



UK-SHEC  
3rd Researchers' Workshop  
Agenda



## United Kingdom Sustainable Hydrogen Energy Consortium

---

**Date:** Friday 9<sup>th</sup> September 2011  
**Location:** 8 West Room 3.14, School of Management  
University of Bath, Bath, BA2 7AY

---

**9.00-9.30**     **Arrival and Registration**

**9.30-9.40**     **Welcome**

Prof Tim Ibell (Associate Dean for Graduate Studies, Faculty of Engineering & Design, Bath)

**9.40-9.50**     **Introduction**

Lacey-Jane Davis and Dr Valeska Ting (Bath)

**9.50-10.40**   **Session I: Hydrogen Production & Hydrogen Storage Modelling**

Facilitator: Dr Valeska Ting (Bath)

9.50-9.55     Introduction

9.55-10.10   Hydrogen production from low grade biomass. *Dr Jaime Massanet-Nicolau (Glamorgan)*

10.10-10.25   Photoelectrochemical Reactors for Hydrogen Generation from Water. *Dr Steve Dennison (Imperial College)*

10.25-10.40   Hydrogen's next top model - modelling adsorption in porous materials. *Nuno Bimbo (Bath)*

---

10.40-11.00   *Refreshments (8 West Foyer)*

---

**11.00-12.20**   **Session II: Hydrogen Storage & Fuel Cells**

Facilitator: Nuno Bimbo (Bath)

11.00-11.05   Introduction

11.05-11.20   Ammonia Borane Derivatives: High Weight Percent Hydrogen Storage Materials. *Katie Hore (Oxford)*

11.20-11.35   Borohydride-based compounds for use as hydrogen storage media. *Sheng Guo (Birmingham)*

11.35-11.50   Destabilisation of MgH<sub>2</sub> by Ge as a new potential multicomponent hydrogen storage system. *Marwa Abbas (Nottingham)*

- 11.50-12.05 The Structure, Thermal Properties and Phase Transformations of the Cubic Polymorph of Magnesium Tetrahydroborate. *Dr Sam Callear (STFC)*
- 12.05-12.20 PEMFCs for hybrid automotive powertrains. *Billy Wu (Imperial College)*
- 

**12.20-13.00** *Lunch (8 West Foyer)*

---

**13.00-14.05 Session III: Flash Presentations**

Facilitator: Lacey-Jane Davis (Bath)

13.00-13.05 Introduction

1. Hydrogen Production via Chemical Looping. *Claire Thompson (Newcastle)*
  2. Low Cost Hydrogen from Natural Sources. *Dr Ibrahim Hassan (Bath)*
  3. Research Interests in Energy Storage Materials. *James Hanlon (Glasgow)*
  4. INS to study hydrogen storage. *Dr Timmy Ramirez-Cuesta (STFC)*
  5. Complex metal hydrides for hydrogen storage. *Mariem Meggouh (Nottingham)*
  6. Mixed anion complex hydrides for hydrogen storage. *David Hewett (Birmingham, Chemistry)*
  7. Benchmarking methodology for hydrogen sorption in nanoporous materials. *Anna Hruzewicz-Kolodziejc (Bath)*
  8. Optimising reversible hydrogen storage in light metal amides. *Josh Makepeace (Oxford)*
  9. Hydrogen Storage properties of Nanostructured graphite-based Materials. *Ying Zhang (Birmingham)*
  10. Induced Changes in the Crystal Structure and Hydrogen Storage Properties of Group II Metal Borohydrides. *Scott Culligan (Oxford)*
  11. Kinetics and Mechanisms of Hydrogen Isotope Exchange. *Simon Owens (Bath)*
- 

**14.05-14.30** *Refreshments (8 West Foyer)*

---

**14.30-14.55 Session IV: Flash Presentations (cont.)**

Facilitator: Simon Owens (Bath)

14.30-14.35 Introduction

12. Microstructural and Mechanical Properties of LSCF based cathode in SOFC. *Zhangwei Chen (Imperial College)*
  13. Two Stage Metal Hydride Compressor. *Lydia Pickering (Birmingham)*
  14. Hydrogen storage in power system with wind farm to balance the wind and demand. *Shuang Yu (Bath)*
  15. The MTH System – The Future of Automotive Fuelling? *Callum Campbell (Newcastle)*
- 

**14.55-15.30 A Future? – HFC SUPERGEN**

Dr Tim Mays (Bath)

---

**15.30** *Close*