

Day 1: Tuesday, 20th March

11:00	Arrival/Registration/Tea and Coffee	
12:00	Conference Opening and Lunch Location: Event Space/Atrium	
12:30	Conference Opening Plenaries: Phil Taylor (Newcastle University): Welcome and Introduction Peter Littlewood (University of Chicago): Faraday's Challenge Francisco Jose Carranza Sierra (Nissan): How Electric Vehicles, Distributed Generation and Storage will Shape the Energy of Tomorrow Location: Lecture Theatre	
13:45	Parallel Session 1a: Thermal, Mechanical and Thermochemical Energy Storage Charlotte Adams (Durham University) Developing a Legacy: Heat Storage of the UK's Abandoned Coal Mines Yan Zhang (University of Birmingham) Formulation of Microcapsules for Cold Energy Storage Sidra Rama (University of Birmingham) Microencapsulation of AMP for CO ₂ Capture Rachel Woods (Swansea University) Thermochemical Heat Storage Materials—Investigating the Discharge Performance Flash Poster Presentation: Angela Mutumba (University of Leeds) Design and Development of a Direct Injection System for Cryogenic Engines Gillmore Wellio (University of Birmingham) Ice Nucleating Efficiency of Self-Assembled Monolayers on Gold Substrates Richard Nayak-Luke (University of Oxford) Quantifying the Need for Energy Storage Using the Storage Duration Index (SDI) Session Chair: Tony Roskilly/Yulong Ding Location: Lecture Theatre	Parallel Session 1b: Electrochemical Energy Storage Ifan Stephens (Imperial College London) Efficient Energy Conversion and Chemical Synthesis Through Improved Electrocatalysis Juhun Shin (University College London) Carbon Quantum Dots as Metal Free Oxygen Electrocatalysts for Rechargeable Metal Air Batteries Magdelina Titirici (Queen Mary University of London) Lignin-Derived Flexible Electrodes for Supercapacitors Robert Dryfe (The University of Manchester) 2D Materials for High Performance Supercapacitors Stratos Chatzinikolaou (University of Oxford) Improved Reliability and Balancing Performance Using Power Electronics Enhanced Battery Packs Xiao Hua (Imperial College London) Detecting Polysulfide Shuttle in Lithium-Sulphur Batteries with Differential Thermal Voltammetry Session Chair: Harry Hoster/Haris Patsios Location: Event Space

15:15	Tea/Coffee	
15:45	<p style="text-align: center;">Parallel Session 2a: Thermal, Mechanical and Thermochemical Energy Storage</p> <p>Keynote: Sara Walker (Newcastle University): Adaptive thermal comfort and the potential role of buildings as thermal stores: A case study</p> <p>Zhiwei Ma (Newcastle University) Electricity and Low Grade Heat Co-Storage Using Ammonia Based Thermochemical Sorption</p> <p>Binjian Nie (University of Birmingham) A Novel PCM Air Cold Thermal Energy Storage Device— Numerical Analysis and Experimental Validation</p> <p>Andrew Smallbone (Newcastle University) The Levelised Costs of Energy Storage Technologies in Context with Pumped Heat Energy Storage</p> <p>James Moore (University of Sheffield) Modelling Melting of Organic Phase Change Materials for Household Heat Storage</p> <p>Session Chair: Seamus Garvey/Sara Walker</p> <p style="text-align: center;">Location: Lecture Theatre</p>	<p style="text-align: center;">Parallel Session 2b: Storage for Future Mobility</p> <p>Keynote: Phil Blythe (DfT): ‘The Transport—Energy Nexus’ Challenges and Opportunities</p> <p>Keynote: Gregory Poilasne (Nuvve): V2G Services Roll Out Around the World</p> <p>Andrew Jenkins (Newcastle University) Operational Cost of a Virtual Energy Storage System of Aggregated Smart Charging Electric Vehicles</p> <p>Hannes Kruegr (Southampton University) Vehicle to Grid (V2G) Communications Strategy</p> <p>Ian Campbell (Imperial College London) Optimising Lithium-ion Cell Design for Plug-in Hybrid and Battery Electric Vehicles</p> <p>Jake Entwistle (University of Sheffield) The Application of Magnesiothermic Reduction of Silica to Produce Porous Silicon for Lithium-ion Batteries</p> <p>Sandy Kerr (University of Warwick) Battery Ageing Study for a Hybrid Bus</p> <p>Jorge Varela Barreras (University of Oxford) Smart Balancing Systems: Towards Virtually Ideal Li-ion Battery Packs</p> <p>Session Chair: Phil Blythe/Gregory Poilasne</p> <p style="text-align: center;">Location: Event Space</p>
17:15	Drinks Reception and Poster Session Location: Event Space/Atrium/Cafe	

Day 2: Wednesday, 21st March

8:45	<p style="text-align: center;">Arrival – Tea/Coffee Event Space/Atrium</p>	
9:15	<p style="text-align: center;">Conference Opening and Plenaries Sally Fenton (Department for Business, Energy & Industrial Strategy): Title TBC Tim Hughes (Siemens): Energy Storage Beyond Li-ion : From new chemistry to Digitalisation Lecture Theatre</p>	
10:15	<p style="text-align: center;">Lab Tours/Tea and Coffee</p>	
11:30	<p>Parallel Session 3a: Electrochemical Energy Storage</p> <p>Plenary: Adam Whitehead (redT): Stack Design Philosophy for the VRFM</p> <p>Dhammika Widanalage (University of Warwick) Battery R&D Challenges for the Automotive Industry</p> <p>Duo Zhang (University of Surrey) Electrode Design for Redox Flow Batteries by Using a Three Dimensional Lattice Boltzmann Model</p> <p>Harry Hoster (Lancaster University) Zinc Oxygen Cells</p> <p>Iain Aldous (The University of Liverpool) SHINing Light on Non-Aqueous</p> <p>Flash Poster Presentations: Marcin Orzech (Swansea University) Novel Dual Carbon Sodium-ion Battery with Excellent Long Cycling Life</p> <p>Qilei Song (Imperial College London) Next Generation Ion Selective Microporous Polymer Membranes in High Performance Redox Flow Batteries for Grid Energy Storage</p> <p>Session Chair: Nigel Brandon/TBC</p> <p style="text-align: center;">Lecture Theatre</p>	<p>Parallel Session 3b: Energy Storage in the Built Environment</p> <p>Andrew Pimm (University of Leeds) Increasing the Value of Distributed Energy Storage and Demand Response through Capacity Charges</p> <p>Onyema Nduka (Imperial College London) A Holistic Evaluation of the Impacts of Harmonics</p> <p>Timur Yunusov (University of Reading) Analysis of Forecasts and Control Methods for Battery Energy Storage Devices on LV Distribution Networks</p> <p>Mohammad Royapoor (Newcastle University) Building as a Power Plant</p> <p>Michael Barclay (Swansea University) Experimental and Numerical Investigations Discrete Heat Storage Materials</p> <p>Session Chair: Yvonne Huebner/Haris Patsios</p> <p style="text-align: center;">Event Space</p>
13:00	<p style="text-align: center;">Lunch</p>	

<p>14:00</p>	<p>Parallel Session 4a: Policy and Economics of Storage in Energy Systems</p> <p>Chris Dent (The University of Edinburgh) Integration of Storage into Electricity Capacity Markets</p> <p>Christopher Jones (The University of Manchester) Evaluating the Environmental Performance of Energy Storage Options in Decarbonising Energy Systems</p> <p>Daniel Murant (University of Birmingham) Decentralised Energy Storage in the UK</p> <p>Giorgio Castagneto-Gissey (University College London) Subsidising Energy Storage to Reduce the Future Cost of Electricity</p> <p>Anu Antony (Newcastle University) Application and Optimization of PVT with Different Energy Storage</p> <p>Diarmid Roberts (The University of Sheffield) Analysis of the Material Costs of Redox Flow Batteries</p> <p>Session Chair: Sara Walker/Dale Geach</p> <p>Lecture Theatre</p>	<p>Parallel Session 4b: Operation and Control: From Battery Management to Energy Management</p> <p>Carlos Pastor-Fernandez (University of Warwick) Problems and Challenges Towards On-Board Li-ion Battery Diagnosis</p> <p>Jorn Reniers (University of Oxford) Optimal Control of Grid Connected Lithium-ion Batteries to Maximise Revenue and Minimise Degradation</p> <p>Harry Hoster (Lancaster University) Point Defects in Lithium-ion Cathodes</p> <p>Nick Good (The University of Manchester) Techno-Economic Assessment of Storage Enabled Multi-Energy Districts Providing Multiple Services</p> <p>Yara Kahwaja (Newcastle University) Supervision Control and Energy Management Strategies for Grid-Connected Microgrids Using Finite Automata</p> <p>Seamus Garvey (University of Nottingham) On Real and Synthetic Inertia</p> <p>Session Chair: Dan Rogers/David Howey</p> <p>Event Space</p>
<p>15:30</p>	<p>Tea/Coffee</p>	
<p>16:00</p>	<p>Parallel Session 5a: Gas Storage (Including Hydrogen)</p> <p>Hamid Hosseini (Newcastle University) Techno Economic Environmental Analysis of Integrated Gas and Electricity Distribution Networks with Energy Storage</p> <p>Julien Mouli-Castillo (The University of Edinburgh) Inter-seasonal Compressed Air Energy Storage using Saline Aquifers</p> <p>Jon Gluyas (Durham University) Humbly Grove Gas Storage Site—Does the Earth Move</p> <p>Evan Passaris (Atkins) Maximum Operating Pressure for Underground Gas Storage Caverns</p> <p>Sally Hewlett (Cardiff University) Storage of Ammonia for Energy (SAFE)</p> <p>Session Chair: Keith Owen/TBC</p> <p>Lecture Theatre</p>	<p>Parallel Session 5b: Demonstration and Commercial Deployment</p> <p>Keynote: Jim Cardwell (Northern Powergrid): Title TBC Keynote: Jonathan Radcliffe (University of Birmingham): Title TBC</p> <p>Gareth Thomas (Cardiff University) Public Attitudes to Energy Storage Technologies</p> <p>Hugh Sutherland (ZapGo Ltd) Zap & Go</p> <p>John Nwobu (Newcastle University) Energy Management of Lithium Flow Hybrid Energy Storage Systems</p> <p>Robert Sutton (Swansea University) Upscaling of a Thermochemical Storage System for Building Integration</p> <p>Session Chair: David Greenwood/Jonathan Radcliffe</p> <p>Event Space</p>
<p>17:30</p>	<p>Close</p>	

Conference Dinner: BALTIC Centre for Contemporary Art

18:30	Drinks Reception
19:00	Dinner

Day 3: Thursday, 22nd March

08:30	Registration (Tea/Coffee) Event Space/Atrium	
09.00	Outputs from the Energy Storage Supergen Hub and Future Funding Opportunities Lecture Theatre	
10.30	Tea/Coffee Event Space/Atrium	
11:00	<p>Parallel Session 6a: Design, Planning and Integration of Storage in Energy Systems</p> <p>Keynote: Eric Brown (Energy Systems Catapult): Title TBC</p> <p>David Howey (University of Oxford) Machine Learning Approaches for Battery Degradation Prediction</p> <p>Graeme Hawker (Strathclyde) Fabric Integrated Thermal Storage– Unlocking Local Energy Systems</p> <p>Jacqueline Edge (Imperial College London) The Role and Value of Energy Storage in Enhancing Safety</p> <p>Yi Cheng (University of Birmingham) The Value of Thermal Storage in Decarbonising the Electricity Industry</p> <p>Ilaria Di Fresco (University of Birmingham) Potential Adoption of Thermal Energy Storage for Renewable Energy Balancing</p> <p>Session Chair: Haris Patsios/Phil Taylor</p> <p>Location: Lecture Theatre</p>	<p>Parallel Session 6b: Policy and Economics of Storage in Energy Systems</p> <p>Oliver Schmidt (Imperial College London) The Impact of Electricity Storage on CO2 Emission in the British Power Sector</p> <p>Daniel Scamman (University College London) Identifying Optimum Roles for Energy Storage Technologies with the Wider Energy System</p> <p>Sarah Mander (The University of Manchester) Enabling Energy System Change</p> <p>Thomas Gradjean (University of Warwick) Safer and More Environmentally Friendly Method to Transport Lithium Ion Batteries</p> <p>Chunping Xie (University of Birmingham) A Techno-Economic Comparison Among Decoupled Energy Storage Systems in the UK</p> <p>Session Chair: Seamus Garvey/Chris Dent</p> <p>Location: Event Space</p>
12:30	Closing Remarks/Plenary Nigel Brandon (Imperial College) Lecture Theatre	
12:45	Close	

