

## European Solar and Energy Storage Solutions

# Birmingham centre for energy storage Bermuda

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**12.8V 100Ah**



### Projects

A novel air-conditioning technology based on energy storage for high-speed trains. Lead organisation: University of Birmingham. Funder: CSR QINGDAO SIFANG CO LTD. Project duration: October 2015 - June 2017. Key phase change-based energy storage technologies for effective renewable energy utilisation. Lead organisation: University of Birmingham

### Birmingham Centre for Energy Storage Celebrates 10th ...

Over the past ten years, under the leadership of Centre Director Professor Yulong Ding, BCES has developed several cutting-edge innovations. One of its earlier successes, the Liquid Air Energy Storage technology, stores excess wind and solar energy so that it can be made available on the grid when required.



### MODES Group

The Multiscale Optimization and Design for Energy Storage (MODES) group led by Dr Adriano Sciacovelli strive to propose innovative solutions for energy technologies to tackle real-world problems. The activities of the MODES group include modelling, numerical simulations and experimental work. The primary focus of the team is thermal and

### Supergen Network+

Supergen Network+. We are an integrated, forward-looking platform that supports, nurtures the expertise of the energy storage community, disseminating it through academia, industry and policy, at a particularly important time when decisions on future funding and research strategy are still being resolved.



**TAX FREE** 

### ENERGY STORAGE SYSTEM

**Product Model**  
HJ-ESS-215A(100KW/215KWh)  
HJ-ESS-115A(50KW/115KWh)

**Dimensions**  
1600\*1280\*2200mm  
1600\*1200\*2000mm

**Rated Battery Capacity**  
215KWH/115KWH

**Battery Cooling Method**  
Air Cooled/Liquid Cooled



## Birmingham Centre for Energy Storage

The Birmingham Centre for Energy Storage (BCES) brings together research expertise from across the University to identify and address key energy storage challenges and their solutions. Through our research, BCES draws on the expertise and excellence from academia, research institutes and industry. The Centre's integrated approach across

## Birmingham Centre for Energy Storage

Birmingham Centre for Energy Storage. Engineering and Physical Sciences; Chemical Engineering; International Forum on DC Technologies and Renewable Energy Integration, Birmingham, 2019. Zhang, X.-P. (Chair) 5 Feb 2019. Activity: Academic and Industrial events > Conference, workshop or symposium.



## Birmingham Centre for Energy Storage Celebrates 10th ...

Today, the research groups under the Centre tackle a wide range of themes, including energy conversion and storage materials; thermal and thermochemical energy conversion and storage

devices and systems; cross ...



## BIRMINGHAM CENTRE FOR FUEL CELL AND HYDROGEN ...

which has placed Birmingham at the forefront of this endeavour. BIRMINGHAM CENTRE FOR FUEL CELL AND HYDROGEN RESEARCH The Birmingham Energy Institute is the focal point for the University, and its national and international partners, to create change in the way we deliver, consume and think about energy. The Institute harnesses



## BIRMINGHAM CENTRE FOR ENERGY STORAGE

Established in 2013, the Birmingham Centre for Energy Storage brings together research expertise from across the University to drive innovation from the laboratory to market. The Centre received two strands of funding: £12m for cryogenic energy storage and £1m for thermal energy storage, as part of a £15m

## Carnot battery in facilitating sector coupling to achieve net-zero

Birmingham Centre for Energy Storage (BCES) of the University of Birmingham is a cross-campus

centre with its hub in the School of Chemical Engineering. BCES is part of Birmingham Energy Institute (BEI) and brings together researchers from across the University to drive innovation in clean energy conversion and storage for decarbonising energy



## Birmingham Centre for Energy Storage (BCES)

The 350kW/2.5MWh pilot plant for liquid air energy storage integrated with heat and cold storage; Lab and pilot-scale facilities for thermal energy storage materials and modules fabrication using an extrusion-based facility for low to ...



## Birmingham Centre for Energy Storage

SIMBA Sodium-Ion and sodium Metal BAtteries for efficient and sustainable next-generation energy storage. Kendrick, E. (Principal Investigator) & Slater, P. (Co-Investigator) European Commission. 1/01/21 -> 30/06/24. Project: EU



## Birmingham Centre for Energy Storage (BCES)

The 350kW/2.5MWh pilot plant for liquid air energy storage integrated with heat and cold storage; Lab and pilot-scale facilities for thermal energy storage materials and modules fabrication using an extrusion-based facility for low to medium temperature composite phase change materials (up to 0.5 ton/day) and

composite thermochemical material



## Meet the Team

The Birmingham Centre for Energy Storage (BCES) convenes researchers from across the University of Birmingham to drive innovation from the laboratory to market. Established in 2013 with a £12 million investment from UK industry and the Engineering and Physical Sciences Research Council (EPSRC), the Centre has grown significantly over the past



## Birmingham Centre for Energy Storage

BCES of the University of Birmingham brings together research expertise from across the University to drive innovation from the laboratory to market. It recognizes how energy storage, particularly thermal and cryogenic energy ...

## Birmingham Centre for Energy Storage Celebrates 10th ...

Today, the research groups under the Centre tackle a wide range of themes, including energy conversion and storage materials; thermal and thermochemical energy conversion and storage devices and systems; cross-length-scale modelling, energy conversion and storage process simulations and optimisation; industrial

decarbonisation through in



## Professor Yulong Ding

Professor Ding was awarded IChemE Clean Energy Medal (2021) and is a receiver of IChemE Global Awards in three categories of Energy, Research Project and Outstanding Achievement Awards in 2019; Distinguished Energy Storage Individual Award (Beijing International Energy Storage and Expo, 2018); Cryogenic Energy Storage Research Chair Award (Royal Academy ...



## Birmingham Centre for Energy Storage

BCES of the University of Birmingham brings together research expertise from across the University to drive innovation from the laboratory to market. It recognizes how energy storage, particularly thermal and cryogenic energy-based technologies, coupled with appropriate policy, could play an important role in delivering an integrated energy system.



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energy storage challenges and their solutions. Through our research, BCES draws on the expertise and excellence from academia, research institutes and industry.



## Our people

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## Birmingham Centre for Energy Storage

Dive into the research topics where Birmingham Centre for Energy Storage is active. These topic labels come from the works of this organisation's members. Together they form a unique fingerprint. Sort by Weight Alphabetically Engineering & Materials Science. Thermal energy 100%. Phase change



## Birmingham Centre for Energy Storage

Birmingham Centre for Energy Storage;  
Mechanical Engineering - Professor of Mechanical Engineering; Person: Academic. 2007 2024.  
Yulong Ding. Birmingham Energy Institute - Chamberlain Chair in Chemical Engineering;

Birmingham Centre for Energy Storage; Person:  
Academic. 2001 2024. Yan Hong.



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