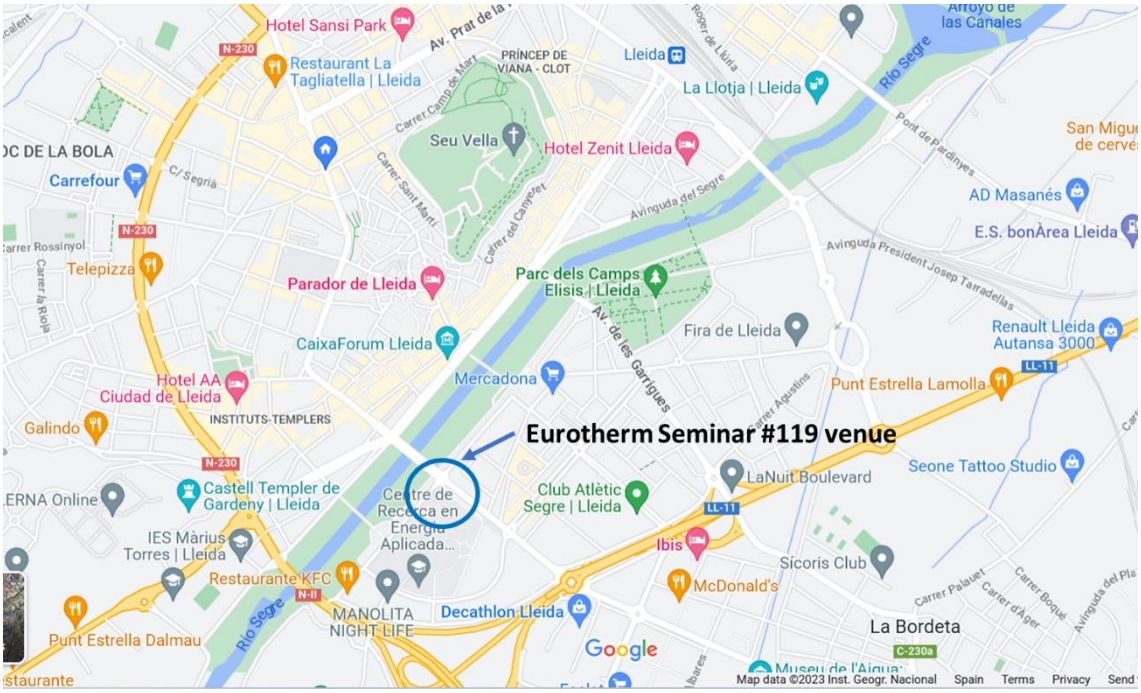
PROGRAM

Venue: Universitat de Lleida **-** Campus Cappont
Jaume II, 67
25001 Lleida



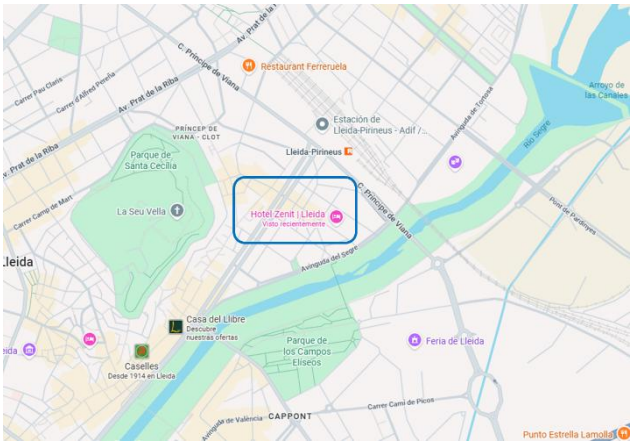
WI-FI

EDUROAM is available for everybody. If you asked for a Wi-Fi access at registration time, you should have received an e-mail with instructions. Nevertheless, if you need any assistance, please go to the registration desk and ask for the instructions.

TUESDAY, 12 MAY 2026

20:30 Optional dinner
(Needs registration prior to attendance)

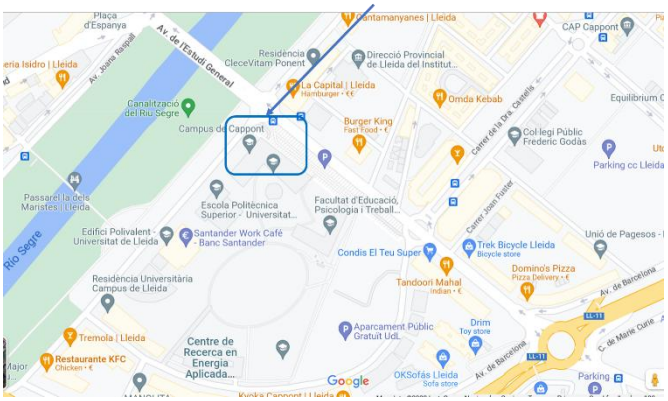
Restaurante Bistrot - Hotel Zenit Lleida
Carrer General Brito, 21, 25007 Lleida



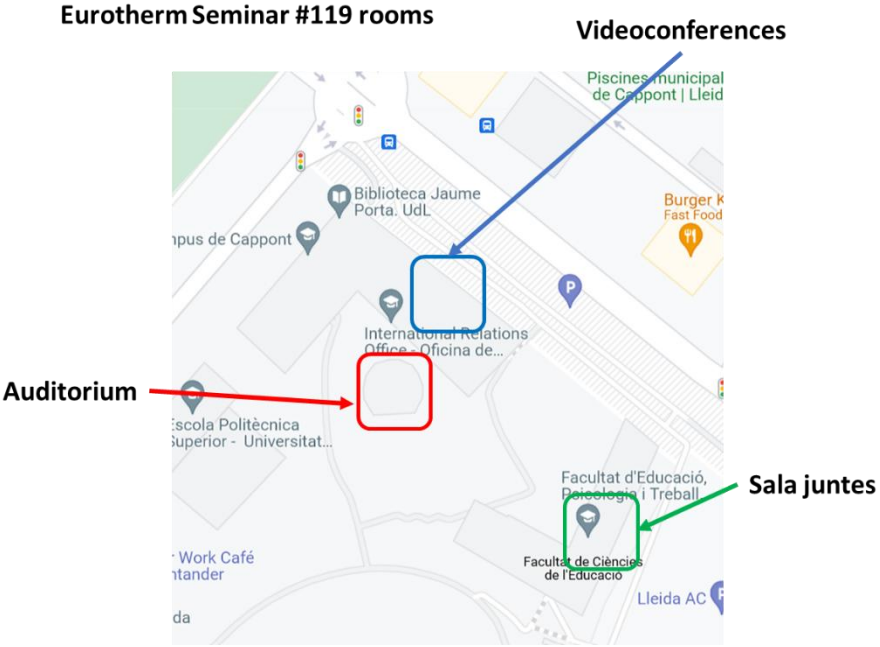
WEDNESDAY, 13 MAY 2026

8:30 – 9:30 Registration
Room: Lobby of Auditorium

Eurotherm Seminar #119 entrance



Eurotherm Seminar #119 rooms



9:30 – 10:00 Opening Ceremony
Chair: Luisa F. Cabeza, Michel de Paepe, Gennady Ziskind, Cristina Prieto; Room: Auditorium

10:00 – 10:45 Plenary session 1 – Keynote: Dr. Daniel Carbonell (DCARBO, Spain)
Chair: Luisa F. Cabeza; Room: Auditorium

10:45 – 11:15 Coffee break

11:15 – 13:15 Parallel Session 1

Session 1A - Thermomechanical storage

Room: Videoconferences

H218 – Hussein Alawai Ibrahim Al-Saaidi, Magdalena Barnetche, Cristina Prieto
Thermal Performance of Electrified Metallic-Based Phase Change Material Storage Unit

T234 – Juan Toloza, Jorge Payá, Francisco Barceló
Transient numerical model of a latent heat thermal energy storage unit at around 222ºC for its integration with a high-temperature-heat-pump

M235 – Tiago Eusébio, Pedro Horta, Raul Bonito
Carnot battery for arbitrage services: comparison with lithium ion batteries in greenfield and brownfield configurations

A287 – Aleksandra Dzido, Emiliano Borri, Alessio Tafone, Luisa F. Cabeza, Alessandro Romagnoli, Piotr Krawczyk
Numerical Investigation of a Cascaded Multi-PCM Cold Thermal Energy Storage System for Liquid Air Energy Storage Applications

X504 – David Pérez-Gallego, Alejandro Medina, Julián González-Ayala, Antonio Calvo Hernández
Adiabatic compressed air energy storage in Spanish variable spot price market

Session 1B - TES for climate change mitigation – 1

Room: Auditorium

R144 – Ruslan Kotegov, Hamza Chaabane, Marc Marín, Mohamed Abokersh, Carles Mateu, Adedamola Shobo, Dieter Boer, Manel Vallés
Enhancing Solar District Energy System Performance via Advanced Thermal Storage Modelling and Multi-Objective Optimization

L150 – Lai Yang-yan, Yang Sheng, Fan Li-wu
Analysis of the Performance and Potential of a Solar PV/T System Integrated with Seasonal Latent Heat Storage for Cold Regions

L162 – Shafquat Rana, Joshua M. Pearce, Anthony G. Straatman
Field Study of Thermal Energy Storage Integration with Air-source Heat Pump and Solar Photovoltaics in Canadian Climate

O174 – Jordi Falguera-Garcia, Ilaria Marotta, Fabio Lilliu, Sara Barja-Martínez, Mònica Aragüés-Peñalba, David Verez, Esther Izquierdo-Martínez, Valeria Palomba, Marco Calderoni, Diego Reforgiato-Recupero
Thermal Energy Storage Sizing in Multi-Vector Energy Communities: An Aggregated Optimization Approach

P209 – Miguel Á. Alfaro-López, Francisco J. Ramírez, Juan F. Belmonte, José A. Almendros-Ibáñez
A stochastic thermo-economic analysis of thermal energy storage for cooling and heating load shifting in residential buildings in Spain.

R212 – Kurt Engelbrecht, Francesco D'Ettorre, Wiebke Brix Markussen, Morten Herget Christensen
Steam generating heat pump coupled to a thermal energy storage operating in three European electricity markets

Session 1C - Thermochemical storage – 1

Room: Sala de juntes

W106 – Antonio Fotia, Mohamed Chairi, Valeria Palomba
Design and experimental testing of TPMS-based 3D-printed heat exchangers for thermochemical energy storage manufactured

J124 – Jan Marčec, Alenka Ristić
New nitrogen-doped carbon-based composites for efficient low-grade sorption thermal batteries

S125 – Jakob Werner-Hoermann, Ronald Miletich, Peter Weinberger
Phase Transformations and Heat Storage Potential of $Na_2CO_3 \cdot 10H_2O$ as Material for Thermochemical Energy Storage

O129 – Zeynep Uykun, Leon Leu, Amirhoushang Mahmoudi, Mina Shahi
Tracking Water Vapor Diffusion in Thermochemical Heat Storage Materials Using Neutron Radiography

O163 – Ronan Kennedy, Sean Mc Kenna, Apostolos Koutsioukis, Valeria Nicolosi, M. Veronica Sofianos
Exploring the potential of limestone waste for thermochemical energy storage systems

D265 – Luca Socci, Carlo Lisini, Martina Lippi, Lorenzo Talluri, Andrea Rocchetti
Use of Type A Silica Gel as a thermal energy storage material: experimental and numerical assessments

13:15 - 13:30 Group photo – Meeting at stairs next to the main entrance of the Eurotherm Seminar #119 venue

13:30 – 15:00 Lunch and poster session

15:00 – 17:00 Europe's corner: workshop on EU-funded research on TES

Session EU1 – Industrial and grid applications

Room: Auditorium

Project	Presenter
ThermalBox EIC	Cristina Prieto
HYBRIDplus	Cristina Prieto
RE-WITCH	Andrea Frazzica
RESTORATIVE	Meisam Sadi
BLAZETEC	Alessandro Bellucci
Hocloop	Johan Van Bael
SUSHEAT	Antonio Rovira
AGRI-COOL	Simone Mancin, Mina Shahi
CETP La-Flex	Gerald Englmair
Heaternal	Julie Van Zele, Michel De Paepe

Parallel session EU2 – Building applications

Room: Videoconferences

Project	Presenter
HYSTORE	David Verez
THUMBS UP	Guillermo Andrés Nieto
PUSH-IT	Elke Mugova
INTERSTORES	Natalie Peracha
TREASURE	Wim van Helden
BEST-Storage	Daniel Carbonell
BIOBUILD	Meysam Nazari
CharCool	Simone Mancin
SONATA	Benedetta Pioppi

Parallel session EU3 – Materials for TES

Room: Auditorium

Project	Presenter
CSTO2NE	João Castro Gomes
M-TES	Elisabetta Gariboldi
HeatScopy	Claudiu Savulescu
SPARK-e	Breogán Pato Doldán
Muspell	Alenka Ristić
CO-COOL	Emiliano Borri
4TunaTES	Aleksandr Shkatulov
MOFTherm	Alenka Ristić

17:00 – 18:30 Coffee Break and networking session

19:45 Bus to the dinner
Entrance conference site

20:30 Dinner – Castell del Remei

23:00 Expected departure of the bus to Lleida

THURSDAY, 14 MAY 2026

09:00 – 11:00 Parallel Session 2

Session 2A - LHTES processes – 1
Room: Videoconferences

N114 – Fabrizia Giordano, Adam Buruzs, Manuel Schieder, Tilman Barz
Numerical modeling and optical measurement of PCM constrained solidification within an MPE tube-and-fin heat exchanger

N132 – Arash Mahdavi, Gianluca Slaviero, Simone Mancin, Mina Shahi, Amirhoushang Mahmoudi
Numerical Simulation-Based Design of Roll Bond Heat Exchangers for Cold Storage Applications

Y158 – Maité Goderis, Julie Van Zele, Kenny Couvreur, Wim Beyne, Michel De Paepe
Beyond the Four-Regime Melting Theory: an Extended Melting Regime Diagram

H167 – Nicolò R. Sgreva, Christel Métivier, Sébastien Leclerc
MRI study of convection-dominated PCM melting in a porous medium

H183 – Kassahun Tadesse Megra, Saranprabhu Mani Kala, Gabriel Zsembinszki, Emiliano Borri, Cristina Prieto, Luisa F. Cabeza
Experimental study of cascade finned shell and tube TES tanks with organic phase change materials

C219 – Matias Pezo, Wolf-Dieter Steinmann, Andrea Gutierrez
Experimental phase change analysis of a eutectic KNO_3-$NaNO_3$ mixture surrounding a finned tube heat exchanger

Session 2B - Materials – 1
Room: Sala de juntes

H164 – Meysam Nazari, Nasko Terziev
Determination of enthalpy in the composites of wood and bio-based phase change materials

T195 – Alba Prats, Laura Ribas-Cabello, Clàudia Pérez-Junyent, Gerardo Carrasco, Josep-Lluis Tamarit, María Barrio, Pol Lloveras, Roc Matheu
Two-dimensional long alkylammonium perovskites as medium-temperature energy materials

X198 – Mahya Nikoo Nahad, Daylen Y. Font-Prieur, Marc Escribà-Gelonch, Luisa F. Cabeza
Synthesis and characterization of bio-based ionic liquids to be used as phase change materials

V202 – Abdelrahman Al-shouha, J. Ramon Castro, Gabriel Zsembinszki, Saranprabhu Mani Kala, Luisa F. Cabeza
Thermo-mechanical behaviour of steel fibres reinforced refractory concrete for thermal energy storage applications

F206 – Rhys Jacob, Zhenying Su, Noah Kramer, Michael Müller, Florian Kerscher
High Temperature Solid-solid Phase Change Materials as Thermal Storage Media

Y207 – Lorena Betancor-Cazorla, Genís Clavé-Batlle, Camila Barreneche, Sergi Dosta, M. Elena Navarro-Rivero

Corrosion Challenges of Protective Coatings in Next-Generation Chloride Molten Salts for CSP Applications: Implications of Corrosion Rate Evaluation Methods

Session 2C - Industrial systems and AI – 1
Room: Auditorium

W103 – Michael Brütting, Hans-Peter Ebert
From Sound to Energy Insight: AI-Driven Acoustic State-of-Charge Monitoring of Phase Change Material Energy Storages
L115 – James McIntosh, Dominic Groulx
Study of Design Parameters for Passive Battery Thermal Management using Phase Change Materials
K117 – Bahareh Bakhsh Zahmatkesh, Mina Shahi, Amirhoushang Mahmoudi
Physics-based dynamic modeling of a latent thermal energy storage for application in the preservation of fruits and vegetables
A123 – Andrea Fragnito, Marcello Iasiello, Gerardo Maria Mauro, Nicola Bianco, Luigi Mongibello
A fast reduced-order thermal network model for cascade PCM cold thermal storage systems
M128 – Prakhar Dixit, Lauri Pallonen, Annukka Santasalo-Aarnio
Harnessing Thermal Energy Storage for Enhanced Safety in Electric Vehicles - a Review

11:00 – 11:30 Coffee break

11:30 – 13:30 Parallel Session 3

Session 3A - Sensible storage
Room: Videoconferences

B127 – Xavier Daguenet, Paul Gantenbein, Lukas Omlin and Andreas Häberle
Heat loss Function of large long-term sensible thermal energy storages
V140 – Javier Reboul, Mahy Soler, Javier Rodríguez, José F. Gallego, Sebastián Magee, and Edouard Gonzalez-Roubaud
Numerical investigation of a molten salt electric heater and a thermocline storage tank with filler for industrial decarbonization
W141 – Maria Criado, Alicia Pachon-Montaño, Oscar Á. Hernanz, Hesam Doostkami, Edouard González-Roubaud, Maria Cruz Alonso
Interaction of filler material with molten salts for thermal energy storage in the thermocline tanks
P173 – Leonel Mario Cerutti-Cristaldo, Paula María Flores-Ríos, Minerva Díaz-Heras, Leonor Hernández-López, José Antonio Almendros-Ibáñez
Estimation of solar absorptivity through color quantification for CSP solid particles
R227 – Rishika Shetty, Marco Prenzel, Thomas Bauer
Design of test rig and parametric investigation of the ratcheting effect in packed-bed thermal energy storage systems

Session 3B - Materials – 2

Room: Sala de juntes

N216 – Dounia Elbasyouni, Juan F. Rodríguez, Manuel Carmona, Ana M. Borreguero
Catalyst effect on the ssPCMs production by Sol-gel Method

N224 – Nuria Navarrete, Carolina Villada, Golo Zimmermann, Florian Kargl
Degradation of steel containers by molten Al-12.5 wt.%Si corrosion in a Thermal Energy Storage system

R232 – David Vera-Rivera, Marc Neira-Viñas, Joan Formosa, Jessica Giro-Paloma
Conditions study for PCM microencapsulation using PMMA waste

F240 – Rebeca Salgado-Pizarro, Dafne Collao, Camila Barreneche, A. Inés Fernández
Metal-dependent study of LHOIPs for energy storage applications

N242 – Marta Stefanska, Galina Simonsen, Jorge Salgado-Beceiro, Julian Walker
Alkali tetrafluoroborates as promising solid-solid phase change materials for thermal energy storage at medium temperature range.

J246 – Pranjal Gandhre, Siddhesh Pawar and Luckman Muhmood
Thermophysical Characterization of $Ca(NO_3)_2$–$NaNO_3$–KNO_3 Ternary Nitrate Salts for Concentrating Solar Power Applications

Session 3C - Industrial systems and AI – 2

Room: Auditorium

F160 – Mohamed Katish, Veronica Ferrandiz-Mas
Computational Approaches for the Discovery of New Phase-Change Materials Using Two Method Machine Learning and First-Principles Density Functional Theory

N169 – Jia-Jie Jiang, Li-Wu Fan
Three-dimensional decoupled modelling and multi-objective optimization for industrial waste heat recovery using erythritol

A177 – Cristina Bianqui, Alberto Egea, Juan Pedro Solano, Alberto García, Antonio Viedma
Experimental study on the impact of passive enhancement techniques in the storage of solar thermal energy

R199 – Nadiya Mehraj, Carles Mateu, Gabriel Zsembinszki, Hector Bastida, Adriano Sciacovelli, Luisa F. Cabeza
Artificial intelligence-based prediction of state of charge in latent thermal energy storage systems

H203 – Carles Mateu, Edgar F. Rojas Cala, Ramon Béjar, Emiliano Borri, Luisa F. Cabeza
Improved modeling of thermal energy storage tanks state of charge Using LSTM neural networks and image segmentation

D263 – Delight Ezeh, Silvia Trevisan, Rafael Guedez
Techno-economic Assessment of Integrating Packed-bed TES for Flexible Process Heat Electrification in High Temperature Industries

13:30 – 15:15 Lunch and poster session

15:15 – 16:15 Plenary session 2. Keynote: Fabrizia Giordano
Presentation of the INPATH-TES Network and LTES Summer School: Prof. Luisa F. Cabeza and Prof. Simone Mancin

16:15 – 17:55 Parallel Session 4

Session 4A - Energy storage in buildings
Room: Videoconferences

A107 – Francesco Valentini, Maja Danovska, Sereno Sacchet, Alessandro Prada, Luca Fambri, Andrea Dorigato, Alessandro Pegoretti, Maurizio Grigiante
Experimental determination of dynamic thermal properties of EPDM/NBR panels with a shape stabilized Phase Change Material based on summer temperatures in Italy
E126 – Matias Alvarez-Rodriguez, Luis Tomas Silva, Mar Alonso-Martinez, Ines Suarez-Ramon
Assessment of the transient thermal response of lightweight aggregate mortars with vacuum-incorporated PCMs
E267 – Sebastian Sonnick, Frederik Wunder, Philipp Meffert, Matthias Rädle
Active PCM Integration in Drywall Heating Systems for Demand-Side Management – Thermal Component Activation for Lightweight Structures
E271 – Youssef Elomari, Mustapha Habib, and Qian Wang
Thermal Inertia as Distributed Energy Storage in a District-Heating-Connected Heritage Building: The Riga Central Market
T290 – Matteo Calò, Walter Mittelbach, Antonio Fotia, Vincenza Brancato, Andrea Frazzica
Preliminary characterization of a sorption TES to enhance flexible exploitation of renewables in buildings

Session 4B - TES for climate change mitigation – 2
Room: Auditorium
F136 – Maria Jesús Gonzalo, José Fernando Gallego Belizón, Germilly Barreto, Li Xiaoyu, Juan Bueno Gayo
Optimization and Energy Management Strategies for Hybrid Power-to-Heat Systems with CST, Electric Heater and Thermal Energy Storage
Y220 – Pablo Tagle-Salazar, Luisa F. Cabeza, Anton López-Román, Cristina Prieto
A systematic benchmark of thermal energy storage schemes in concentrating solar power applications
C229 – A. Svobodova, C. Barreneche, A. Calderón, B. Koçak, M. Rodríguez-García, T. Özkan, G. Kardas, H.O. Paksoy, A. I. Fernández
Evaluating an industrial silica-based ceramic filler in a Solar P2H Packed-Bed TES Unit: A Case Study from the GREENOLIVE Pilot
X233 – Natalie Peracha, Akbar Shariq, David Schmitt, Christoph Trinkl, Tobias Schrag
Techno-economic assessment of a multifunctional large-scale thermal energy storage system using existing infrastructure

Session 4C - Thermochemical storage – 2

Room: Sala de juntes

Q239 – Carlos Cuadrado-Collados, Aleksandr Shkatulov, María Gelpí Ramos, Manuel Sánchez-Andújar, Breogán Pato, Rubén Ramos
Prussian Blues Analogues as Water Sorbents for Thermochemical Energy Storage

J243 – Hyerin Seo, Joey Aarts , Dasol Choi, Henk Huinink, Olaf O.C.G. Adan, Hartmut Fischer
Tuning the thermodynamic properties for salt hydrates via solid solution for thermochemical heat storage

A273 – Emanuela Mastronardo, Davide Palamara, Antonio Fotia, Vincenza Brancato, Andrea Frazzica, Candida Milone, Luigi Calabrese
Impact of Synthesis Methods on the Long-Term Performance of Calcium Chloride-Impregnated Silica Gel for Thermochemical Storage

X503 – Mateusz Młynarczyk, Łukasz Cieślikiewicz, Piotr Furmański, Piotr Łapka
Methodology for experimental determination of equilibrium water vapor pressure in magnesium chloride hydrates

19:30 Bus to the gala dinner
Entrance conference site

20:15 Gala Dinner in La Boscana
LV-3311, 4, 25142 Bellvís, Lleida

00:00 – 03:00 Departure of the bus to Lleida available at different time (approximately every hour from 00:00 to 03:00)

FRIDAY, 15 MAY 2026

10:00 – 11:20 Parallel Session 5

Session 5A - LHTES processes – 2
Room: Videoconferences

A260 – Maoz Yakobi, Doron Sahray, Gennady Ziskind
High-temperature LHTES unit using salt as the PCM
B272 – Julie Van Zele, Jera Van Nieuwenhuyse, Michel De Paepe, Wim Beyne
Techno-economic optimal sizing model of a casted ceramic-phase change material LTES system for high temperature industry
P275 – Noah Kramer, Florian Kerscher, Hartmut Spliethoff
Numerical Modelling of a Fixed-Bed Reactor with Solid-Solid Phase Change Materials for Thermal Energy Storage
K277 – Onyedika V. Mbelu, Bikram Singh Bhattarai and Jay M. Khodadadi
Development and analysis of a direct-contact thermal energy storage system: computational and experimental findings

Session 5B - TES for climate change mitigation – 3
Room: Auditorium

G237 – Curtis Meister, Nikola Tomic, Sarah Schneeberger and Schuetz, Philipp
Thermal energy storage in buildings: A key step towards a flexible, decarbonized Swiss energy system
V289 – Gianluca Slaviero, Claudio Zilio, Emiliano Borri, Luisa F. Cabeza, Simone Mancin
Off-grid Cold Rooms for food preservation in remote areas of Africa
C268 – Alice Tosatto, Fabian Ochs
Impact of Groundwater on the Design and Performance of Large-scale Thermal Energy Storage systems
C222 – Leonardo Colacino, Wiebke Meesenburg, Jonas Kjaer Jensen, Adriano Sciacovelli
Dynamic modelling of Ground-Source Heat Pumps and Thermal Energy Storage for Demand-Side Management strategies

Session 5C - Industrial systems and AI – 3
Room: Sala de juntes

B261 – Dimitrios Skondras Giousios, Ioanna Giannopoulou and Argyrios Anagnostopoulos
The valorization of copper slag as a matrix for composite phase change materials
I236 – Johan Van Bael, Carlo De Servi, Sanjay Vermani, Nitish Anand
Impact of eccentricity of the inner pipe to the outer pipe on pressure drop and heat transfer in co-axial heat exchangers for BTES
X245 – Aditya Singh Suswal, Saman Nimali Gunasekara, Justin Chiu, Björn Palm, and Per Lundqvist
Impact of State of Charge Estimation on Operational Strategies for Latent Thermal Energy Storage System
J249 – Kira Zhmud, Adriano Sciacovelli
Integrated Dynamic-Recurrent Neural Network Modelling for Design and State Estimation of Pillow Plate Latent Heat Storage Systems

11:20 – 11:40 Coffee Break

11:40 – 13:00 Parallel Session 6

Session 6A - LHTES processes – 3
Room: Videoconferences

B228 – Dario Groppi, Alekos Ioannis Garivalis, Daniele Testi
Experimental investigation of microencapsulated phase-change slurry for low temperature energy storage application
K284 - Dario Guarda, Giulia Righetti, Claudio Zilio, Simone Mancin
Experimental Comparison of Organic and Inorganic PCMs in a Real-Scale Latent Thermal Energy Storage for Heat Pump Applications
G254 – Louis Desgrosseilliers, Ignacio Gurruchaga, Daniel Carbonell
Evaluation of a 14 kWh phase change slurry for space cooling

Session 6B - Materials – 3
Room: Sala de juntes

H253 – Caleb Stamper, Dehong Yu, David Cortie, Laura Thomas, Roger Lewis, Zengji Yue, Pablo Galaviz, Karolina Matuszek, et al.
Characterizing terahertz dynamics in materials with inelastic neutron scattering for thermal energy management
F269 – Maria Elena Navarro-Rivero, Abdalqader Ahmad, Yelaman Maksum, Yulong Ding
Linking Microstructure Engineering and Industrial Scale-Up in High-Temperature Composite Phase Change Materials for Thermal Energy Storage
D274 – Angel G. Fernández, Teresa Guraya
Design and evaluation of modified high entropy alloys as structural material in Gen 3 of CSP plants
K278 – Alina Brzęczek-Szafran, Magdalena Gwóźdź, Bartłomiej Gaida, Karolina Matuszek
Advancing Thermal Energy Storage with Bio-Based Polyol Materials

Session 6C - Industrial systems and AI – 4
Room: Auditorium

K255 – Ilaria Marotta, Giorgio Frazzoni, Orhigomisan Fyne, Mohammad Saffari, Esther Kieseritzky, Dario Aguiar, Riccardo Caponetto, Andrea Frazzica, Salvatore Vasta, Valeria Palomba
Novel approaches for the State-of-Charge Estimation in Latent Thermal Energy Storage: a computer vision setup

C262 – Raffaele D'Urso, Alessia Arteconi
Techno-economic assessment of thermochemical storage integration in high-temperature data centres

C270 – Jadira Zarbo, Samuele Cerquetelli, Claudia Fabiani, Anna Laura Pisello
AI-supported thermal imaging for ground-level detection and mapping of urban heat storage dynamics

13:00 – 13:50 Closing Ceremony and plenary session 3. Keynote: Dr. Dominic Groulx
Room: Auditorium

13:50 – 15:30 Lunch

Special Issue

Extended abstract submitted to the Eurotherm Seminar #119 are welcome to contribute to the special issue "Advances in Eurotherm Seminar #119: Contribution of thermal energy storage towards decarbonization" in Journal of Energy Storage (Elsevier)