

Day 1 Forum-3 2019/05/18-19

Date: 05/18, 13:30-18:00

Venue: China National Convention Center, Beijing

Organizer: International Coalition for Energy Storage and Innovation, China Energy Storage Alliance, University of Ontario, Institute of Technology, World Society of Sustainable Energy Technologies

Chairs:

Haisheng Chen, IET, Chinese Academy of Sciences, China

Ibrahim Dincer, UOIT, Canada

Co-Chairs:

Yulong Ding, Birmingham University, UK

Xinrong Zhang, Peking University, China

Gary Yang, UET, Founder, USA

Zhenhua Yu, China Energy Storage Alliance, China

Committee Members:

Christos Markides, Imperial College London, UK

Xuejie Huang, IP, Chinese Academy of Sciences, China

Mehmet Akif Ezan, Dokuz Eylul University, Turkey

Xiaokang Lai, China Electric Power Research Institute, China

Yuhiro Iwamoto, Nagoya Institute of Technology, Japan

Hong Li, IP, Chinese Academy of Sciences, China

Trygve Eikevik, NTNU, Norway

Xianfeng Li, DICP, Chinese Academy of Sciences, China

Andre Thess, German Aerospace Center, Germany

Zhaoyin Wen, SIC, Chinese Academy of Sciences, China

Paul Webley, University of Melbourne, Australia

Zongping Shao, Nanjing Tech University, China

Xiangli Xi, Chemical Industry Press, China

Yaodong Wang, Newcastle University, UK

Toru Okazaki, Institute of Applied Energy, Japan

Liye Xiao, IEE, Chinese Academy of Sciences, China

Eric Loth, University of Virginia, USA

Huamin Zhang, DICP, Chinese Academy of Sciences, China

Timothy E. Hopkins, The Chemours Company, USA

Xingjian Dai, Tsinghua University, China

Xiaolin Wang, Single Buoy Moorings INC, Netherland

Zifeng Ma, Shanghai Jiaotong University, China

Jeong Kyun Seo, KAIST, Korea

Xisheng Tang, Shuangdeng Group, China

Tianbiao Liu, Utah State University, USA

Na Zhang, IET, Chinese Academy of Sciences, China

Jihong Wang, The University of Warwick, UK

Yiji Lu, Zhejiang University, China

Forum 3 : The 1st World Energy Storage Conference

Host: Haisheng Chen

13:30-14:00	Opening ceremony
	Host: Xinrong Zhang & Peter Duffy
14:00-14:25	Plenary: Physical energy storage research & innovation – a UK perspective - Yulong Ding, Birmingham University, UK
14:25-14:50	Plenary: Progress and challenge of flow battery technologies - Huamin Zhang, DICP, China
14:50-15:10	Keynote: Energy storage in the EU: update on the latest market and policy developments - Clerens Patrick, European Association for Storage of Energy, Belgium
15:10-15:30	Keynote: Low cost energy storage technologies in future - Hong Li, IP, China
15:30-15:50	Keynote: Energy storage in Ireland and what we have learned - Peter Duffy, Irish Energy Storage Association, Ireland
15:50-16:00	Tea break
	Host: Gary Yang & Clerens Patrick
16:00-16:25	Plenary: Progress in advanced compressed air energy storage system

	- Haisheng Chen, IET, China
16:25-16:45	Keynote: CO ₂ thermodynamic system for energy storage - Xinrong Zhang, Peking University, China
16:45-17:05	Keynote: Molten salt corrosion and control for energy systems - Jinsuo Zhang, Virginia Tech, USA
17:05-17:15	Presentation: Inward melting of water inside annulus exposed to cross-flow - Mehmet Akif Ezan, Dokuz Eylül University, Turkey
17:15-17:25	Presentation: Advancement of Nafion™ Membrane for Renewable Energy Applications - Ray Yang, The Chemours Company, USA
17:25-17:35	Presentation: Solar drying of food using a phase change material in Khartoum Sudan - A A A Abuelnuor, Sudan University of Science and Technology, Sudan
17:35-17:45	Presentation: Synthesis and characterization of D-LA-PAPCM/EG PCM used for indoor energy storage floor unit - Qian Xu, University of Science and Technology, China
17:45-17:55	Presentation: Full spectrum absorption of CuO mesoporous nanosheets for direct absorption solar collectors - Hongyun Zhang, Shanghai Polytechnic University, China
18:00	Dinner

Day 2 Forum-3 2019/05/18-19

Date: 05/19, 08:30-18:00

Venue: China National Convention Center, Beijing

Forum 3 : The 1 st World Energy Storage Conference	
Host: Andre Thess & Yaodong Wang	
8:30-8:55	<p>Plenary: Commercialization and deployment of emerging energy storage technologies in the US: status and challenges</p> <ul style="list-style-type: none"> - Gary Yang, UniEnergy Technologies, USA
8:55-9:15	<p>Keynote: Opportunity and challenge of sodium ion battery technology for energy storage application</p> <ul style="list-style-type: none"> - Zifeng Ma, Shanghai Jiaotong University, China
9:15-9:35	<p>Keynote: Opportunities and challenges of emerging redox flow batteries for energy storage</p> <ul style="list-style-type: none"> - Tianbiao Liu, Utah State University, USA
9:35-9:55	<p>Keynote: Zinc based flow batteries for energy storage</p> <ul style="list-style-type: none"> - Xianfeng Li, DICP, China
9:55-10:15	<p>Keynote: High safety energy storage technologies with solid electrolytes</p> <ul style="list-style-type: none"> - Zhaoyin Wen, SIC, China
10:15-10:35	<p>Keynote: The 100kWh Na-ion battery energy storage system for stationary application</p> <ul style="list-style-type: none"> - Yongsheng Hu, IP, China
10:35-10:45	Tea break
Host: Tianbiao Liu & Zhaoyin Wen	
10:45-11:10	<p>Plenary: Carnot Batteries for Terawatt Scale Electricity Storage and for the Decarbonization of Coal Fired Power Plants</p> <ul style="list-style-type: none"> - Andre Thess, Garmen Aerospace Center, Germany
11:10-11:30	<p>Keynote: A Proposed Modelling and Optimization of Micro Solar Thermoelectric Generator Modules</p> <ul style="list-style-type: none"> - Jianqiang Li, IPE, China
11:30-11:40	<p>Presentation: Mitigating discharge capacity decay of a vanadium redox flow battery with asymmetric multiple addition strategy</p> <ul style="list-style-type: none"> - Mengyue Lu, Xi'an Jiaotong University, China
11:40-11:50	<p>Presentation: Parametric study on thermal management of lithium ion battery module using phase change material</p> <ul style="list-style-type: none"> - Rui Huang, Zhejiang University, China
11:50-12:00	<p>Presentation: Designing of (MgH₂ + V₂O₅) metal hydride based thermal energy storage system for effective solar baking</p> <ul style="list-style-type: none"> - Iqra Ayub, Xi'an Jiaotong University, China
12:00-13:00	Buffet lunch
Host: Liang Wang & Christos Markides	
13:00-13:25	<p>Plenary: Thermoeconomic performance and system value of pumped thermal electricity storage</p> <ul style="list-style-type: none"> - Christos Markides, Imperial College London, UK
13:25-13:45	<p>Keynote: The development and trend of UK new energy technologies</p> <ul style="list-style-type: none"> - Yaodong Wang, Newcastle University, UK
13:45-14:05	<p>Keynote: The life cycle assessment of energy storage and its role in energy transition</p> <ul style="list-style-type: none"> - Xiaojin Zhang, Pau Scherrer Institute, Switzerland
14:05-14:25	<p>Keynote: Unbalanced mass flow and cyclic transient behavior of pumped heat electricity storage system using</p>

	packed bed TES - Liang Wang, IET, China
14:25-14:35	Presentation: Energetic and exergetic assessments of a solar-aided latent heat thermal energy storage system - Mehmet Akif Ezan, Dokuz Eylül University, Turkey
14:35-14:45	Presentation: The optimization on the compression charging process based on the expansion discharging characteristic requirement using exergy analysis - Yang He, Xi'an Jiaotong University, China
14:45-14:55	Presentation: Sector-level energy consumption in Pakistan from dominant sources and correlation with economic growth: evidence from long-run and short run - Abdul Rehman, Research Center of Agricultural-Rural-Peasants, Pakistan
14:55-15:05	Presentation: A review of metal hydrides thermal energy storage technology for concentrating solar power - Yang Liu, Xi'an Jiaotong University, China
15:05-15:15	Presentation: A proposed modelling and optimization of micro solar thermoelectric generator modules - Hend S. Atteya Allah, Alexandria University, Egypt
15:15-15:25	Presentation: Towards an improvement of effective thermal conductivity of PCM composites for thermal energy storage: an theoretical assessment - Tao Zhou, Shanghai Jiao Tong University, China
15:25-15:35	Presentation: Investigation on novel isothermal compressed air energy storage for renewable power generation - Gayathri Venkataramani, Anna University, India
15:35-15:45	Presentation: Experimental investigation of a thermal energy storage system using magnetic fluid and porous carbon - Licong Jin, Tsinghua University, China
15:45-15:55	Presentation: Effects of expansion ratio on unsteady flow in a scroll expander for micro-CAES system - Zhen Liu, Hubei Key Laboratory of Power System Design and Test for Electrical Vehicle, China
15:55-16:05	Presentation: Application in the electric driller micro grid system and experimental tests of the magnetically suspended flywheel energy storage array - Shusheng Li, Beijing Honghui Company, China
16:05-16:15	Presentation: Study of a shell-and-tube molten salt latent heat thermal energy storage under dynamic heat source - Zhi Li, Zhejiang University, China
16:15-16:25	Presentation: Integrating capillary loop heat pipe with PCM for the enhancement and adjustment of thermal convection - Yuqi Huang, Zhejiang University, China
16:25-16:35	Tea break
	Host: Xisheng Tang
16:35-16:55	Keynote: Cloud energy storage: concept, business model and key technologies - Chongqing Kang, Tsinghua University, China
16:55-17:15	Keynote: LiFePO ₄ battery system towards electricity storage - Jia Xie, Huazhong University of Science and Technology, China
17:15-17:35	Keynote: Energy storage committee, IEE PES - Xisheng Tang, IEE, China
17:35-18:00	Discussion - Xisheng Tang
18:00	Close