

Friday, 11 June 2021

9:00 – 10:25	Plenary Session P2 Chairperson:	
9:00 – 9:45	Plenary lecture PL2 100% Renewable smart energy systems <u>Henrik Lund</u> <i>Aalborg University, Denmark</i>	
Short break		
9:50 – 10:30	Morning session A6 Chairperson:	TES applications
9:50 – 10:10	Carnot-batteries and the decarbonization of coal fired power plants (#150) <u>Andre Thess</u> <i>German Aerospace Center, Germany</i>	
10:10 – 10:30	Demonstration of two latent heat storages for industrial solar process heat applications (#195) <u>Christoph Zauner</u> <i>AIT Austrian Institute of Technology, Austria</i>	
9:50 – 10:30	Morning session B6 Chairperson:	P2X applications
9:50 – 10:10	District cooling system optimization with distributed cold storage adopting power-to-cold: a case study on Norrenergi AB (#121) <u>Saman Nimali Gunasekara</u> <i>KTH Royal Institute of Technology, Sweden</i>	
10:10 – 10:30	Flexibility of refrigeration systems for grid balancing in Germany (#127) <u>Dana Laureen Schmidt</u> <i>Fraunhofer Institute for Environmental, Safety, and Energy Technology UMSICHT, Germany</i>	
9:50 – 10:30	Morning session C6 Chairperson:	Sensible materials
9:50 – 10:10	Chemisorption at solid-liquid interfaces as a mechanism for enhanced sensible energy storage in nanofluids (#172) <u>Ivan Carrillo-Berdugo</u> <i>University of Cadiz, Spain</i>	
10:10 – 10:30	Nanofluids study through infrared thermography and physico-chemical characterization (#157) <u>Adela Svobodova Sedlackova</u> <i>University of Barcelona, Spain</i>	
10:30 – 10:45	Participant networking / Break	



10:45 - 12:25	Morning session	A7	TES applications
	Chairperson:		
10:45 - 11:05	Commissioning of high temperature thermal energy storage for high power levels (#4) <u>Maike Johnson</u> <i>German Aerospace Center, Germany</i>		
11:05 - 11:25	Enhancing energy density of existing sensible thermal storage system with encapsulated PCM (#53) <u>Rok Koželj</u> <i>University of Ljubljana, Slovenia</i>		
11:25 - 11:45	Effect of fluid velocity on storage performance of medium temperature packed-bed thermal energy storage systems (#168) <u>Burcu Koçak</u> <i>Çukurova University, Turkey</i>		
11:45 - 12:05	Thermal high performance storages for electric bus heating - overview on the current state of development (#26) <u>Werner Kraft</u> <i>German Aerospace Center, Germany</i>		
12:05 - 12:25	An insight into challenges associate with seasonal storage in solar district heating systems (#192) <u>Mohamed Abokersh</u> <i>University of Rovira i Virgili, Spain</i>		

10:45 - 12:25	Morning session	B7	PCM materials
	Chairperson:		
10:45 - 11:05	Hybridisation of latent and thermochemical thermal energy storage: 3 in 1 thermal energy storage (#204) <u>Anabel Palacios Trujillo</u> <i>University of Birmingham, United Kingdom</i>		
11:05 - 11:25	Synthesis and characterization of microcapsules based on inorganic@PCM for thermal energy storage at low temperature applications (#193) <u>Teresa Aguilar</u> <i>University of Cadiz, Spain</i>		
11:25 - 11:45	Hierarchical macro-nanoporous metals for shape-stabilized phase change materials with high energy capacity, enhanced thermal conductivity and superior antileakage performance (#6) <u>Yaroslav Grosu</u> <i>CIC energiGUNE, Spain</i>		
11:45 - 12:05	Evaluation of nitrate salts as storage medium for active latent heat thermal energy storage systems (#71) <u>Andrea Gutierrez</u> <i>German Aerospace Center, Germany</i>		
12:05 - 12:25	Effect of adding expanded graphite microparticles in organic plastic crystals for latent heat storage (#108)		

Sergio Santos-Moreno,
CIC energiGUNE, Spain

10:45 – 12:25	Morning session	C7	Systems
	Chairperson:		
10:45 – 11:05	Use of a simplified numerical model for the thermal performance evaluation of a tube&shell LHTES (#52) <u>Daniele Nicolini</u> <i>ENEA, Italy</i>		
11:05 – 11:25	Life Cycle Assessment (LCA) of concentrating solar power (CSP) plant in tower configuration with and without thermal energy storage (TES) (#63) <u>Gemma Gasà</u> <i>University of Lleida, Spain</i>		
11:25 – 11:45	Impact of PEMFC performance and durability on life cycle environmental impacts (#200) <u>Rok Stropnik</u> <i>University of Ljubljana, Slovenia</i>		
11:45 – 12:05	Analyzing Different Thermal Management Systems for Li-ion battery pack - CFD Study (#140) <u>Yousif Muhammad</u> <i>Technical University of Denmark, Denmark</i>		
12:05 – 12:25	Multi-scale modelling of the thermal runaway in Li-ion batteries (#194) <u>Tomaž Katrašnik</u> <i>University of Ljubljana, Slovenia</i>		
12:30 – 13:00	Participant networking		
13:00 – 14:00	Lunch break		

14:00 – 15:00	Afternoon session	A8	TES applications
	Chairperson:		
14:00 – 14:20	Applications of thermal energy storage systems for nearly-zero energy demonstration buildings in China (#165) <u>Xinyan Yang</u> <i>China Academy Of Building Research, China</i>		
14:20 – 14:40	Development and demonstration of a Zero-Energy-Sauna (#142) <u>Micha Schaefer</u> <i>University of Stuttgart, Germany</i>		
14:40 – 15:00	Developing northern greenhouses : an experimental and numerical studies (#199) <u>Didier Hailot</u> <i>Ecole De Technologie Supérieure, Canada</i>		

14:00 – 15:05	Afternoon session	B8	P2X/TCM materials
Chairperson:			
14:00 – 14:25	Keynote lecture KL5 Photocatalytic CO₂ and CH₄ conversion to H₂ and CO beyond thermodynamic equilibrium for a possible power to gas application (#98) <u>Petar Djinović</u> <i>National Institute of Chemistry, Slovenia</i>		
14:25 – 14:45	Thermochemical heat storage through CaO-Mayenite/CaCO₃ system: thermal performances comparison for two synthesis methods. (#64) <u>Raffaele Liberatore</u> <i>ENEA, Italy</i>		
14:45 – 15:05	Cyclic CO₂ hydrate-based cold thermal storage and CO₂ gas storage enabled by amine infused hydrogels (#161) <u>Xiaolin Wang</u> <i>The Australian National University, Australia</i>		

14:00 – 15:00	Afternoon session	C8	PCM materials
Chairperson:			
14:00 – 14:20	Valorization of red mud as a supporting material for medium-high temperature thermal energy storage (#208) <u>Argyrios Anagnostopoulos</u> <i>University of Birmingham, United Kingdom</i>		
14:20 – 14:40	Potential new reference materials for caloric measurements on PCM (#68) <u>Harald Mehling</u> <i>Consultant, Germany</i>		
15:10 – 15:30	Closing		