work across many medical disciplines,” Mr Anstice said.

“In that time, I learned to deeply appreciate the contributions of basic medical research … and the massive contributions of the research-based private sector in discovering and making medicines and vaccines that serve patient medical needs. Much of my career has thus been supporting ongoing research in medicine – in Australia and with global companies.

Mr Anstice and Academy archivist Clare McLellan examine a folio in the Basser library at the Shine Dome.

“I am very happy that I can support the important work of the in-house archivist,” Mr Anstice said. “My financial support of the Academy is one small way of recognising that the future can deliver even more value for subsequent generations of Australians.”

Expert roundtable to explore new approaches to negative emissions

August 25, 2022

Experts from across Australia will gather for a national roundtable on September 16 to identify new approaches for negative emissions.

The invitation-only event, held online, will be hosted by the Australian Academy of Science and will be chaired by Academy President Professor Chennupati Jagadish AC PresAA FTSE.

30 https://vimeo.com/430260327

The Shine Dome from the air

The main question the roundtable will consider is the capability of science to draw out new negative emissions approaches, in addition to current approaches.

While Earth's natural carbon sinks play an important role in absorbing carbon dioxide from the atmosphere, the **report from the IPCC Working Group III**[31] highlighted the need for methods of removing carbon dioxide from the atmosphere to limit global warming.

Developing a range of negative emissions approaches will better place Australia, and the world, to limit global warming to 1.5°C. This requires exploring innovative future opportunities and options to achieve the scale of carbon dioxide removal required.

This roundtable will focus on identifying additional and different approaches that science might offer, rather than simply building what is already being developed at a larger scale. The roundtable will discuss:

- the impacts of large amounts of CO_2 drawdown by natural sinks on ecosystems
- the science capabilities, research and investments needed to deliver new breakthroughs in negative emissions
- Australia's research strengths and comparative advantage in negative emissions.

A statement summarising the critical outcomes of the roundtable will be released in the days following the roundtable discussion, with a full summary report to be released later this year.

For enquiries about the roundtable, please contact the Academy's **Science Policy team**[32].

Birds, balance and biographical memoirs

August 31, 2022

The **latest issue**[33] of the Academy's journal, Historical Records of Australian Science, gives a good indication of the breadth of Australian science in five historical articles, three biographical memoirs and reviews of seven books about Australian science.

Russell McGregor takes **a long look at one of the icons of Australian birding**[34], J. A. Leach's

31 https://www.science.org.au/news-and-events/presidents-statement-ipcc-working-group-iii-report
32 Science.Policy@science.org.au
33 https://www.publish.csiro.au/hr#CurrentIssue
34 https://www.publish.csiro.au/HR/HR21010

From left: Pioneers of the Australian birding field guide with J. A. Leach in foreground, Neville W. Cayley behind*; some of Australia's 'highly developed' birdlife from Leach's book†; the frontispiece of the book

1911 An Australian Bird Book, that helped to guide birding practice away from collection of specimens and towards field observation. He places the book at the interface of science and recreation so we can think of it as an early example of citizen science. That theme is taken up later in the journal in a review of the new edition of Penny Olsen's book, Feather and Brush, in which we learn about the illustrators and artists whose work was important in later books of this kind.

Libby Robin's article[35] began as the annual lecture at the University of Melbourne that is dedicated to the memory of Diana 'Ding' Dyason, and was adapted for publication in the journal. The article traces the emergence of studies in history and philosophy of science in Australia, and the importance of soils to an emerging environment movement with an eye to food production.

There is also an environment aspect to **Nicola Williams's story of a delicate analytical balance**[36] that was twice taken to the Antarctic, where science accompanied exploration, although in the archive of 'heroic' stories about the Arctic and Antarctic science is seldom mentioned.

Turning to the laboratory rather than the field, journal editor **Ian Rae writes about some nineteenth-century chemistry**[37] that was perhaps ahead of its time and ultimately unsuccessful. The story reveals much about scientists in the colonies, like David Orme Masson, as they tried to fit into the international scene.

Ilse Rosenthal-Schneider, who had studied with Albert Einstein, Max Planck and Max von Laue, brought a particularly European blend of scholarship to Australia. Her little-known career in Australia as a university teacher and a communicator of the connections between

35 https://www.publish.csiro.au/HR/HR21014

36 https://www.publish.csiro.au/HR/HR21013

37 https://www.publish.csiro.au/HR/HR22001

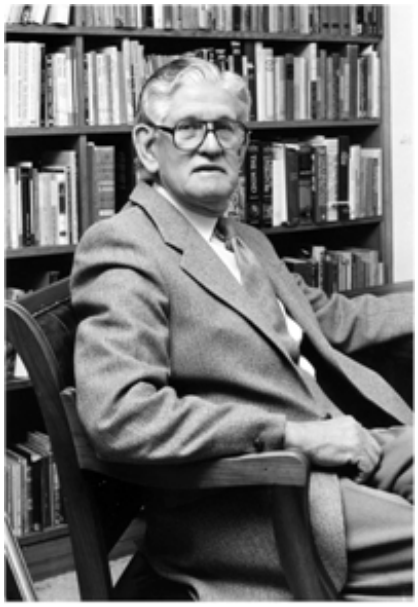
* Detail from a photograph of the Sydney session of the Royal Australasian Ornithologists' Union, 1921, PIC BOX PIC/7586 #PIC/7586/176, National Library of Australia, Canberra.

† J.A. Leach, An Australian Bird Book, Whitcome & Tombs, Melbourne, 1911. **See the eBook version:** https://www.gutenberg.org/files/34781/34781-h/34781-h.htm

physics and philosophy is **revealed by Daniela Helbig and Maureen O'Malley**[38].

Biographical memoirs

The Academy publishes biographical memoirs of deceased fellows of the Australian Academy of Science, as the Royal Society of London does for its fellows. When a scientist has been a fellow of both societies, the biographical memoir is published by each organisation using its own format. This issue of HRAS contains memoirs for several Fellows, including **Geoffrey Burnstock FAA FRS**[39], the physiologist who discovered that adenosine triphosphate (ATP) was not just a carrier of phosphate in biological systems but also a signalling molecule – a neurotransmitter. You can read **his Royal Society memoir**[40] on the RS website.



Ross Day was the first psychologist to be elected to the Academy.

Ross Day FAA FASSA[41] was foundation professor of psychology at Monash University and the first psychologist to be elected to the Academy for his work on perception that made him a world leader in this field of science.

Hans Freeman AM FAA[42] was a chemist at the University of Sydney. The elucidation of the crystal structures of bio-significant molecules such as the blue protein plastocyanin required painstaking laboratory chemistry, the development of instrumentation and computing power, and the efforts of a team led by Freeman.

Book reviews

Something unusual among the **book reviews in this issue of HRAS**[43] is the coverage of technology, specifically photography and image projection by the 'magic lantern'. This was the subject of a research project 'Heritage and Limelight' that gave rise to one of these books and adopted the neologism 'lanternists'.

About the journal

Much of the content of the journal is publicly available as open access, and Fellows of the Academy are able to access all content by logging into the Academy website and using the link on the Fellows page. The Academy also publishes **the biographical memoirs of Fellows on its website**[44] following publication in the journal.

The Academy encourages authors to contact the editors to discuss their ideas for articles.

Find out more about Historical Records of Australian Science[45]

The journal editors are Dr Sara Maroske and Professor Ian D. Rae. This article was adapted from the editors' introduction to the latest issue of the journal.

More news

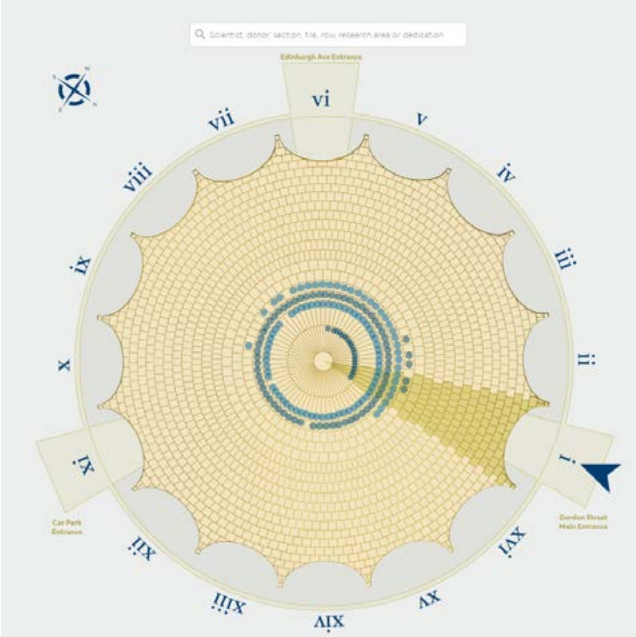
Celebrate Science now an interactive experience

You can now explore Celebrate Science donations or choose your tile in **an interactive online model of the Dome**[46].

The Academy established Celebrate Science with the objectives of celebrating Australian scientists and their achievements, and strengthening the Academy's ability to offer scientific advice, comment, and education in the national interest.

38 https://www.publish.csiro.au/HR/HR22005
39 https://www.publish.csiro.au/HR/HR22004
40 https://royalsocietypublishing.org/doi/10.1098/rsbm.2021.0016
41 https://www.publish.csiro.au/HR/fulltext/HR22002
42 https://www.publish.csiro.au/HR/fulltext/HR21011
43 https://www.publish.csiro.au/hr/Fulltext/HR22012
44 https://www.science.org.au/fellowship/fellows/biographical-memoirs
45 https://www.publish.csiro.au/hr/AbouttheJournal
46 https://www.science.org.au/about-us/philanthropy-and-partnerships/philanthropy/celebrate-science/dedications

We ask that you celebrate science with us by dedicating a virtual copper roof tile to an Australian scientist who has made a significant contribution to science. Your donation will help us to continue to play an essential role as an independent voice for Australian science.



Learn more about Celebrate Science and make a dedication today[47]

New video

What causes COVID-19 variants?[48]

Watch on **Vimeo**[49]

Getting boosted provides greater protection from Omicron than only having two vaccine doses.

All viruses change over time, and Omicron is the latest variant. But do you know the difference between a subvariant and a variant?

In brief

Submissions to government

The Academy recently provided the following submissions to government:

- **Climate Change Bill 2022**[50]
- **Australian Code of Practice on Misinformation and Disinformation (2022 review)**[51] (joint submission with ATSE)

Opportunities for scientists

Find out more about coming **opportunities for scientists**[52]:

- Science and Industry Endowment Fund—Australian Academy of Science Fellowships to the 72nd Lindau Nobel Laureate Meeting in physiology and medicine
- Global Science and Technology Diplomacy Fund – Strategic Element
- Abel Prize
- Canada Gairdner International Awards
- The Danone International Prize for Alimentation
- 2023 Science and Innovation Awards for Young People in Agriculture, Fisheries and Forestry

Fellows update

Keep abreast of the Academy Fellowship in the **Fellows update**[53]:

- Honours and awards to Fellows
- Obituary for Dr Alec Costin AM FAA

47 https://www.science.org.au/about-us/philanthropy-and-partnerships/philanthropy/celebrate-science
48 https://www.science.org.au/curious/video/what-causes-covid-19-variants
49 https://vimeo.com/703977973
50 https://www.science.org.au/supporting-science/science-policy-and-analysis/submissions-government/submission-climate-change-bill
51 https://www.science.org.au/supporting-science/science-policy-and-analysis/submissions-government/joint-submission-australian-code-of-practice-on-misinformation-and-disinformation-2022-review
52 https://www.science.org.au/academy-newsletter/august-2022-163/opportunities-scientists
53 https://www.science.org.au/academy-newsletter/august-2022-163/fellows-update

Coming events

Launch of 'A National Strategy for Just Adaptation'

Date: 6 September

Venue: Online

Join the Australian Academy of Science and Future Earth Australia to watch the livestreamed launch of **A National Strategy for Just Adaptation**[54]. This much-anticipated strategy is being launched at Parliament House by the Assistant Minister for Climate Change and Energy, Senator the Hon Jenny McAllister.

More about this event[55]

Falling Walls Lab Australian Finale 2022

Date: 26 September

Venue: Online

The Academy will host the seventh Falling Walls Lab Australia finale from Canberra, to identify the national winner who will take part in the global event in Berlin.

More about this event[56]

Surprising Science: The life of lightning

Date: 11 October

Venue: Shine Dome and online

Hear from two scientists whose research has been sparked by lightning in two extremely different ways. Dr Hannah King from Swinburne University of Technology and Dr Emma Lovell from UNSW Sydney will demonstrate the life (and death) of lightning and what this powerful natural phenomenon can mean for us.

More about this event[57]

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