

DRAFT Electromaterials Symposium Program
'Cinema', Ground Floor, Kambri Precinct Cultural Centre
Building 153, Australian National University, Canberra, Australia

Wednesday 5th – Friday 7th February 2020

Day 1: Wednesday 5th February 2020	
Session 1 - Chair: Dr Mark Howard	
9:00am	Registrations Open – Lobby, Kambri Precinct Cultural Centre, Building 153, ANU
10:00am	Professor Michelle Coote, Australian National University: Welcome Remarks
10:05am	Professor Gordon Wallace, ACES Director: Opening Remarks
10:20am	Professor Jadranka Travas-Sejdic, University of Auckland, New Zealand <i>Self-healing and Stretchable Polymer Electronics</i>
11:00am	Professor Richard Kaner, University of California, Los Angeles, USA <i>Graphene for Energy Storage</i>
11:40am	Morning Tea
Session 2 - Chair: Dr Hao Zhou	
12:10pm	Associate Professor Zongyou Yin, Australian National University <i>Nanomaterials for Energy Conversion: Reactivity and Stability</i>
12:30pm	Professor Bong-Sup Shim, Inha University, South Korea <i>Title TBC</i>
12:50pm	Professor Mark Cook, University of Melbourne <i>Developing an Inplantable Epilepsy Device</i>
1:10pm	Lunch
Session 3 - Chair: Dr Vipul Gupta	
2:20pm	Professor Antonio Tricoli, Australian National University <i>Scalable Structuring of Efficient Earth-Abundant Electrocatalysts for Water Splitting and CO₂ Reduction</i>
2:40pm	Associate Professor Ekaterina Pas, Monash University <i>Towards All-Organic Radical Batteries</i>
3:00pm	Associate Professor Ajay Pandey, Queensland University of Technology <i>Smart Robotic Skin and Large Area Tactile Sensing Using Elastomers and Advanced Organic Optoelectronic Diodes</i>
3:20pm	Professor Jenny Pringle, Deakin University: 2020 Research Training Events
3:25pm	Professor Simon Moulton, Swinburne University: Poster Burster Session
4:10pm	Afternoon Tea

Session 4 - Chair: Professor Susan Dodds	
4:30pm	<p>Ethics Panel Session #1 – 3D Printed Medical Devices: Regulatory & Legal Challenges in Clinical Practice</p> <p>Chair: Susan Dodds</p> <p>Guest Panellists:</p> <ul style="list-style-type: none"> • Associate Professor Jane Nielsen, Faculty of Law, University of Tasmania • Professor Dianne Nicol, Faculty of Law, University of Tasmania • Professor Cameron Stewart, Faculty of Law, University of Sydney • Ms Jenny Kaldor, Faculty of Law, University of Tasmania
5:30pm	Posters After Five: ACES Canapé Reception – Lobby, Kambri Precinct Cultural Centre
8:00pm	Day 1 Finish

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Day 2: Thursday 6 th February 2020	
Session 5 - Chair: Dr Alexandr Simonov	
9:00am	Professor Justin Gooding, University of NSW <i>Nanoparticles that Mimic the Three-dimensional Architecture of Enzymes: The Role of Nanoconfinement in Enhancing Electrocatalytic Reactions</i>
9:40am	Professor Mario Romero-Ortega, University of Houston, USA <i>The Sutrode</i>
10:00am	Professor Irene Yarovsky, RMIT University <i>Biofouling Resistance: Role of Nanostructure, Dynamics & Hydration</i>
10:20am	Morning Tea
Session 6 - Chair: Dr Alex Harris	
11:10am	Associate Professor Alister Page, The University of Newcastle <i>Growing Low-Dimensional Inorganic Nanostructures via CVD: Insights from Quantum Chemistry & Molecular Simulations</i>
11:30am	Professor Yun Liu, Australian National University <i>Defect Design for Dielectric Polarization</i>
11:50am	Professor Brett Paull, University of Tasmania <i>Fibre-based Microfluidics and Diagnostics: Precise Concentration and Delivery of Targets using the Simplest of Substrates</i>
12:10pm	Professor Anthony Burrell, National Renewable Energy Laboratory, USA <i>Title TBC</i>
12:30pm	Lunch – including special Equity & Diversity Panel Session Equity & Diversity Panel (held in the main conference room during lunch) Chair: Linda Hancock Guest Panellists: <ul style="list-style-type: none"> • Louise Moes – Manager, Diversity and Inclusion, Australian Academy of Science • Professor Maria Forsyth – ACES Associate Director, Deakin University • Dr Justin Bourke – University of Melbourne
Session 7 - Chair: Dr Klaudia Wagner	
1:50pm	Professor Maria Forsyth, Deakin University <i>Towards Practical High Energy Density Batteries Using Ionic Liquid Electrolytes and the Role of the Electrode Interphase</i>
2:10pm	Dr Nagore Ortiz-Vitoriano, CIC EnergiGUNE, Spain <i>Engineering 3D Graphene Air Cathodes for Na-O₂ Batteries</i>
2:30pm	Professor Han Yoon, Gwangju Institute of Science and Technology, South Korea <i>Conducting Polymer Microfibers for Organic Electrochemical Transistor-based Bioelectronics</i>
2:50pm	Dr Pu Xiao, Australian National University <i>Efficient Photoinitiating Systems for Fast 3D-Printing</i>
3:10pm	Afternoon Tea

Session 8 - Chair: Professor Linda Hancock	
3:30pm	<p>Ethics Panel Session #2 - <i>Translating Renewable Technologies into Reality for Cleaner, More Just Climate Change and Energy Transitions</i> Chair: Linda Hancock Guest Panellists:</p> <ul style="list-style-type: none"> • Christopher Anderson - Director of Science Policy, Australian Academy of Science • Dr Tayannah O'Donnell – Director of Future Earth Australia • Professor Doug MacFarlane – Monash University
4:20pm	<p>Professor Gordon Wallace, ACES Director and Professor Maria Forsyth, ACES Associate Director: <i>Poster Awards</i></p>
4:30pm	Day 2 Finish – Free Evening for all Symposium Attendees

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Day 3: Friday 7 th February 2020	
7:00am to 8:00am	RSG/CI Meeting (By Invitation Only) Room 3.02, Marie Reay Teaching Centre Building 155, Kambri Precinct Australian National University
ACES Showcase	
8:30am	Welcome and Introduction Professor Gordon Wallace, ACES Director
8:45am	Opening Remarks
9:00am	Electromaterials - Theme Leader: Professor David Officer <ul style="list-style-type: none"> • Holly Warren - UOW (7 min): <i>Patterning of Hydrogels Using Ionoprinting</i> • Shaikh Faisal - UOW (7 min): <i>Next Generation Magnetic Plastics, Doughs, Gels and Liquid Droplets</i> • Ghulum Murtaza Panhwar - Deakin University (7 min): <i>Title TBC</i>
9:30am	Electrofluidics and Diagnostics - Theme Leader: Professor Brett Paull <ul style="list-style-type: none"> • Vipul Gupta - University of Tasmania (7 min): <i>Title TBC</i> • Liang Chen - University of Tasmania (7 min): <i>Title TBC</i> • Jawairia Khan - UOW (7 min): <i>3D Textile Structures as Electrophoresis Platforms for Selective Delivery and Separation of Complex Mixtures</i>
10:00am	Soft Robotics – Theme Leader: Professor Gursel Alici <ul style="list-style-type: none"> • Hao Zhou - UOW (7 min): <i>A Soft Robotic Prosthetic Hand with Pattern Recognition Based Myoelectric Control</i> • Gerardo Montoya Gurrola - UOW (7 min): <i>Adaptive Neural Interface to Control Prosthetic Devices: Design, Fabrication and Performance Evaluation</i> • Hong Quan Le - UOW (7 min): <i>Improving Usability, Intuitiveness of Controlling Prosthetic Hand Via Non-invasive Approach</i>
10:30am	Synthetic Energy Systems – Theme Leader: Professor Doug Macfarlane <ul style="list-style-type: none"> • Si-Xuan Guo - Monash University (7 min): <i>Title TBC</i> • Shuo Dong - Monash University (7 min): <i>Title TBC</i> • Amrutha Vijayakumar - UOW (7 min): <i>Copper Nanowires with Tunable Selectivity for Electrochemical Reduction of CO₂</i>
11:00am	Morning Tea

11:30am	<p>Synthetic Bio Systems – Theme Leader: Professor Mark Cook</p> <ul style="list-style-type: none"> • Eva Tomaskovic-Crook – UOW (7 min): <i>Synthetic Biosystems to Model Brain Pathologies</i> • Xifang Chen – UOW (7 min): <i>Electrophysiological Systems for Tissue Engineering Applications within ACES</i> • Bijan Shekibi – UOW (7 min): <i>Electrical Stimulation of Neural Cells on Multielectrode Arrays</i>
12:00pm	<p>Ethics Policy Public Engagement - Theme Leader: Professor Susan Dodds</p> <ul style="list-style-type: none"> • Mark Howard – Monash University (7 min): <i>Machine Learning, Efficiency and Equity in Health Care: How will I know that you're thinking of <u>me</u>?</i> • Linda Wollersheim – Deakin University (7 min): <i>Analysing the Framing of Renewable Energy Actors in Australia and Germany</i> • Mathew Cherian – Deakin University (7 min): <i>Indian Energy Transitions: The Energy Divide</i>
12:30pm	Certificate in Entrepreneurship and Innovation Presentations
1:30pm	Professor Michelle Coote, Australian National University: Closing Remarks
1:35pm	Dr Alexandr Simonov, Monash University: Feedback Session
1:40pm	Lunch and Day 3 Finish
1:40pm to 3:40pm	<p>IAC Meeting (By Invitation Only) Room 3.02, Marie Reay Teaching Centre Building 155, Kambri Precinct Australian National University</p>