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Curtin research boosted with ARC Discovery Projects support

MEDIA RELEASE

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Curtin University has been awarded almost \$4 million by the Federal Government to fund new research projects, ranging from the solar system and the Earth's tectonic records to lithium batteries and renewable energy.



As part of the latest round of Australian Research Council (ARC) Discovery Projects scheme, Federal Education Minister, the Hon. Dan Tehan, announced 11 Curtin-led projects had been successful.

Two research projects led by John Curtin Distinguished Professor Zongping Shao, from Curtin's WA School of Mines: Minerals, Energy and Chemical Engineering, were awarded more than \$750,000.

Professor Shao's research will aim to develop high-performance lithium batteries that have the potential to boost Australia's world-leading lithium mining industry, as well as developing an innovative hybrid hydrocarbon-carbon fuel cell for long-life power generation.

New research, led by John Curtin Distinguished Professor Phil Bland who leads Curtin's Space Science and Technology Centre, received \$526,000 in ARC funding to pinpoint the origins of hundreds of meteorites as part of an international collaboration.

Other Curtin projects funded by ARC Discovery Projects grants will aim to gain a better understanding of Australia's natural resources, investigate how to support people achieve difficult goals, explore an energy storage solution to a dish-Stirling concentrated solar power system, and search for the most disruptive stellar-mass and supermassive blackholes in the Universe.

The remaining projects will work to identify the source of cosmic rays – the highest-energy particles in nature – using the Murchison Widefield Array radio telescope, investigate creating green concrete from lithium waste, and examine the history, impact and potential future of zoo biology with the aim of improving human-wildlife relations.

Curtin University Deputy Vice-Chancellor Research Professor Chris Moran congratulated the Curtin researchers on being awarded ARC Discovery Projects grants.

"The ARC Discovery Projects scheme aims to support national and international research collaborations and enhance the scale and focus of Australian research," Professor Moran said.

"With this support from the Federal Government, these Curtin researchers will lead significant research projects that have the potential to create lasting scientific, economic, sustainability and social benefits."

The ARC Discovery Projects scheme aims to expand the knowledge base and research capacity in Australia as well as the country's economic, commercial, environmental, social and cultural benefits.

The Curtin-led projects funded by the ARC Discovery Projects scheme include:

Deciphering the tectonic record of the early Earth, led by Dr Tim Johnson: \$318,988

Facilitating the attainment of difficult goals: From theory to intervention, led by John Curtin Distinguished Professor Nikos Ntoumanis: \$365,068

The Global Fireball Observatory: Illuminating Solar System Origins, led by John Curtin Distinguished Professor Phil Bland: \$526,000

A thermal battery for dish-Stirling concentrated solar power systems, led by Professor Craig Buckley: \$390,000

Black holes accreting at extreme rates, led by Associate Professor James Miller-Jones: \$390,000

Detecting cosmic rays using precision radio imaging, led by Dr Clancy James: \$378,000

High-performance green concrete containing lithium refinery residue, led by Associate Professor Faiz Shaikh: \$240,000

Hybrid Hydrocarbon-Carbon Fuel Cells for Long-Life Power Generation, led by John Curtin Distinguished Professor Zongping Shao: \$370,000

Interface/Boundary Engineering Towards Better Solid-State Lithium Batteries, led by John Curtin Distinguished Professor Zongping Shao: \$386,188

Rethinking Zoo Biology: The Histories, Effects and Futures of Captivity, led by Dr Matthew Chrulew:
\$201,786

For more information about the ARC Discovery Projects scheme, visit [here](https://www.arc.gov.au/grants/discovery-program/discovery-projects)
(<https://www.arc.gov.au/grants/discovery-program/discovery-projects>).

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