

AOC-GSC8 Conference Programme

Wednesday 29th November

Time	Event	Location
09:30 - 15:00	Registration Opens	Engineering Building 405 Level 4 Foyer
10:00 - 11:00	Arrival Tea & Coffee	Engineering Building 405 Level 4 Foyer
11:00 - 11:30	Opening and Welcome	Lecture Theatre 401-401
11:30 - 12:30	Plenary Session 1: John Warner <i>Green Chemistry: The Missing Elements</i>	Lecture Theatre 401-401
12:30 - 13:30	Lunch	Engineering Building 405 Level 4 Foyer
13:30 - 14:00	Keynote Session 1: Debabrata Maiti <i>En-Lightening C-H Functionalization</i>	Lecture Theatre 401-401
Oral Session 1		
	Lecture Theatre 401-401	Lecture Theatre 401-439
	Sustainable Agriculture and Pollutant Remediation	Synthesis
14:00-14:20	<i>New Frontiers in Polymers Made from Sulfur</i> Justin Chalker	<i>Computation and Experiment in Synergy: A Sustainable Research Approach</i> Nadeem Sheikh
14:20-14:40	<i>Regulation of plant ethylene biosynthesis for sustainable agriculture</i> Ivanhoe Leung	<i>Development of heterogeneous catalysts for hydrogenation of carboxylic acids</i> Masazumi Tamura
14:40-14:55	<i>Esterified Lignin Nanoparticles for Pesticide Delivery to Plant Leaves</i> Matilda Andersson	<i>Electrochemical oxidation of 3-substituted indoles</i> Juan Arteaga Giraldo
14:55-15:10	<i>Using the potential of waste biomass in the bioremediation of soil contaminated with heavy metal ions</i> Izabela Michalak	<i>Endo-selective 1,4-addition of thiols to (-)-levoglucosenone</i> Atsushi Tahara
15:10-15:25	<i>Removal of antibiotic residues in aqueous solutions using Polyvinyl alcohol-Glycine-Zirconium(IV)tungstophosphate (PVA-Gly-ZWP) Membrane</i> Jitha Kunhikrishnan	
15:25-16:00	Afternoon Tea	Engineering Building 405 Level 4 Foyer

Wednesday 29th November continued

Oral Session 2		
	Lecture Theatre 401-401	Lecture Theatre 401-439
	Biomass	Nanoparticles and Metal Clusters
16:00-16:20	<i>Grape marc as a source of high-value products including antioxidant biopolymers</i> Paul Kilmartin	<i>Toward Greener Synthetic Routes to Gold and Silver Nanomaterials</i> Michelle Regulacio
16:20-16:40	<i>Sustainable Bioproducts to Promote a Circular Economy</i> Colin Barrow	<i>Precisely controlled single atom and nanocluster-based materials: from fundamentals to applications in catalysis and energy</i> Vladimir Golovko
16:40-16:55	<i>Extraction and Derivatisation of Hemicellulose for Novel Applications</i> Antonio Patti	<i>Development of metal nanoparticle catalysts modified using multidentate polyoxometalates</i> Kang Xia
16:55-17:10	<i>Psidium guajava (Guava) leaves ash: A green heterogeneous catalyst for efficient biodiesel production</i> Ankita Sarkar	<i>Development of High Entropy Alloy Subnanocluster Catalysts and its Structural Reversibility under Oxidative/reductive Conditions</i> Naoki Hashimoto
17:10-17:25	<i>Thermally insulating foams based on upcycled aramid nanofibers and nanocellulose</i> Lennart Bergström	<i>Atomically Dispersed Co-Ni Dual-Metal Sites Showing Unique Reactivity and Dynamics for the Oxygen Evolution Reaction</i> Jun-Xi Wu
17:25-17:40	<i>Hydrophobic pine bark extracts for the surface treatment of natural fibres</i> Regis Risani	
17:40-17:55	<i>Eco-friendly recovery of alginate, fucoïdan, and phenolics via aqueous ball milling of brown seaweed</i> Sachin Talekar	
17:55-19:00	Welcome Reception	Engineering Building 405 Level 4 Foyer

Thursday 30th November

Time	Event	Location
08:30 - 09:00	Arrival Tea & Coffee	Engineering Building 405 Level 4 Foyer
09:00 - 10:00	Plenary Session 2: Xiaonan Wang <i>Harnessing AI for Green and Sustainable Chemistry towards Carbon Neutrality</i>	Lecture Theatre 401-401
10:00 - 10:30	Keynote Session 2: Kei Saito <i>Self-healing polymers from biobased compounds</i>	Lecture Theatre 401-401
10:30 - 11:00	Morning Tea	Engineering Building 405 Level 4 Foyer
Oral Session 3		
	Lecture Theatre 401-401	Lecture Theatre 401-439
	Waste Utilisation	Alternative Solvents and Catalysis
11:00-11:20	<i>CO₂-derived oxalic acid-assisted conversion of organic and inorganic resources</i> Shinji Kudo	<i>Quantifying reaction outcomes in ionic liquids</i> Jason Harper
11:20-11:40	<i>Computational prediction of the catalyst surface hydrogen coverage in the hydrogenolysis of plastic waste</i> Martina Lessio	<i>Amphiphilic Ionic Liquid cytotoxicity: structure-activity and mechanistic studies</i> Tristan Rawling
11:40-11:55	<i>Waste Plastics as Resources for Functional Material and Chemical Production</i> Jason Lim	<i>Sub- and supercritical fluids for the biomass conversion</i> Jaehoon Kim
11:55-12:10	<i>Fluorous Nanochannels Enabling Ultrafast Desalination</i> Shuo Chen	<i>Hydroxide-ion induced efficient mineralization of poly(vinylidene fluoride) and related copolymers in subcritical water</i> Hisao Hori
12:10-12:25	<i>Evaluation of the microbial hydrogenotrophic methanation process for power to gas</i> Byoung-in Sang	<i>Catalytic decomposition of polypropylene in petroleum-based solvents</i> Mahiro Matsushita
12:25-13:30	Lunch	Engineering Building 405 Level 4 Foyer

Thursday 30th November continued

Oral Session 4		
	Lecture Theatre 401-401	Lecture Theatre 401-439
	CO2 Conversion and Atmospheric Chemistry	Heterogeneous Catalysis
13:30-13:50	<i>Direct Conversion of Low-Concentration of CO2 to Polyurethane Raw-Materials Using an Organic Base as CO2 Capture Agent</i> Katsuhiko Takeuchi	<i>Atomically Dispersed Metal Catalysts Steering Selective Electrocatalysis</i> Sang Hoon Joo
13:50-14:10	<i>Multi-scale modeling of the electrochemical CO2 reduction reaction: Challenges and opportunities</i> Yu Mao	<i>Chemocatalytic Synthesis of Amino Acids from Renewable Feedstocks</i> Yiyang Xiao
14:10-14:25	<i>Methanol Production by CO2 Hydrogenation Catalyzed by Dinuclear Iridium Complexes under Gas-Solid Phase Conditions</i> Yuichiro Himeda	<i>Synthesis of novel photocatalysts for hydrogen and oxygen production via water splitting</i> Areef Billah
14:25-14:40	<i>CO2-blown Non-isocyanate Polyurethane Foams</i> Ping Choong	<i>water molecules via operando surface-enhanced Raman spectroscopy coupled with an Fe3+ probe</i> Yongfang Zhou
14:40-14:55	<i>Visible-light driven fumarate synthesis using CO2 gas as a direct feedstock in a bio/photocatalytic hybrid system</i> Mika Takeuchi	<i>Polyethylene decomposition over zeolite catalysts in hydrocarbon solvents</i> Masahiko Matsukata
14:55-15:10	<i>Hydrocarbon synthesis from CO2 using spinel oxide and zeolite</i> Kazuya Hashimoto	
15:10-15:25	<i>Applications of computational chemistry in atmospheric science</i> Sara Farahani	
15:25-16:00	Afternoon Tea	Engineering Building 405 Level 4 Foyer
16:00 - 16:30	Keynote Session 3: Laurel Schafer <i>Green Chemistry Enabled Synthesis of Aminated Responsive Materials</i>	Lecture Theatre 401-401
16:30 - 17:00	Keynote Session 4: Thomas Maschmeyer <i>BTEX from Lignin using a Novel Molybdenum Carbo-nitride@Titanium Nitride Catalyst</i>	Lecture Theatre 401-401
17:00 - 19:00	Poster Session	Engineering Building 405 Level 4 Foyer

Friday 1st December

Time	Event	Location
09:00 - 09:30	Arrival Tea & Coffee	Engineering Building 405 Level 4 Foyer
Oral Session 5		
	Lecture Theatre 401-401	Lecture Theatre 401-439
	Metal Clusters and Metal Organic Frameworks	Synthesis
09:30 - 09:50	<i>Shifting Catalytic Activity and Selectivity Atom-by-Atom by Subnanometer Cluster Catalysts</i>	<i>Catalytic Asymmetric Synthesis of Chiral Indole Derivatives</i>
	Stefan Vajda	Feng Shi
09:50 - 10:10	<i>Addressing hydrocarbon separations using MOFs as a bottom-up approach towards energy alternatives</i>	<i>Flow-enabled photosensitized [2+2] cycloadditions for the synthesis of natural products.</i>
	Lauren Macreadie	Zoe Wilson
10:10 - 10:25	<i>Photocatalytic Hydrogen Peroxide Production Utilizing Al-Based Metal-Organic Frameworks</i>	<i>Highly Active and Chemoselective Homobimetallic Ruthenium Catalyst for One-pot Reductive Amination in Water</i>
	Yoshifumi Kondo	Gopal Deshmukh
10:25 - 11:00	Morning Tea	Engineering Building 405 Level 4 Foyer
11:00 - 11:30	Keynote Session 5: Mageswary Karpudewan	Lecture Theatre 401-401
	<i>Green Chemistry Education: A Fundamental Theoretical Perspective with Augmented Reality Integration for Enhanced Delivery</i>	
Oral Session 6		
	Lecture Theatre 401-401	Lecture Theatre 401-439
	Synthesis and Green Chemistry Education	Energy
11:30-11:50	<i>Green chemistry in higher education: An upstream approach to addressing sustainable development goals</i>	<i>Study of Decarbonisation on the Special Remote Area in East Indonesia</i>
	Amy Cannon	Eniya Listiani Dewi
11:50-12:10	<i>Temperature control strategy in a flow reactor for safer operation and higher heat efficiency</i>	<i>Molecular electron acceptors and the new photophysical landscape of organic solar cells</i>
	Yosuke Muranaka	Paul Hume
12:10-12:25	<i>Applied research in green and sustainable chemistry: a Singapore story</i>	<i>Electrolyte Design and Synthesis for Sodium-Ion Batteries</i>
	Valerio Isoni	Darren Ould
12:25 - 14:00	Lunch	Engineering Building 405 Level 4 Foyer
	Lecture Theatre 401-401	Lecture Theatre 405-422
13:00-14:00	AON-GSC Meeting	Student Quiz

Friday 1st Decemer continued

Oral Session 7		
	Lecture Theatre 401-401	Lecture Theatre 401-439
	Energy and Separations	Catalysis and Mechanochemistry
14:00-14:20	<i>Regulating Lithium Metal Interfaces to Enhance the Cycle Life of Anode-free Lithium Metal Batteries</i> Dong Jun Kim	<i>Modular assembly of biomimetic catalysts from amphiphilic precursors</i> Jack Chen
14:20-14:40	<i>Exploring the potential for ionic liquid derived bio-degradable and bio-compatible proton conducting membranes</i> Patricia Hunt	<i>Using TSE as a Route to Sustainable Manufacture</i> Deborah Crawford
14:40-14:55	<i>High-pressure H₂ and CO₂ Production from Formic Acid</i> Hajime Kawanami	<i>Remarkable Catalytic Activity of Molybdenum Complexes Bearing 4-[3,5-Bis(trifluoromethyl)phenyl]pyridine-Based PNP-Type Pincer Ligand toward Ammonia Formation</i> Taichi Mitsumoto
14:55-15:10	<i>Poly(3-hexylthiophene)-based Graft Copolymers for Smart Self-transform Novel Transient Electronics</i> Xin Sun	<i>Ball Milling as a Scalable Destruction Technology for Toxic 'Forever Chemicals'</i> Kapish Gobindlal
15:10-15:25	<i>Eco-friendly oxygen reduction reaction electrocatalyst for high-performance green biofuel cells</i> Edwin Nyangau	<i>The Origin of the Waterfall Effect: The Earliest Known Example of On-Water Chemistry.</i> Alexander Yuen
15:25 - 16:00	Afternoon Tea	Engineering Building 405 Level 4 Foyer
16:00-17:00	Plenary Session 3: Magda Titirici <i>Sustainable Materials for Energy Storage and Conversion</i>	Lecture Theatre 401-401
17:00-17:30	Closing Ceremony (including prize giving)	Lecture Theatre 401-401
18:30 - 23:00	Conference Dinner	Maritime Room (Princes Wharf, Viaduct Harbour)