

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

14:30	Bus transportation from VSB-TUO (EKF) to Sepetná resort
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 – Welcome party
18:45 - 22:00	Welcome party in the local brewery with folklore dance performance
21:30 and 22:00	Transport back to Sepetná Resort – only these two transports

Tuesday 9th September

8:00 – 9:00	Registration
9:00 - 9:30	Opening ceremony (Room 1) <i>Prof. Stanislav Honus, Dr. Karel Borovec, Dr. Tomáš Výtisk, Prof. Stanislav Mišák</i> <i>Ing. Pavel Staněk, Member of the Moravian-Silesian Regional Council, Department of Environment and Territorial Planning</i> <i>Dr. Jiří Ryšavý, Dr. Jakub Čespiva</i>
9:30 - 18:00	Poster session
14:00	Accommodation

	Industrial section (Room 1)	Research section (Room 2)
	Decarbonisation, alternative fuels, legislation <i>Chair: Dr. Borovec, Dr. Výtisk</i>	Keynote section <i>Chair: Dr. Ryšavý, Dr. Čespiva</i>
9:30 - 10:00	Michal Kocůrek <i>EGÚ Brno, a.s.</i> Energy transformation and its future outlook in the context of the integration of RES technologies	Prof. Daniela Plachá New directions and perspectives in membrane electrode assemblies for water electrolysis
10:00 - 10:30	Petr Mareš ml. <i>United Energy, a.s.</i> Energy transformation in Komořany powerplant	Prof. Luca Fiori Biowaste and the circular economy: some significant examples based on hydrothermal, biochemical and extraction processes

10:30 - 11:00	Petr Bielan <i>OZO Ostrava, s.r.o.</i> Ideologization and bureaucracy in the field of waste management	Prof. Tomasz Wejrzanowski Advanced Materials for Chemical and Electrochemical Energy Conversion and Storage
11:00 - 11:30	Magdalena Caklová <i>Ústav chemických procesů AV ČR, v. v. i.</i> Energy conversion of problematic waste	Prof. Jenn-Kun Kuo Performance analysis of mixed fuels in low and medium-temperature SOFC
11:30 - 12:00	Coffee and tea	

Industrial section (Room 1)		Research section (Room 2)
Air protection, effective CO₂ capture and separation, modernization of energy operations <i>Chair: Assoc. prof. Szeliga</i>		Energy Exchange and Storage <i>Chair: Dr. Ryšavý, Dr. Teicht</i>
12:00 - 12:15	Radek Štěřba <i>ČIŽP Ostrava</i> New obligations for air pollution sources resulting from the amendment to the Air Protection Act	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	Bohumil Lisner <i>Sumitomo SHI FW Energia Polska Sp. z o.o.</i> Update on our LAES in Hiroshima and CCS/CCU test results	Mr. Matěj Charvát Metastable sodium acetate trihydrate for applications in household-scale energy sector
12:45 - 13:00		Dr. Jens Möllmer The Importance of Sorption Technologies for the Energy Transition
13:00 - 13:15	Lukasz Pluta <i>Sumitomo SHI FW Energia Polska Sp. z o.o.</i> Modernizations carried out by our service (new project in Fortum Częstochowa and planned in Fortum Zabrze) – decarbonization	Prof. Zühtü Onur Pehlivanlı Theoretical and Numerical Investigation of the Effect of Blade Clearance on Heat Transfer and Pressure Drop in Rotary Air Preheaters
13:15 - 13:30		Mr. Tomasz Bujok Coated Adsorption Beds for Enhanced Heat Transfer in Adsorption Cooling Systems
13:30 - 15:00	Lunch	

Industrial section (Room 1)		Research section (Room 2)	
New technologies and optimization of energy sector operations		Bioprocesses and Hydrogen	
<i>Chair: Dr. Výtisk, Dr. Borovec</i>		<i>Chair: Dr. Čespiva, Dr. Niedźwiecki</i>	
15:00 - 15:15	Dr. David Kupka <i>Energy Research Centre, CEET, VSB-TUO</i> LCA analysis – Utilization in energy processes optimization		Prof. Wei-Hsin Chen Carbon dioxide capture for battery electrode production through microalgae cultivation and pyrolysis
15:15 - 15:30			Dr. Mateusz Wnukowski Microwave Plasma Reforming of CH ₄ /CO ₂ Mixtures
15:30 - 15:45	Mariola Kobylańska-Pawlisz <i>Energopomiar Sp. z o.o.</i> Reducing energy losses in coal-fired unit auxiliary systems: Improving the energy efficiency of wet gas cleaning systems		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	Prof. Ladislav Vilimec, Dr. Jaroslav Konvička <i>Department of Power Engineering, FME, VSB-TUO</i> WITKOWITZ low-voltage electric boilers		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		

Industrial section (Room 1)		Research section (Room 2)	
Emission-free energetics		Thermochemical processes	
Chair: Dr. Šmída		Chair: Dr. Jadlovec, Mr. Lukeš	
17:00 - 17:15	Petr Seghman <i>LEANCAT, s.r.o.</i> Electrolytic production of H ₂ , research, development	Dr. Małgorzata Wilk The effect of temperature on degradation of PET under hydrothermal carbonization	
17:15 - 17:30		Assoc. prof. Agata Mlonka-Mędrala Thermochemical conversion of food waste toward production of new porous materials	
17:30 - 17:45	Roman Lukeš <i>Department of Power Engineering, FME, VSB-TUO</i> AHP – A new type of hydroelectric power plant	Dr. Tadeusz Dziok Factors affecting mercury emissions from residential solid fuel boilers	
17:45 - 18:00		Mrs. Joanna Mikusińska Management of corn silage and tomato residue silage through hydrothermal carbonization process	
18:00 - 18:15	Dr. Jiří Rusín <i>Energy Research Centre, CEET, VSB-TUO</i> Dark fermentation – A source of biohydrogen	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 <i>Dr. Jiří Ryšavý, Dr. Jakub Čespiva</i>	
18:30 - 19:00	Free time		
19:00 - 00:00	Evening social event 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)