

International Energy and Environment Conference 2025



8. – 10. 9. 2025
Resort Sepetná,
Ostravice, Czechia



PROGRAMME

The 28th **International Energy and Environment Conference** will be held in [Sepetná hotel](#) in [Ostravice](#), heart of Beskid Mountains, Czechia. Surrounded by forests, at the foot of the Moravian-Silesian Beskid Mountains highest peak – [Lysá Hora 1323 m](#) (Bald Mountain) – Sepetná resort offers a true experience for nature lovers and peace-seekers. The adjacent relax centre offers quality relaxation procedures, sauna, massage and other wellness activities after days spent hiking the surrounding mountains for the most enchanting views.



Monday 8th September

14:00 - 16:00	Registration / Accommodation
17:30	Transport from Sepetná resort to the local brewery – Excursion included
18:30	Transport from Sepetná resort to the local brewery – Excursion excluded
18:45 - 22:00	Welcome party in the local brewery with folklore dance performance
22:00	Transport back to Sepetná Resort

Tuesday 9th September

8:00 - 9:00	Registration / Accommodation
	Opening ceremony
9:00 - 9:30	Prof. Stanislav Honus, Dr. Karel Borovec (ROOM 1) Dr. Jiří Ryšavý, Dr. Jakub Čespiva
9:30 - 18:00	Poster session

Keynote section

Chair: Dr. Ryšavý, Dr. Čespiva

9:30 - 10:00	Prof. Daniela Plachá New directions and perspectives in membrane electrode assemblies for water electrolysis
10:00 - 10:30	Prof. Luca Fiori Biowaste and the circular economy: some significant examples based on hydrothermal, biochemical and extraction processes
10:30 - 11:00	Prof. Tomasz Wejrzanowski Advanced Materials for Chemical and Electrochemical Energy Conversion and Storage
11:00 - 11:30	Prof. Jenn-Kun Kuo Performance analysis of mixed fuels in low and medium-temperature SOFC
11:30 - 12:00	Coffee and tea

Energy Exchange and Storage

Chair: Dr. Ryšavý, Dr. Teicht

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| 12:00 - 12:15 | Dr. Christian Teicht
Calorimetry of Phase Change Materials (PCM) for heat storage applications |
| 12:15 - 12:30 | Mr. Moritz Walter
NewHeatIntegrated - Development and Integration of a two stage latent heat thermal energy storage system in the built environment |
| 12:30 - 12:45 | Prof. Karol Sztékler
Efficiency Enhancement in Adsorption Chillers Through Glue Bed Application |
| 12:45 - 13:00 | Dr. Marcus Lange
The Importance of Sorption Technologies for the Energy Transition |
| 13:00 - 13:15 | Mr. Piotr Boruta
Design and Numerical Investigation of a Novel Heat Exchanger for Adsorption Bed Applications |
| 13:15 - 13:30 | Mr. Tomasz Bujok
Coated Adsorption Beds for Enhanced Heat Transfer in Adsorption Cooling Systems |
| 13:30 - 15:00 | Lunch |

Bioprocesses and Hydrogen

Chair: Dr. Čespiva, Dr. Niedźwiecki

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| 15:00 - 15:15 | Prof. Wei-Hsin Chen
Advances in Bioenergy and Biofuel for Circular Economy and Sustainability |
| 15:15 - 15:30 | Dr. Mateusz Wnukowski
Microwave Plasma Reforming of CH ₄ /CO ₂ Mixtures |
| 15:30 - 15:45 | Dr. Łukasz Niedźwiecki
Thin-layer drying kinetics of tomato waste for biorefinery purposes – an LCA perspective |
| 15:45 - 16:00 | Mr. Allen Godswill Nkemakolam
Membrane separation of hydrogen applied on various industrial gases |
| 16:00 - 16:15 | Dr. Jakub Mularski
Experimental and numerical analysis of hydrogen combustion in a high-pressure Oxygen-CO ₂ environment. Design and performance of a combustion chamber |
| 16:15 - 16:30 | Mr. Baran Taşğın
Hydrogen sorption characteristics of Cu-doped high-entropy alloys |

16:30 - 17:00 **Coffee and tea**

Thermochemical processes

Chair: Dr. Jadlovec, Mr. Lukeš

17:00 - 17:15 **Dr. Małgorzata Wilk**

The effect of temperature on degradation of PET under hydrothermal carbonization

17:15 - 17:30 **Dr. Tadeusz Dziok**

Factors affecting mercury emissions from residential solid fuel boilers

17:30 - 17:45 **Prof. Zühtü Onur Pehlivanlı**

Theoretical and Numerical Investigation of the Effect of Blade Clearance on Heat Transfer and Pressure Drop in Rotary Air Preheaters

17:45 - 18:00 **Mrs. Joanna Mikusińska**

Management of corn silage and tomato residue silage through hydrothermal carbonization process

18:00 - 18:15 **Dr. Katarzyna Szramowiat-Sala**

Optimization of Artificial Neural Network Parameters for Modelling Flue Gas Composition from Woodstove Combustion of Beech Wood and Briquettes

18:15 - 18:30 **Closing ceremony and remarks**

Dr. Jiří Ryšavý, Dr. Jakub Čespiva

18:30 - 19:00 **Free time**

19:00 - 00:00 **Crystal Valley Evening, dinner buffet and bar, terrace grill party, dance floor**

Wednesday 10th September

8:00 - 10:00 **Poster session**

10:00 **Bus transportation to the VSB-Technical University of Ostrava campus**

11:00 - 15:00 **Excursion tour to the Centre for Energy and Environmental Technologies ([CEET](#))**