

## MEDIA RELEASE

19 June 2019

### From ideas to innovation: Australia-Ireland collaboration advancing electromaterials science

Innovation, industry collaboration and game-changing devices will be on display in Dublin this week as part of a partnership between Dublin City University (DCU) and Australian researchers, all part of the ARC Centre of Excellence for Electromaterials Science (ACES).

The events are part of an annual showcase being hosted at DCU and the Australian Embassy in Ireland, designed to highlight the impact advances in materials and fabrication technologies have had in the areas of human health and energy.

The events will feature presentations from a number of ACES researchers as well as international collaborators on storing, converting and transporting energy, and advances in materials for medicine, including:

- Professor Gordon Wallace (University of Wollongong, Australia), on the development of the sutrode, a wet spun graphene-based fibre that combines the properties of a suture with that of an electrode, that has presented unprecedented communications with nerves;
- Professor Doug MacFarlane (Monash University, Australia), on large scale renewable energy storage and the efficient production of hydrogen and ammonia, and the utilisation of ionic liquids to assist with current limitations in these technologies;
- Professor David Officer (University of Wollongong, Australia), on the development of a new form of graphene for energy conversion and storage as part of the global focus on utilising electrochemical CO<sub>2</sub> conversion to turn atmospheric and marine CO<sub>2</sub> into clean and renewable liquid fuels;
- Professor Mark Cook (University of Melbourne, Australia), on the demonstration of significant and highly prevalent multitemporal cycles in epilepsy sufferers, and how the tracking of seizure cycles on a patient-specific basis can influence treatment decisions and can help to develop patient-specific forecasting algorithms;
- Professor Susan Dodds (La Trobe University, Australia), on the bioethical considerations for 3D bioprinted implants, and the importance of significant collaboration between ethicists, regulators, clinicians and researchers to explore, question and shape the development of this important area of medical innovation to ensure there is adequate critical and informed discussion about these developments as they emerge.

ACES Director Professor Gordon Wallace said the long-established collaboration with DCU goes back over 20 years as part of ACES' commitment to connecting with international research and end-user communities.

ARC Centre of Excellence for Electromaterials Science  
[electromaterials.edu.au](http://electromaterials.edu.au)

“Our partnership combines DCU strengths in sensing technologies and invaluable links to industry, with Australian materials development and fabrication expertise including state-of-the-art 3D printing technologies,” Gordon said.

“This annual program of events in Dublin explores converging technologies and emerging opportunities, and showcases how advances at the frontiers of human health and energy benefit from interdisciplinary and global collaborations.”

**[END]**

#### **MEDIA OPPORTUNITY:**

Professor Gordon Wallace, Professor Doug MacFarlane, Professor David Officer, Professor Mark Cook and Professor Susan Dodds are available for interview by arrangement.

Please contact ACES Communication and Media Coordinator Lauren Hood at [lhood@uow.edu.au](mailto:lhood@uow.edu.au) to arrange any interviews.

The ACES@DCU program of events includes:

- **Thursday 20 June, 9am – 4pm (The Helix, DCU) – [Storing, Converting and Transporting Energy Workshop](#)**, which will explore recent advances in addresses challenges around the storage and transportation of energy generated from renewable sources;
- **Thursday 20 June, 5pm – 6pm (Science Gallery, Dublin) – [The Pursuit of Perfection in Science and Art Panel Discussion](#)**, featuring Professor Gordon Wallace, Louise Allen (Head of Innovation, Design and Crafts Council of Ireland) and Adam Peacock (featured artist), tying in with PERFECTION exhibition launch;
- **Friday 21 June, 10am – 3.30pm (The Helix, DCU) – [Advances in Materials for Medicine Workshop](#)**, which will showcase advances in a number of clinical areas including tissue engineering, cell therapy and medical bionics, and discuss the implementation of a translational environment that ensures delivery to patients in need;
- **Friday 21 June, 4.30pm – 6.30pm, Australian Embassy – [Australian Embassy ACES@DCU Showcase](#)**, which will highlight advances in materials and fabrication strategies and the impact on medical challenges as progressed through Irish-Australian collaboration, and will feature live demonstrations of latest electromaterials technologies.

#### **THE ARC CENTRE OF EXCELLENCE FOR ELECTROMATERIALS SCIENCE (ACES)**

Based at the University of Wollongong’s Innovation Campus, ACES is a multidisciplinary research group with a focus on developing functional devices for applications including batteries, solar cells and systems that interact with living tissue.

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## **ACES Organisations:**

### **Australia:**

University of Wollongong

Monash University

Deakin University

Swinburne University of Technology

University of Tasmania

University of Melbourne

Australian National University

University of New South Wales

### **International:**

Dublin City University, Ireland

University of Warwick, UK

Friedrich Alexander University of Erlangen-Nuremberg, Germany

Hanyang University, Korea

Yokohama National University, Japan

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