

50 women at the cutting edge of science in Australia

From anthropology to Astro-particle physics, these women excel in their fields.



Credit: Marc Blazewicz

In honour of International Women's Day 2023, Cosmos is showcasing the exceptional and interesting female researchers and scientists in Australia.

We're not highlighting the work of one or two who have made important scientific breakthroughs, or brought new understanding to our community, although we could do that every day. We're deliberately showcasing the vast number of women in a variety of fields who we can celebrate together.

Share this list with your daughters, sons, and school students. Let them be inspired and excited. Let them understand the full range of fascinating and important areas of science these women are working in.

Cosmos is grateful for the support of the Australian Council of Learned Academies ([ACOLA](#)) and Australia's five Learned Academies who helped us to create this list.

Anthropology – the scientific study of humanity



Marcia Langton. Credit: Tamati Smith/Stringer/Getty Images

[Distinguished Professor Marcia Langton](#) AO is a descendant of the Iman people of Central and Southwestern Queensland. As an anthropologist and geographer, she is recognised internationally for her ground-breaking work modernising the mining industry's engagement with Indigenous people.

[Professor Emma Kowal](#) is a cultural and medical anthropologist, with a background as a medical doctor and public health researcher in Indigenous health settings in Australia.

[Professor Andrea Whittaker](#) is a medical anthropologist whose research spans anthropology, international public health, Asian studies, and gender studies, with current projects including the study of global medical trade and mobility.



Sarah Pink. Credit: Monash University via Wikimedia Commons

[Associate Professor Kalpana Ram](#) is an anthropologist with a background in philosophy and sociology. Her research focusses on class, gender and women's movements in India, caste, and popular religion.

[Professor Sarah Pink](#) is a world-leading design anthropologist. Her research focuses on emerging intelligent technologies, automation, data, digital futures, safety, and design for wellbeing.

[Professor Megan Warin's](#) research investigates gender and class differences in obesity, public understandings of obesity science, Aboriginal and Torres Strait Islander views on health, and eating and intergenerational transmission.

[Dr Julie Finlayson](#) is an anthropologist whose work has included claim/heritage work under the Northern Territory Aboriginal Land Rights Act, and across the native title system.



Alison Bashford. Credit: Alegria221 via Wikimedia Commons

Archaeology – study of the ancient and recent human past through material remains

[Professor Jo McDonald](#) is an archaeologist interested in the ways people use rock art to communicate their identity through time and is known for her collaborative research with Australian Aboriginal communities.

[Scientia Professor Alison Bashford](#) is Director of the Laureate Centre for History & Population at UNSW. Her work connects the history of science, global history, and environmental history into new assessments of the modern world.

[Distinguished Professor Lynnette Russell](#) AM is an historian who combines anthropology and archaeology in her research, which ranges from the 16th to the 20th centuries, Aboriginal people in the maritime industry, to the last 1000 years of encounter history.

[Distinguished Professor Sue O'Connor](#) is an archaeologist whose research focuses on modern human migration, settlement and adaptations within the Indo-Pacific region.



Alice Gorman. Credit: Flinders University

[Zoe Rimmer](#) is a proud Pakana woman currently completing her PhD on Tasmanian Aboriginal activism in cultural institutions. Her research follows on from her work in the museum sector associated with repatriation, cultural revival and developing First Peoples museology.

[Professor Ronika Power](#) is an archaeologist whose research uses ancient human remains to better understand human health and migration.

[Associate Professor Alice Gorman](#) is an expert in Indigenous stone tool analysis, and is an internationally recognised leader in the field of space archaeology.

Physics – the study of matter, energy, and force



Sarah Pearce. Credit: CSIRO

[Professor Nicole Bell](#) is a theoretical physicist and new President of the [Australian Institute of Physics](#), who works on dark matter, neutrinos, and other areas of particle and astroparticle physics at the University of Melbourne.

[Dr Sarah Pearce](#) is an astronomer and space technologist who played a leading role in the creation of the Square Kilometre Array (SKA) – the world’s largest radio telescope – and is now the Director of the SKA-Low Telescope.

[Professor Lan Fu](#) is Head of Electronic Materials Engineering at ANU. Her main research interests include design, fabrication, and integration of optoelectronic devices (LEDs, lasers, and photodetectors) and high efficiency solar cells.

[Professor Naomi McClure-Griffiths](#), astrophysicist and radio astronomer, is an expert on the atomic hydrogen gas distribution and evolution the Milky Way and its neighbours, the Magellanic Clouds.

[Professor Halina Rubinsztein-Dunlop](#) AO is recognised internationally for her achievements in laser physics, linear and nonlinear high-resolution spectroscopy, laser micromanipulation, atom cooling, and trapping and nano optics.



Susan Pond. Credit Stuart Midgley via Wikimedia Commons

[Dr Susan Pond](#) AM is a distinguished physician, scientist, and company director recognised for her contributions to medicine, biotechnology, renewable energy, and sustainability.

[Professor Elanor Huntington](#) is Executive Director of Digital, National Facilities & Collections at CSIRO. Her research is in quantum computation.

[Professor Ewa Goldys](#) is a renowned leader in the applications of light and fluorescence for biomedicine, nanotechnology and advanced materials.

[Professor Celine Boehm](#) is an astroparticle physicist who was the first to quantify the impact of dark matter interactions with the Standard Model particles on the cosmic microwave background and large-scale-structure formation.

[Dr Cathy Foley](#) AO PSM is a physicist who became Australia’s ninth Chief Scientist in January 2021 after a lengthy career at Australia’s national science agency, the CSIRO, where she was appointed as the agency’s Chief Scientist in August 2018.



Xiaojing Hao. Credit: UNSW

[Professor Xiaojing Hao](#) is a world expert in solar technology and has set five world records for solar cell efficiency using thin film kesterite materials.

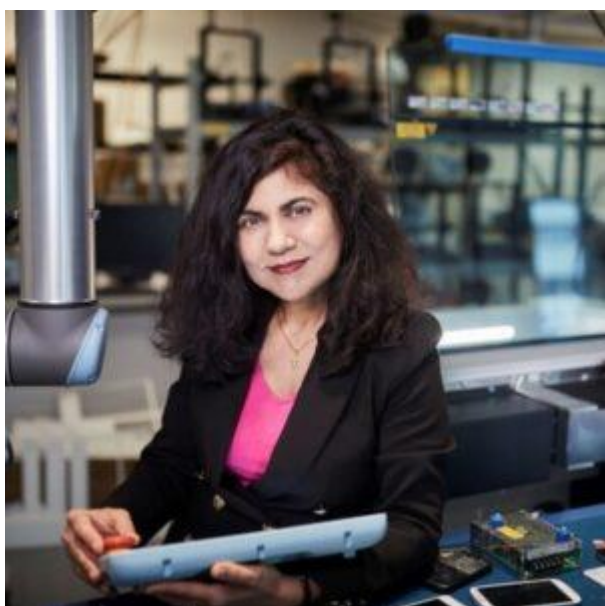
[Professor Shazia Sadiq](#) is a computer scientist whose research focuses on developing innovative solutions for Business Information Systems.

[Professor Neena Mitter](#) is the founding Director of both the QAAFI Centre for Horticultural Science and the ARC Industrial Transformational Research HUB for Sustainable Crop Protection at UQ.

[Professor Svetha Venkatesh](#) is a computer scientist who has made fundamental and influential contributions to the field of activity and event recognition in multimedia data.

[Professor Madhu Bhaskaran](#) is an engineer who has developed stretchable skin-like electronic devices for better health care.

[Professor Kylie Catchpole](#) is a global expert in solar energy whose work demonstrates new approaches to increase the efficiency of solar cells and solar hydrogen technology.



Veena Sahajwalla. Credit: UNSW

[Professor Elizabeth Croft](#) is an expert in human-robot interaction. Her research seeks to advance the collaboration between people and robots in safe, predictable and helpful ways.

[Scientia Professor Veena Sahajwalla](#) is a materials scientist, engineer and innovator who is revolutionising recycling science.

[Professor Sally McArthur](#) is a materials scientist whose research is in the development of novel biomaterials for biomedical, nutritional, and environmental applications.

[Professor Cordelia Selomulya](#) has extensive experience in the area of spray drying and characterisation of functional dairy and food powders.

Health and Medical Sciences



Dimity Dornan. Credit: Michael Greves via Wikimedia Commons

[Professor Ngjare Brown](#) is a proud Yuin nation woman and senior Aboriginal medical practitioner. She has qualifications in medicine, public health and primary care, and has studied bioethics, medical law and human rights.

[Dr Dimity Dornan](#) AO is a speech pathologist who has devoted her career to helping deaf children to listen and speak by training their brains to use implantable bionic technologies.

[Kylie Sproston](#) is a chartered engineer and leader in the pharmaceutical and biotechnology industries with a strong focus on manufacturing.

[Dr Alison Todd](#) is an inventor, and co-founder and Chief Scientific Officer of SpeedX – a biomedical company which develops and manufactures diagnostics tools.



Ranjeny Thomas. Credit: the University of Queensland

[Clinical Associate Professor Asha Bowen](#) is a paediatric infectious diseases specialist whose research focusses on reducing the burden of infectious diseases in Australia's Indigenous children.

[Professor Ranjeny Thomas](#) AM is a rheumatologist whose research focuses on the biology and clinical use of human dendritic cells in autoimmune disease.

[Dr Anneline Padayachee](#) is a food-based nutrition preventative health scientist, who helps consumers, healthcare professionals and industry improve their understanding of how food affects health.

[Professor Maree Teesson](#) AO is known nationally and internationally for her research on the comorbidity between mental health and substance use disorders.

Chemistry – the study of the properties and behaviour of matter



Vicki Chen. Credit: Houawu via Wikimedia Commons

[Professor Vicki Chen](#) is a chemical engineer with research experience in membrane separation, gas separation, bio-catalytic systems, nanomaterials, and water treatment.

[Professor Sally Gras](#) is a biochemical engineer in the dairy manufacturing industry and an expert in translating laboratory research into industrial practice.

[Scientia Professor Rose Amal](#) is a chemical engineer and a world leader in photocatalysis – harnessing solar energy to purify water or generate hydrogen gas.

[Emeritus Professor Mary Garson](#) AM is an organic chemist whose research explores the chemistry and bioactivity of natural products from both the marine and terrestrial environment.



Alison Rodger. Credit: Graceanncooper via Wikimedia Commons

[Professor Alison Rodger](#) is a chemist who has invented four techniques that use polarised light to reveal the structures of complex biological molecules.

[Professor Kate Jolliffe](#) is a supramolecular and organic chemist whose research interests include the design and synthesis of molecular receptors, sensors and transporters for anionic (negatively charged) species.

[Dr Sara Kyne](#) is a chemist whose research focuses on discovery and design of sustainable catalytic reactions, and organometallic and free radical chemistry.

[Dr Yvonne Mah](#) has a PhD in chemistry and is the Business Development Manager, Plastic Additives Australia and New Zealand, at BASF.

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