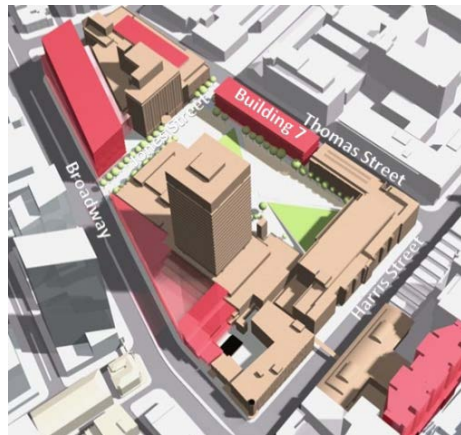


Symposium Program

The 2nd International Symposium on Renewable Energy Technologies

30 Nov - 4 Dec 2016 | University of Technology Sydney, Australia



Registration starts on 30. November 2016 (Day 0) from 4 pm at *Building 4, Level 5, Common Area.*

Location: University of Technology Sydney *Room A:* CB07.02.025 (Building 7, Level 2, Room 025)
City Campus - Building 7 *Room B:* CB07.02.020 (Building 7, Level 2, Room 020)
67 Thomas Street
Ultimo, NSW 2007

Plenary and Special Sessions will be held in *Room A*

Conference Dinner will be held on 2. December 2016 (Day 2) from 6:30 pm
(including *Poster Award Ceremony*)

Location: Aerial UTS Function Centre
UTS Building 10, Level 7
235 Jones Street
Ultimo 2007 New South Wales

Day 0		Day 1 - 01. December 2016			
8:00 -		Registration			
9:00 -		Opening Remarks – Prof. Guoxiu Wang Opening Address – UTS DVCR – Glenn Wightwick Opening Address – ARENA CFO – Ian Kay			
9:50 -		U.S. DOE Advanced Automotive Batteries R&D Overview - Tien Q. Duong <i>Chair: Prof. Guoxiu Wang</i>			
10:40 -		Morning Tea			
11:20		Batteries Room A <i>Chairs: Prof. Ying (Ian) Chen and A/Prof. Bin Liu</i>		Catalysis and Materials Room B <i>Chairs: Prof. Soojin Park and Prof. Yuping Wu</i>	
11:20 -		11:20 -	11:20 -	11:20 -	11:20 -
11:45		11:45	11:45	11:45	11:45
11:20 -		RECENT PROGRESS ON BATTERY MATERIALS – Prof. Marca M. Doeff		Ultrastrong Polyoxazole Nanofiber Membranes for Dendrite-Proof and Heat-Resistant Battery Separators - Prof. Kening Sun	
12:05		Negative Electrode Materials and Designs for Lithium-ion Batteries - Prof. Gao Liu		Progress towards the sustainocene through a global artificial photosynthesis - Prof. Tom Faunce	
12:05 -		Stabilizing Water for Clean Energy Storage – Prof. Kang Xu		Hydrogen storage materials: Designing for success – A/Prof. Kondo-Francois Aguey-Zinsou	
12:30		Synthesis and electrochemical performance of LiFePO ₄ /C cathode materials - A/Prof. Yemin Hu		Carbon nanostructure based catalysts for degradation of organic pollutants under light irradiation – Dr. Xufang Qian	
12:30 -		Mesoporous TiO ₂ -Based Materials for Lithium ion batteries – Prof. Wei Li		Silicene: a new 2D material beyond graphene – Dr. Yi Du	
12:45		12:45	12:45	12:45	12:45
13:00		13:00	13:00	13:00	13:00
13:00 -		Lunch			
14:00		Batteries Room A <i>Chairs: Prof. Marca M. Doeff and Prof. Kening Sun</i>		Catalysis and Materials Room B <i>Chairs: Prof. Kang Xu and Prof. Deyang Qu</i>	
14:00 -		14:00 -	14:00 -	14:00 -	14:00 -
14:25		14:25	14:25	14:25	14:25
14:00 -		Nanostructuring Strategies toward high-performance Lithium-ion batteries - Prof. Soojin Park		Solar-energy activated rapid water disinfection based on vertically assembled ultrathin carbon nitride nanocoating - Prof. Chengyin Wang	
14:50		Interlayers Improving Lithium Sulphur Batteries' Life – Prof. Ying (Ian) Chen		Improving electron transport in nanostructured TiO₂ electrodes - A/Prof. Liu Bin	
14:50 -		Functional Nanomaterials as High-Performance Electrodes for Lithium-Ion Batteries - Prof. Liang Zhou		ADVANCING FUNCTIONAL ENERGY-MATERIALS USING NEUTRON SCATTERING AND COMPUTATIONAL STUDIES - Prof. Vanessa Peterson	
15:05		Surface and Interface Engineering of Silicon-Based Anode Materials for Lithium-Ion Batteries - Dr. Jiangping Yang		Development of Solution-processed Cerium Oxide Thin Films for High Performance Resistive Random Access Memory Applications - Dr. Dewei Chu	
15:05 -		Versatile Conjugated Polymers for Biocompatible/Biodegradable Batteries - Dr. Caiyun Wang		liquid-mediated pathway for the growth of continuous polymeric carbon nitride (C ₃ N ₄) thin films - Dr. Jingsan Xu	
15:35		Metallothermic reduced anode materials for high performance lithium ion batteries – Dr. Sinho Choi		Rational design of metal oxide nanomaterials for sustainable energy applications - Dr. Ziqi Sun	
15:35 -		15:45	15:45	15:45	15:45
15:50		16:00	16:00	16:00	16:00
16:00 -		Afternoon Tea			
16:20	Registration	Special Session:			
16:20 -		Panel discussion Wiley – Dr. Xin Su <i>Chair: Prof. Kang Xu</i>			
16:50		Super Lab tour			
17:00 -					
17:30					

Day 2 - 02. December 2016				
8:00 - 9:00	Registration			
9:00 - 9:40	Problems facing the wide use of hydrogen as a universal fuel – Prof. Christine Charles			
9:40 - 10:20	CHALLENGES FOR LARGE SCALE ENERGY STORAGE AND TRANSPORTATION – Prof. Jun Liu Chair: Prof. Gao Liu			
10:20 - 10:40	Morning Tea			
10:40 - 13:00	PROGRESS TOWARDS HYDROGEN AND AMMONIA FROM RENEWABLES - Prof. Douglas MacFarlane Chair: Prof. Gao Liu			
11:20 - 13:00	Batteries and Supercapacitors Room A Chairs: Prof. Xiaolin Wang and Prof. Eddie Shanqing Zhang		Catalysis and Materials Room B Chairs: Prof. Qiang Xu and Prof. Kostya (Ken) Ostrikov	
	11:20 - 11:45	Development and Implementation of Redox Flow Batteries for Large-Scale Energy Storage – Prof. Maria Skyllas-Kazacos	11:20 - 11:45	Development of Advanced Solid Oxide Fuel Cells Based on In Situ Assembled Cathodes: Interface and Electrochemical Activity - Prof. San-Ping Jiang
	11:45 - 12:05	Solid-state capacitors for energy storage - Prof. Yun Liu	11:45 - 12:05	Progress of Nanostructured Electrode Materials for High Performance Supercapacitors - Prof. Xiaogang Zhang
	12:05 - 12:30	Rethinking the challenges in supercapacitors: What makes graphene unique - Prof. Dan Li	12:05 - 12:30	Metal-Organic Frameworks as a Platform for Energy Conversion and Storage - Prof. Qiang Xu
	12:30 - 12:45	Hybrid carbon-metal oxide nanostructures for supercapacitors - Dr. Zhao Jun Han	12:30 - 12:45	Design of Flow Plate in Fuel Cell Using Aluminum Open Cellular Foam Material - Prof. Abdul Ghani Olabi and Tabbi Wilberforce Awotwe
	12:45 - 13:00	Low cost Materials for High Energy Sodium-ion Battery – Dr. Shulei Chou	12:45 - 13:00	Biosynthesized Pd–Au Alloy Nanocatalysts Grown on Carbon Fiber Paper for Efficient Hydrogen Evolution - A/Prof. Zuliang Chen
13:00 - 14:00	Lunch			
14:00 - 16:00	Batteries and Supercapacitors Room A Chairs: Prof. Dan Li and Prof. Sanping Jiang		Catalysis and Materials Room B Chairs: Prof. Yun Liu and Dr. Shulei Chou	
	14:00 - 14:25	Boosted Charge Transfer in Hybrid Nanostructures: Toward High Rate Capability for Sodium-Ion Batteries - Prof. Zai-Ping Guo	14:00 - 14:25	III-V Semiconductor Nanowire Solar Cells – A/Prof. Lan Fu
	14:25 - 14:50	High performance NASICON structured sodium ion battery at low temperatures – Prof. Eddie Shanqing Zhang	14:25 - 14:50	Synthesis of Iron Series Phosphate Micro-nano-materials and Their Potential Applications for Electrochemical Energy Storage - Prof. Huan Pang and Prof. Huaiguo Xue
	14:50 - 15:05	Antimony and phosphorus-based anodes for sodium-ion batteries - Dr. Alexey Glushenkov	14:50 - 15:15	FROM NANO-SCALE PLASMA PROCESSING TO NANO-SCALE PLASMAS: CHALLENGING ENERGY BARRIERS – Prof. Kostya (Ken) Ostrikov
	15:05 - 15:20	Boron Innovation: from energy storage to nanomaterials - Dr. Zhenguo Huang	15:15 - 15:40	Grand design of new materials - Prof. Xiaolin Wang
	15:20 - 15:35	Porous Carbon Based Composites for Energy Storage and Conversion – Dr. Hao Liu	15:40 - 16:05	Scalable Flame Synthesis of Tailored Metal Oxide Nanoparticles and Ultraporous Layers for Renewable Fuel Production – A/Prof. Antonio Tricoli
15:35 - 15:50	Development of Novel Electrode Materials for Na-ion batteries – Dr. Dawei Su			
16:05 - 16:20	Afternoon Tea			
16:20 - 17:00	Special Session: Materials Science Publishing and How to Maximise Your Success - Dr. Esther Levy – Wiley Chair: A/Prof. Antonio Tricoli			
17:00 - 17:15	Group photo			
17:15 - 18:00	Poster Session			
18:30 - 22:00	Conference Dinner			

Day 3 - 03. December 2016				
8:00 – 9:00	Registration			
9:00 – 9:40	Microstructural characterisation and control for organic-inorganic hybrid perovskite solar cells – <i>Prof. Yi-Bing Cheng</i>			
9:40 – 10:20	Recent developments and future trends in photovoltaics – <i>Prof. Martin Green</i> <i>Chair: Prof. Deyang Qu</i>			
10:20 – 10:40	Morning Tea			
10:40 – 13:00	Catalysis and Materials Room A <i>Chairs: Prof. Xiangdong Yao and Prof. Jiazhao Wang</i>		Batteries and Supercapacitors Room B <i>Chairs: Prof. John Zhu and Prof. Kang Xu</i>	
	10:40 – 11:05	UV-stable fully printable perovskite solar cells based on triple mesoscopic layer - <i>Prof. Hongwei Han</i>	10:40 – 11:05	The Investigation of Li-S Batteries Mechanism by Accurate Identification of the Dissolved Polysulfide Ions - <i>Prof. Deyang Qu</i>
	11:05 – 11:30	Nanostructured Earth Abundant Electrocatalysts for Water Splitting – <i>A/Prof. Chuan Zhao</i>	11:05 – 11:30	Lithium metal and polysulfides – two issues that will impede a long cycle-life Li-S battery - <i>Dr. Adam Best</i>
	11:30 – 11:55	Semiconductor metal oxides for photoelectrochemical energy conversion – <i>Prof. Lianzhou Wang</i>	11:30 – 11:55	Exploring new Energy storage systems - <i>Prof. Yuping Wu</i>
	11:55 – 12:20	SOLAR REDOX PROCESSES FOR FUEL PRODUCTION AND THERMAL ENERGY STORAGE - <i>Prof. Wojciech Lipinski</i>	11:55 – 12:20	Towards high energy density graphene –based supercapacitors on silicon – <i>Prof. Francesca Iacopi</i>
	12:20 – 12:35	Design of Nanoporous Carbon Spheres for Energy Conversion and Storage - <i>Dr. Jian Liu</i>	12:20 – 12:35	Polymeric Sulfur Cathodes for High Performance Li-S Batteries - <i>Dr. Da-Wei Wang</i>
	12:35 – 12:50	High performance multiphase thermoelectric materials - <i>Dr. Sima Aminoroaya-Yamini</i>	12:35 – 12:50	Free-standing flexible sulfur electrode for high performance Li-S batteries – <i>A/Prof. Suqing Wang</i>
	13:05 – 14:00	Lunch		
14:00 – 16:00	Catalysis and Materials Room A <i>Chairs: Dr. Adam Best and Prof. Wojciech Lipinski</i>		Batteries and Supercapacitors Room B <i>Chairs: Prof. Francesca Iacopi and Dr. Da-Wei Wang</i>	
	14:00 – 14:25	Engineering Einstein rattling mode in Ca ₃ Co ₄ O ₉ for the Suppression of Thermal Conductivity – <i>Prof. Sean Li and Dr. Ahn Pham</i>	14:00 – 14:25	Development of New Materials for Li-S and Li-O ₂ Batteries – <i>Prof. Jia-Zhao Wang</i>
	14:25 – 14:50	Defective Carbons for Electrochemical Reactions – <i>Prof. Xiangdong Yao</i>	14:25 – 14:50	Metal-Carbide as Cathode for Rechargeable Lithium-Air Battery – <i>A/Prof. Jun Chen</i>
	14:50 – 15:15	Novel cathode materials for intermediate temperature solid oxide fuel cells – <i>Prof. John Zhu</i>	14:50 – 15:05	Nanostructured catalysts for rechargeable lithium-oxygen batteries - <i>Dr. Bing Sun</i>
	15:15 – 15:30	TiO ₂ MESOCRYSTALS FOR IMPROVED PHOTOCATALYSIS – <i>Prof. Zhenfeng Bian</i>	15:05 – 15:20	Intellectual Property protection & it's role in enabling renewable energy uptake – <i>Dr. Stephen L. Bewlay - CTO, Eco-Sight Corp.</i>
Special Session: Closing Remarks - <i>Prof. Gao Liu</i>				
16:00 – 16:20	Afternoon Tea			
16:20 – 17:00				

Rechargeable Batteries	<ul style="list-style-type: none">▪ Ultra-light and Current Collector-free Pencil-trace Electrode for Potassium Ion Battery - <i>Zhixin Tai</i>▪ VC-CNT composite cathode for lithium oxygen battery - <i>Yuyang Hou</i>▪ A Novel Na₂Fe₂(SO₄)₃@C@rGO Cathode Composite for Long Life and High Energy Density Sodium-Ion Batteries - <i>Mingzhe Chen</i>▪ In-operando mechanism analysis on nanocrystalline silicon anode material for reversible and ultra-fast sodium storage - <i>Lei Zhang</i>▪ Peapod-like Yolk-Shell Ge@N-doped Carbon Nanotubes formed by using Capillarity Action with Enhanced Li-Storage Performance - <i>Haipeng Guo</i>▪ A Polypyrrole-Sulfur Sandwich structure for Li-S battery - <i>Fang Li</i>▪ Novel electrodes for lithium-ion batteries - <i>Junnan Liu</i>▪ A Bifunctional Organic Redox Catalyst for Rechargeable Lithium–Oxygen Batteries with Enhanced Performances – <i>Jinqiang Zhang</i>▪ 3D interconnected carbon fibre network-enabled ultra-long life Na₃V₂(PO₄)₃@carbon paper cathode for sodium-ion batteries – <i>Katja Kretschmer</i>▪ Three-Dimensional Metal Carbide@Mesoporous Carbon Hybrid Architecture as a New Polysulfide Reservoir for Lithium-Sulfur Batteries – <i>Weizhai Bao</i>▪ Nitrogen-Sulfur Co-doped Porous Graphene Matrix as a Sulfur Immobilizer for High Performance Lithium Sulfur Battery – <i>Jing Xu</i>▪ Porous Heterostructured MXene/Carbon Nanotube Composite Paper with High Volumetric Capacity for Sodium-Ion Storage – <i>Xiuqiang Xie</i>▪ Single Crystalline Co₃O₄ Nanocrystals Exposed with Different Crystal Planes Effect on Li-O₂ Battery – <i>Dawei Su</i>▪ Ruthenium decorated hierarchically ordered macro-, mesoporous carbon for lithium oxygen batteries - <i>Xin Guo</i>▪ Enhancement of the rate capability of LiFePO₄ by a new highly graphitic carbon-coating method - <i>Jianjun Song</i>
Supercapacitors	<ul style="list-style-type: none">▪ Nanodroplets for Stretchable Superconducting Circuits - <i>Long Ren</i>▪ Nitrogen doped porous carbon nanosheets from eco-friendly eucalypt leaves as high performance electrode materials for supercapacitors and lithium ion batteries – <i>Anjon K. Mondal</i>
Catalysis	<ul style="list-style-type: none">▪ Graphene-Like Holey Co₃O₄ Nanosheets as a Highly Efficient Catalyst for Oxygen Evolution Reaction - <i>Yuhai Dou</i>▪ Platinum–Cobalt bimetallic nanoparticles with Pt skin for efficient electro-oxidation of ethanol - <i>Bin-Wei Zhang</i>▪ A Ferroelectric Photocatalyst Silver Silicate & Bismuth Silicate - <i>Amar Al-Keisy</i>▪ Electrospun Cobalt Embedded Porous Nitrogen Doped Carbon Nanofibers as an Efficient Catalyst for Overall Water Splitting – <i>Yufei Zhao</i>▪ Colloidal Solution-Based Synthesis of Supported Au Nanocatalysts - <i>Jie Han</i>▪ Epitaxial growth and characterization of undoped and doped ZnO single crystalline films for applications in hybrid solar cells and photodetectors - <i>Dr. Qiang Cao</i>
Fuel Cells	<ul style="list-style-type: none">▪ Design of Flow Plate in Fuel Cell Using Aluminum Open Cellular Foam Material - <i>Tabbi Wilberforce</i>
Materials	<ul style="list-style-type: none">▪ Triconstituent Co-assembly Synthesis of N,S-Doped Carbon-Silica Nanospheres with Smooth and Rough Surfaces - <i>Hao Tian</i>▪ Modulation of Photocatalytic Properties by Strain in 2D BiOBr Nanosheets - <i>Haifeng Feng</i>▪ Metallothermic Reduction Process for Synthesis of Energy Materials – <i>Sinho Choi</i>▪ Electronic structures and high conductivity in doped and undoped 2D VSe₂, TiSe and CoSe₂ metallic systems - <i>Lina Sang</i>▪ High performance of thermoelectricity in doped and undoped Cu₂Se - <i>Sheik Nazrul Islam and Meng Li</i>▪ Applications of Coal Fly Ash Magnetic Spheres in High-turbidity Water Treatment - <i>Dr. Jianjun Li</i>
