

OVERVIEW PROGRAMME

Tuesday 2 September 2025

10:00	Registration		
12:30	Lunch		
13:30	Welcome & Introductions Alex Cowan <i>University of Liverpool, UK</i> Jenny Zhang <i>University of Cambridge, UK</i> Session chair: Alex Cowan		
13:45	PL01 - The Secret Life of Electrocatalysts unveiled by Operando Spectroscopy and Microscopy Beatriz Roldan Cuenya <i>Fritz-Haber-Institut der Max-Planck-Gesellschaft, Germany</i>		
14:30	PL02 - Artificial Z-Scheme for Photocatalytic CO₂ Reduction Using Molecular Photocatalysts as Key Players Osamu Ishitani <i>Hiroshima University, Japan</i>		
15:15	Refreshments		
	Inorganic	Biological	Electrocatalysis
	Session chair: TBC	Session chair: TBC	Session chair: TBC
15:45	K01 Scalable and Efficient Artificial Photosynthetic Processes for Solar Fuel Production Qian Wang <i>Nagaoya, Japan</i>	K02 Title TBC Peter Lindblad <i>Uppsala University, Sweden</i>	K03 Hybrid Photoelectrodes for Light-driven CO₂ reduction Jillian Dempsey <i>University of North Carolina, USA</i>
16:15	I01 Advanced photoelectrodes to enable solar fuel production under variable and diurnal conditions Emily Warren <i>National Renewable Energy Laboratory, US</i>	B01 Microbial photohybrids for solar fuel and chemical production from carbon dioxide Shafer Kalathil <i>Northumbria University, UK</i>	E01 CO₂/CO-to-C₃₊ products electrochemical conversion for dinuclear cuprous molecular catalysts Naonari Sakamoto <i>Toyota Central R&D Labs Inc., Japan</i>
16:35	I02 Developing photoelectrochemical water splitting devices - from understanding charge carrier behaviour to testing prototypes in the field Andreas Kafizas <i>Imperial College London, UK</i>	B02 Light-driven electron transfer and CO₂-reduction at and across artificial lipid bilayers Andrea Pannwitz <i>Friedrich Schiller University Jena, Germany</i>	E02 Tetracationic Cobalt 3,4-pyridinoporphyrazine for Direct CO₂ to Methanol Conversion Escaping the CO Intermediate Pathway Chanjuan Zhang <i>VITO, Belgium</i>
16:55	I03 Semiconductor/metal-organic frameworks assemblies for photoelectrochemical hydrogen production Sascha Ott <i>Uppsala University, Sweden</i>	B03 A Versatile Bioconjugation Strategy for Photosystem II Engineering in Cyanobacterial Biohybrids Hyeryeong Lee <i>University of Cambridge, UK</i>	E03 Electrografting of organic layer on Cu-based electrode surface for improving C-C coupling during CO₂ electroreduction Duy Thai Nguyen <i>College de France, France</i>
17:15	Welcome reception		
19:00	Close		

Wednesday 3 September 2025

		Session chair: Julea Butt PLO3 - 2024 Tilden Prize for Chemistry Solar Chemistry: Translating Concepts into Technologies Erwin Reisner University of Cambridge, UK		
		PLO4 - Living bio-nano systems for solar hydrogen production Kara Bren University of Rochester, USA		
10:30		Refreshments		
		Inorganic	Organic	Advanced methods
		Session chair: TBC		
11:00	K04	Title TBC Marcella Bonchio University of Padova, Italy	K05 Title TBC Haining Tian Uppsala University, Sweden	K06 Charge carrier dynamics in organic semiconductor photocatalysts James Durrant Imperial College London, UK
11:30	I04	Light-driven catalysis of the CO ₂ reduction reaction using heptacoordinated cobalt and iron complexes Mirco Natali University of Ferrara , Italy	O01 Rational design of organic conjugated polymers for efficient photocatalysis Xiong Cheng Fuzhou University, China	A01 Catalyzing Change: The Role of Multifunctional Materials in Solar-chemistry technologies Victor A. de la Peña O'Shea IMDEA Energy Institute, Spain
11:50	I05	Integrated Experimental and Theoretical Investigation of Photocatalytic CO ₂ Conversion to Hydrocarbons: Unraveling Mechanisms and Reaction Pathways SU IL In Daegu Gyeongbuk Institute of Science and Technology, South Korea	O02 Metal- and solvent-dependent recombination pathways in organic photocatalyst systems Sam Hillman Imperial College London, UK	A02 Full ThrOTTL tr-IR: Time resolved IR Spectroelectrochemistry with Controlled Sample Throughput for the Investigation of (Catalytic) Redox Intermediates Kerstin Oppelt University of Zurich, Switzerland
12:10	I06	Realization of a Photoelectrochemical Cascade for the Generation of Methanol Grace Rome Colorado School of Mines/National Energy Laboratory, US	O03 Floatable composites for solar chemistry at the liquid-liquid interface Andrea Rogolino University of Cambridge, UK	A03 Tracking interfacial redox dynamics of photoanodes by operando X-ray Absorption Spectroscopy Raffaello Mazzaro University of Bologna, Italy
12:30 Lunch				
13:15 Publishing with impact (RSC)				
		Inorganic	Organic	Advanced methods
		Session chair: TBC		
14:00	I07	Connecting the Dots for How Highly Nonuniform Nanoreactors + Discrete Photon Absorption Events + Stochastic Charge Separation = Near-Perfect Water Splitting Shane Ardo UC Irvine, USA	O04 Photocatalytic hydrogen production coupled to glucose oxidation using a conjugated polyelectrolyte photocatalyst. Rhys Bourhill University of Strathclyde, UK	A04 High throughput experimentation for solar fuels materials and methods—12 years of deployment and discovery Joel Haber California Institute of Technology, USA
14:20	I08	Exchange of CO ₂ with CO as Reactant Switches Selectivity in Photoreduction on Co- and Fe-ZrO ₂ from C1-3 Paraffin to Ethylene and Propylene Yasuo Izumi Chiba University, Japan	O05 lectric bias-free solar-to-hydrogen peroxide conversion in a photoelectrochemical cell using an organic polymer photocathode Masayuki Yagi Niigata University, Japan	A05 Visualizing Spin Selective Electron Dynamics in Yttrium Iron Garnet Photoanodes Using Ultrafast, Circularly Polarized XUV Light Robert Baker Ohio State University, USA
14:40	I09	Biomimetic photocatalytic N ₂ fixation based on MOFs Ling Wu Fuzhou University, China	O06 Boosting Solar Fuel and Chemical Production with Organic Heterojunctions and Hybrids Salvador Eslava Imperial College London, UK	A06 Microkinetic modelling of photocatalytic oxidation processes for sustainable hydrogen production Sergio Vernuccio University of Southampton, UK
15:00	I10	Photocatalytic CO ₂ Reduction with Oxygen-Tolerance Hua Sheng Institute of Chemistry, Chinese Academy of Sciences, China	O07 Decoupled Solar Energy Conversion and Storage in a Two-Dimensional Covalent Organic Framework Photoanode Bibhuti Bhusan Rath Maz Planck Institute for Solid State Research, Germany	A07 Unravelling Charge Carrier Dynamics in Nanostructured Photoelectrodes for Water Splitting Via Intensity-Modulated Photocurrent Spectroscopy. Juan Carlos Exposito Galvez Universidad Pablo de Olavide, Spain
15:20	I11	Nanoscale Strategies for Directing the Enhancement in Plasmon Enhanced Electrocatalysis: Insights and Challenges Andrew Bagnall Uppsala University, Sweden	O08 Probing and tuning of ion-mediated excitonic effects organic photocatalysts Filip Podjaski Imperial College London, UK	A08
15:40 Refreshments				
		Inorganic	Organic	Electrocatalysis
		Session chair: TBC		
16:10	I12	Title TBC Roland Marschall Bayreuth, Germany	O09 Neglected Role of Surfactant Tail on Modulating Metallic Pt Content in Y ₆ Nanoparticles for Photocatalytic Hydrogen Evolution Zeinab Hamid University of Oxford, UK	E04 Pivotal proton-coupling of electron transfer in the oxygen evolution reaction – from biology (photosystem II) to inorganic oxyhydroxides Holger Dau Freie Universitat Berlin, Germany
16:30	I13	Rational design of Zn ₃ Sn overlayers to enhance the water splitting kinetics of hematite photoanodes Alejandra Galán-González Instituto de Carboquímica, Spain	O10 Controlling formation, performance, and degradation in bulk heterojunction organic nanoparticle photocatalysts Arnaud Bertran EPFL, Switzerland	E05 Unraveling the Role of Crystal Structure and Polarization in Bi-Fe-O for Oxygen Evolution Reaction Shaswati Jyoti Institute of Nano Science and Technology, India
16:50	I14	Decoupling of Light and Dark Reactions in a 2D Niobium Tungstate for Light-Induced Charge Storage and On-Demand Hydrogen Evolution Yang Wang Max Planck Institute for Solid State Research, Germany	O11 Insights into Charge Dynamics in W ₆ -Based Heterojunction Organic Nanoparticles for Hydrogen Evolution Keren Ai Imperial College London, UK	E06 Hierarchical (Ni, Co) _{2-x} Se Sheets as Efficient Electrocatalysts for Oxygen Evolution Reaction: Synergizing Fabrication Control with Mechanistic Insights Muhammad Sohail Riaz University of Galway, Ireland
17:10	I15	Unassisted solar syngas production by a molecular dye-cobalt catalyst assembly in a tandem photoelectrochemical cell Murielle Chavarot-Kerlidou LCBM, Grenoble, France	O12 Towards stable solar hydrogen generation by tandem organic bulk heterojunction photoanodes Matyas Dabocsi Centre for Energy Research, Institute of Technical Physics and Materials Science, Hungary	E07 Impact of cobalt intercalation on the electrochemical properties of layered birnessite under water oxidation potentials Sid Halder Imperial College London, UK
17:30	Flash poster presentations		Flash poster presentations	
17:50	Poster session 1			
19:20	Close			

Session chair: Martijn Zwijnenburg			
09:00	PL05 - Title TBC Andy Cooper <i>University of Liverpool, UK</i>		
09:45	PL06 - Title TBC Xinchun Wang <i>Fuzhou University, China</i>		
10:30	Refreshments		
	Devices	Organic	Electrocatalysis
	Session chair: Seb Sprick	Session chair: TBC	Session chair: TBC
11:00	K07 Coupling hydrogen production and upgrading of chemicals in oxide based photoelectrochemical device Fatwa Abdi <i>City University of Hong Kong, Hong Kong</i>	K08 Title TBC Junwang Tang <i>Tsinghua University, China</i>	K09 Colloidal nanocrystals to define design rules for selective and stable catalysts in CO2 and CO electroreduction Raffaella Buonsanti <i>EPFL, Switzerland</i>
11:30	D01 Design and optimization of a 30 cm2 membraneless photoelectrochemical flow device Sven Schneider <i>Helmholtz-Zentrum Berlin, Germany</i>	O13 A Light(er) Approach towards Sustainable Solar Fuel Production: Curious Case of Heptazines Kamalakannan Kailasam <i>INST, India</i>	E08 The dual role of redox mediators in electrochemical CO2 capture and conversion Sonja Pullen <i>University of Amsterdam, Netherlands</i>
11:50	D02 Perovskite-BiVO4 Tandem Devices for Scalable Solar Fuel Production Virgil Andrei <i>University of Cambridge, UK</i>	O14 Vapor-phase synthesis of potassium-ion-doped polymeric carbon nitride panels for efficient photocatalytic oxygen reduction Devesh Garg <i>Ben-Gurion University of the Negev, Israel</i>	E09 Iodide-mediated CO2 electroreduction for efficient and selective electrosynthesis of C2+ chemicals over CuI microcrystals Chia-Yu Lin <i>National Cheng Kung University, Chinese Taipei</i>
12:10	D03 Development and on sun field testing of photoelectrochemical reactors for scaling-up solar hydrogen production George Creassey <i>Imperial College London, UK</i>	O15 Coalescing solar-to-chemical and carbon circular economy: Mediated by metal-free triazine and porphyrin-based porous organic polymer under natural sunlight Neha Saini <i>Institute of Nano Science and Technology, India</i>	E10 Towards scalable CO2 reduction by molecular electrocatalysts in bipolar membrane electrolyzers Bhavin Siritanaratkul <i>University of Liverpool, UK</i>
12:30	Lunch		
	13:15 Making science greener: sustainable laboratories (RSC)		
	Devices	Biological	Electrocatalysis
	Session chair: Libby Gibson	Session chair: TBC	Session chair: TBC
14:00	D04 Triplet-Triplet Annihilation Upconversion for Overall Photocatalytic Water Splitting Gregory F Metha <i>University of Adelaide, Australia</i>	B04 Microbial Photohybrids for Semi-artificial Photosynthetic CO2-to-Chemical Conversion Cathal Burns <i>Northumbria University, UK</i>	E11 Indoor Renewable Energy: Harnessing Artificial Leaves for Hydrogen Generation Ji-Hyun Jang <i>UNIST, Korea</i>
14:20	D05 Pilot scale deployment electrolyzer of CO2 direct air capture Tanushree Ghosh <i>University of Toronto, Canada</i>	B05 Solvent engineering for oxygen-tolerant solar fuel generation Moritz Kuhnelt <i>University of Hohenheim, Germany</i>	E12 Exploring Reversible Electrochemical Hydrogen Production/Oxidation with a DuBois Complex Immobilized on an Edge-Plane Graphite Electrode Sriram Katipamula <i>LCBM, Grenoble, France</i>
14:40	D06 demonstrating solar ethylene production, reactor integration in multi-step conversion from H2O and CO2 Pau Farràs Costa <i>University of Galway, Ireland</i>	B06 Semi-artificial photosynthesis for solar fuel production Yongpeng Liu <i>University of Cambridge, UK</i>	E13 Degradation studies on multi-metallic electrocatalysts for low grade water electrolysis Suraj Gupta <i>Jozef Stefan Institute, Slovenia</i>
15:00	D07 Diurnal Considerations of a Three-Terminal Tandem Photoelectrodes for Solar Fuel Production Darci Collins <i>National Renewable Energy Lab/ Colorado School of Mines, USA</i>	B08 Novel semi-artificial enzyme- and bacteria-inorganic hybrids for light-driven valorisation of CO2 and H2O to fuels and chemicals Santiago Rodriguez Jimenez <i>University of Cambridge, UK</i>	E14 Role of the Oxide Species in Ni-based Catalysts for Alkaline Water Electrolysis Yifeng Wang <i>Imperial College London, UK</i>
15:20	Refreshments		
	15:40 Policy/funding panel session		
	Inorganic	Biological	Electrocatalysis
	Session chair: TBC	Session chair: TBC	Session chair: TBC
16:20	I16 Charge carrier collection at buried Cu(In,Ga)S2 interfaces with opaque front contact for photoelectrochemical hydrogen generation Valentina Corsetti <i>University of Bristol, UK</i>	B09 Autotrophic growth of Escherichia coli biomass through semi-artificial photosynthesis Lin Su <i>Queen Mary University of London, UK</i>	E12 Ammonia production via electrochemical dinitrogen reduction: addressing parameters control in the metal-mediated systems Anna Mangini <i>Politecnico di Torino, Italy</i>
16:40	I17 Driving Photoelectrochemical Reactions on Bare Cu(In,Ga)S2 Surface: Addressing the Stability and Selectivity Challenge in Photocathode Materials Sudhanshu Shukla <i>IMEC, Belgium</i>	B10 Enhancing Acetate Production in Synechocystis PCC 6803: A Farmer Strain for Photosynthetic Butanol Production Stamatina Roussou <i>Uppsala University, Sweden</i>	E13 Laser-Driven Solid-State Route to Ultrasmall Nanocatalysts Huize Wang <i>Helmholtz-Institut Erlangen-Nürnberg für Erneuerbare Energien (HIERN), Germany</i>
17:00	I18 Tuning the intrinsic catalytic activity of W and V doped MoSx for hydrogen evolution reaction Ching Thian Moi <i>French Alternative Energies and Atomic Energy Commission (CEA), Grenoble, France</i>	B11 A robust, versatile biohybrid assembly for solar chemical generation Motair Rahman <i>University of Liege, Belgium</i>	E14 Theory Guided Design of MoOx/NiMoOx Heterostructures Hybridized Active Pt co-catalyst for Efficient Water Splitting Nikhil Komalla <i>The Pennsylvania State University, USA</i>
17:20	Flash poster presentations		
17:40	Flash poster presentations		
17:40	Poster session 2		
19:10	Close and walk to conference banquet		
19:30	Conference banquet		

Session chair: Libby Gibson									
09:00	PL07 - Title TBC Sophia Haussener <i>École Polytechnique Fédérale de Lausanne (EPFL), Switzerland</i>								
09:45	PL08 - Liquid Sunlight®, Made from CO2 Peidong Yang <i>University of California, Berkeley, USA</i>								
10:30	Refreshments								
Inorganic		Biological			Electrocatalysis				
11:00	Session chair: TBC		Session Chair: TBC			Session chair: TBC			
11:00	I19	2024 Beilby Medal and Prize Developing stable inorganic light harvesters for PECs – defect tolerance and electron-phonon coupling Robert Hoyer <i>University of Oxford, UK</i>	K10	11:00	Title TBC Yannis Ieropoulos <i>University of Southampton, UK</i>	E15	11:00	Mechanistic Understanding of Homogeneous and Heterogeneous Electrocatalysts for Energy Conversion Reactions Vincent Wang <i>National Sun Yat-Sen University, Chinese Taipei</i>	
11:20	I20	Quantitative Analyses of Photovoltages and Electron Transfer Kinetics at Illuminated p-Si Hybrid Photoelectrodes Renato Sampaio, UNC Chapel Hill, USA	B12	11:30	Harnessing natural oxygenic photosystem for sustainable hydrogen production via biophotovoltaics Bin Lai <i>Helmholtz Center for Environmental Research - UFZ, Germany</i>	E16	11:20	A Geometric Interpretation of Kinetic Zone Diagrams for Mechanistic Understanding of Electrocatalytic Systems Ben Johnson <i>Technical University of Munich (TUM), Germany</i>	
11:40	I21	Investigating photovoltage in Fe2O3 photoanodes Louise Oldham <i>Imperial College London, UK</i>	B13	11:50	Guided Re-design of 3D Porous Electrodes for Biophotoelectrochemical Systems Linying Shang <i>University of Cambridge, UK</i>	E17	11:40	Ligand-based oxidative and reductive catalysis Javier Concepcion <i>Brookhaven National Lab, USA</i>	
12:00	I22	Simulation of Photoinduced Processes in Photoelectrochemical Cells for Solar Fuel production Jan Paul Menzel <i>Yale University, USA</i>	B14	12:10	Semi-artificial leaf interfacing organic semiconductors and enzymes for solar fuel synthesis Celine Wing See Yeung <i>University of Cambridge, UK</i>	E18	12:00		
12:20	ECR best talk		12:30			ECR best talk		12:20	ECR best talk
12:40	Closing remarks								
Lunch and close of conference									