

## Program – Day 0, 20<sup>th</sup> July 2014

16.30-18.30	Conference Reception and Early-Bird Registration
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## Program – Day 1, 21<sup>st</sup> July 2014

8.00	Conference Registration	
8.45	Conference Welcome, Prof. J. Raper, UOW DVCR	
ACSMS Plenary / FOCSA Keynotes / Chair – Prof. S. X. Dou		
9.00	PL01, Prof. Hideo Hosono, "Recent progress in iron-based superconductors"	
9.30	PL02, Prof. Judith Driscoll "Unprecedented physical properties in nanocomposite functional oxides"	
10.00	FO01, Prof. Yi Xie "Semiconductor ultrathin nanosheets with atomic thickness: chemistry, challenge and opportunities"	
10.20	FO02, Prof. Mark Wainwright "Australia's growing research collaborations with China"	
10.40	Morning tea	
FOCSA Keynotes / Chair – Prof. H. M. Cheng		
11.00	FO03, Prof. Aibing Yu "Australia-China Joint Research Centre for Minerals, Metallurgy and Materials (3-M) and its activities"	
11.20	FO04, Prof. Yiu-Wing Mai "Toughening laminated composites: approaches from micro to nano"	
11.40	FO05, Prof. Jinhai Li "Current challenges in chemical engineering: three bottlenecks and two gaps"	
12.00	FO06, Prof. Yi Bing Cheng "Printing of hybrid solar cells"	
12.20	FO07, Prof. Wei Zhang "Marine biotechnology: An ocean of opportunities for Australian and Chinese blue bio-economy partnership"	
12.40	FO08, Qingdao Government Address	
13.00	Lunch	
ACSMS Session Talks		
	ACSMS Electronic Materials Chair - Prof. P. Murphy	ACSMS Materials Science Chair - Prof. L. J. Guo
14.00	EM01, Prof. John Bell "Intriguing thermal properties of graphene-based materials"	MS01, Prof. Ying Chen "Nanomaterials and their applications in energy storage"
14.15	EM02, Prof. Yanwei Ma "Development of superconducting and electrode materials at IEECAS"	MS02, Prof. Lin Guo "Morphological control and properties of nickel nanomaterials"
14.30	EM03, Prof. Hua Zhang "Synthesis and applications of novel two-dimensional nanomaterials"	MS03, Prof. George Zhao "Colloidal photonic crystals and functional structures"
14.45	EM04, Prof. Sean Li "High performance of nanoelectronic devices"	MS04, Prof. Zhiyong Tang "Inorganic nanoparticle-metal organic framework core-shell nanostructures: A novel multifunctional platform"
15.00	EM05, Prof. Kehui Wu "Persistent Dirac electron state on bulk-like Si(111)"	MS05, Prof. Dan Wang "Multi-shelled metal oxides hollow microspheres: controllable synthesis and applications"
15.15	EM06, Prof. Chuanbing Cai "Progress of secondary-generation high- $T_c$ superconducting tapes and power application in China"	MS06, A/Prof. Dayong Jin, "TBA"
15.30	Afternoon tea	
	ACSMS Energy Materials Chair - Prof. D. Y. Zhao	ACSMS Materials Science Chair Prof. - J. Bell
15.50	ENG01, Prof. Yanglong Hou "Graphene based composites as high performance anode for lithium ion batteries"	MS07, Prof. Chenzhong Yu "Novel hollow particles and their applications"
16.05	ENG02, Prof. Xiangdong Yao "Advances in materials for hydrogen storage"	MS08, Prof. Dan Li "Graphene-based supramolecular gels"
16.20	ENG03, Prof. Rose Amal "Photocatalysis – from material design to system engineering"	MS09, Prof. Jin Zhang "CVD growth of single-walled carbon nanotubes with controlled structures for nanodevice applications"
16.35	ENG04, Prof. Huagui Yang "Atomically engineered materials for solar-driven water splitting"	MS10, Prof. Peter Murphy "A Case study: The development of the world's first plastic automotive rear view mirror"
16.50	ENG05, Prof. Weichang Hao "Exploring photocatalysis based on $sp$ hybridization"	MS11, Prof. Jiu Zhou Zhao "Solidification of immiscible alloys under effect of electric current pulses"
Close of Day 1		

## Program – Day 2, 22<sup>nd</sup> July 2014

ACSMS Plenary / ACSMS Keynotes / Chair – Prof. H. J. Zhao		
9.00	PL03, Prof. Zhong Lin Wang "Nanogenerators as new energy technology and piezotronics for functional systems"	
9.30	PL04, Prof. Jeffrey Snyder "Materials engineering of complex thermoelectric materials"	
10.00	ACK01, Prof. Chennupati Jagadish "Semiconductor nanowires for optoelectronics and energy applications"	
10.20	ACK02, Prof. Hui Ming Cheng "Novel approaches for efficient energy storage"	
10.40	Morning tea	
ACSMS Keynotes / Chair – Prof. C. Jagadish		
11.00	ACK03, Prof. Michael Fuhrer "Graphene: A novel material for electronics and optoelectronics"	
11.20	ACK04, Prof. Min Gu "Australian-China collaborative partnership in solar cell research"	
11.40	ACK05, Prof. Sean Smith "Materials epigenetics: Accelerating the discovery of new functional materials"	
12.00	ACK06, Prof. Jinhua Ye "Design and construction of solar energy harvesting materials for chemical conversion and environmental remediation"	
12.20	ACK07, Dr. Esther Levy "Materials science publishing and how to maximise your success"	
12.40	ACSMS Group Photo	
13.50	Lunch	
ACSMS Session Talks		
	ACSMS Materials Science Chair Prof. K. Ostrikov	ACSMS Energy Materials Chair Prof. S. W. Kim
13.45	MS12, Prof. Jin Zou "Impact of catalysts in the epitaxial growth of III-V nanowires"	ENG06, Prof. Yong Mook Kang "Fundamental design principles of cathode catalysts and the tailoring methods for their optimized structure and composition for Li-O <sub>2</sub> batteries"
14.00	MS13, Prof. Guoxiu Wang "Development of novel electrode materials for lithium-air batteries and sodium-ion batteries"	ENG07, Prof. Yongyao Xia "Lithium storage in the graphite intercalation compounds (GICs)"
14.15	MS14, Prof. Yyuansheng Yang "Dispersion of carbon nanotubes in CNTs/Mg composite fabricated with ultrasonic"	ENG08, Dr. Hongxia Wang "Influence of stacking layer of Cu-ZnS-SnS precursors on the performance of Cu <sub>2</sub> ZnSnS <sub>4</sub> thin film solar cells"
14.30	MS15, Prof. Xuchuan Jiang "Engineering nanoparticles for energy and environmental applications"	ENG09, Prof. Yunhui Huang "How to get high energy density in lithium-ion batteries"
14.45	MS16, Dr. Yi Du "STM and Raman studies on silicene and silicene oxides"	ENG10, Prof. Hansu Kim "Electrochemical performances of nanostructured Si-SiO <sub>x</sub> materials as high capacity anode material for lithium-ion battery"
15.00	Afternoon tea	
	ACSMS Materials Science Chair – Prof. W. Zhang	ACSMS Energy Materials Chair – Prof. G. X. Wang
15.20	MS17, Prof. Shi Zhang Qiao "Carbon-based materials for electrochemical energy conversion"	ENG11, Dr. Min Sik Park "A Novel lithium-doping approach for advanced lithium ion capacitors"
15.35	MS18, Prof. Kostya Ostrikov "Graphenes from plasmas: fabrication, properties and applications"	ENG12, Prof. Shanqing Zhang "Visible light photoelectrochemical sensors for determination of organic compounds"
15.50	MS19, Prof. Tianying Xiong "The Study of photocatalytic coating by cold spraying"	ENG13, Prof. Sang Woo Kim "Transparent flexible nanogenerators based on piezoelectric and triboelectric nanomaterials"
16.05	MS20, Prof. Litao Sun "Setting up a Nanolab in a TEM for nanomaterials research"	ENG14, Prof. Quan Hong Yang "Effective energy storage from the surface of graphene"
16.20	MS21, Prof. Hao Wang "Geopolymer: green cement from waste materials and no calcination"	ENG15, Dr. Jong Won Lee "Carbon- and binder-free oxide cathodes for reversible lithium-oxygen batteries"
16.45	ACSMS Poster Session and Refreshments	
18.30	Conference dinner	
Close of Day 2		

## Program – Day 3, 23<sup>rd</sup> July 2014

ACSMS Keynotes / Chair – Prof. W. Price		
9.00	ACK08, Prof. Lei Jiang "Bio-inspired interfacial materials with super-wettability"	
9.20	ACK09, Prof. Xinyi Zhang "Advanced engineering materials and membranes for energy conversion & storage"	
9.40	ACK10, Prof. Zhongfan Liu "Graphene and its 2D hybrids: attraction, reality and future"	
10.00	ACK11, Prof. Dongyuan Zhao "Hydrothermal synthesis of ordered mesoporous materials for application"	
10.20	Morning tea	
ACSMS Keynotes / Chair – Prof. X. L. Wang		
10.40	ACK12, Prof. Yusuke Yamauchi "Chemical design of functional nanoporous materials"	
11.00	ACK13, Dr. Richard White "Demystifying the editorial process at Nature and its sister journals"	
11.20	ACK14, Prof. Liejin Guo "Solar hydrogen: On material design and pilot-scale demonstration"	
11.40	ACK15, Prof. William Price "The Australian Institute for Innovative Materials: AIMing to make a material impact – an overview"	
12.00	Lunch	
ACSMS Session Talks		
	ACSMS Electronic Materials Chair – Prof. I. Gentle	ACSMS Energy Materials Chair - Prof. Z. F. Ma
13.00	EM07, Prof. John Zhu "Novel cathode materials for intermediate temperature solid oxide fuel cells"	ENG16, Dr. Shulei Chou "Alloy-based anode materials for sodium ion battery"
13.15	EM08, Prof. Ajayan Vinu "Nanoporous carbon nitride: A Unique material with multiple functions"	ENG17, A/Prof. Rachel Caruso "Morphological control of materials for environmental applications"
13.30	EM09, Prof. Xiazhou Liao "The structural evolution of nanocrystalline materials processed by severe plastic deformation"	ENG18, Prof. Gang Wei "Science and technology innovation and collaboration, Australia – China"
13.45	EM10, Dr. Sima Aminorroaya-Yamini "Thermoelectric performance of <i>p</i> -type quaternary (PbTe) <sub>(1-x-y)</sub> (PbSe) <sub>x</sub> (PbS) <sub>y</sub> compounds"	ENG19, Dr. Ziqi Sun "Metal oxide nanostructure engineering for advanced photovoltaic devices"
14.00	EM11, Prof. Nagarajan Valanoor "Combinatorial studies of multilayer periodicity modulation on Ferroelectric behaviour of Sm-BiFeO <sub>3</sub> multilayers"	ENG20, Prof. Zhaoxiang Wang "Feasibility of constructing Mo-based Li-rich cathode materials for lithium ion batteries"
14.15	EM12, Prof. Shane Kennedy "Applications of neutron beam methods in materials science"	ENG21, Prof. Rongming Wang "Controllable synthesis, atomic structure and properties of magnetic and optical nanomaterials"
14.30	Afternoon tea	
	ACSMS Materials Science Chair – Prof. S. Kennedy	ACSMS Energy Materials Chair – Prof. Y. Yamauchi
14.50	MS22, Prof. Lianzhou Wang "Semiconductor layered materials for photoelectrochemical energy conversion"	ENG22, Prof. Zi Feng Ma "Graphene-based electrode material preparation for rechargeable sodium ion battery application"
15.05	MS23, Prof. Huaizhe Xu "The microstructure and magnetic coupling mechanism in Mn-doped ZnO nanocrystals"	ENG23, Prof. Ian Gentle "Carbon materials for electrocatalysis"
15.20	MS24, Prof. Jiatao Zhang "Hybrid metal/semiconductor nanostructures: controlled synthesis and their optoelectronic properties research"	ENG24, Dr. Md Shariar Al Hossain "The Roles of CHPD: superior critical current density and <i>n</i> -value obtained in <i>in-situ</i> MgB <sub>2</sub> wires and cables"
15.35	MS25, Prof. Wenlong Cheng "From soft meta-atoms to wearable electronic skin sensors"	ENG25, Dr. Zhi Gang Chen "Design of band engineered and nanostructure engineered metal chalcogenide thermoelectrics"
15.50	MS26, Dr. Ruoming Tian "Development of high-performance thermoelectric material calcium cobaltates via advanced neutron/synchrotron diffraction techniques"	ENG26, Prof. Ai Shui Yu "Free-standing electrodes used in lithium-oxygen batteries"
16.10	Closing remarks – Conference Chair Prof. S. X. Dou	
Close of Day 3		