

MEDIA RELEASE

18/12/13

From Batteries to Bio-systems: \$25million funding for next generation 3D devices

Important new functional 3D devices are to be developed, including soft robotic limbs and solar generated fuels in a new world centre for 3D Electromaterials.

The [ARC Centre of Excellence for Electromaterials Science](#) (ACES) has received \$25million as a new [ARC Centre of Excellence](#) to further develop their work on smart nano-materials, to now create 3D devices with advanced capabilities over their 2D counterparts. The resulting technology breakthroughs will have a direct impact on existing industries for batteries, solar cells and medical implants and will provide opportunities for the development of new manufacturing capabilities.

Long term aims of the centre include development of systems that will have profound implications for advances in materials development, energy conversion/storage devices, systems that interact with living tissue and soft robotics. Planned applications include a 3D robotic prosthetic hand with a neural interface system and a solar fuel device that will use the sun to convert carbon dioxide into a fuel.

ACES Executive Director [Professor Gordon Wallace](#) says the ACES vision is to create the preeminent world centre for electromaterials science.

“We are well placed to take a global leadership position in 3D electromaterials science and to use this knowledge to create new industries for Australia,” said Professor Wallace.

The new centre will combine research strengths from across six countries including five new international partner organisations, bringing together leading experts in materials, modelling, fabrication and device development.

Advanced customised 3D fabrication equipment and engineering expertise will enable the transition from fundamental research to a workable 3D product. All applications will be looked at by an Ethics, Policy and Public Engagement program.

ACES will also implement a new program to ensure the development of globally recognised PhD graduates with multidisciplinary skills including business development and community engagement.

Administrating Organisation

University of Wollongong

Collaborating Organisations

Monash University

Deakin University

University of Tasmania

The University of Melbourne

The Australian National University

Partner Organisations

Dublin City University, Ireland

University of Warwick, UK

Friedrich Alexander University of Erlangen, Nuremburg, Germany

Hanyang University, Korea

Yokohama National University, Japan

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