

AM&ST24 Program, 11-13 Dec 2024, Hobart

Time:		Plenary Lecture (30 min)		Keynote Lecture (20 min)	Invited Lecture (15 min)	Oral Lecture (10 min)	
11st Dec.	Registration (14:00-19:00) and Welcome reception (17:30-19:00, Harbour View Room 1, Hotel Grand Chancellor, Hobart)						
Thursday 12 December, 1st day of the conference							
08:30-09:00	Opening: A/Prof. Dongchen Qi & Dr. Cathy Foley (Venue: Grand Ballroom)						
Plenary	Chair: Prof. Hongxia Wang (QUT) Venue: Grand Ballroom						
09:00-09:30	Distinguished Prof. Christopher Barner-Kowollik (Queensland University of Technology) The Precision Photochemistry Paradigm						
09:30 -10:00	Prof. Vicki Chen (University of Technology Sydney) Horizons for Coordination Polymers: Membrane Separation and Devices						
10:00-10:30	Prof. Shizhang Qiao (University of Adelaide) Electrocatalytic Refinery for Production of Fuels and Chemicals						
10:30-10:50	Morning Tea (20 min)						
Venue	Ballroom 1	Ballroom 2	Ballroom 3	Harbour View Room 1	Harbour View Room 2	Chancellor Room 4	
Morning Sessions	Session 1A: 2D & Quantum Materials (Wei Chen)	Session 1B: Soft Materials & Photopolymers (Hendrik Frisch)	Session 1C:Functional Materials (Liangzhi Kou)	Session 1D: Energy & Catalytic Materials (Ziqi Sun)	Session 1E: Energy & Catalytic Materials (Jiaye Ye)	Session 1F: Solar & Photovoltaic Materials (Paul Shaw)	
10:50-11:10	Prof. Andrew T.S. Wee, NUS	Prof. Cyrille Boyer, UNSW	Distinguished Prof. Dmitri Golberg, QUT	Prof. Hua Zhang, CityU	Dr. Anthony Murphy, CSIRO	Prof. Tom Wu, PolyU	
	Phase Engineering using 2D Heterostructures & 2D MOF formation	Engineering Nanostructured Materials via 3D Printing with Fully Recyclable Resins	Boron Nitride Nanotubes, Nanoparticles and Nanosheets: Synthesis, Properties and Applications	Phase Engineering of Nanomaterials (PEN)	Plasma-assisted Catalysis for Ammonia Production and Carbon Dioxide Methanation	Navigate the Chemical Space of Organic Cations in Hybrid Perovskites	
11:10-11:30	Prof. Lan Chen, CAS	Prof. Chun-Xia Zhao, Adelaide	A/Prof. Bin Luo, UQ	Prof. Yan Jiao, Adelaide	Prof. Yijiao Jiang, MQ	Dr. Mei Gao, CSIRO	
	Atomic-scale Manipulation of Single-Polaron in a Two-Dimensional Semiconductor	Peptide-Based Nanoemulsions and Nanocapsules: Versatile Platforms for Advanced Applications	Functional materials for multivalent metal batteries	Molecular Modelling of Electrocatalyst Materials for Clean Energy Conversion	Heterogeneous Molecular Catalysis for Electrochemical CO2 Reduction	Flexible Thin Film Solar Cells: Opportunities and Challenges	
11:30-11:50	Dr. Yi ZHENG, ZJU	Prof. Luke Henderson, Deakin	Prof. Guichuan XING, Macau	Prof. Zhenguo Huang, UTS	Prof. Torben Daeneke, RMIT	Prof. Jacek Jasieniak, Monash	
	New Rashba Physics and Prototypical Device Applications	Controlling surface chemistry to influence interfaces and induce functionality in composite materials	Metal-halide Perovskites for Light Emission Applications	Hydrogen-rich bond (N-H and B-H) for Energy Storage and Transfer	Liquid metal colloids – A unique type of chemistry is coming into focus	Towards Perovskite Solar Windows	
11:50-12:05	Prof. Jiatao Sun, BIT	A/Prof. Georgina Such, UoM	Dr. Marco Fronzi, USyd	A/Prof. Judy Hart, UNSW	Dr. Li Wei, USyd	Dr. Munkhbayar Batmunkh, Griffith	
	Flat-band and tunable electronic states in two-dimensional Kagome systems	Engineering Smarter Delivery Systems based on Self-Immolative Polymers.	Exploring color center features in diamond nanostructures: a step towards advanced nano-photonics	Ferroelectric polarisation as a route to enhancing catalytic and photoelectrochemical performance	The catalytic and substrate role of carbon nanotube in electrocatalytic reactions	Engineering Metal Halide Perovskite Films for Photovoltaic Devices	
12:05-12:20	Prof. JianQiang Zhong, HZNU	Dr. Joel Hooper, Monash	Dr. Haoran Ren, Monash	Dr. Shilin Zhang, Adelaide	Dr. Ziyun Wang, Auckland	Prof. Jianjun Li, CAS	
	Infrared Reflection Absorption Spectroscopy Studies of the D2O/Co(0001) Interface	Sustainable materials synthesis through photo(catalysis)	Advanced nanostructured metasurfaces	Ionic Transport in Solid or Semi-solid Materials for Electrochemical Energy Storage	Rational Catalyst Design for CO2 Electrochemical Reduction Reaction	Microscopic carrier loss mechanisms in kesterite Cu2ZnSn(S,Se)4 thin film solar cells	
12:20-12:30	Dr. Minghao Liu, QUT	Michael Halwes, UoM	Sadeepa Amarathunga, Newcastle	Dr. Ye Chen, CUHK	Kaili Liu, ANU	Pivini Gunasekara, QUT	
	Two-dimensional ferroelectric materials on the applications of next-generation electronics	Spatial Porosity Patterning in Hydrogels via Dynamic Interface Printing of Aqueous Two-Phase Emulsions	Gas-Phase Fluorination of Boron Nitride Nanotubes	Synthesis and catalytic properties of metal nanomaterials with unconventional crystal phases	Controllable Cu nanofoam with spatial confinement for enhanced C2 selectivity in CO2 reduction	Water-Based Recovery of FTO/SnO2 Substrate for Sustainable Perovskite Solar Cell Technology	
12:30-13:20	Lunch (50 min)						
Venue	Ballroom 1	Ballroom 2	Ballroom 3	Harbour View Room 1	Harbour View Room 2	Chancellor Room 4	
Afternoon Sessions	Session 2A: 2D & Quantum Materials (Xiao Wang)	Session 2B: Soft Materials & Photopolymers (Luke Henderson)	Session 2C: Materials Simulation (Yan Jiao)	Session 2D: Energy & Catalytic Materials (Yijiao Jiang)	Session 2E: Energy & Catalytic Materials (Ziyun Wang)	Session 2F:Solar & Photovoltaic Materials (Tom Wu)	
13:20-13:40	Prof. Johnson Goh, A*STAR	A/Prof. Zhongfan Jia, Flinders	Prof. Yunhao Lu, ZJU	Prof. Chuan Zhao, UNSW	Prof. Ian Chen, Deakin	Prof. Yeng Ming LAM, NTU	
	Engineering 2D Semiconductor for Valleytronics	Material design to make organic radical batteries more practical	Two-dimensional Unconventional Ferroelectricity	Challenges and Opportunities for Green Hydrogen Production and Utilisation in Water Electrolysers and Fuel Cells	Developing Safe and Reliable Battery Technologies	Understanding and Improving Stability of Hybrid Perovskites Devices	
13:40-14:00	Prof. Yi Du, Beihang	A/Prof. Yu Lin Zhong, Griffith	Prof. Zhe Liu, UoM	Prof. Ziqi Sun, QUT	A/Prof. Lei Ge, USQ	Prof. Qianqian Lin, WuhanU	
	2D Frustrated Materials with Exotic Electronic Structures	Electrochemical Engineering and Direct Ink Writing 3D Printing: Cost-Effective Production of 2D Nanomaterials and their Bespoke Assemblies	Tunable Ferroelectric Topological Defects on 2D Topological Surfaces: Complex Strain Engineering Skyrmion-Like Polar Structures in 2D Materials	2D metal oxide nanostructures for green hydrogen production	Unlocking High-rate Electrochemical Conversions by Microtubular Gas Penetration Electrodes	Probing the Charge Carrier Dynamics and Trap Features of Solution-Processed Semiconductors via Time-Resolved Spectroscopy	

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14:00-14:20	Prof. Lin He, BNU	Dr. Hongjie An, Griffith	A/Prof. Liangzhi Kou, QUT	A/Prof. Xiaoguang Duan, Adelaide	Dr. Jianfeng Mao, Adelaide	Prof. Rongkun Zheng, USyd
	Quantum confined Dirac fermions	Nucleation and Dynamics of Nanobubbles in Chemical Environment	Ferroelectric Dynamics in 2D function materials: Insights from Machine learning enabled large-scale simulations	Single atom catalyst for water purification	Selective Extraction of Critical Metal Resources from Spent Li-ion Batteries	Optimising 2D Formamidinium Perovskites for Stable and Efficient Solar Cells
14:20-14:35	Prof. Dawei Shen, USTC	A/Prof. Stuart Thickett, UTAS (14:20-14:40)	Prof. Zhenpeng Hu, Nankai	Dr. Mengyao Li, UNSW	Dr. Yuan Shang, UNSW	Dr. Paul Shaw, UQ
	Electronic Structure Studies on Altermagnetic Candidates: CrSb and RuO2	Polymerizable Eutectics for the Preparation of Functional Materials	A Computational Study on Low Dimensional Boron Materials: Structural and Electronic Properties	Thermostable 1T MoS2 by spontaneous intercalation of Cu single atoms and the enhanced water splitting performance	Zinc Depletion-Mediated Failure- Unveiling the Realistic Failure of Zn Anode	Understanding the roles of the acceptors in organic solar cells with a ternary blend
14:35-14:50	Dr. Anton Tadich, AS	Dr. Alexandra Mutch, UTAS (14:40-14:55)	Dr. Priyank Kumar, UNSW	Dr. Si (Alex) Qin, Deakin	Dr. Qingbing Xia, UQ	A/Prof. Heping Shen, ANU
	Quantum Material Research Capabilities at the Australian Synchrotron	Mixed-mode interpenetrating polymer networks from polymerizable eutectics	Engineering plasmonic hot-carrier transfer at metal/semiconductor interfaces	Exfoliation and Functionalization of Layered Double Hydroxides (LDHs) for Catalytic and Energy Applications	Zero-Strain Electrode Materials for Sodium-Ion Batteries	The next generation ultra-high-efficiency, ultra-low-cost solar cells
14:50-15:05	A/Prof. Lihong Bao, CAS	Dr. Qian Liu, QUT (14:55-15:10)	Dr. Xiuwen Zhou, QUT	Dr. Doudou Zhang	Dr. Wenjie Tian, Adelaide	Dr. Chen Tao, WTU
	High-performance Electronic Devices Enabled by Atomically Sharp Interface in van der Waals Heterostructures	Diketopyrrolopyrrole Polymers: N-dominant Feature for Molecular Doping, Flexibility and Stretchability Studies	Rational design of light-emitting materials in OLEDs	Bifunctional Electrocatalysts for Hydrogen Electrolyser	Microplastic Degradation and Carbon Engineering from Biomass	Manipulating FA-based Perovskite Growth for High-efficiency Solar Cells
15:05-15:20	Prof. Yingshuang Fu, HUST		Dr. Junxian Liu, QUT	Dr. Dan Yang, RMIT	Dr. Li Li, UQ	Dr. Meng Li, QUT
	Artificial Kondo lattice in van der Waals monolayer crystals		Exploration of C–N Coupling for Electrocatalytic Urea Synthesis	Liquid Metal Electrocatalyst for Direct Ethanol Fuel Cells (DEFCs)	Biomineral nanocomposites in agriculture	The panoscopic approach to low thermal conductivity
15:20-15:40	Afternoon Tea (20 min)					
Afternoon Sessions	Session 3A: 2D & Quantum Materials (Lan Chen)	Session 3B: Materials Characterisation (Anton Tadich)	Session 3C: Solar & Energy Materials (Yang Yang)	Session 3D: Bionic Materials (Dewei Chu & Lei Bao)	Session 3E: Energy & Catalytic Materials (Torben Daeneke & Zhiliang Wang)	Session 3F: Energy Storage (Dan Liu & Zongping Shao)
15:40-16:00	Prof. Jiandong Guo, CAS	Prof. Xingyu Gao, CAS	Prof. Hongqi Sun, UWA	Dist. Prof. Chia-Liang Cheng, NDHU	Prof. Adam Lee, Griffith	Prof. Zongping Shao, Curtin
	Collective excitations of low-dimensional materials studied with high resolution electron energy loss spectroscopy	The Applications of Grazing Incidence Wide Angle X-ray Scattering	Solar Energy for Future Chemical Manufacture from A Catalysis Perspective	Nanodiamond as a biocompatible platform for bioimaging and efficient drug delivery	Chemical Cascades Catalysed by Earth Abundant Elements	A new rechargeable high-temperature all-solid-state iron-air battery for efficient energy storage
16:00-16:20	Prof. Lan Wang, HFUT	Dr. Bernt Johannessen, ANSTO	Prof. Zhiping Wang, WuhanU	Prof. Dawei Wang, SUAT	Prof. Jian Liu, IMU	Prof. Meinan Liu, GXU
	Electrically controlled room temperature magnetic phase transition and ultrafast colossal magnetoresistance in van der Waals magnetic materials	Advanced Materials Capabilities at the Australian Synchrotron	Pathways to long-term stable perovskite solar cells	Nanofluidic Energy Storage - A Lesson from Nature	Sustainable Photocatalytic Production of H2O2 over Phenolic Resins Catalysts	Electrolyte Engineering for Wide-Temperature Lithium Metal Batteries
16:20-16:40	Prof. Haitao Yang, CAS	Prof. Xuesen Zeng, USQ	Prof. Haolan Xu, UniSA	A/Prof. Zi (Sophia) Gu, UNSW	Dr. Zhiliang Wang, UQ	Prof. Xiaodong Wu, CAS
	Room-temperature antisymmetric magnetoresistance and skyrmionic spin textures in van der Waals ferromagnet Fe3GaTe2 nanosheets	An overview of digital twin in Australian aerospace manufacturing	Strategies enabling highly efficient interfacial solar evaporation	Bioresponsive nanoparticles enabled catalytic therapy	Dipole Moment Tuning in Semiconductor Photoelectrodes	Solvation and Interfacial Chemistry in Ionic Liquid Based Electrolytes toward Rechargeable Lithium-metal Batteries
16:40-17:00	Prof. Xiao Renshaw Wang, NTU	Prof Dawei Su, RMIT	Prof. Sheng-Guo Lu, GDUT	A/Prof. Kang Liang, UNSW	Prof. Hao Li, Tohoku	Prof. Dan Liu, RMIT
	Integrating perovskite oxides and layered materials towards future electronics	Unveiling the material's photo/electrochemical properties correlated with its electronic structures	Giant electrocaloric strength generated by the polarization flip in PMN-PT single crystals and boosted energy storage densities in lead-free Na0.5Bi0.5TiO3-based thick film ceramics	Nanobiohybrid materials for environmental sustainability	The Progress of "Materials Turing Scheme": Developing AI Public Platforms for the Automatic Design of Energy Materials	Advanced nanomaterials for thermal energy harvesting and energy storage
17:00-17:15	Room ends early at 17:00 for dinner preparation			Dr. Jiao Jiao Li, UTS	Dr. Jingrun Ran, Adelaide	Dr. Junnan Hao, Adelaide
17:15-17:30				Developing New Regenerative Therapies for Bone and Joint Diseases	Atomic-Level Regulation on Photocatalyst for Energy-Related Reaction	New electrolytes and electrodes for aqueous Zn batteries
				Dr. Helen (Xiaoxue) Xu, UTS	A/Prof. Aaron Elbourne, RMIT	Dr. Zengxia Pei, USyd
17:30-17:40				Nano-strategy of Targeting at Embryonic Trophoblast Cells Using CuO Nanoparticles for Female Contraception	Ultra-Small Gold Nanoparticle Particle Adsorption and Uptake is Directed by Particle Capping Agent	Functional Polymer Electrolyte Design for Efficient Zn Batteries
				Mazen Alanazi, UQ	Dr. Venkata D B C Dasireddy, Griffith	Chanaka Mudugamuwa, Flinders
17:40-17:50				Responsive Nanoprobe for Ratiometric Fluorescence Detection of Hydroxyl Radical in Macrophage Polarization	Development of Ru-based catalysts for the CO2 reduction: Power to Gas process	Polysaccharide-based all-polymer rechargeable battery
				Dr. Juan Zhou, QUT	Dr. Di Liu, Macau	Tong Yang, QUT
17:50-18:00				An Investigation into Biomimetic Structures Inspired by Plants	Surface reconstructions in nitrate reduction reaction for electrocatalytic ammonia production	Multifunctional Lead-Free Metal Halide Perovskite Modified electrolyte for High-Performance Aqueous Zinc-ion Batteries
	Dr. Melissa Stanfield, UTAS	Imogen Smith, Flinders	Fan Zhang, QUT			
18:00-19:00	Poster Session (Mezzanine)					
19:00-21:00	Symposium Dinner (Grand Ballroom) Chair: Prof. Jennifer MacLeod					

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Friday 13 December, 2nd day of the conference						
Plenary	Chair: Prof. Lianzhou Wang (University of Queensland) Venue: Grand Ballroom					
08:30-09:00	Prof. Michel Armand (CIC Energigune) <i>The coming (r)evolution in batteries</i>					
09:00-09:30	Prof. Yun Liu (Australian National University) <i>Chemistry, structure and scale matters in ferroelectric study</i>					
Plenary	Chair: Prof. Hua Zhang (City University of Hong Kong) Venue: Grand Ballroom					
09:30-10:00	Distinguished Prof. Baohua Jia (RMIT University) <i>Atomaterials for Sustainability</i>					
10:00-10:30	Prof. Kourosh Kalantar-Zadeh (University of Sydney) <i>Transformation of Chemical Processing by Liquid Metals</i>					
10:30-10:50	Morning Tea (20 min)					
Venue	Ballroom 1	Ballroom 2	Ballroom 3	Harbour View Room 1	Harbour View Room 2	Chancellor Room 4
Morning Sessions	Session 4A: 2D & Quantum Materials (Yi Zheng)	Session 4B: Surface & Interface (Xingyu Gao)	Session 4C: Energy Storage & Conversion (Meinan Liu)	Session 4D: Energy & Catalytic Materials (Xiaoguang Duan)	Session 4E: Energy & Catalytic Materials (Judy Hart)	Session 4F: Biomass-derived materials (Run Zhang)
10:50-11:10	Prof. Xiaoqun Wang, ZJU	A/Prof. Jin Zhang, UNSW	Prof. Shu Ping Lau, PolyU	Prof. John Zhu, UQ	Prof. Wei Chen, NUS	Prof. Qin LI, Griffith
	A density-matrix renormalization group algorithm for non-hermitian physics	Triboelectric Nanogenerator-Powered Radio Frequency Identification Tags for Backscatter Communications	Pure-water-fed electrocatalytic CO2 reduction to valuable chemicals	High performance anode materials for direct methane fuel cells	Interface engineered electrocatalysis	Sustainable Quantum Materials
11:10-11:30	Prof. Xiangang Wan, NJU	Prof. Shixuan Du, CAS	Prof. Feng Li, USyd	A/Prof. Daniel Chua, NUS	Prof. Jingsan Xu, QUT	Prof. Pingan Song, USQ
	Novel three-dimensional Fermi surface and electron-correlation-induced charge density wave in FeGe	Surface and Interface Enhanced Properties in 2D Monolayers and Heterostructures	Electrochemistry of carbon materials	Engineering Cathode Layers for PEM Fuel Cells	Liquids Interfacial Catalysis and Photocatalysis with New Protocols	Lignin-based fire retardants
11:30-11:50	Prof. Jian Wang, PKU	A/Prof. Bent Weber, NTU	Prof. Karen Wilson, Griffith	A/Prof. Hong Li, NTU	Prof. Cheng Yan, QUT	Prof. Zhanying Zhang, QUT
	Discovery of higher charge superconductivity beyond charge-2e Cooper pairs	Tunable many-body interactions in bulk and edge of the 2D topological excitonic insulator WTe2	Sustainable catalytic biorefining: Challenges and opportunities for catalyst design	Waste Reforming for Cogeneration of Green Hydrogen and Chemicals	Investigation of chemo-mechanical failure in rechargeable batteries	Biomass-Derived Functional Materials for Energy Storage and Management
11:50-12:05	Prof. Yu Zhang, BIT	Prof. Katsuhiro Tomioka, Hokkaido	A/Prof. Shi Chen, Macau	Dr. Xiangkang Zeng, UQ	Prof. Jose Alarco, QUT	Dr. Alex Y. Song, USyd
	Manipulation of strongly correlated electrons in monolayer 1T-NbSe2	Selective-Area Growth of Vertical III-V Nanowires on Si and Transistor Applications	Bifunctional binder for Shuttle free Aqueous Zinc Iodine Battery	Engineered Catalysts for Green Hydrogen Peroxide Production	Before Digging Deep, Collect the Treasures from the Surface	Passive radiative cooling textiles
12:05-12:20	Prof. Zheng Han, Shanxi U	Dr. Limei Yang, UTS	Prof. Teng Wang, SUT	Dr. Dechao Chen, Griffith	Dr. Mu Xiao, UQ	Dr. Lixue Jiang, UNSW
	Recent progress on 2D charge-transferonics	Focused Ion Beam sample preparation for Atom Probe Tomography	Synthesis of Advanced Electrode Materials for Zinc based Energy Storage Devices	Colloidal Synthesis of Photocatalytic Quantum Dots Heterostructure	Solar-Powered Methanol Conversion for On-Demand Hydrogen Production	A Zero-Emission Tandem Array for Transforming Waste Biomass into Renewable Hydrogen
12:20-12:35	Dr. Kaijian Xing, MUST	Dr. Zhenzhen Wu, Griffith	Prof. Zhenhua Sun, CAS	Dr. Karma Zuraiqi, RMIT	Dr. Jinqiang Zhang, Adelaide	A/Prof. Nolene Byrne, Deakin
	Pick-and-place transfer of arbitrary-metal electrodes for scalable van der Waals device fabrication	Functional organic materials to construct high-energy and stable electrode	Structure Design of Polymer Electrolyte for Solid-state Lithium Batteries	Exploiting metal mobility in liquid metals for ammonia production	Regulation of Full Process of Photoexcited Charge Dynamics in Solar Fuels Production	Hard carbons influence of structure, pre sodiation and electrolyte choice
12:35-12:45	A/Prof. Siwen Zhao, LAM	Dr. Xue Yan, UoM	Zan Simon, Deakin	Qianqin Zhou, QUT	Dr. Xuan Wu, UniSA	Dr. Morteza Hassanpour, QUT
	Fractional quantum Hall effect in n-type semiconductor MoS2	SiC substrate-enabled modulation of Li+ ion intercalation thermostability in strained bilayer graphene	Electromechanical Energy Harvesting in Solvate Ionic Liquids and Advanced Electrolyte Systems	Concentration Gradient Hydrogel Electrolyte Enhance Rapid Ion Transportation to Improve Aqueous Zinc-ion Batteries	Interfacial Photothermal Evaporation and Applications	From Waste to Value: High-Quality Precipitated Silica from Rice Hulls for Green Manufacturing
12:45-12:55	Dr. YAXIN ZHAO, BNU	Fan Feng, UoM	Dr. Yanlin Shi, Flinders	Dr. Bhagya Dharmasiri, Deakin	Jie Yang, UQ	Mansi Goyal, QUT
	Realization of 2/3 -layer transition metal dichalcogenides	Anomalous Ion Transport Properties Induced by Ion Pairing and Ion Clustering inside Sub-1nm Graphene Nanoslits	Converting Industrial Polymer into Organic Cathode for Practical Aqueous Zinc-Ion Batteries	Development of Carbon Fibre Electrodes for "Massless" Energy Storage via Surface Modification Approaches	Metal-organic framework glass composite membrane for H2 purification	Tailoring the multifunctional properties of self-assembled cellulose nanocrystal (CNC) photonic films for advanced applications
12:55-13:05	Sindhu Priya Giridhar, RMIT	Qingchao Fang, QUT	Huimin Gu, ANU	Dr. Tsz Lok Wan, Alberta	Dr. Steffen Jeschke, Griffith	Dr. SI LIU, UNSW
	Oxygen Driven Defect Engineering of Monolayer MoS2 for Tunable Electronic, Optoelectronic, and Electrochemical Devices	Theoretical Screening of P-block Single Atom Anchored on g-C3N4 for NO Reduction to NH3	Balancing Polysulfide Containment and Energy Loss in Lithium-Sulfur Batteries	The Structure and Dynamics of Supercritical CO2: A Recent Theoretical Investigation	Screening Furfural-Copper Adsorbate-Surface Geometries using low-cost Computational Methods	Constructing heterogeneous biocatalysis cascade systems and cofactor recycling

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13:05-13:55	Lunch (50 min)					
Venue	Ballroom 1	Ballroom 2	Ballroom 3	Harbour View Room 1	Harbour View Room 2	Chancellor Room 4
Afternoon Sessions	Session 5A: 2D & Quantum Materials (Yi Du & Kaijian Xing)	Session 5B: Soft Materials & Photopolymers (Georgina Such & Qian Liu)	Session 5C: Functional Materials (Baoyue Zhang & Dehong Yu)	Session 5D: Energy Storage & Conversion (Xiaolei Shi & Weiwei Lei)	Session 5E: Energy & Catalytic Materials (Juan Bai & Mengran Li)	Session 5F: Functional Materials (Lei Zhang & Porun Liu)
13:55-14:15	A/Prof. Agustin Schiffrin, Monash	A/Prof. Ming Li, UNSW	Dr. Dehong Yu, ANSTO	Prof. Weiwei Lei, RMIT	Prof. Yao Zheng, Adelaide	Prof. Xiaozhou Liao, USyd
	Controllable Electronic Quantum Phases in 2D Metal-Organic Materials	Empowering Electrochemical Biosensors by Nanocomposite Materials for Biomarker Detection	Barocaloric Materials – Cooling and Heat storage –Atomic Level Understanding with Neutrons	Advanced 2D nanomaterials for water and energy conversion	Innovation of Seawater Electrolysis	In-Situ Transmission Electron Microscopy Investigation of Ferroelectric Domain Switching Behaviour
14:15-14:35	Dr. Mengting Zhao, Monash	A/Prof. Shiyang Tang, UNSW	Prof. Jian Zhen Ou, RMIT	Prof. Hao Liu, UTS	Prof. Ting Liao, QUT	A/Prof. Porun Liu, Griffith
	Realization of flat band in ultra-thin Kagome metal Mn3Sn films	Harnessing the giant and switchable surface energy of liquid metals for robotics	Layered hexagonal metal oxides – A new member of 2D family	Porous Carbon Based Composites for Energy Storage and Conversion	Coordination Engineering in Nanomaterials Design for Energy Applications	Design and In-Situ Analysis of Metal-Based Electrocatalysts for Clean Energy Conversion
14:35-14:50	A/Prof. Peng Song, NTU	Dr. Shuying Wu, USyd	A/Prof. Shery Chang, UNSW	Dr. Kaiwen Sun, UNSW	Dr. Le Wang, PNNL	Dr. Teng Lu, ANU
	Spin-orbit electronics in Van der Waals heterostructures	Elastic Conductive Biopolymer Nanocomposites for Wearable Sensors	Fluorescence Brightness Enhancement in Nanodiamond Quantum Sensors – Correlative Photoluminescence and Transmission Electron Microscopy (TEMPL) Studies	The pathway towards high efficiency high bandgap Cu2ZnSnS4 solar cells	Doping Effects on Structural, Electronic, and Oxygen Evolution Reaction Properties of Perovskite Oxide Thin Films	Multiscale structural parameters affecting properties of polar functional materials
14:50-15:05	Prof. Yang Bao, CAS	Prof. Xingkun Man, Beihang	Dr. Tao Wan, UNSW	Dr. Peng Chen, UQ	Dr. Mengran Li, UoM	Dr. Run Zhang, UQ
	Making Patterned Single Defects in MoS2 Thermally with the MoS2/Au Moiré Interface	Case II Diffusion and Anomalous Swelling of Glassy Polymers	Designing Metal Nanowires for Flexible and Wearable Applications	Stabilizing perovskite solar cells: from Pb-based to Pb-free	Management of local ionic transport for stable CO2 electrolysis	Enhanced Plant Stress Resilience through Quantitative Redox Regulation
15:05-15:20	A/Prof. Qingdong Ou, MUST	A/Prof. Markus Muellner, USyd	Dr. Feng Li, USyd	Dr. Xiaolei Shi, QUT	Dr. Jiaye Ye, QUT	Dr. Siqi Huo, USQ
	Engineering 2D van der Waals materials for polariton nanophotonics	Self-Assembly of Amorphous and Functional Polymer Nanodiscs in Water	Solution-Processed Perovskite Single Crystals and Heterostructures for Opto-/electronics	Solvothermal synthetic designs advance thermoelectric materials	Advanced Hybrid Membrane for Vanadium Redox Flow Battery	Strong Yet Tough Catalyst-Free Transesterification Vitrimer with Excellent Fire-Retardancy, Durability, and Closed-Loop Recyclability
15:20-15:35	Dr. Daniel Sando, Canterbury	Asst. Prof. Bryan Tuten, UT Tyler	Dr. Long Hu, HKUST	Dr. Yang Yang, QUT	Mahesh Suryawanshi, UNSW	Dr. Jun Zhang, Griffith
	Topological Structures in Multiferroic Oxide Thin Films and Superlattices for Future Low Energy Computation	Dynamic Chalcogen Squares for Material and Topological Control over Macromolecules	Halide Perovskite Quantum Dot Light Conversion Devices	Advanced 2D Perovskite nanoplatelets in Energy Harvesting and Conversion Applications	Carbon-based Hybrid Catalytic-Protective Overlayer for Efficient and Stable Kesterite Photocathode for Solar Hydrogen Production	Leveraging dielectrophoresis at inertial flows for versatile manipulation of micro and nanoparticles
15:35-15:50	Dr. Qiran Cai, Deakin	A/Prof. Hendrik Frisch, QUT	Dr. Miaoqiang Lyu, UQ	Dr. Chao Liu, UNSW	Dr. Zhipeng Ma, UNSW	Prof. Chuanbing Cai, SHU
	Properties and Applications of Boron Nitride Nanosheets	Tailoring Polymer Brushes with Water and Light	Next-generation Energy Devices for Low-Power Internet-of-Things Devices	Unveil the Triple Roles of Water Molecule on Power Generation of MXene Derived TiO2 based Moisture Electric Generator	Coupled NOx Production and Electrochemical NOx Conversion Processes for Renewable Ammonia Synthesis from Air	High-performance MOD-derived REBCO superconducting coated conductors with thick REBaCuO films
15:50-16:05	Dr. Lifeng Wang, RMIT	Dr. Ruirui Qiao, UQ	Dr. Bao Yue Zhang, RMIT	Dr. Weidi Liu, QUT	Dr. Yuting Zhuo, UNSW	Dr. Wei Wang, UNSW
	Controllable Synthesis of 2D Metal Nitrides and Their Heterostructures	Liquid Metal Integrated Hybrid Materials as 4D Printing Soft Robots	Two-dimensional hexagonal germanium oxide- A wide bandgap semiconductor for next Gen electronics	Thermoelectric technology for low-grade waste heat recovery	Numerical Study of Hydrogen Storage Design and Optimisation	Two Strategies to Prepare MXene Based Flame Retardant Composites
16:05-16:15	Dr. HuiYing Ren, BNU	Dr. Zixi Xie, UQ	Jack Hogan, Newcastle	Dr. Lei Chen, USQ	Dr. Yan Jing, NUS (16:05-16:20)	Dr. Lei Zhang, Griffith (16:05-16:20)
	Tunable Quantum Confinement in Individual Nanoscale Quantum Dots via Interfacial Engineering	Aggregation Suppression and Enhanced Blue Emission in a Coordination Polymer Glass Composite	Large-Area Transfer of Nanometre-thin C60 Films	Development and Applications of Radioisotope Thermoelectric Generators (RTG)	Electrochemically induced CO2 capture with aqueous organic flow chemistry	The application of silicon anode materials in energy storage systems
16:15-16:25	Shuke Zhao, UQ	Meilin Yin, UQ	Dr. Shuwen Yu, UQ	Prof. Kunpeng Zhao, SJTU	Dr. Juan Bai, QUT (16:20-16:35)	Dr. Harshal Patel, Flinders (16:20-16:35)
	Glassy metal-organic framework (MOF) composite membranes for gas separation	Covalent organic framework coated with coordination polymer glass for high-efficiency selective CO2 capture	Coordination Polymer Liquid Crystal and Glass	Modeling Critical Thermoelectric Transports Driven by Band Broadening and Phonon Softening	Phase engineering by ions-modulation for durable oxygen evolution	Spontaneous Trisulfide Metathesis in Polar Aprotic Solvents
16:25-16:35	Wei Zhang, USyd	Jun Wang, USyd	Deyu Wang, UniSA	Dr. Yangyang Liu, CSIRO		
	Hidden Acidification Challenges in Electrochemical Ocean Decarbonization	Structural evolution of copper-silver alloy using machine learning accelerated molecular dynamics	Redefining Interfacial Solar Steam Generation: Harvesting Energy from Bulk Water for Ultra-High Evaporation Performance	Regulating ion migration maximizes electricity generation from ambient moisture		
16:35-17:00	Afternoon Tea (25 min)					
Plenary	Chair: A/Prof. Zhaojun Han (QUT) Venue: Grand Ballroom					
17:00-17:30	Prof. Hong-Jun Gao (Chinese Academy of Science) Ordered and tunable Majorana-zero-mode lattice in iron-based superconductors					
17:30-18:00	Dongke Zhang (The University of Western Australia) How Far and How Fast Can Green Hydrogen Fantasy Go					
18:00-18:40	Award Session & Closing (Grand Ballroom)					
19:00-21:00	Invited Speaker Dinner (Asian Gourmet on the Pier)					