9th Singapore International Chemistry Conference
11 - 14 December 2016

SICC9

Day 3 - 13th December 2016, Tuesday

Time	Program					
09:00-10:30	*Auditorium 2* *Session Chair: Prof Wenping Hu* **Molecular materials and their applications in field-effect transistors** **Plenary Session By: Prof Yunqi LIU** **Skin-Inspired Electronic Material Design and Applications** **Plenary Session By: Prof Zhenan BAO**					
10:30-11:00	**Coffee Break**					
11:00-11:45	**Session 1** **Auditorium 2** *Session Chair: Prof Dan Wang* **Keynote Session** Time-resolved Luminescent Probes and Devices **Prof Dayong Jin**	**Session 2** **Lecture Theatre 50** *Session Chair: Prof Xiaoming Chen* **Keynote Session** New Materials in Hydrothermal Synthesis: Atomic Scale p-n Junction Crystals of Perovskite Oxides with Three Oxidation States **Prof Shouhua Feng**	**Session 3** **Lecture Theatre 51** *Session Chair: Prof Haoli Zhang* **Keynote Session** Bulk graphene materials for energy conversion and storage **Prof Yongsheng Chen**	**Session 4** **Lecture Theatre 52** *Session Chair: Prof Zheng Hu* **Keynote Session** Structural Design and Diversity of Covalent Organic Frameworks **Prof Donglin Jiang**	**Session 5** **Lecture Theatre 53** *Session Chair: Prof Tze Chien Sum/Prof Yin Thai Chan* **Keynote Session** Engineering of Stable Perovskite Materials and Interfaces for Photovoltaic and Optoelectronic Applications **Prof Mohammad Khaja Nazeeruddin**	
11:45-12:30	**Keynote Session** Mesostructural Catalysts and High Performance Catalytic Processes **Prof Weiping Ding**	**Keynote Session** Biodegradable Thermogels and Their Biomedical Applications **Prof Byeongmoon Jeong**	**Keynote Session** Graphene quantum dots from materials synthesis, properties to applications **Prof Shu Ping Lau**	**Keynote Session** Design and Synthesis of Integrated Nanocatalysts **Prof Hua Chun Zeng**	**Keynote Session** Colloidal Quantum Dots: A New Window to the Infrared **By: Prof Philippe Guyot-Sionnest**	
12:30-13:30	**Lunch**					
13:30-13:50	**Symposium 1** **Lecture Theatre 50** *Session Chair: Prof Dong Wang* High-resolution imaging and spectroscopy of surface water at single bond limit **(I) Prof Ying Jiang (199)**	**Symposium 2** **Lecture Theatre 51** *Session Chair: Prof Bin Liu* Photoelectrochemical Energy Conversion based on Semiconductor Metal Oxides **(I) Prof Liangzhou Wang (0408)**	**Symposium 3** **Global Learning Room** *Session Chair: Prof Huailiang Xu* Interface Engineering in Inorganic Hybrid Structures towards Improved Photocatalysis **(I) Prof Yujie Xiong (013)**	**Symposium 4** **Lecture Theatre 52** *Session Chair: Prof Hye Ryung Byon & Prof Yan Yu* Energy Storage Mechanisms in Advanced Anodes and Cathodes for Na-ion Batteries **(I) Prof Shirley Meng (123)**	**Symposium 5** **Seminar Room 1** *Session Chair: Prof Ruqiang Zou* Microporous Graphene Frameworks For Gas and Energy Storage Applications **(I) Prof Ali Coskun (0338)**	**Symposium 6** **Seminar Room 2** *Session Chair: Prof Howe-Siang Tan* Multi-nanopore Structures for Quantum Dot Laser **(I) Dr Ryuzaki Sou (132)**
13:50-14:10	Single-Molecule Chemistry on Ultrathin Oxide Films **(I) Prof Hyung-Joon Shin (153)**	Photocatalytic hydrogen evolution efficiency of Si up to 18% by employing the cascading energy band structure and novel electrode design **(C) Ms Hui-Chun Fu (417)**	Non-Centrosymmetric Structure-Based Optoelectronic Crystalline Materials **(I) Prof Junhua Luo (507)**	Minimizing the polysulfide dissolution for high performance lithium sulfur battery **(I) Prof Chenglin Yan (027)**	Heterogeneous Metal-free Catalysis: Porous Graphene Oxide and Beyond **(I) Prof Chenliang Su (0091)**	Scandium-Based Luminescent Nanomaterials **(I) Prof Huang Ling (577)**
14:10-14:20	Structuring, Dynamics, Electric Double Layer Formation of Interfacial Ionic Liquid Faced to Various Electrode Surfaces Analyzed by Electrochemical Frequency Modulation AFM and MD Calculation **(I) Prof Ken-ichi Fukui (136)**	Nanoporous hematite for highly efficient water splitting **(I) Prof Ji-Hyun Jang (085)**	A theoretical study of photo-induced electron kinetics in composite functional materials **(I) Prof Jun Jiang (030)**	Generic Synthesis of Various Carbon Branched Arrays Exhibiting Stable High-Rate and Long-Cycle sodium ion storage and capacitive performance **(I) Prof Xinhui Xia (065)**	Design of Flexible Porous Coordination Compounds for Efficient Molecular Separation **(I) Prof Ryotaro Matsuda (536)**	The influence of intra-gap trap states on the photoemission properties of colloidal perovskite nanocrystals **(C) Dr Yi Wang (595)**
14:20-14:30						Investigating the optical gain behavior of dispersions of colloidal semiconductor nanocrystals in solution **(C) Ms Min Zhi (594)**
14:30-14:40	Liquids at Interfaces, Most Soft Materials Probed by Atomic Force Microscopy **(I) Prof Hiroshi Onishi (0243)**	Tailoring the Bonding Structure of Graphitic Carbon Nitride to Improve Visible Light Photocatalytic Hydrogen Generation **(I) Prof Gang Liu (280)**	Designing and engineering new 2D materials for energy applications **(I) Prof Li Song (269)**	All Solid-State Thin Film batteries and Possible 3D Cathode Designs **(I) Prof Hui Xia (112)**	Molecular Modeling and Design of Metal-Organic Frameworks for CO_2 Capture and Water Desalination **(I) Prof Jianwen Jiang (0081)**	Facet-to-facet linking of shape anisotropic nanocrystals with site specific stoichiometric control **(C) Mr Xuanwei Ong (592)**
14:40-14:50						Hierarchical multi-component nanoheterostructures via facet-to-facet attachment of anisotropic semiconductor nanoparticles **(C) Mr Shashank Gupta (593)**
14:50-15:00	Operando XAFS Imaging of PEFC Electrocatalysts **(I) Prof Hirosuke Matsui (0509)**	Enhancing Photoelectrochemical Activity with Three-Dimensional p-CuOn-ZnO Junction Photocathodes **(C) Ms Fangli Wu (157)**	Design of Porous Ag Platelet Structures with Tuneable Porosity and Highly Catalytic Activity **(C) A/Prof Yongming Sui (105)**	Development of New Redox Couples for High-Performance Redox Flow Batteries **(I) Prof Hye Ryung Byon (108)**		Synthesis of Colloidal $CH_3NH_3PbBr_3$ Nanoplatelets through Self-Organization Process **(C) Mrs Lige Liu (167)**
15:00-15:10		Smart Interfacial Materials from Super-Wettability to Binary Cooperative Complementary Systems **(I) Prof Jiang Lei**	Ultrafast nonlinear optical properties of black phosphorus **(I) Prof Jun He (0161)**			Nanostructures of Graphitic Carbon Nitride: Green Synthesis, Self-assembly and Unique Optical Properties **(C) Dr Zhenhua Jiang (228)**
15:10-15:20	Shimadzu Scientific Instruments: Excellence in Science **(I) Ms Wang Zhen**			Perovskite Oxides for ORR, OER and HER **(I) Prof Zongping Shao (117)**	Understanding of complicated structures with abnormal scattering **(I) Mr Junliang Sun (098)**	
15:20-15:30			Interactions between lasers and nanomaterials **(C) Dr Junpeng Lu (038)**			
15:30-16:00	**Coffee Break**					

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	Symposium 1 Lecture Theatre 50	Symposium 2 Lecture Theatre 51	Symposium 3 Global Learning Room	Symposium 4 Lecture Theatre 52	Symposium 5 Seminar Room 1	Symposium 6 Seminar Room 2
16:00-16:20	*Session Chair: Prof Ying Jiang*	*Session Chair: Prof Zhichuan Xu*	*Session Chair: Prof Yujie Xiong*	*Session Chair: Prof Chenglin Yan & Prof Xinhui Xia*	*Session Chair: Prof Ruqiang Zou*	**Poster Session at Level 2**
16:20-16:40	Facet-selective reaction pathways for radical-mediated dissociation and synthesis on copper low-index surfaces **(I) Prof Wei Ji (356)**	Engineering Nanostructured Materials for High Performance Electrocatalysis **(I) Prof Yanguang Li (0302)**	Fragmentation and Luminescence of Hydrocarbon Molecules Induced by Strong Laser Fields **(I) Prof Huailiang Xu (508)**	Recent Progress of the Novel Aluminum-Graphite Dual-Ion Battery **(I) Prof Yongbing Tang (0222)**	Assembly of Porous MOFs Materials for Gas Storage and Separation Applications **(I) Prof Yunling Liu (120)**	
16:40-17:00	Inelastic Energy transport in molecular conductors **(I) Prof Jing-Tao Lu (0237)**	Surface Segregation of Bimetallic Nanoparticles **(I) A/Prof Zhichuan Xu (506)**	Microcavity-Free Flexible OLEDs on Outcoupling Enhanced Plastics **(I) Prof Jianxin Tang (0214)**	High-Energy-Density Energy Storage: Redox Activities and Design Strategies **(I) Prof Yi-Chun Lu (122)**	Porous Structure based High Performance Electrocatalysts for Low Temperature Fuel Cells and CO_2 conversion **(I) Prof Jinwoo Lee (0423)**	
17:00-17:10	The spin polarized states in pristine silicon thin films **(I) Prof Jiatao Sun (0159)**	Regulation of electric behavior of two-dimensional inorganic solids for highly-efficient electrocatalyts **(I) Prof Changzheng Wu (158)**	Developing high mobility emissive organic semiconductors towards integrated optoelectronic devices **(I) Prof Huanli Dong (0371)**	A green and facile method to prepare porous polymer electrolyte membrane **(C) Dr Xiuli Wang (0274)**	Guest-Dependent Magnetic and Luminescent Properties of Lanthanide Metal-Organic Frameworks **(I) Prof Wei Shi (446)**	
17:10-17:20				Formation of CoS_2 Nanobubble Hollow Prisms for Highly Reversible Lithium Storage **(C) Dr Le Yu (363)**		
17:20-17:30	Band alignment at solid-liquid interfaces and nanoplasmonic photocatalysis **(I) Dr Johannes Lischner (0597)**	A Metal-organic Framework Derived Oxygen Electrocatalyst **(C) Prof Bao Yu Xia (543)**		Polyaniline anchored $MnCo_2O_4$ nanorods hybrid electrode material for high performance supercapacitor **(C) Dr Santimoy Khilari (512)**	A Biotemplating Method to Construct Carbon Quantum Dot/TiO_2 Nanosheets with High Photocatalytic Efficiency **(C) Dr Juan Xue (293)**	
17:30-17:40		Electrochemical Reduction of Carbon Dioxide to n-Propanol Using Nanostructured Cu Catalysts **(C) Mr Dan Ren (337)**				
17:40-17:50	Water oxidation pathways using a cobalt oxide dimer catalyst **(C) Prof Edward Brothers (0187)**	Fabrication of 2D Carbon and MoS_2 Nanomaterials for Electrocatalysis **(C) Ms Bin Zhang (413)**	Rolled-up Micro/Nanotubes Meet Light **(I) Prof Yongfeng Mei (024)**	Applications of Atomic Layer Deposition in Energy Conversion and Storage Devices **(I) Prof Liang Li (0141)**		
17:50-18:00	Polypentenamers and Poly(Vinyl Alcohol) Using Supported Ruthenium Catalysts **(C) Prof Hassan S. Bazzi (037)**			Porous Metal Nitrides Synthesized via RF Plasma and Their Application in Elctrochemical Water Splitting **(C) Dr Yongqi Zhang (325)**		
18:00-18:10	Synthesis of Cu_2O nanowire mesocrystals using PTCDA as a modifier and their superior peroxidase-like activity **(C) Mr Galong Li (341)**			CNTs Cocoon on Sodium Manganate Nanotubes forming Core/Branch Cathode Coupled with Helical Carbon Nanofibres Anode for Enhanced Sodium Ion Batteries **(C) Mr Yu Zhong (095)**		
18:00--	***Organised by Symposium Chair***					
	Speaker's Night					

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	Auditorium 2					
	Session Chair: Prof Wenping Hu					
09:00-10:30	**Molecular materials and their applications in field-effect transistors** **Plenary Session By: Prof Yunqi LIU**					
	Skin-Inspired Electronic Material Design and Applications **Plenary Session By: Prof Zhenan BAO**					
10:30-11:00	**Coffee Break**					
11:00-11:45						
11:45-12:30						
12:30-13:30	**Lunch**					
	Symposium 7 **Seminar Room 3** *Session Chair: Prof Li Shang & Prof Chih-Ching Huang*	**Symposium 8** **Auditorium 2** *Session Chair: Dr Yi Zheng*	**Symposium 9** **Seminar Room 4** *Session Chair: Prof Dinesh Kabra*	**Symposium 10** **Lecture Theatre 53** *Session Chair: Prof Hanying Li*	**Symposium 11** **Seminar Room 5** *Session Chair: Prof Dongchen Qi*	**Symposium 12** **Seminar Room 12 (Town Plaza)** *Session Chair: Prof Hong Liu & Prof Hai Ming Fan*
13:30-13:50	Aptamer Self-assembled on Gold and Graphene Oxide Nanomaterials for Anticoagulation **(I) Prof Chih-Ching Huang (175)**	Exploring Light Emission from Monolayer Transition Metal Dichalcogenides **(I) Prof Yu Ting (0248)**	Organo-Lead Hybrid Perovskites: Solar Cell Powered Devices and New Properties of Single Crystals **(I) Prof Hongjin Fan (063)**	Tuning the Ambipolar Charge Transport Properties of N-heteropentacenes for Organic Logic Circuits **(I) Prof Haoli Zhang (527)**	Substrate effect on DBBA self assembly **(I) Prof Han Huang (0043)**	Innovative magnetic vortex nanoring platform for biomedical application **(I) Prof Hai Ming Fan (173)**
13:50-14:10	Luminescent Gold Nanoparticles for Tumor Imaging **(I) Prof Jinbin Liu (0224)**	Optical Properties and Application of Transition Metal Dichlcogenides and Metal Monochalcogenides **(I) Prof Kazunari Matsuda (264)**	Beyond 3D perovskites **(I) A/Prof Nripan Mathews (0596)**	Thermoelectric Properties of Organic Materials in Enabling Functional Devices **(I) Prof Chong-an Di (0290)**	Synthesis 1-D MoS_2 molecular wire on Au surface **(I) Dr Hai Xu (0437)**	An Improved Micro/nano Mechanical Characterization Technique for Biomaterials and Tissues **(I) Prof Bin Tang (438)**
14:10-14:20	Gold Nanoclusters Stabilized by Zwitterionic Ligands: Optical Properties and Behavior in Cell Environment **(I) Prof Xavier Le Guevel (020)**	Ultrafast Carrier Thermalization and Relaxation Dynamics in Few-Layer Molybdenum Disulfide **(I) A/Prof Zhi-Heng Loh (227)**	Perovskite Single Crystals: Probing the underlying Photophysics with Ultrafast Spectroscopy **(C) Dr Bo Wu (468)**	Charge Transport Studies in High Performance Single-Crystal Field-Effect Transistors **(I) Prof Lang Jiang (326)**	Study of K-doped MnO_2 Catalysts for CO Oxidation Reaction **(I) Dr Jia Zhang A*STAR (0048)**	Two-photon Small Molecular Enzymatic Probes **(I) Prof Lin Li (0235)**
14:20-14:30			Enhanced Nonlinear Optical Properties in Perovskite Nanocrystals with Core-Shell Structure **(C) Dr Weiqiang Chen (481)**			
14:30-14:40	Novel Glucose Sensor Based on Au@Ag Heterogeneous Nanorods **(I) Prof Aihua Liu (236)**	Bandgap and Excitonic States Engineering of Two Dimensional Materials on Fluoropolymer Substrates by Electrostatical Control **(C) Prof Liu Bo (0425)**	Development and Insight into White-Light Emitting 2D Hybrid Lead Chloride Perovskite **(C) Mr Thirumal Krishnamoorthy (488)**	Charge transport in organic optoelectronic materials: Theoretical perspective and implication for materials design **(I) Prof Yuanping Yi (291)**	Strategies for Improving the Photocatalytic Activity of Zinc Oxide **(C) Mr Daimei Chen (0524)**	NIR Photosensitizers for Photo-theranostics **(I) Prof Xiaochen Dong (311)**
14:40-14:50		BCN：2D Hybrids with Tunable Band Gaps for Microwave Absorbing and Light Emission **(C) Prof Zengyong Chu (225)**	Halide Perovskite Ambipolar Field-Effect Transistors **(C) Mr Xin Yu Chin (195)**		Investigation of the physicochemical properties and catalytic activities of $Fe_9M_1O_x$ (M=Ti, Ce, Al) catalysts for NH_3-SCR reaction **(C) Ms Jingfang Sun (0093)**	
14:50-15:00	Ultrasmall metal nanoclusters in the biological systems **(I) Prof Li Shang (029)**		Crystal Engineering of a Copper-based Layered Perovskite Using an Optoelectronically Active Functional Cation **(C) Mr Daniele Cortecchia (191)**	Electrodes in Organic Transistors: Materials, Fabrication, and Physics **(I) Prof Liqiang Li (126)**	Development of Novel Micro-Nanoscale Structured Photocatalysts for Efficient Removal of Indoor Air Pollutants **(I) Prof Zhihui Ai (057)**	Regulation of stem cell differentiation driven by nanostructure mediated physical signals, and its applications in tissue engineering **(I) Prof Hong Liu (591)**
15:00-15:10		Tunable spin-selective optical Stark effect in layered two-dimensional lead halide perovskites **(C) Mr David Giovanni (119)**				
15:10-15:20	Antimicrobial Cluster Bombs: Silver Nanoclusters Packed with Daptomycin **(C) Ms Kaiyuan Zheng (148)**	Low-dimensional Boron Nitride Nanomaterials in Thermoconductive Polymer Composites and SERS **(C) Dr Xiangfen Jiang (0366)**		Electrochemically Organized Monodispersed Fullerene-Rich Thin Films **(C) Prof Mao Li (0335)**	STM and PES Investigations on Organic-TMD Heterointerfaces: Self-Assembly and Energy Level Alignments **(I) Dr Yuli Huang (0111)**	Mineralized Antimicrobial Nanofibers (MANs) for Advanced Wound Dressings & Bone Tissue Engineering **(I) Dr Lakshminarayanan Rajamani (448)**
15:20-15:30	Fiber-based Flexible Microelectrode for Cancer Detection **(C) Dr Fei Xiao (544)**	Raman and PL Fingerprint of Interlayer Charge Transfer in MoS_2/WS_2 Heterostructures **(C) Ms Lishu Wu (324)**		Charge Carrier Mapping of Ambipolar Organic Field-Effect Transistors **(C) Mr Xin Yu Chin (0197)**		
15:30-16:00	**Coffee Break**					

Day 3 - 13th December 2016, Tuesday - Con't

	Symposium 7 Seminar Room 3	Symposium 8 Auditorium 2	Symposium 9 Seminar Room 4	Symposium 10 Lecture Theatre 53	Symposium 11 Seminar Room 5	Symposium 12 Seminar Room 12 (Town Plaza)
16:00-16:20	*Session Chair: Prof Jian Yang & Prof Yujie Xiong*	**Poster Session at Level 2**			*Session Chair: Dr Jia Zhang*	**Poster Session at Level 2**
	Surface and Interface Design for Surface Plasmon-Mediated Catalysis **(I) Prof Yujie Xiong (014)**				Quantitative Femtosecond Charge Transfer Dynamics at Organic/Electrode Interfaces Resolved by Synchrotron Based Core-Hole Clock Spectroscopy **(I) Prof Liang Cao (0149)**	
16:20-16:40	Organic Stabilizer-Free Polyol Synthesis of Silver Nanowires for Efficient Access to Electrode Applications **(I) Prof Byungkwon Lim (267)**				Electrochemical conversion of CO2 to useful chemicals **(I) A/Prof Falong Jia (160)**	
16:40-16:50	Site-Specific Colloidal Synthesis **(I) Prof Hongyu Chen (500)**				Effective decomposition of greenhouse gas SF6 via heavy-metal solid waste derived catalyst **(C) Prof Jia Zhang (579)**	
16:50-17:00					Roles of Surface Oxygenated Groups of Activated Carbon Support on Nickel Phosphide Catalysts for Deoxygenation of Palmitic Acid **(I) Dr Dan Li (170)**	
17:00-17:10	Controlled metal nanostructures for catalytic applications **(I) Prof Pedro Henrique Cury Camargo (381)**					
17:10-17:20					Diamond Surface Functionalization and Doping for Carbon-based Electronics **(I) Dr Dongchen Qi (0174)**	
17:20-17:30	Selective Etching of Gold-based Nanorods for Polymetallic Nanostructures **(I) Prof Jian Yang (035)**					
17:30-17:40					Sulfonated Polyaniline: A Novel Solid Organic Acid-base Catalyst for Selective Dehydration of Fructose to 5-Hydroxymethylfurfural **(I) Prof Changwei Hu (207)**	
17:40-17:50	Understanding the Role of Ligands to the Reaction Pathways of 4-nitrophenol Hydrogenation Catalyzed by Ligand-Protected $Au_{25}(SR)_{18}$ Nanocluster Catalyst **(C) Ms Ricca Rahman Nasaruddin (0219)**					
17:50-18:00	Highly Anisotropic PtCu Decahedral Nanoframes as Bifunctional Electrocatalysts for Oxygen Reduction and Methanol Oxidation **(C) Dr Zhi-cheng Zhang (387)**				Comparative micromorphological analysis of municipal sludge by different SEM method **(C) Ms Shaolian Ma (562)**	
18:00-18:10					Separation of Peptides and Proteins (Tryptic Digest of Cytochrome C) by Open Tubular Capillary Electro-chromatography **(C) Prof Ashraf Ali (0567)**	
18:00--	***Organised by Symposium Chair***					
	Speaker's Night					