**The CCUV4 Workshop in Lodz**

**Theme:**

Advances in designing processes, equipment, and technologies to meet low carbon strategies   
in V4 countries.

**Place:**

The Lodz University of Technology, Faculty of Process and Environmental Engineering, Wolczanska 213, 93-005 Lodz, Poland.

**Term:**

Wednesday 31.5.2023, 10:00 - 16:00

**Programme:**

**9:30 – 10:00 – Registration of participants.**

**10:00 – 10:10 – Workshop opening, welcome talk TUL representatives.**

**10:10 – 11:30 – Section “Processes and Equipment” - chairman Prof.Dr.Stanislaw Ledakowicz**

10:10 – 10:30 Green deal strategy - the ambition of zero pollution for a non-toxic environment.

*Oliver Macho\*, Ľudmila Gabrišová, Peter Peciar*

*Slovak University of Technology in Bratislava, Faculty of Mechanical Engineering,   
Institute of Process Engineering*

10:30 – 10:50 Energy payback time for a high concentrated photovoltaic panel with optical micro-tracking.

*Ireneusz Zbiciński\*, Aleksandra Ziemińska-Stolarska, Monika Pietrzak Lodz University of Technology, Faculty of Process and Environmental Engineering,  
Department of Environmental Engineering*

10:50 – 11:10 Cryogenic separation of CO2 from flue gas.

*Radek Šulc\*, Jonáš Karejs*

*Czech Technical University in Prague, Faculty of Mechanical Engineering,   
Department of Process Engineering*

11:10 – 11:30 Efficient industrial methods for harvesting and dewatering   
of microalgae.

*Vojtěch Bělohlav\*, Tomáš Jirout*

*Czech Technical University in Prague, Faculty of Mechanical Engineering,   
Department of Process Engineering*

**11:30 – 12:30 – Lunch Break, discussion of participants.**

**12:30 – 13:50 – Section “Processes and Equipment” – chairman Prof. Dr. Ireneusz Zbicinski**

12:30 – 12:50 The influence of temperature and residence time on hydrothermal carbonization of kitchen waste.

*Radosław Ślęzak\*,Stanisław Ledakowicz*

*Lodz University of Technology, Faculty of Process and Environmental Engineering,  
Department of Environmental Engineering*

12:50 – 13:10 Optimization of the extrusion process with respect to energy consumption.  
*Roman Fekete\*, Miriam Uličná, Peter Peciar, Marián Peciar  
Slovak University of Technology in Bratislava, Faculty of Mechanical Engineering,*

*Institute of Process Engineering*

13:10 – 13:30 Integration of Scale-Up and Life Cycle Assessment to optimize the environmental load and energy consumption of grinding processes by introducing new emission factors.

*Viktoria Mannheim, Zoltán Siménfalvi, Máté Petrik**University of Miskolc, Faculty of Mechanical Engineering and Informatics, Institute of Energy Engineering and Chemical Machinery, Department of Chemical Machinery.*

13:30 – 13:50 Non-Conventional Reinforced EPS and Its Numerical   
Examination.

*Katalin Voith, Zoltán Siménfalvi, Máté Petrik  
University of Miskolc, Faculty of Mechanical Engineering and Informatics, Institute of Energy Engineering and Chemical Machinery, Department of Chemical Machinery.*

**13:50 – 14:15 – Coffee Break, discussion of participants.**

**14:15 – 16:00 – The tour in TUL partner laboratories, closure of the Workshop.**

**Contact on local organizer:**

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