10th UK Solar Fuels Network Symposium

Northumbria University, Newcastle, City Campus East, Business and Law Building
14th and 15th July 2022

14th July: Symposium

09:30	Registration opens

10:15	**Welcome by Professor Alex Cowan – SFN Director**

Session 1 Chair: Dr Shafeer Kalathil

10:20	**Keynote - Professor Julea Butt,** University of East Anglia *Light-driven microreactors for catalytic redox transformation*
10:50	**Ying Yang,** University of Liverpool *Photocatalytic hydrogen production using recombinant Escherichia coli-conjugated polymer nanoparticle biohybrid system*
11:10	**Dr Samuel J. Cobb,** University of Cambridge *Using enzymes to understand and control the local environment of catalysis*
11:30	**Dr Shahid Rasuul,** Northumbria University *Designing the Multi-Metallic Electrocatalytic Interfaces for CO_2 Reduction to C_3 Products*
11:50	**Invited Talk – Dr Seb Sprick,** University of Strathclyde *Conjugated polymer photocatalysts for solar fuel production*
12:10	**Professor Gary Black,** *Northumbria University* A quick introduction to the Hub for Biotechnology in the Built Environment
12.20	**Lunch and posters**

Session 2 Chair: Professor Alex Cowan

13:40	**Keynote - Professor James Durrant,** Imperial College London *The kinetics of metal oxide photoanodes: from charge generation to catalysis*
14:10	**Dr Charles E. Creissen,** University of Keele *Molecular Inhibition for Selective CO_2 Conversion*
14:30	**Professor Jia Hong Pan,** Imperial College London *Photocatalytic properties of all-inorganic and lead-free metal halide perovskites*
14:50	**Invited Talk – Dr Anabel E. Lanterna,** University of Nottingham *From dark to light: TiO_2 photocatalytic activity throughout the solar spectrum*
15:25	**Tea break**

Session 3 Chair: Dr Charles E. Creissen	
15:40	**Keynote - Dr Jenny Zhang,** University of Cambridge *Photosynthesis on an electrode*
16:10	**Dr Paula Dias,** University of Porto *Solar redox flow cells: a new frontier on solar energy storage*
16:30	**Dr Joe Briscoe, (Queen Mary University)** *Ferroelectric-Photocatalyst Nanocomposite Thin Films for Enhanced Photoelectrocatalytic Activity*
16:50	**Dr Dowon Bae,** Heriot-Watt University *Insights into thermal control of photoelectrochemical energy storage system: Modelling and empirical studies*
17.10	**Poster session and drinks reception**

15th July: Postgraduate and Early Career Researcher Event

09:00	**Welcome by Professor Alex Cowan – SFN Director**

Session 1 Chair: Dr Shafeer Kalathil	
9.05	**Invited Talk – Dr. Motiar Rahman,** University of Cambridge *Artificial leaves for solar fuel generation*
9:35	**Dr Bhavin Siritanaratkul,** University of Liverpool *Selective CO_2 reduction in a bipolar membrane electrolyzer using Ni-based molecular catalysts*
9:50	**Soranyel Gonzalez-Carrero,** Imperial College London *Generation of Long-lived charges in organic semiconductor heterojunctions for solar fuels production*
10.05	**Sreejith P. Nandan,** Technical University of Vienna *Supported $\{Co_2W_{11}\}$ polyoxometalate clusters as co-catalysts for photocatalytic water oxidation reaction*
10:20	**Telmo da Silva Lopes,** University of Porto *Semiconductor-liquid junction solar redox flow cells: experimental standardization and technology upscaling*
10:35	**Tea break**

Session 2 Chair: Dr Motiar Rahman	
10:50	**Matyas Daboczi,** Imperial College London *Phase engineering of $CsPbBr_3$ photoactive layer improves stability and efficiency of perovskite photoanode*
11:05	**Subhajit Bhattacharjee,** University of Cambridge *Reforming of Soluble Biomass and Plastic Derived Waste using Bias-Free Photoelectrochemical Devices*

11:20	**Haozhen Yuan,** Queen Mary University *Enhanced photoelectrochemical water splitting performance of $Bi_{1+x}FeO_3$ photocathodic thin films*
11:35	**Andrew Bagnall,** University of Grenoble Alpes/CNRS *Molecular-engineered electrodes incorporating novel derivatives of a hydrogen-evolving cobalt macrocyclic complex*
11:50	**Dr Colin W. J. Lockwood,** University of East Anglia *Building biowires with bespoke chemical functionality: Introducing non-natural amino acids for click circuitry*
12:05	**Cawai Liang,** Imperial College London *Unravelling the effects of active site densities and energetics on water oxidation activity of iridium oxides*
12:20	**Junyi Cui,** Imperial College London *Surface-functionalized $BiVO_4$ photoanodes boosting solar water splitting by improving interfacial charge injection for oxygen evolution*
12:35	**Lunch Break**

Session 3 Chair: Dr Shahid Rasul

13:40	**Dr Alicia Garcia-Osorio,** University of Liverpool *Solar hydrogen production using a hybrid photocathode based on Antimony Selenide/NiP molecular catalyst*
13:55	**Dr Santiago Rodríguez-Jiménez,** University of Cambridge *Self-Assembled Liposomes Enhance Electron Transfer for Efficient Photocatalytic CO_2 Reduction*
14:10	**Ioanna Itskou,** Imperial College London *Investigation of phosphorus doping on porous boron nitride and its impact on the optoelectronic and photocatalytic properties*
14:25	**Dr Xuebin Ke,** University of Hull *Photocatalytic production of solar fuels*
14:40	**Dr *Yongpeng Liu,*** *University of Cambridge* *Operando observation at the semiconductor–liquid junction for solar water splitting*
14:55	**Dr Tack Ho Lee**, Imperial College London *Near-infrared absorbing organic photovoltaics drive solar water splitting*
15:10	**Closing comments and prize giving**