

# CCS IN THE BIGGER PICTURE

## UKCCSRC Biannual Meeting

2-3 April 2014, Queens' College Cambridge, UK



### AGENDA

Wednesday 2 <sup>nd</sup> April 2014	
10.00-12.30	<b>OPTIONAL FIELD TRIP TO BRITISH ANTARCTIC SURVEY</b> <i>Meeting at 09.30-09.45 Coach Bays, Queens' Road</i>
12.30-13.30	<b>REGISTRATION AND NETWORKING LUNCH</b> <i>Fitzpatrick Hall Foyer (REGISTRATION) and Cripps Dining Hall (LUNCH)</i>
13.30-13.45 <i>Fitzpatrick Hall</i>	<b>Welcome/Opening remarks</b> Jon Gibbins – Director, UKCCSRC David Reiner – University of Cambridge
13.45-14.30 <i>Fitzpatrick Hall</i>	<b>Opening Keynote</b> Myles Allen – <i>Cumulative carbon and the case for mandatory CCS</i>
14.30-15.30 <i>Fitzpatrick Hall</i>	<b>Plenary session – CCS in the UK Energy Landscape</b> Chair: Myles Allen Jim Skea – <i>CCS and the wider energy innovation picture</i> Jim Watson – <i>CCS in an uncertain energy policy landscape</i>
15.30-16.15 <i>Conservatory</i>	<b>AFTERNOON BREAK</b>
16.15-16.30 <i>Fitzpatrick Hall</i>	<b>Plenary session - EPSRC CCS Research Update</b> Laura Sewell
16.30-17.20 <i>Fitzpatrick Hall</i>	<b>Plenary session – UKCCSRC Call 1 Project Updates</b> <i>Flexible CCS Network Development (FleCCSnet) project update from Hannah Chalmers, University of Edinburgh</i>  <i>CO<sub>2</sub> storage in Paleogene and Neogene Hydrogeological systems of the North Sea: preparation of an IODP scientific drilling bid project update from Sam Holloway, BGS</i>  <i>Determination of water solubility limits in CO<sub>2</sub> mixtures to deliver water specification levels for CO<sub>2</sub> transportation project update from Stephanie Foltran, University of Nottingham</i>
17.20-17.30 <i>Fitzpatrick Hall</i>	<b>Plenary session – EERA (European Energy Research Alliance) Update</b> Jonathan Pearce – BGS
17.30	<b>SESSIONS CLOSE</b>
19.00-19.45 <i>Conservatory</i>	<b>Networking reception</b>
19.45-23.00 <i>Cripps Hall</i>	<b>Networking dinner</b> Speaker: Jeremy Carey, 42 Technology – <i>Life Beyond CCS</i>

## Thursday 3<sup>rd</sup> April 2014

09.30-09.45  
Conservatory

ARRIVALS AND TEA AND COFFEE

### Technical Parallel Sessions

09.45-12.45

MORNING BREAK 11.00-11.30 in Bar/Conservatory

#### **ROOM CC43** *Capture – Solid Adsorption*

Chair: **Hyungwoong Ahn**, University of Edinburgh

Speakers:

**Tina Düren** – University of Edinburgh, *Molecular simulation of carbon capture in MOFs: challenges and pitfalls*

**Fredrik Glasser** – University of Aberdeen, *Carbon-negative cements*

**Hao Liu** – University of Nottingham, *CO<sub>2</sub> capture in NGCC power plants and from ambient air by solids adsorbent looping technology*

**Colin Snape** – University of Nottingham, *Performance enhanced activated spherical carbon adsorbents for CO<sub>2</sub> capture*

**Joe Wood** – University of Birmingham, *Studies of hydrotalcite clays for CO<sub>2</sub> adsorption*

#### **ROOM – FITZPATRICK HALL** *Storage – Monitoring and Verification*

Chair: **Andy Chadwick**, BGS

Speakers:

**Branko Bijeljic** - Imperial College London, *Pore-scale Imaging of capillary trapping and reactive transport in sandstone and carbonate rock*

**Giorgio Caramanna**- Heriot-Watt University, *The study of natural CO<sub>2</sub> emissions coupled with laboratory experiments to assess the geochemical impact of potential CO<sub>2</sub> seepage*

**David Jones** - British Geological Survey, *Refuting leakage allegations at Weyburn*

**Sam Krevor** - Imperial College London, *Observations of multiphase flow, trapping and reactive transport for the CO<sub>2</sub> brine system at reservoir conditions: Implications for capacity estimation and monitoring in the UK*

**Michael Steven** - University of Nottingham, *Potential environmental impacts of CO<sub>2</sub> leakage: results from the ASGARD facility*

#### **ROOM - DD47** *CCI – Effects of Impurities*

Chair: **Hannah Chalmers**, University of Edinburgh

Speakers:

**Andy Brown** – Progressive Energy, *The effects of impurities in CO<sub>2</sub> and the work of the EC IMPACTS Programme*

**Antonin Chapoy** – Heriot-Watt University, *Impact of impurities on thermophysical properties and dehydration requirements of CO<sub>2</sub>-rich systems in CCS*

**Sergey Martinov** – University College London, *Overview of CO<sub>2</sub>QUEST: Techno-economic assessment of CO<sub>2</sub> quality effect on its storage and transport*

**Julia Race** – Newcastle University, *MATTRAN project: Impact of impurities on CO<sub>2</sub> specification or impact of impurities on hydraulic modelling and pipeline design*

**David Vega-Maza** – University of Aberdeen, *Low-temperature VLE and SVLE measurements on mixtures of CO<sub>2</sub> + H<sub>2</sub> binary mixtures*

## **ROOM - DD48 CCI – Process Engineering**

Chair: **Mathieu Lucquaiud**, University of Edinburgh

Confirmed presenters:

**Carolina Font Palma** – University of Leeds, *Oxyfuel Power Plant with Novel CO<sub>2</sub> Separation and Compression Technology*

**Eric Fraga** – University College London, *Efficient computational modelling for integrated power plant design*

**Niall Mac Dowell** – Imperial College London, *Dynamic modelling and analysis of a coal fired power plant integrated with post-combustion CO<sub>2</sub> capture process*

**Evgenia Mechleri** – Imperial College London, *A new control strategy for the optimal operation of a gas-fired power plant with post-combustion*

**Meihong Wang** – University of Hull, *Modelling and simulation of Intensification absorber*

<b>12.45-13.45</b> <i>Cripps Hall</i>	<b>NETWORKING LUNCH</b>
<b>13.45-15.00</b> <i>Fitzpatrick Hall</i>	<b>Plenary session – Challenges Facing CCS</b> Chair: <b>Baroness Bryony Worthington</b>  <b>David Cope</b> - <i>Communicating CCS</i> <b>Angela Whelan</b> - <i>Mobilising private sector capital for CCS in the UK</i> <b>David Santillo</b> - <i>CCS in sub-seabed geological formations - Evolution of regulations under the London Protocol and ongoing concerns</i>
<b>15.00-15.45</b> <i>Fitzpatrick Hall</i>	<b>Closing Keynote</b> <b>Baroness Bryony Worthington</b>
<b>15.45</b>	<b>MEETING CLOSE</b>

## **Plenary Speakers**

**Myles Allen** - Professor of Geosystem Science, University of Oxford

**David Cope** – Cambridge University and Doshisha University, Kyoto

**David Santillo** - Honorary Research Fellow (Greenpeace), University of Exeter

**Jim Skea** – RCUK Energy Strategy Fellow

**Jim Watson** – Research Director, UKERC

**Angela Whelan** – CEO, Ecofin Foundation

**Baroness Bryony Worthington** – Labour Peer, Shadow Spokesperson (Energy and Climate Change)

## **POSTERS**

Posters will be presented in the **Conservatory**