

# ***CONFERENCE PROGRAMME***

**1<sup>st</sup> International Conference  
INNOVATIONS IN CARBON CAPTURE AND WASTE MANAGEMENT**

***InnoCO<sub>2</sub>Sorbent - FFH-CO<sub>2</sub>***

**„Capture of carbon dioxide by an innovative sorbent” (InnoCO<sub>2</sub>sorbent)**

**International title: „Utilization of carbon dioxide by using iron compounds” (FFH-CO<sub>2</sub>)**

**within initiative EUREKA - Marked Driven Innovative Projects**

**14 -16 September 2022, Częstochowa Poland**

## Conference Program Framework

(Central European Time (CET))

14.09.2022 (Wednesday) - I day

Energy Climate Environment Conference [in Polish]

- 9:00-10:00 Registration  
10:00-12.00 Opening ceremony  
12:00-13:00 Lunch  
13:00-15:00 Sessions  
17:00-23:00 Jubilee Gala Dinner Faculty of Environmental Engineering

15.09.2022 (Thursday) - II day

Conference *InnoCO<sub>2</sub>Sorbent – FFH-CO<sub>2</sub>* [in English]

9:00-9:15 **Opening ceremony**

### *Session 1 – on line*

**Session Chair:** Prof. Sebastian Werle, Assoc. Prof. Magdalena Zabochnicka

- 9:15-9:25 **Fuel grade hydrocarbons production by CO<sub>2</sub> utilization using iron carbonate cycle**, V.I. Kovbasiuk, I.B. Bychko, A.I. Trypolskyi, M.K Sukhyi, P.E Strizhak.
- 9:25-9:35 **Capability of iron oxide-hydroxide hydrosols for CO<sub>2</sub> capture and utilization**, I.B. Bychko, V.I. Kovbasiuk, A.I. Trypolskyi, P.E.Strizhak
- 9:35-9:45 **Production of feriferohydrozol (FFH) for CO<sub>2</sub> capture**, I. Svitojūtė, D. Budilovskis
- 9:45-9:55 **Experimental Plant for Conversion of Solid Organic Feedstock in Hydrogen and Carbon Acid Gas with High and Low Temperature CO<sub>2</sub> Capture**, O.M. Dudnyk, I.S. Sokolovska
- 9:55-10:05 **Plasma Steam and Air-Steam Gasification of Solid Organic Wastes**, O.M. Dudnyk, V.A. Zhovtiansky, M.V. Ostapchuk
- 10:05-10:15 **Extraction of CO<sub>2</sub> from low-calorific landfill gas to improve the performance of the power generator**, H. Zhuk, Yu. Ivanov, S. Krushnevich, V. Verbovsky, D. Komissarenko, M. Bondarenko
- 10:15-10:25 **Biomass waste processing and modification as a tool for carbon capture**, M. Klavins, L. Arbidans, V. Bisters, L. Ansone-Bertina
- 10:25-11:00 **Discussion**
- 11:00-11:30 **Coffee brake**

## Session 2 – on site

**Session Chair:** Dr. Vadimas Dudoitis, Assist. Prof. Urszula Kępa

- 11:30-11:40 **Development and evaluation for CO<sub>2</sub> reduction in flue gases**, V. Dudoitis, V. Ulevičius
- 11:40-11:50 **Methods for reducing carbon dioxide emissions to the atmosphere**, G. Rymarz
- 11:50-12:00 **Utilization of the environment in terms of CO<sub>2</sub> emissions in small and medium-sized enterprises**, M. Majka, B. Kuzio-Wasilewska
- 12:00-12:10 **Waste Management – Torrefaction to Obtain BioChar**, H. Ünyay, S. Szufa, G. Wielgosinski
- 12:10-12:20 **Waste into biofuels through innovative oxidative liquefaction process**, H. Mumtaz, S. Sobek, M. Sajdak, S. Werle
- 12:20-12:30 **Sustainable dry pressed ceramic tiles using fine granite wastes**, Sh. K. Amin, N. Y. S. Selem, N. F. Abdel Salam
- 12:30-13:00 **Discussion**

## Session 3 - Panel Discussion with industry / E-Poster session – online

13:00-13:30 **Panel Discussion with industry**

### E - posters

**Characteristics of selected natural materials as biosorbents**, M. Zabochnicka, R. Czech, M. Cempa, P. Bargieł

**Removal of phenol from coke wastewater using sorption processes**, M. Zabochnicka, P. Bargieł, R. Czech

**Utilization of *Chlorella vulgaris* for CO<sub>2</sub> sequestration towards circular economy**  
M. Zabochnicka, U. Kępa, M. Worwąg

**A comparative analysis of carbon dioxide capture methods**, U. Kępa, M. Zabochnicka, M. Worwąg

**Management of waste after CO<sub>2</sub> capture**, M. Worwąg, M. Zabochnicka, U. Kępa

13:30-14:30 Lunch

14:30-15:30 Consortium online meeting on *InnoCO<sub>2</sub>Sorbent - FFH-CO<sub>2</sub>* (closed session)

14:00-16:00 Trip to the Jasna Góra Library and the Monastery – **meeting point for registered participants at the hotel reception, punctually at 13.50**

19:00-22:00 Conference dinner

## 16.09.2022 (Friday) - III day

### Energy Climate Environment Conference [in Polish]

8:00-9:00 Breakfast

9:00-13:00 Energy - Climate - Environment Conference

13:00-13:15 Closing Ceremony

13:15-14:30 Lunch