



E-Futures

E-Futures Autumn Conference Agenda *Challenges to a Sustainable Energy Future*



The
University
Of
Sheffield.

Day 1- 19th September 2012
Halifax Hall Conference Centre, Sheffield

Sharman Room

Middleton Room

09:30	Coffee & Registration	
10:00	Welcome: Prof. Geraint Jewell	
10:10	Philip Beer , Director Clean Energy Europe, Linde AG, <i>'Carbon capture and storage technologies - a Linde view'</i>	
10:50	GaAsBi: Material growth and characterisation, Robert Richards	Sampling methods and Emission Monitoring in Post Combustion Carbon Capture Plants, Goudarz Poursharif
11:05	GaAsBi: device characteristics, Chris Hunter	CCS Technologies: Good Practices in Public Communication, Aimie Hope
11:20	TEM analysis of nanowires for PV applications, Andrew Foster	Treatment of wastewater from an amine-based carbon capture plant, Richard Smith
11:45	Coffee Break	
12:00	A parametric design study of pulse detonation engine geometry promoting deflagration to detonation transition, Jonathan Knapton	Optical studies of semiconductor nanowires for PV applications, John Bradley
12:15	Power Curve Measurements of Locally Manufactured Small Wind Turbines, Jon Leary	Organic Photovoltaics: Device Fabrication using crude PCDTBT, Alex Barrows
12:30	Biologically inspired catalysts for the conversion of methane to methanol, Sam Ring	Development of In-Situ Raman Spectroscopy on Electrolysis Cells, Elliot Carrington
12:45	Tidal Stream Power Collection - Rectification to a Common DC-Bus, Shoan Mbabazi	Nanostructured battery materials for mobile energy storage, Qasid Safir
13:00	Lunch	
14:00	David Dodd , Team Leader - Marine, Energy and Nuclear Strategic Research , Rolls-Royce Strategic Research Centre , <i>'The Alternative Fuels Challenge - a Rolls-Royce Perspective'</i>	
14:30	High Efficiency Non-radiative Energy Transfer for Hybrid White LEDs, Rick Smith	Oxyfluoride Substitution in Lithium Battery Materials, Rory Campbell
14:45	Polymers for hydrogen energy applications, Laura Platt	Investigating methods of low-level tritium measurement to support future energy production in fusion power plants, Jonathan Shimwell
15:00	Synthesis, Characterization and Electrochemical Properties of Mn/Co Substituted Pyrophosphate $\text{Li}_2\text{Fe}_{1-y}\text{M}_y\text{P}_2\text{O}_7$ (M=Mn, Co) for Li-Ion Batteries, Kuang-Che Hsiao	Metal-organic frameworks: novel ligands and synthesis, James Lloyd
15:30	Flash poster Presentations followed by drinks reception	
17:00	Close	

Day 2- 20th September 2012

Sharman Room		Middleton Room	Ennis Room
09:30	Coffee & Registration		
10:00	Dr Dominic Emery, Chief Development Officer for BP Alternative Energy, <i>‘Investing in renewable energy - BP's Alternative Energy experience’</i>		
10:35	Window use in single person offices: do occupants control personal ventilation to provide adequate IAQ, Adorkor Bruce	Vegetation changes associated with small scale hydropower in the peaks, Emma Ireland	Microalgae for biofuel production, Supatchalee Sophonthammaphat
10:50	The Energy Performance Gap of Non-Domestic Buildings, Holly Castleton	Hydropower in Alpine Regions: Future Changes and Ecological Impacts, James Douglas	The future for farming? Genetic modification of rice and sugar beet to boost useful biomass yields, Rachel Thorley
11:05	How Are Interpretations of Sustainability Influencing the Development of New Low Carbon Settlements? Joanne Oldfield	Modelling wind turbine performance for unsteady wind, Timinyo Owei	Can the manipulation of PH enhance biomass crop growth on contaminated land? Chris Hepworth
11:20	Coffee Break		
11:35	Optimising solar thermal panel use, James Williams	Ground Energy – Visualisation of heat transfer in thermal piles, Nicola Lazenby	Sustainable Youlgrave - Difficulties faced when introducing new energy technologies in agriculture, Rob Raine
11:50	Analysis of algal lipid composition using Nile Red fluorescence, Krys Bangert	Life cycle assessment of solar thermal systems for zero carbon buildings, Donald Willey	Energy Access Ecosystems: measuring the health of energy services in the developing world, Jacob Gower
12:05	Economic integration of algal biofuel production with biological wastewater treatment using computational modelling, Philippa Uttley	Understanding Energy Use in University Buildings, Colin Whittle	Rail network modelling, Jonathan Goodwin
12:20	Proteomic investigation of microalgae for enhanced biofuels production, Emily Hounslow	Energy Storage in Sustainable Cities, Clare Stevenson	Simple factors affecting energy use in supermarkets, Martin Braun
12:35	Lunch		
13:30	Dr Omar Hadded, VP Commercial Operations & Marketing, Tata Motors, <i>‘Vehicle CO2 Emissions Reduction and Prime Mover Energy Options - A Tata Motors Perspective’</i>		
14:00	Mapping the vulnerability of commuters to oil shocks: a case study from Yorkshire and the Humber, Robin Lovelace	Green roofs and biodiversity: A case study of Sharrow School, Vi Nguyen	Mimicking the transformation of methane to methanol catalysed by methane monooxygenase, Ben Crozier
14:15	Encouraging pedal power: An evaluation of the University of Sheffield's Cycle Challenge initiative, James Uttley	Towards the intelligent energy management of buildings, Philip Carpenter	Optimisation of the diesel production in Fischer–Tropsch hydrocracking using kinetic modelling, Charlotte Bjork
14:30	Sustainable Biomass As An Alternative To Coke, Towards Low Carbon Steel Making, Nicola Hurst	Project Deep Carbon: Muon tomography to measure carbon sequestration, Nicola Austen	Aluminium surface treatments for increased corrosion resistance to thermal accumulator phase change materials, Liam Chisman
14:45	---	Sustainable refurbishment: a case study of the Crookesmoore building, Faisal Abubakar	---
15:00	Carbon Challenge presentation & prize giving		
15:20	Close		

Cohort 2 poster presentations

1. Fluid-Structure Interactions of Tidal Stream Turbine Blades Manufactured with Bio-Inspired Internal Structure, Cora Fung
2. Development of porous metals to improve the efficiency of Stirling engines, Erardo Elizondo Luna
3. Presence of Schottky barrier between ZnO and thin film silicon materials, Asiel Corpus Mendoza
4. Air Processed Organic Photovoltaics, Ed Bovill
5. Understanding Photosynthesis: super resolution microscopy to study magnesium chelatase, Dawn Scott
6. Advanced thermal modelling and management techniques for next generation electric vehicles, Jonathan Davidson
7. Solar Hydrogen Production from III-Nitride Materials, Jonathan Benton
8. Modelling of the Home Area Network for smart meter applications, Christopher Davenport
9. Non-local excitation of LH2 using silver nanowire waveguides, Scott Dufferweil
10. Water neutrality at Port Talbot, Tim Balhatchett
11. Physical and Ecological Impacts of 'Run of the River' Micro Hydropower in the Peak District National Park, David Anderson
12. Large Tidal Arrays in the UK, Stuart Walker
13. Sustainability Impact Assessment of UK Air Travel: A Stakeholder Approach, Andrew Timmis
14. Modulating charge recombination using mid-IR perturbation , Milan Delor
15. Development of a Novel Feeding System for Pressurised Gasification Processes, James Craven
16. Platinum (II) complexes for light harvesting applications, Stuart Archer
17. Tefcel issues of logistics and supply chain management in oil and gas industry, Seyed Ebrahimi
18. Optimising sustainability and security of renewable energy systems , Huw Birch
19. Dual-three phase permanent magnet machines with phase-group winding and auxiliary teeth, Zongxi Fang
20. Preliminary fuel test using the Shell Pre-Mix Burner, Emamode Ubogu
21. Optimising Green Roof Substrate for Specific Services and Climates, Thomas Young



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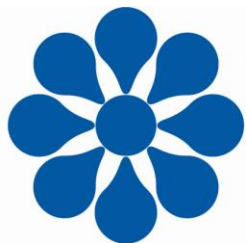
About E-Futures

E-Futures is a Doctoral Training Centre training a new generation of scientists and engineers to address the challenges inherent in making the transition to a sustainable energy future. Students receive a formal programme of taught material to develop and enhance their technical interdisciplinary knowledge and broaden their set of skills, alongside developing individual specialisations through research projects.

E-Futures is part of a national network of energy Doctoral Training Centres

To register for the conference, please email neil.lowrie@sheffield.ac.uk , tel. 0114 222 5506

Maps and directions to Halifax Hall are available on our [website](#)



Energy CDT Network

