

NextGEM26 Symposium Program					
27 September 2026 – Welcome Reception 28–30 September 2026 – Symposium					
	Plenary (Talk: 30 min; Question: 5 min)	Keynote (Talk: 17 Min; Question: 3 min)	Invited (Talk: 12 min; Question: 3 min)	Oral (Talk: 10 min; Question: 2 min)	
Day 0: Registration (16:00-20:00) Welcome reception (18:0-20:00) at Poolside					
Day 1 (28/09)					
08:30–08:45	Opening (Prof. Hongxia Wang & Professor John Bell)				
Plenary	Ballroom/ Norfolk (Chair: Prof. Dewei Chu)				
08:45–09:20	Plenary 1 (Prof. Alex Kwan Yue Jen) Molecular Engineering of Hybrid Materials for Highly Efficient and Stable Organic and Perovskite Solar Cells				
09:20–09:55	Plenary 2 (Prof. Yun Liu) Introduction to the newly built full structure data of materials that greatly extend traditional crystallography				
09:55–10:30	Plenary 3 (Prof. Shengzhong (Frank) Liu) Large-area scaleup preparation for perovskite solar cell production				
10:30–10:50	Morning Tea				
Time	Room: Norfolk	Room: Phoenix	Room: Monaco II	Room: Kauri/Cypress	Room: Boardroom
Sessions	Catalyst 1A (Prof. Guohua Jia)	Solar 1 (Dr. Munkhbayar Batmunkh)	Battery 1 (Dr. Junnan Hao)	Catalyst 1B (Dr. Doudou Zhang)	Low-Energy Devices 1 (Assoc. Prof. Soniya Yambem)
10:50–11:10	Prof. Chuan Zhao Earth-Abundant Electrocatalysts for Hydrogen Energy Conversion	Prof. Shuzi Hayase Distinct Roles of Germanium Anion Additives in DMSO-Based and DMSO-Free Inks for Tin-Based Perovskite Solar Cells	Prof. John Zhu High Performance Cathodes for Solid Oxide Fuel Cells	Prof. Rachel Caruso Photocatalytic and Electrocatalytic Materials for Energy and Environmental Applications	Prof. Xiaolin Wang Novel Quantum Materials and Devices for Next-Generation Energy and Electronic Technologies
11:10–11:30	Prof. Fuxiang Zhang Solar hydrogen production from water over particulate photocatalysts with wide visible light utilization	Prof. Yeng Ming Lam From Structure to Function: Interface Design in Energy Harvesting and Conversion Devices	Prof. Qing Wang Redox-mediated Electrified Chemistry for Scalable Carbon-neutral Energy Applications	Dr. Fan Fang Ordered mesoporous SrTiO3 nanotubes: from structural engineering to active-site regulation	Assoc. Prof. Jin Zhang Toward Humidity-Tolerant Triboelectric Nanogenerators for Reliable Energy Harvesting
11:30–11:45	Assoc. Prof. Ken Chiang Gallium-Based Alloy Catalysts for Small-Molecule Activation: From Dynamic Interfaces to Thermocatalytic Selectivity	Prof. Jianjun Li Charge carrier loss mechanisms at grain boundaries and junction interfaces of keserite thin-film solar cells	Prof. Zheng Liang Direct Repair of Spent Li-ion Batteries	Dr. Juan Bai Tailoring Defective Molybdenum Centers for Enhanced and Durable Oxygen Evolution	Prof. Katsuhiko Tomioka Vertical III-V Nanowire Multi-Mode Transistor for Ultra-Low-Power Circuit Applications
11:45–12:00	Dr. Dechao Chen Heavy-Metal-Free Quantum Dot Heterostructures for Selective Solar-to-Chemical Conversion	Dr. Limei Yang Focused Ion Beam sample preparation for Atom Probe Tomography	Bhagya Dharmasiri Manipulation of Carbon Fibre Surface Chemistry for Structural Batteries and Structural Supercapacitors	Maheshika Perera Electrode Pairing of Plasma-Treated Fe Oxide/Pt and Co Oxide/Pt Nanosheets on Nickel Foam for Alkaline Overall Water Splitting	Dr. Qianqian Shi 2D Soft Plasmonic Nanostructures for Energy Conversion and Sensing
12:00-13:00	Lunch				
Plenary	Ballroom/ Norfolk (Chair: Prof. Ziqi Sun)				
13:00–13:35	Plenary 4 (Prof. Guoxiu Wang) Materials Innovation for Green Hydrogen Production and High-performance Batteries				
13:35–14:10	Plenary 5 (Prof. Maria Antonietta Loi) Sn-Pb metal halide perovskites challenges and opportunities for photovoltaics				
14:10–14:15	Symposium photo time				
Time	Room: Norfolk	Room: Phoenix	Room: Monaco II	Room: Kauri/Cypress	Room: Boardroom
Sessions	Catalyst 2A (Prof. Tianyi Ma)	Solar 2 (Dr. Kaiwen Sun)	Catalyst 2B (Assoc. Prof. Ken Chiang)	Thermoelectric Materials 1 (Assoc. Prof. Bin Luo)	Low-Energy Devices 2 (Dr. Shuhua Peng)

14:20–14:40	Prof. Yao Zheng Proton's Behaviors in Water Electrolysis	Prof. Mats R Andersson Thermally robust organic photovoltaic devices based on a low content of amorphous donor polymers	Prof. Nadim Darwish Electrostatic Catalysis of the Azide–Alkyne Huisgen Cycloaddition	Prof. Zhigang Chen Zero-emission thermoelectrics for solid-state power generation and cooling	Prof. Wenlong Cheng Nano-enabled Intelligent Soft Bioelectronics
14:40–15:00	Prof. Guohua Jia Thermally Reversible Interconversion between Two Isomeric Forms of Silver Sulfide Magic-Size Clusters	Prof. Zhijun Ning Perovskite Solar Cells Based on Metal-ion-linked Self-Assembled Monolayer (MILSAM)	Dr. Wenjie Tian Engineering Carbon Nitride Interfaces for Solar-to-Chemical Conversion	Prof. Cheng-Liang Liu Organic/Hybrid Thermoelectric Materials and Devices	Dr. Shuying Wu Advanced Conductive Polymer Nanocomposites for On-Skin Sensors/Electrodes
15:00–15:15	Dr. Doudou Zhang Magnetron Sputtered Ultrathin Boron Nitride Enables Highly Selective Solar-Driven Nitrite-to-Ammonia Conversion	Dr. Meng Zhang Crystallization Engineering of Wide Bandgap Perovskite Thin Films for Photovoltaic Applications	Assoc. Prof. Rahman Daiyan Developing Nanomaterials and Electrolyser Systems for Power to X Applications	Dr. Xiaolei Shi Flexible Thermoelectric Materials and Devices for Power Generation and Refrigeration	Assoc. Prof. Soniya Yambem Low voltage operating solid-state organic transistor sensors/biosensors
15:15–15:30	Dr. Xiaocheng Liu JMST: A Platform for High-Impact Research in Materials Science	Dr. Robert Patterson The search for stable and scalable high-performance semiconductors for silicon tandem solar cells	Muhammad Hamza Nazir Computational Design of Electrocatalysts for Energy and Environmental Applications	Dr. Meng Li Progress and opportunities in composite thermoelectric materials	
15:30–15:50	Afternoon Tea				
Time	Room: Norfolk	Room: Phoenix	Room: Monaco II	Room: Kauri/Cypress	Room: Boardroom
Sessions	Catalyst 3 (Prof. Xiaoguang Duan, Prof. Yao Zheng)	Solar 3 (Prof. Jianjun Li, Dr. Robert Patterson)	Battery 2 (Prof. Dawei Su)	Carbon Materials (Assoc. Prof. Nolene Byrne, Dr. Sam (Xianjue) Chen)	Theoretical Computation & Machine Learning 1 (Assoc. Prof. Asaph Widmer-Cooper)
15:50–16:10	Prof. Jian Liu Precise Structural Regulation of Functional Nanomaterials for Catalysis and Energy Storage	Prof. Itaru Osaka Conjugated Polymers Based on Benzothiadiazole-Containing π -Extended Fused Rings for High-Performance Organic Photovoltaics	Prof. Mainak Majumder Holistic design of faster, thinner and longer-lasting Lithium Sulfur batteries	Prof. Hongwei Wu Biocarbon for low-emissions metals and energy applications	Prof. Tao (Tom) Wu Navigate the Chemical Space of Organic Cations to Inverse Design Next-Generation Energy Materials
16:10–16:30	Prof. Xiaoguang Duan Catalytic Pollutant Upcycling via Nonradical Advanced Oxidation	Prof. Rongkun Zheng Optimising 2D FA Perovskites for Stable and Efficient Solar Cells	Prof. Caiyun Wang Advancing Energy Storage for Bioelectronic Applications	Assoc. Prof. Hong Li Carbon-Negative Hydrogen	Prof. Yan Jiao Molecular Modelling for Electrocatalytic Clean Energy Conversion
16:30–16:50	Prof. Zhenguo Huang Hydrogen-rich bond (N-H, O-H, and B-H) for Energy Storage and Transfer	Dr. Peng Chen 2D/3D heterostructures for efficient tin-based perovskite solar cells	Prof. Meinan Liu Delicate Design of Solvation Chemistry for High-Performance Lithium Metal Batteries	Dr Sam (Xianjue) Chen Fullerene Architecture	Dr. Carla Verdi First-principles and machine learning modeling of polaron states and dynamics
16:50–17:05	Dr. Peng Li Tandem Carbon Capture and Electrochemical Conversion for Chemicals Production	Dr. Kaiwen Sun Wide-Bandgap Cu-Based Chalcogenide Solar Cells for Next-Generation Tandem Photovoltaics	Dr. Fan Zhang Electrolyte engineering for long life-span aqueous Zinc ion battery	Xin Yang Orders-of-magnitude reactivity enhancement in persulfate activation by curvature-dependent oxygenated carbon nanotubes	Dr. Jodie Yuwono Computational Design of High-performance Materials for Energy Conversion and Storage
17:05–17:20	Dr. Liang Jason Wang Interface Engineering of Heterostructures for Energy Storage and Conversion	Dr. Ning Song Materials and Device Innovation for High-Performance and Next-Generation Photovoltaics	Shangxu Jiang Caging Polyhalide Anions in Polycyclodextrin for Long-Lasting Aqueous Zinc–Iodine Batteries	Yangyang Wang Dynamic coupling of carbon deposition, electrical resistance and heat transfer in Joule-heated methane pyrolysis	Dr. Xiuwen Zhou Quantitative calculations of the photoluminescence quantum yield of organometallic emitters
17:20-17:35		Ji Cao Surface Interface Engineering for Wide-Bandgap p-i-n Perovskite Solar Cells	Zia Ud Din Polyethylene glycol Modified porous Sulfonated Poly (ether ether ketone) separator for highly Stable Aqueous Zinc-Ion Batteries		
	Plenary (Talk: 30 min; Question: 5 min)	Keynote (Talk: 17 Min; Question: 3 min)	Invited (Talk: 12 min; Question: 3 min)	Oral (Talk: 10 min; Question: 2 min)	
Day 2 (29/09)					
Plenary	Ballroom/ Norfolk (Chair: Prof. Hongxia Wang)				
08:30–09:05	Plenary 6 (Prof. Tsutomu (Tom) Miyasaka) Interface engineering for durable perovskite solar cells				
09:05–09:40	Plenary 7 (Prof. ShiZhang Qiao) Electrocatalysis for Energy Conversion and Storage				

09:45–10:15	Panel Discussion session: <i>Publishing in Top-Tier Journals: Insights from Editors</i> (Moderator: Prof. Ziqi Sun) Prof. Maria Antonietta Loi (Applied Physics Letters); Dr. Yaoqing Zhang (Nature Sustainability); Dr. Esther Levy (Advanced Materials); Prof. Shizhang Qiao (EES Catalyst)				
10:15–10:35	Morning Tea				
Time	Room: Norfolk	Room: Phoenix	Room: Monaco II	Room: Kauri/Cypress	Room: Boardroom
Sessions	Catalyst 4 (Prof. Lei Ge, Dr. Martina Lessio)	Solar 4 (Prof. Itaru Osaka, Dr. Tim Connell)	Battery 3 (Assoc. Prof. Cheng Zhang, Dr. Shilin Zhang)	Theoretical Computation & Machine Learning 2 (Prof. Tao (Tom) Wu, Dr. Jodie Yuwono)	2D Materials 1 (Prof. Daniel S.P. Lau, Prof. Vita Pi-Ho Hu)
10:40–11:00	Prof. Lei Ge Forced convective mass transfer by designing flow-through microtubular gas diffusion electrodes for high-rate gas-phase electrolysis	Prof. Satoshi Uchida Beyond perovskite solar cell ~AgBiS2~	Assoc. Prof. Nolene Byrne Development of high performance hard carbon anode active materials: exploring property-structure-processing-performance	Prof. Zhe Liu Mesoscale dynamics of electrosorbed ions in fast-charging carbon-based nanoporous electrodes	Prof. Huanting Wang Nanosheet-based proton conducting membranes for fuel cells and hydrogen separation
11:00–11:20	Dr. Haoxin Mai Design and synthesis of C3N4-based photocatalysts for energy and environmental applications	Prof. Udo Bach Closing the Loop: Autonomous Robotic Discovery of Stable Inorganic Photovoltaic Absorbers	Assoc. Prof. Cheng Zhang Fluorination in Advanced Battery Design	Assoc. Prof. Asaph Widmer-Cooper Simulation Insights into the Formation and Stability of Metal Halide Perovskites	Prof. Jennifer MacLeod Surface-Confined Metal-Organic Architectures for Future Energy Technologies
11:20–11:40	Dr. Hangjuan Ren From Active Sites to an Active-Site Ecosystem: Rethinking CO2 Electrolysis	Prof. Tao Chen Chemical synthesis of antimony selenosulfide thin film for solar cell applications	Assoc. Prof. Bing Sun Interphase and Interface Design for High-Energy Lithium Metal Batteries	Dr. Teng Lu Resolving correlated disorder in polar functional materials through atomistic modelling	Prof. Yun Wang Engineering Mechanical Behaviour in 2D Materials for Energy and Functional Applications
11:40–11:55	Assoc. Prof. Edmund Chun Ming Tse Hybrid Electrocatalytic Interfaces Tailored for Renewable Energy Conversion and Waste-to-Resource Upcycling	Dr. Jincheol Kim Advanced Manufacturing Strategies for Scalable Perovskite Solar Cells	Dr. Tianyi Wang Biomolecule-Regulated Interfaces for Rechargeable Metal Batteries: From Dynamic Interphases to Biomimetic Mineralization	Ahmad Ayyaz Impact of Australian sourced precursor impurities on halide perovskite solar cells performance: DFT and Experimentation	Prof. Vita Pi-Ho Hu 2D Materials-Based Static Random-Access Memory
11:55–12:10	Dr. Haijiao Lu Atomic-Scale Engineering of Catalysts for Low-Carbon Energy Conversion	Dr. Zhipeng Shao Li2SnS3 Interphase-Regulated Selenization Kinetics for High-Efficiency ACZTSSe Solar Cells	Dr. Tong Yang Ultra-Thin Hybrid Ion Exchange Interlayer for High Performance Aqueous Zn Metal Batteries	Ika Fitriani Why Metadynamics Fails to Capture Perovskite Nucleation: A Force Field Perspective	Dr. Qiran Cai Thermal properties and applications of boron nitride nanosheets
12:10–12:25		Lahiru Nimantha Jayasekera Gamage Design of Sustainable Solvent Systems for Metal Halide Perovskite Photovoltaics	Shuangbin Zhang Hexacoordinate Iron Complex Anolyte for High-Performance Alkali-Iron Redox Flow Batteries		Muhammad Sabbtain Abbas Wafer-scale synthesis of monolayer amorphous carbon interlayer on c-Al2O3 as universal template for remote epitaxy
12:25-13:25	Lunch				
Plenary	Ballroom/ Norfolk (Chair: Prof. John Bell)				
13:25–14:00	Plenary 8 (Prof. Joanne Etheridge) Perovskites for Sustainable Energy Applications: Which atoms matter?				
14:00–14:35	Plenary 9 (Prof. Su-Huai Wei) First Principles Design of Functional Materials for Energy and Optoelectronic Device Applications				
14:35–15:10	Plenary 10 (Prof. Debra Bernhardt) Improving Materials and Devices through Atom- Level Understanding				
15:10–15:30	Afternoon Tea				
Time	Room: Norfolk	Room: Phoenix	Room: Monaco II	Room: Kauri/Cypress	Room: Boardroom
Sessions	Catalyst 5 (Prof. Yijiao Jiang, Dr. Xin Mao)	Optoelectronic 1 (Assoc. Prof. Jingwei Hou)	Low-Energy Devices 3 (Assoc. Prof. Jin Zhang, Dr. Mengyao Li)	Battery 4 (Prof. Caiyun Wang)	2D Materials 2 (Dr. Qiran Cai)
15:30–15:50	Prof. Yijiao Jiang Metal-Organic Frameworks for Sustainable Hydrogen Peroxide Production	Prof. Heike Ebendorff-Heidepriem Optical glasses and fibers: a powerful platform for new sustainable technologies	Prof. Justin M. Chalker Sustainable Gold Extraction from Ore and Electronic Waste	Prof. Xiwang Zhang From Separation to Recognition through Nanoconfinement: Precision Nanochannel Membranes	Prof. Sumeet Walia Ultra-thin materials for next-generation electronics and optoelectronic technologies

15:50–16:10	Prof. Zongyou Yin Microenvironment Roles in Nano-to-Atomic Catalysis	Prof. Dzung Dao Robust and Self-Powered Sensing Based on Semiconductor Heterojunctions	Prof. Stefan Maier Nanophotonics for energy conversion	Prof. Liping Wang Pyrites as sustainable high energy density lithium metal battery cathodes	Prof. Yulin Zhong Green Electrochemical Production and Engineering of Nanomaterials
16:10–16:30	Prof. Han Young Woo Organic Photocatalysts and Photoelectrochemical Cells for Green Hydrogen Generation	Prof. Lan Fu III-V semiconductor nanowire arrays for optoelectronic device applications	Dr. Shuhua Peng Microstructure design for high-performance wearable pressure sensors	Prof. Luke C. Henderson Piezoelectric effects of neat ionic liquids and as part of bicontinuous solid polymer electrolytes	Prof. Daniel S.P. Lau Switchable ferroelectricity in van der Waals magnets
16:30–16:45	Dr. Tim Connell Surpassing Photon Energy Limits for Light-Driven Chemical Synthesis	Dr. Miaoqiang Lyu Rational Design of Low-toxicity Metal Halide Perovskites for Optoelectronic Applications	Dr. Tao Wan Atmospheric Moisture Energy Harvesting for Sustainable Energy Supply	Assoc. Prof. Bin Luo Interfacial Engineering for Metal-Based Rechargeable Batteries	Dr. Nitu Syed Liquid Metal-Derived Two-Dimensional Materials: A New Frontier for Transparent Electronics and Advanced Sensors
16:45–17:00	Dr. Martina Lessio Mechanistic insights into catalytic chemical recycling of polyethylene waste for a circular plastics economy	Dr. Xinyu Shen Rational Design of Phosphine Oxide for Efficient Perovskite Light-Emitting Diodes	Ziheng Feng From Atmospheric Water Harvesting to Energy Conversion	Dr. Shilin Zhang Interfacial Engineering for Aqueous Zn Battery	Ransini Dahanayake (On behalf of Dr. Morgan Zhang) Light-enabled High-performance Graphene for Energy Devices, Wearable Textiles and Beyond
17:00–19:00	Room preparing for dinner		Poster Session		
Canape service (18:30 - 19:00)					
19:00–23:00	Banquet				

	Plenary (Talk: 30 min; Question: 5 min)	Keynote (Talk: 17 Min; Question: 3 min)	Invited (Talk: 12 min; Question: 3 min)	Oral (Talk: 10 min; Question: 2 min)	
Day 3 (30/09)					
Time	Room: Norfolk	Room: Phoenix	Room: Monaco II	Room: Kauri/Cypress	Room: Boardroom
Sessions	Catalyst 6A (Prof. Dawei Su, Prof. Zhaojun Han)	Solar 5 (Assoc. Prof. Paul Shaw, Dr. Yajie(Jessica) Jiang)	Optoelectronic 2 (Assoc. Prof. Shery Chang)	Catalyst 6B (Dr. Peng Li)	Battery 5 (Prof. Zheng Liang)
09:00–09:20	Prof. Shaobin Wang Carbon-based Materials for Photocatalytic Energy Conversion	Prof. Trystan Watson Democratising Perovskite Photovoltaics: Roll-to-Roll and Carbon-Based Routes to Low-Capex Solar Manufacture	Prof. Guichuan Xing Breaking the Efficiency Trade off in Visible Perovskite Photovoltaic Light Emitting Diodes	Dr. Jingrun Ran Atomic-Level Regulation on Photocatalyst for Energy-Related Reaction	Prof. Cheng Yan Chemo-mechanical failure mechanisms in high performance Li-ion batteries
09:20–09:40	Prof. Zhaojun Han Novel electrocatalyst designs for green hydrogen	Assoc. Prof. Shi Chen Interfacial characterization and engineering for high performance perovskite optoelectronic devices	Prof. Glenn Solomon Optimising the optical properties of single, semiconductor quantum dots for quantum technologies using an epitaxial growth process	Prof. Zhenguo Huang Hydrogen-rich bond (N-H, O-H, and B-H) for Energy Storage and Transfer	Assoc. Prof. Jianfeng Mao Development of next-generation lithium metal batteries for high energy storage
09:40–10:00	Dr. Yonggang Jin CSIRO Research and Development in Mine Methane Mitigation	Assoc. Prof. Murad Tayebjee Singlet Fission on Silicon Solar Cells	Dr. Mile Gao Characterising Charge Carrier Dynamics in Organic Optoelectronic Devices	Dr. Xiaomin Xu Tuning Cation Nonstoichiometry in Perovskite Oxides for Water and CO2 Electrolysis	Assoc. Prof. Wengui Li Unlocking high energy density in rechargeable cement-based batteries via coating-engineered low-tortuosity pore networks
10:00–10:15	Dr. Wenhao Ren Engineering Reaction Interfaces in Catholyte-Free CO2/CO Electrolysers	Asst. Prof. Chang Yan Efficient wide bandgap Copper Indium Gallium Sulfide solar cell by solution methods	Weilun Li Twinning in Halide Perovskites: Atomic Structures and Impacts on Photophysical Properties	Nazish Aslam Dynamic Liquid Metal Catalysts for Acid-Free Biomass Conversion	Dr. Junnan Hao Advanced conversion-based cathodes for aqueous Zn batteries
10:15–10:27	Dr. Qingfeng Zhai Probing the active site of carbon-based catalysts through EC-STM	Saveen Senanayake Unravelling the Role of Indium in Enhancing the Stability of Mixed Tin–Lead Perovskite Solar Cells	Oliver Lindsay In situ measurement of film formation for homojunction OPV films with volatile processing additives		Dr. Emily Chen Advanced Electron Microscopy Characterisation of Battery Materials
10:30–10:50	Morning Tea				

Time	Room: Norfolk	Room: Phoenix	Room: Monaco II	Room: Kauri/Cypress	Room: Boardroom
Sessions	Solar 6 (Prof. Zhijun Ning, Dr. Jincheol Kim)	Catalyst 7 (Prof. Torben Daeneke, Dr. Jingrun Ran)	Optoelectronic 3 (Prof. Guichuan Xing, Dr. Mile Gao)	Theoretical Computation & Machine Learning 3 (Dr. Aoni Xu, Dr. Teng Lu)	Low-Energy Devices 4 (Dr. Tao Wan)
10:50–11:10	Prof. Yi Zhang Carrier Transport Regulation Towards Efficient Sb ₂ (S,Se) ₃ Thin Film Photoelectronic Devices	Prof. Huai-Yong Zhu Harnessing Plasmonic Nanoparticle Antennas for Catalysis	Assoc. Prof. Jingwei Hou Metal–Organic Framework Glasses: A Versatile Platform for Next-Generation Optoelectronic and Energy Materials	Assoc. Prof. Chun Ouyang Deep Time-Series Models Meet Electricity Price Volatility	Prof. Zhenxiang Cheng Novel type of Multiferroics, Magnetoelectric Coupling and their Energy-related applications
11:10–11:30	Prof. Jingling Xue Stabilizing Molecule-Based Selective Contacts for Perovskite Solar Cells	Prof. Tianyi Ma Integrated CO ₂ Capture-Upgrading	Dr. Haoran Ren Lightwave valleytronics based on a meta-waveguide optoelectronic chip	Dr. Tu Le Energy Materials Development using Machine Learning	Assoc. Prof. Ming Li Microfluidic Technologies for Microbial Cell Analysis in Renewable Energy Applications
11:30–11:50	Assoc. Prof. Paul Shaw Performance optimization of Y6 homojunction organic solar cells	Prof. Torben Daeneke Liquid Metal Alloys as Next-Generation Catalysts for Clean Chemical Production	Dr. Xueqian (Queenie) Sun Optical Visualization of Carrier Surfing in 2D Monolayers Driven by Surface Acoustic Waves	Dr. Aoni Xu The Dynamic Electrochemical Interface in CO ₂ Reduction	Dr. Ying Liu Topological domain walls in archetypal antiferroelectric PbZrO ₃
11:50–12:05	Dr. Jessica Yajie Jiang Ultra-stable Near Unity Luminescent CsPbBr ₃ Nanocrystals for Efficiency Enhancement in Commercial Silicon Photovoltaics	Dr. Wenxian Li Minimizing Energy Loss in Electrocatalysts for Water Splitting	Prof. Waner He Charge-Trapping Materials Engineering for Solution-Processed Organic Synaptic Transistor Memories	Dr. Xin Mao Ligand Engineering in MIL-53(Cu) Nanozymes for Selective Electrochemical CO ₂ Reduction to C ₂ Products by Molecular Modelling	Dr. Mengyao Li Bridging Moisture-Electric Generation and Hydrogen Evolution through Neutral Hydrogen Intermediates
12:05–12:20	Dr. Yumin Liu Bimolecular Hetero-spatial Co-passivation Enables Efficient MA-free Wide-bandgap Perovskites for All-perovskite Tandem Solar Cells	Dr. Jinqiang Zhang Refining structures of electrochemical catalysts for energy storage and conversion	Dr. Wenxin Mao Photo-modulation of Ion Distribution in Metal Halide Perovskites	Md Tarikal Nasir Computational Design of Electrocatalysts for Energy and Environmental Applications	Chao Liu Unveil the Roles of Water Molecules in Moisture Electric Generators
12:20–12:32	Dr. Wei-Hsun Chiu Origin of thermal induced variation in performance and negative reactance of inorganic CsPbI ₂ Br perovskite solar cells	Bharathi Mohan V CoSeTe as an asymmetric bridging co-catalyst for photocatalytic hydrogen generation over modified g-C ₃ N ₄	Asst. Prof. Leonard Ng Wei Tat From Photovoltaics to Hydrometallurgy: Self-Driving Laboratories as a Universal Engine for Accelerated Materials Discovery	Fozia Batool Understanding Properties of SAF/Jet Fuel Blends: DFT and MD Studies	Dr. Bo Fu Solar-driven Atmospheric Water Production through Hierarchically Ordered Porous Carbon for Self-sustaining Green Hydrogen Production
12:32-13:30	Lunch				
Time	Room: Norfolk	Room: Phoenix	Room: Monaco II	Room: Kauri/Cypress	Room: Boardroom
Sessions	Solar 7 (Prof. Wallace Wong, Prof. Trystan Watson)	Thermoelectric Materials 2 (Dr. Meng Li)	Catalyst 8 (Dr. Liang Jason Wang, Dr. Wenjie Tian)	Optoelectronic 4 (Dr. Wenxin Mao)	Battery 6 (Dr. Zengxia Pei, Dr. Nana Wang)
13:30–13:50	Assoc. Prof. Wallace W. H. Wong Designing Molecules for Spectral Engineering in Photovoltaics	Prof. Min Hong Phonon Engineering for High-Performance Thermoelectric Materials	Prof. Dawei Su Unveiling the material's photo/electrochemical properties correlated with its electronic structures	Prof. Qing Shen Lead-Free Perovskite Quantum Dots for Next-Generation Optoelectronics: Defect Engineering and Photophysical Properties	Dr. Xiaodan Huang Mesoporous Separator Engineering Rectified Electrolyte Chemistry for Durable Non-Aqueous Aluminium-Ion Batteries
13:50–14:10	Dr. Munkhbayar Batmunkh Engineering Metal Halide Perovskite Semiconductors for Solar Cells	Dr. Qian Liu High-Performance SWCNTs/Organic Hybrid Thermoelectric Materials	Assoc. Prof. Fengwang Li Unlocking Stable and Efficient Green Hydrogen from Ammonia	Assoc. Prof. Shery Chang Mechanisms of Structural Evolution in Lead-Free Halide Perovskites Uncovered by In Situ Multimodal Microscopy	Dr. Zengxia Pei Polymeric Gel Electrolyte Design for Efficient Zn Batteries
14:10–14:30	Dr. Mei Gao Towards Commercialisation of Flexible Perovskite Solar Cells	Tairan yang Bilayer D-Ni/PVA/SA Aerogel for Efficient Solar Evaporation	Dr. Xiaoyang Wang Engineering Efficient Carrier Transport through Synergistic Photo-Thermoelectric Catalytic Effect	Prof. Jin Chang Crystallization Regulation for Efficient Tin-based Perovskite LEDs	Dr. Nana Wang Engineering Sulfur Reaction Pathways for High-Energy Metal–Sulfur Batteries
14:30–14:45	Dr. The Duong Development of Scalable Processes for Perovskite-Silicon Tandem Solar Cells	Shihang Ma Synergistic photothermal and thermal management in h-BN/CB engineered PVA aerogels for high-efficiency solar desalination	Muhammad Abid Amin Dynamic Spin-Adaptive Matching via Alternating Magnetic Fields for Accelerated Oxygen Electrocatalysis on Gd-NiFe-LDH	Qimu Yuan Amplified Spontaneous Emission in Vacuum-Deposited CsPbBr ₃ : Insights into Crystallisation Control and Defect Formation	Dr. Qingbing Xia Elucidating Sodium Ion Storage Mechanisms in Hard Carbon Anodes at the Electronic Level
14:45–15:00	Dr. Tuquabo Tesfamichael Inorganic Hole Transport Materials for High-performance Inverted Perovskite Solar Cells	Tao Yin Accelerating water desorption at heterostructure interfaces for high-rate solar evaporation	Tianyang Wang Developing polymer-encapsulated Nickel-doped Magnesium nanoparticles for solid-state hydrogen storage		Xiaoman Lin Modulating Two-Electron Storage in Aqueous Zinc Radical Batteries

15:00–15:15	Dr. Yang Yang Advancing Carbon Electrode-Based Perovskite Solar Cells from Device Optimisation to Emerging Applications				Zijian Cai Tailored highly conductive collectors through interface engineering
15:15–15:30	Afternoon Tea				
15:30–16:00	Award Session and Closing				

Poster Presentation (Room: Sifu)		
P01	Muhammad Fawad Khan	SPEEK Matrix Membrane Integrated with Layered Double Hydroxide for Alkaline Zinc-Iron Flow Batteries
P02	Cao Tram Anh Hoang	Intelligent Battery Energy Storage Operation using Multi-Agent Reinforcement Learning
P03	Caleb Fianku Quao	Machine Learning Guided Discovery of Self-Assembled Monolayers for Efficient Perovskite Solar Cells
P04	Christine Yu	Computational Insights into Polyolefin Pyrolysis Catalysed by Linker-Defective UiO-66
P05	Danhua Wang	Design and synthesis of Ion Exchange Membrane for high performance Zinc-Iron Redox Flow Batteries
P06	Haowei Jia	Powering the Future with Safe, Stable and Sustainable Aqueous Ammonium-Ion Batteries
P07	Ke Ma	Tuning Interfacial Energetics and Wettability with Diphenyl acridine-Based Mixed self-assembled molecules
P08	Jiarong Liu	High-Performance Semi-Transparent Inverted Perovskite Solar Cells with DMD Electrodes
P09	Jiating Qu	Hydride-Mediated Activation for Accelerated Nitridation towards (Oxy)nitride Photocatalysts
P10	Jinyang Guo	Spin-State Regulation of Fe Single-Atom Catalysts for Enhanced Electrochemical Nitrate Reduction: A DFT Study
P11	Jinling Wen	Artificial Interfacial Modification for Stable Zinc Anodes in Aqueous Zinc Metal Batteries
P12	Liu Lijun, Dr.	System Development for Lithium Battery Materials Recycling
P13	Minh Khang Le	Interpretable machine learning for ionic liquid – organic solvent mixture design and discovery
P14	Namuersaihan Namuersaihan	Beyond an Oxide Skin: A Graded Photoactive Interface on Liquid Gallium
P15	Nayanthara P.S.	Graphitic Carbon Nitride-Reinforced OPBI Membranes for High Performance Vanadium Redox Flow Battery
P16	Nethmi Kulanika Dayarathn	Engineering Biomass Fractionation via Acid-Catalyzed Ethanol Pretreatment for High-Performance Hard Carbon Anodes in Sodium-Ion Batteries
P17	Phan Anh Nguyen	Optoelectrical memristor active layer based on perovskite nanoparticles in polymer matrix
P18	Pubudu Dissanayake	Parafilm-Assisted Fabrication of Flexible Perovskite Solar Cells to Improve Efficiency
P19	Tianshu Peng	Mechanochemical Engineering of Liquid Metal–Tannic Acid Interfaces for High-Efficiency Solar-Driven Seawater Desalination
P20	Tianyue Liang	High-performance aqueous zinc-sulfur batteries enabled by a hybrid solvent electrolyte
P21	Tan Trung Kien Huynh	Efficient Membranes Made of Nanohybrid of Fluorine-doped Carbon Dots Coupled with Metal Organic Framework for High Performance Vanadium Redox Flow Battery
P22	Tingting Mei	Light-Tunable Charge Dynamics Enable Ultralow-Power Bidirectional Lead-free Perovskite Synapses for Intelligent Vision
P23	Wenming Zhao	Reversible Bond Dynamics Enable Crystallinity-Healed COF Membranes for Selective Ion Transport
P24	Xin Li	Solar-Driven Photothermal Depolymerization of PET Enabled by Single-Atom Pd Catalysts
P25	Yashi Zhang	Deciphering the Deactivation of Highly Active Metallic Ru Nanosheet Arrays: Stability Window and Lattice-Oxygen Replenishment in Acidic Oxygen Evolution
P26	Yuankai Zhao	Machine Learning-guided design and experimental validation of high entropy perovskite catalysts
P27	Yongyue Yu	Thermally Crosslinked Dual-Anchor Self-Assembled Monolayers for Efficient and Stable Perovskite Solar Cells