A LEADING LIGHT IN WESTERN AUSTRALIA

Curtin University

Curtin University has a global reputation as a collaborative, resourceful and hands-on research partner

Western Australia is rich in land, minerals and biodiversity. Its ancient soils host rare marsupials, from the quokka to the dibbler, but also Australia's most collaborative higher education provider, and a prominent name in the Nature Index — Curtin University.

As an international university established in 1986, Curtin has campuses across Australia, Malaysia and Singapore. It leads major international projects in astronomy, sustainability and interconnectivity, with a particular focus on solving real-world problems.

Curtin is renowned for minerals and energy research. Groups from across the university undertake fundamental and applied research into mining, materials, fuel technologies and mineral economics. Using atom probe microscopy, for example, researchers at Curtin have explained how gold nanoparticles form in the metallic mineral arsenopyrite, commonly found in Australian mines.

Curtin is a key partner in some of the world's biggest astronomy projects. Astrophysicists at Curtin were part of an international team that detected a star being sucked into a supermassive black hole 300 million light-years away — among the top 5 per cent most talked about papers globally.

The Curtin-led Murchison Widefield Array (MWA) is a low-frequency radio telescope comprising 4,000 separate, fixed antennas, capable of reaching deep into space and far back through time, making the night sky visible with better resolution than ever before. The array is a precursor project to an even larger telescope, the Square Kilometre Array (SKA), to be built in Western Australia and in South Africa. When completed, the SKA will give scientists a better understanding of the Universe in its earliest moments.

"THE CURTIN-LED MURCHISON WIDEFIELD ARRAY IS A LOW-FREQUENCY RADIO TELESCOPE COMPRISING 4,000 SEPARATE, FIXED ANTENNAS, CAPABLE OF REACHING DEEP INTO SPACE AND FAR BACK THROUGH TIME."

Fast and effective communication is a major challenge for large data-intensive projects like the MWA. Together with the Cisco Internet of Everything Innovation Centre and Woodside Energy, Curtin is constructing a direct data-transmission line from the radio telescope's remote location to central Perth. The partners are also building a long-range, low-power network of sensors that can provide farmers with essential information about soil, rainfall and temperature for improved crop management.

Agriculture and sustainable development are critical research programmes for Curtin University, where a team of researchers recently discovered fungicide-resistant strains of a pathogen that can wipe out barley crops. Tracking outbreak resistance in this way can save farmers from considerable financial loss. In April 2016, Curtin joined an initiative to establish the world's first zero-carbon neighbourhood powered entirely by the Sun.

Committed to urban renewal, the university's Greater Curtin Master Plan will transform its 114-hectare Perth campus into a major Asia-Pacific innovation precinct by 2030. The plan will drive collaboration and commercialisation, create opportunities for students and position Western Australia at the forefront of the knowledge economy.

CURTIN UNIVERSITY
CURTIN.EDU.AU
GPO BOX U1987 PERTH, WESTERN AUSTRALIA

CURTIN UNIVERSITY IN THE NATURE INDEX

SOCIAL IMPACT SCORE
Real-time detection of an extreme scattering event: Constraints on galactic plasma lenses

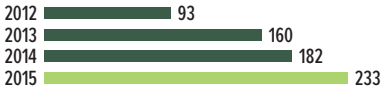
Journal: Science | Published: 2016

WWW.ALTMETRIC.COM/DETAILS/5023120 * DATE OBTAINED 16/06/2016

#3 RISING STAR IN AUSTRALIA

* BASED ON ABSOLUTE CHANGE IN WFC 2012-2015

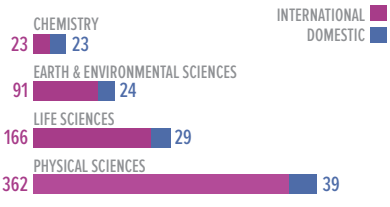
ARTICLE COUNT



#34 IN ASIA-PACIFIC ACADEMIC INSTITUTIONS IN 2015 FOR ARTICLE COUNT

SUBJECT AREAS

INTERNATIONAL AND DOMESTIC COLLABORATING INSTITUTIONS BY SUBJECT AREA 2015



* INSTITUTIONS MAY BE COUNTED IN MORE THAN ONE SUBJECT AREA

NUMBER OF INTERNATIONAL AND DOMESTIC COLLABORATING INSTITUTIONS 2015