

## Keynotes talks

09.00-09.30	Registration & Morning Refreshments	
09.30-09.45	Conference Opening & Welcome	
9.45-10.10	Cristian Savanu University of St Andrews	Tailoring the microstructure of impregnated SOFC electrodes for improved performance
10.10-10.35	Nana Zhao National research Council Canada	Effects of Membrane Additives on PEMFC Conditioning
10.35-11.00	Robert Steinberger-Wilckens University of Birmingham	Preparing the workforce for FCH technology companies
11.00-11.30	Coffee Break with Exhibitors	
11.30 - 11.55	Andy Williams DNV GL	Hydrogen and other routes to decarbonisation of the gas network'
11.55 - 12.20	Nick Van Dijk PV3 Technologies	Understanding Failure Mechanisms in Titanium Bipolar Plates
12.20- 12.45	Zeynep Kurban Imperial College London	The H2FC Hub: Identifying the opportunities for Hydrogen and Fuel Cells in the UK
12.45 - 14:00	Lunch and Poster Session	

# FCH2 2018

## TECHNICAL CONFERENCE



Engineering and Physical Sciences Research Council



THE HYDROGEN AND FUEL CELL RESEARCH HUB



## Session 1: PEFC development

14:00 - 14:20	Larisa Karpnko-Jereb Graz university of Technology	Impact of material properties on the PEMFC performance: comprehensive computational study
14:20 - 14:40	Peter Mardle University of Birmingham	The development of aligned PtNi NW electrodes for PEMFCs
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
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 phosphomolybdatevanadium polyoxoanion catholyte
15:30 - 15:45	Coffee Break with Exhibitors	

## Session 2: SOFC development

A Sheikholeslami University of Sheffield	Study of Solid Oxide Fuel Cell Stabilisation under Load Using EIS Analysis and Polarisation Curves
Alessia Masini Institute of Physics of Materials, Academy of Sciences of the Czech Republic	Mechanical Characterisation of Multi-layered Ceramic Systems for SOFC
Graham Stevenson Imperial College London	The Contribution of Microstructure on Electrochemical and Catalytic Properties in Lanthanum-Doped Strontium Titanate (LST)
Oujen Hodjati-Pugh University of Birmingham	Multiphysics Modelling of a Segmented Microtubular SOFC: A Study of Interconnect Configuration
Coffee Break with Exhibitors	

## Session 3: Hydrogen production and infrastructure

Daniel Scamman UCL	Impact of compression and purification requirements on hydrogen deployment pathways
J.E Graves Coventry University	Novel Production of Renewable Hydrogen from Agricultural and Municipal Waste
Mehmet Fatih Kaya Erciyes University, Kayseri, Turkey	Modelling of Lorentz Force effects on PEM Water Electrolysis Performance
Lois Milner University of Birmingham	Ni@SiO2 vs SiO2@Ni Catalyst: The effect of catalyst/support orientation on reforming performance
Coffee Break with Exhibitors	

## Session 4: Electrochemistry

15:45 - 16:05	Min Wang Wuhan University of technology	Controllable Synthesis and Mechanism study of Fe-based Catalyst toward Oxygen Reduction Reaction
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
16:25 - 14:45	Daniel Smith University of Nottingham	The Use of Acid-Supplemented Protonic Ionic Liquid Electrolytes in Fuel Cells – Consequences for the Oxygen Reduction Reaction
16.45-17.00	Coffee Break with Exhibitors	

## Session 5: SOFC Development

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

## Session 6: Fuel Cell Applications

Alex Thirkell Loughborough University	Thermodynamic Feasibility for Civil Aircraft Fuel Cell APU
Dongxiao Wu Coventry University	Feasibility study of Connected & Demountable Fuel Cell Range Extender for Electric Vehicles
Beatrice Sampson University of Birmingham	An Overview of Methodologies for Externality Costing Evaluation