

Keynotes talks

Registration & Morning Refreshments

Conference Opening & Welcome

FCH2 2018
TECHNICAL CONFERENCE

UNIVERSITY OF
BIRMINGHAM

EPSRC
Engineering and Physical Sciences
Research Council

H₂FCSUPERGEN
THE HYDROGEN AND FUEL CELL RESEARCH HUB

Energy
For a Low Carbon Future

Imperial College
London

UCL

Loughborough
University

The University of
Nottingham

Lunch and Poster Session

Session 1: PEFC development

Session 2: SOFC development

Session 3: Hydrogen production and infrastructure

14:00 - 14:20 Larisa Karpnko-Jereb
Graz university of Technology **Impact of material properties on the PEMFC performance: comprehensive computational study**

A Sheikhsari
University of Sheffield **Study of Solid Oxide Fuel Cell Stabilisation under Load Using EIS Analysis and Polarisation Curves**

Daniel Scamman
UCL **Impact of compression and purification requirements on hydrogen deployment pathways**

14:20 - 14:40 Peter Mardle
University of Birmingham **The development of aligned PtNi NW electrodes for PEMFCs**

Alessia Masini
Institute of Physics of Materials,
Academy of Sciences of the
Czech Republic **Mechanical Characterisation of Multi-layered Ceramic Systems for SOC**

J.E Graves
Coventry University **Novel Production of Renewable Hydrogen from Agricultural and Municipal Waste**

14:40 - 15:00 Irina Profatilova
CEA **The impact of trace concentrations of NH₃ in hydrogen on polymer electrolyte membrane fuel cell performance under automotive load cycling**

Graham Stevenson
Imperial College London **The Contribution of Microstructure on Electrochemical and Catalytic Properties in Lanthanum-Doped Strontium Titanate (LST)**

Mehmet Fatih Kaya
Erciyes University, Kayseri,
Turkey **Modelling of Lorentz Force effects on PEM Water Electrolysis Performance**

15:00 - 15:20 David Ward
University of Chester **Impact of varying temperature and catholyte concentration within a chemically regenerative redox cathode polymer electrolyte fuel cell system using phosphomolybdo vanadium polyoxoanion catholyte**

Oujen Hodjati-Pugh
University of Birmingham **Multiphysics Modelling of a Segmented Microtubular SOFC: A Study of Interconnect Configuration**

Lois Milner
University of Birmingham **Ni@SiO₂ vs SiO₂@Ni Catalyst: The effect of catalyst/support orientation on reforming performance**

Coffee Break with Exhibitors

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Session 4: Electrochemistry

Session 5: SOFC Development

Session 6: Fuel Cell Applications

15:45 - 16:05 Min Wang
Wuhan University of technology **Controllable Synthesis and Mechanism study of Fe-based Catalyst toward Oxygen Reduction Reaction**

Christian J Laycock
University of South Wales **Fuel processing of H₂/CO₂ mixtures from biohydrogen production processes in solid oxide cell devices**

Alex Thirkell
Loughborough University **Thermodynamic Feasibility for Civil Aircraft Fuel Cell APU**

16:05 - 16:25 Aimee Jackson
University of Birmingham **Improved Durability Of DMFC Anode Catalyst Through Use Of A Manganese Oxide – Graphene Oxide Hybrid Catalyst Support**

Kun Zhang
University of Birmingham **Effect of Alloy Composition on the Oxidation Behaviour and Cr Evaporation of High-Cr Steels for SOFC Cathode Air Pre-Heater**

Dongxiao Wu
Coventry University **Feasibility study of Connected & Demountable Fuel Cell Range Extender for Electric Vehicles**

16:25 - 14:45 Daniel Smith
University of Nottingham **The Use of Acid-Supplemented Protic Ionic Liquid Electrolytes in Fuel Cells – Consequences for the Oxygen Reduction Reaction**

Beatrice Sampson
University of Birmingham **An Overview of Methodologies for Externality Costing Evaluation**

16:45 - 17:00