



7th Solar Fuels Network Symposium

School of Divinity, St. John's College, Cambridge CB2 1TP, UK

28th March 2019

9:00 Registration open

9:30 Welcome by Prof. Erwin Reisner

SESSION 1 – Chaired by Prof. Erwin Reisner

9:40 **Invited talk:** Eli Zysman-Colman, University of St Andrews, UK
Developing Earth-Abundant Photoredox Catalysts

10:10 Dr. Sebastian Pike, University of Cambridge, UK
Metal-oxo clusters: new photoactive molecules and single-source precursors for photoanodes

10:30 Dr. Guillaume Izzet, Sorbonne Université, France
Photosensitized polyoxometalate-based hybrids

10:50 Dr. Akihiko Kudo, Tokyo University of Science, Japan
Photocatalytic CO₂ Reduction using Water as an Electron Donor

11:10 Coffee

SESSION 2 – Chaired by Prof. Robin Perutz

11:40 **Keynote lecture (2018 RSC Corday-Morgan Prize):**
Prof. Magda Titirici, Queen Mary University of London, UK
Photoluminescence, Band Gap and Applications of Hydrothermally Carbonised Carbon Dots

12:40 Dr. Chong-Yong Lee, University of Wollongong, Australia
CO₂ Electrolysis in Seawater

13:00 Prof. Michael George, University of Nottingham, UK
Photochemical Manufacturing of Chemicals: Is this a Key Development that is Needed for the Wider Adoption of Solar Fuels?

13:20 Lunch

SESSION 3 – Chaired by Dr. Elizabeth Gibson

14:30 **Invited talk:** Dr. Alison Parkin, University of York, UK
Re-wiring Bio-Hydrogen Enzymes

15:00 Dr. Han Sen Soo, Nanyang Technological University, Singapore
Artificial Photosynthesis by Light Absorption, Charge Separation, and Photoredox Catalysis

15:20 Dr. Natalia Martsinovich, University of Sheffield, UK
Computational Modelling of Doped Polymeric Carbon Nitride Photocatalysts

15:40 Dr. Aleksandr Savateev, Max Planck Institute of Colloids and Interfaces, Germany
Tinted Carbon Nitride Radical Triggers Reduction of Chalcones toward Application in Organic Synthesis under Visible Light

16:00 Poster Session

29th March 2019

Postgraduate and Early Career SFN Symposium

9:00 Welcome by Dr Jenny Zhang

SESSION 1 – Chaired by: Dr. Jenny Zhang

9:05 Qian Guo, Queen Mary University of London, UK
N-doped carbon dots derived from biomass as interfacial layer enhance the photoelectrochemical performance of hematite photoanodes for solar water splitting

9:20 Dr. Ernest Pastor, Imperial College London
In situ observation of polaron formation in α -Fe₂O₃ Photoelectrochemical Cells

9:35 Dr Hao Zhang, Loughborough University, UK
Multiphysics Numerical Modeling and Design Optimization of Solar Fuel Devices

9:50 Dr. Anna Hankin, Imperial College London
Pitfalls in Determining Flat Band Potentials of Semiconducting Photo-electrodes

10:05 Dr. Daniel Congrave, University of Cambridge, UK
A design rule for obtaining efficient near-IR TADF emission beyond 1000 nm

10:20 Coffee break

SESSION 2 – Chaired by: Dr. Moritz Kuehnel

10:45 Katarzyna Sokol, University of Cambridge, UK
Bias-free semi-artificial photoelectrochemical tandem cells for solar fuel synthesis

11:00 Dr. Souvik Roy, University of Cambridge, UK
Light driven CO₂ reduction by mesoporous carbon nitride modified with polymeric cobalt phthalocyanine

11:15 Dr. Sebastian Sprick, University of Liverpool
Tuning of light absorption and wettability in conjugated polymers for light-driven hydrogen evolution from water

11:30 Yang Bai, University of Liverpool, UK
Accelerated discovery of organic polymer photocatalysts for hydrogen evolution from water through the integration of experiment and theory

11:45 Michael Sachs, Imperial College London, UK
Understanding hydrogen evolution activity of linear polymer photocatalysts

12:00 Short break followed by conclusion and prize giving



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