PROGRAMME

Monday, 29 September 2025

8:30 – 9:00	Registration	
	Opening	**Great lecture hall, 1st floor**
9:00 – 9:15	Prof. Dr. Gregor Anderluh and Prof. Dr. Nataša Zabukovec Logar: Opening speeches	
9:15 – 9:30	Dr. Salvatore Vasta: EERA-JP introduction	
9:30 – 10:00	Dr. Alenka Ristić: Introduction into porous TCMs	
	Lecture 1	**Great lecture hall, 1st floor**
10:00 – 10:45	**TCMs for Versatile Thermal Energy Storage – From Salt Hydrates to Oxides** Assoc. Prof. dr. Peter Weinberger *TU Wein, Austria*	
10:45 – 11:15	Coffee break	**Foyer of the great lecture hall, 1st floor**
11:15 – 13:00	**Lab work**	**Synthesis lab, ground floor**
13:00 – 14:30	Lunch	**Mansard, 2nd floor**
	Lecture 2	**Great lecture hall, 1st floor**
14:30 – 15:15	**Synthesis of Nanoporous Adsorbents and Composites** Dr. Alenka Ristić *National Institute of Chemistry, Ljubljana, Slovenia*	
15:15 – 16:30	**Lab work**	**Synthesis lab, ground floor**
16:30 – 17:00	Coffee break	**Foyer of the great lecture hall, 1st floor**
	Short Oral presentations – Synthesis	**Great lecture hall, 1st floor**
17:00 – 19:00	**Impact of Synthesis Variables on the Structural and Sorption Properties of Si/Me-AlPO$_4$-5** Ann Jini Mathews[a,b], Alenka Ristić[a], Nataša Zabukovec Logar[a,c] [a]*Department of Inorganic Chemistry and Technology, National Institute of Chemistry, Ljubljana, Slovenia* [b]*Faculty of Chemistry and Chemical Technology, University of Ljubljana, Ljubljana, Slovenia* [c]*University of Nova Gorica, Nova Gorica, Slovenia* **Green Synthesis of MIL-100(Fe) for Adsorption Cooling Applications** Sondes Guesmi[a], Luigi Calabrese[a], Andrea Frazzica[b] [a] *Department of Engineering, University of Messina, Messina, Italy* [b] *National Research Council of Italy – Institute for Advanced Energy Technologies (CNR-ITAE), Messina, Italy* **Hierarchically Porous Silica Support for TCM** Dasol Choi[a,b,c], Heiner Friedrich[a,b], Olaf Adan[a,c,d], and Henk Huinink[a,c*] [a]*Eindhoven Institute for Renewable Energy Systems, Eindhoven University of Technology, Eindhoven, The Netherlands* [b]*Laboratory of Physical Chemistry, Department of Chemical Engineering and Chemistry, Eindhoven University of Technology, Eindhoven, The Netherlands* [c]*Transport in Permeable Media, Department of Applied Physics and Education, Eindhoven University of Technology, Eindhoven, The Netherlands*	

[d]*TNO Materials Solution, High Tech Campus 25, Eindhoven, The Netherlands*

Comparison of Performance of K_2CO_3 and $CaCl_2$ Stabilized with LECA and Vermiculite in Thermochemical Energy Storage

Bartłomiej Wajda[a], Łukasz Cieślikiewicz[b], Piotr Łapka[b]

[a] *Warsaw University of Technology, pl. Politechniki 1, 00-661 Warsaw, Poland*

[b] *Faculty of Power and Aeronautical Engineering, Warsaw University of Technology, ul. Nowowiejska 24, 00-665 Warsaw, Poland*

Doped Porous Carbon Composites for Low Temperature Sorption Thermal Batteries

Jan Marčec[a,b], Marija Švegovec[a,b], Matjaž Mazaj[a], Andraž Krajnc[a], Boštjan Genorio[c], Daniel Lager[d], Fabrizia Giordano[d], Nataša Zabukovec Logar[a,b], Alenka Ristić[a]

[a] *National Institute of Chemistry, Hajdrihova 19, SI-1000 Ljubljana, Slovenia*

[b] *School of Science, University of Nova Gorica, Vipavska cesta 13, SI-5000 Nova Gorica, Slovenia*

[c] *Faculty of Chemistry and Chemical Technology, University of Ljubljana, Večna pot 113, SI-1000 Ljubljana, Slovenia*

[d] *AIT Austrian Institute of Technology GmbH, Energy Department, Sustainable Thermal Energy Systems, Giefinggasse 2, 1210 Wien, Austria*

Earth Alkali Oxalates for Thermochemical Heat Storage

Joey Aarts[a], Caroline Kirk[b], Henk Huinink[a], Olaf Adan[a]

[a] *Eindhoven University of Technology, the Netherlands*

[b] *University of Edinburgh, Scotland*

Mixed Cation Sulfates as Thermochemical Heat Storage Materials

Jakob Smith[a], Peter Weinberger[a]

[a] *Institute of Applied Synthetic Chemistry, TU Wien, Getreidemarkt 9/163, Vienna, Austria*

19:00 – 20:30	**Welcome drinks**	**Foyer of the great lecture hall, 1st floor**

Tuesday, 30 September 2025

9:00 – 9:45	**Lecture 3**	**Great lecture hall, 1st floor**
	Understanding and Improving the Performance of TCM Composites Assoc. Prof. Dr. Henk Huinink *Eindhoven University of Technology, The Netherlands*	
9:45 – 10:45	**Hands on**	**Foyer of the great lecture hall, 1st floor**
10:45 – 11:15	Coffee break	**Foyer of the great lecture hall, 1st floor**
11:15 – 12:00	**Lecture 4**	**Great lecture hall, 1st floor**
	Structural Insights Into Porous Adsorbents Prof. Dr. Nataša Zabukovec Logar *National Institute of Chemistry, Ljubljana, Slovenia*	
12:00 – 13:00	**National Institute of Chemistry guided tour**	
13:00 – 14:30	Lunch	**Mansard, 2nd floor**
14:30 – 15:15	**Lecture 5**	**Great lecture hall, 1st floor**
	Thermophysical Methods and Properties of TCM Dr. Daniel Lager *Austrian Institute of Technology, Austria*	
15:15 – 16:15	**Hands on**	**Foyer of the great lecture hall, 1st floor**
16:15 – 16:45	Coffee break	**Foyer of the great lecture hall, 1st floor**
16:45 – 18:00	**Short Oral presentations – Characterisation**	**Great lecture hall, 1st floor**
	Determination of Effective Thermal Conductivity of Thermochemical Composite Material Using Numerical Modeling Natalia Mikos-Nuszkiewicz[a], Piotr Furmański[a] *[a]Faculty of Power and Aeronautical Engineering, Warsaw University of Technology, Nowowiejska 21/25, 00-665 Warsaw, Poland*	
	High Performance Thermochemical Energy Storage Composites using $CaCl_2$ in Mesoporous Silica Erik Barbosa[a], Akanksha Menon[a] *[a]Georgia Institute of Technology, Atlanta, GA 30332, USA*	
	Screening and Thermodynamic Characterisation of Cement-Based Composite Materials for Sorption Thermal Energy Storage Alessio Mondello[a], Luca Lavagna[b], Matteo Fasano[a,b], Matteo Pavese[b], Eliodoro Chiavazzo[a,b] *[a] Department of Energy, Politecnico di Torino, Corso Duca degli Abruzzi 24, Torino, Italy.* *[b] Department of Appl. Science and Technology, Politecnico di Torino, Corso Duca degli Abruzzi 24, Torino, Italy*	
	Developing Biochar-based Sustainable Composites as Thermochemical Materials in Cooling Applications Tina Azmoodeh[a,b], Carlos Cuadrado Collados[a], Camila Barreneche Guerisoli [b], Rubén Ramos Velarde[a] *[a] Iberian Centre for Research in Energy Storage (CIIAE), 10004 Cáceres, Extremadura, Spain* *[b] Universitat de Barcelona, Barcelona, Spain*	
18:00 – 19:00	Free time	
19:00 – 20:30	Union experience museum tour	
20:30 – 23:00	Dinner at Union pub	

Wednesday, 1 October 2025

	Lecture 6	**Great lecture hall, 1st floor**
9:00 – 9:45	**Design of Sorption Thermal Battery Based on Composite Sorbent Materials: Challenges and Perspectives** Dr. Andrea Frazzica *Institute of Advanced Technologies for Energy "Nicola Giordano", Italy*	
	Short Oral presentations – Simulations	**Great lecture hall, 1st floor**
9:45 – 10:15	**Computational exploration of ZIF-8 for Thermochemical heat storage.** Indy Boumon[1], Veerapandian Ponnuchamy[1], Thomas Hooper[2], Mateo Narváez[1], Dimitrios Sakellariou[2], Frederik Tielens[1], Ionut Tranca[1] [1] *General Chemistry (ALGC) - Materials Modelling Group, Vrije Universiteit Brussel, Brussel, Belgium* [2] *M2S, cMACS, KU Leuven, Leuven, Belgium* **Chemical Kinetic Modeling of Calcium Manganite based Perovskites as redox materials for Thermochemical Heat Storage** Michail Mouratidis[a,b], George Karagiannakis[a] [a]*Advanced Renewable Technologies & Environmental Materials in Integrated Systems, ARTEMIS, Chemical Process and Energy Resources Institute CPERI, Centre for Research and Technology Hellas CERTH, 57001 Thermi, Thessaloniki, Greece* [b]*Department of Chemical Engineering, Aristotle University of Thessaloniki (AUTH), 54124 Thessaloniki, Greece*	
10:15 – 10:45	**Simulation of Sorption Thermal Energy Storage lab-scale unit** Mateusz Młynarczyk[a], Piotr Łapka[a], Natalia Mikos-Nuszkiewicz[a], Piotr Furmański[a] [a] *Faculty of Power and Aeronautical Engineering, Warsaw University of Technology, 21/25 Nowowiejska St., Warsaw, 00-665, Poland* **Hands on**	**Foyer of the great lecture hall, 1st floor**
10:45 – 11:15	Coffee break	**Foyer of the great lecture hall, 1st floor**
	Lecture 7	**Great lecture hall, 1st floor**
11:15 – 12:00	**Adsorption Chillers and Storage from a Market Point of View – Challenges and Perspectives** Dr. Walter Mittelbach *Sorption Technologies GmbH, Germany*	
12:00 – 13:00	Lunch	**Mansard, 2nd floor**
	Lecture 8	**Great lecture hall, 1st floor**
13:00 – 13:45	**Advancements in Adsorption Refrigeration: Fundamentals and Prototype Evolutions Over the Last Two Decades** Dr. Salvatore Vasta *Institute of Advanced Technologies for Energy "Nicola Giordano", Italy*	
	Short Oral presentations – Applications	**Great lecture hall, 1st floor**
13:45– 15:00	**Computational Modeling and Design of Sorption Reactors for Long-Duration Thermal Energy Storage** Elham Abohamzeh[a], Georg Frey[a] [a]*Saarland University, Chair of Automation and Energy Systems, D-66123 Saarbrücken, Germany* **Thermochemical Storage System With Heat Pump Functionality** Lucas Sotelo[a], Pia Wacker[a], Inga Bürger[a], Marc Linder[a]	

[a]*Deutsches Zentrum für Luft- und Raumfahrt, Pfaffenwaldring 38-40, 70569, Stuttgart, Germany*

K_2CO_3 Composite TCM for Low-Medium Temperature TES

Khouloud Abid [a], Roberta De Salvo [a], Antonio Fotia [a], Valeria Palomba [a], Vincenza Brancato [a], and Andrea Frazzica[a]
[a] *Institute of Advanced Technologies for Energy "Nicola Giordano", Messina- Italy*

Investigation of Salt-Mixture Systems for Thermochemical Storage Applications

Gayaneh Issayan
University of Applied Sciences Upper Austria, Stelzhamerstrasse 23, 4600 Wels, Austria

Development of Salt-in-Matrix Thermochemical Materials based on $MgSO_4$ and Cyclic Testing in a Lab-scale Experimental Facility

Enrico Patrucco[a], Fabrizio Rainone[a], Paola Castellazzi[a], Andrea Rossetti[a], Antonio Licciulli[b], Sanosh Padmanabhan[b]
[a] *RSE – Ricerca sul Sistema Energetico S.p.A, Via Rubattino 54, 20134 Milano, Italy*
[b] *Università del Salento, Via per Monteroni 73100 Lecce, Italy*

15:00 – 15:30 **Closing** **Great lecture hall, 1st floor**