

# Friday, 11 June 2021

<b>9:00 – 10:25</b>	<b>Plenary Session P2</b> <b>Chairperson:</b>	
9:00 – 9:45	<b>Plenary lecture PL2</b> <b>100% Renewable smart energy systems</b> <u>Prof. Henrik Lund</u> <i>Aalborg University, Denmark</i>	
<b>Short break</b>		
<b>9:50 – 10:30</b>	<b>Morning session A7</b> <b>Chairperson:</b>	<b>TES applications</b>
9:50 – 10:10	<b>Carnot-batteries and the decarbonization of coal fired power plants (#150)</b> <u>Prof. Andre Thess</u> <i>German Aerospace Center, Germany</i>	
10:10 – 10:30	<b>Demonstration of two latent heat storages for industrial solar process heat applications (#195)</b> <u>Dr. Christoph Zauner</u> <i>AIT Austrian Institute of Technology, Austria</i>	
<b>9:50 – 10:30</b>	<b>Morning session B7</b> <b>Chairperson:</b>	<b>P2X applications</b>
9:50 – 10:10	<b>District cooling system optimization with distributed cold storage adopting power-to-cold: a case study on Norrenergi AB (#121)</b> <u>Dr. Saman Nimali Gunasekara</u> <i>KTH Royal Institute of Technology, Sweden</i>	
10:10 – 10:30	<b>Flexibility of refrigeration systems for grid balancing in Germany (#127)</b> <u>Ms. Dana Laureen Schmidt</u> <i>Fraunhofer Institute for Environmental, Safety, and Energy Technology UMSICHT, Germany</i>	
<b>9:50 – 10:30</b>	<b>Morning session C7</b> <b>Chairperson:</b>	<b>Sensible materials</b>
9:50 – 10:10	<b>Chemisorption at solid-liquid interfaces as a mechanism for enhanced sensible energy storage in nanofluids (#172)</b> <u>Mr. Ivan Carrillo-Berdugo</u> <i>University of Cadiz, Spain</i>	
10:10 – 10:30	<b>Nanofluids study through infrared thermography and physico-chemical characterization (#157)</b> <u>Ms. Adela Svobodova</u> <i>University of Barcelona, Spain</i>	

**10:30 – 10:45**      **Participant networking / Break**

**10:45 – 12:25**      **Morning session      A8**      **TES applications**  
**Chairperson:**

10:45 – 11:05      **Commissioning of high temperature thermal energy storage for high power levels (#4)**  
Ms. Maike Johnson  
*German Aerospace Center, Germany*

11:05 – 11:25      **Enhancing energy density of existing sensible thermal storage system with encapsulated PCM (#53)**  
Mr. Rok Koželj  
*University of Ljubljana, Slovenia*

11:25 – 11:45      **Effect of fluid velocity on storage performance of medium temperature packed-bed thermal energy storage systems (#168)**  
Dr. Burcu Koçak  
*Çukurova University, Turkey*

11:45 – 12:05      **Thermal high performance storages for electric bus heating - overview on the current state of development (#26)**  
Mr. Werner Kraft  
*German Aerospace Center, Germany*

12:05 – 12:25      **An insight into challenges associate with seasonal storage in solar district heating systems (#192)**  
Dr. Mohamed Abokersh  
*University of Rovira i Virgili, Spain*

**10:45 – 12:25**      **Morning session      B8**      **PCM materials**  
**Chairperson:**

10:45 – 11:05      **Hybridisation of latent and thermochemical thermal energy storage: 3 in 1 thermal energy storage (#204)**  
Ms. Anabel Palacios Trujillo  
*University of Birmingham, United Kingdom*

11:05 – 11:25      **Synthesis and characterization of microcapsules based on inorganic@PCM for thermal energy storage at low temperature applications (#193)**  
Dr. Teresa Aguilar  
*University of Cadiz, Spain*

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)**  
Prof. Yaroslav Grosu  
*CIC energiGUNE, Spain*

11:45 – 12:05      **Evaluation of nitrate salts as storage medium for active latent heat thermal energy storage systems (#71)**  
Dr. Andrea Gutierrez

<i>German Aerospace Center, Germany</i>	
12:05 – 12:25	<b>Compatibility of the novel Cu-67wt.%Mg phase change material in non-inertial thermal storage applications (#37)</b> <u>Dr. Anthony Rawson</u> <i>German Aerospace Center, Germany</i>

<b>10:45 – 12:25</b>	<b>Morning session C8</b>	<b>Systems</b>
<b>Chairperson:</b>		
10:45 – 11:05	<b>Use of a simplified numerical model for the thermal performance evaluation of a tube&amp;shell LHTES (#52)</b> <u>Dr. Daniele Nicolini</u> <i>ENEA, Italy</i>	
11:05 – 11:25	<b>Life Cycle Assessment (LCA) of concentrating solar power (CSP) plant in tower configuration with and without thermal energy storage (TES) (#63)</b> <u>Mrs. Gemma Gasa</u> <i>University of Lleida, Spain</i>	
11:25 – 11:45	<b>Impact of PEMFC performance and durability on life cycle environmental impacts (#200)</b> <u>Dr. Rok Stropnik</u> <i>University of Ljubljana, Slovenia</i>	
11:45 – 12:05	<b>Analyzing Different Thermal Management Systems for Li-ion battery pack - CFD Study (#140)</b> <u>Mr. Yousif Muhammad</u> <i>Technical University of Denmark, Denmark</i>	
12:05 – 12:25	<b>Multi-scale modelling of the thermal runaway in Li-ion batteries (#194)</b> <u>Prof. Tomaž Kutrašnik</u> <i>University of Ljubljana, Slovenia</i>	
<b>12:30 – 13:00</b>	<b>Participant networking</b>	
<b>13:00 – 14:00</b>	<b>Lunch break</b>	

<b>14:00 – 15:00</b>	<b>Afternoon session A9</b>	<b>TES applications</b>
<b>Chairperson:</b>		
14:00 – 14:20	<b>Applications of thermal energy storage systems for nearly-zero energy demonstration buildings in China (#165)</b> <u>Dr. Xinyan Yang</u> <i>China Academy Of Building Research, China</i>	
14:20 – 14:40	<b>Development and demonstration of a Zero-Energy-Sauna (#142)</b> <u>Dr. Micha Schaefer</u> <i>University of Stuttgart, Germany</i>	

14:40 – 15:00	<b>Developing northern greenhouses : an experimental and numerical studies (#199)</b> <u>Prof. Didier Haillot</u> <i>ÉTS, Canada</i>
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<b>14:00 – 15:05</b>	<b>Afternoon session B9</b>	<b>P2X/TCM materials</b>
<b>Chairperson:</b>		

14:00 – 14:25	<b>Keynote lecture (#98)</b> <b>Photocatalytic CO<sub>2</sub> and CH<sub>4</sub> conversion to H<sub>2</sub> and CO beyond thermodynamic equilibrium for a possible power to gas application</b> <u>Dr. Petar Djinović</u> <i>National Institute of Chemistry, Slovenia</i>
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14:25 – 14:45	<b>Thermochemical heat storage through CaO-Mayenite/CaCO<sub>3</sub> system: thermal performances comparison for two synthesis methods. (#64)</b> <u>Dr. Raffaele Liberatore</u> <i>ENEA, Italy</i>
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14:45 – 15:05	<b>Cyclic CO<sub>2</sub> hydrate-based cold thermal storage and CO<sub>2</sub> gas storage enabled by amine infused hydrogels (#161)</b> <u>Dr. Xiaolin Wang</u> <i>The Australian National University, Australia</i>
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<b>14:00 – 15:00</b>	<b>Afternoon session C9</b>	<b>PCM materials</b>
<b>Chairperson:</b>		

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