



Innovations in CO₂ Reduction Technologies

<https://desired-project.eu>

Workshop in the Centre of New Technologies University of Warsaw

Join us for an exciting workshop on the latest advancements in CO₂ reduction technologies, where leading researchers and innovators will present cutting-edge strategies for carbon capture and utilization. This event will explore emerging trends in electrocatalysis, photoelectrochemical approaches, and novel materials driving sustainable solutions for CO₂ conversion.

 Date: April 11th, 2025, 9 am -1 pm, online and on-site

 Location: Centre of New Technologies, University of Warsaw, auditorium 01.130
<https://cent.uw.edu.pl/en/>

Don't miss this opportunity to connect with experts, exchange ideas, and contribute to the future of green energy and sustainable chemistry!

 Register now! <https://desired-project.eu/workshop-1/>



Workshop Agenda

8:30 AM – 9:00 AM: *Welcome and Coffee*

9:00 AM – 9:30 AM: (30 min) Key note presentation **Prof. Michele Aresta**, IC2R, Bari, Italy

"Carbon Dioxide Utilization: a Strategic Technology for our Future. Targeting a Man-Made Carbon-Cycle"

9:30 AM – 11:00 AM: *Session 1: Initiatives for CO₂ reduction technologies*

- **9:30 AM – 10:00 AM:** (30 min) **Prof. J.C. Colmenares**, IChF, Polish Academy of Science

"Improving the carbon footprint by (piezo)photoredox catalysis using modified carbon-based materials"

- **10:00 AM – 10:30 AM:** (30 min) **Prof. Jarosław Judek**, Faculty of Electronics and Information Technology, Warsaw University of Technology

"Nitrides and Oxides of Group IVb Metals (Ti, Zr, Hf) as Cost-Effective and Abundant Photocatalyst Materials for Solar-Driven Environmental Solutions"

- **10:30 AM – 10:45 AM:** (15 min) **Dr Piotr Barczuk**, Orlen S.A.

"From incubation to venture capital. Corporate open innovation as a comprehensive platform for bringing novel ideas and technologies to the market"

- **10:45 AM -11:00 AM :** (15 min) **Dr Marcin Walter**, Orlen S.A.

"Decarbonization in Orlen's 2035 Strategy and Orlen's R&D initiatives"

11:00 AM – 11:15 AM: *Coffee Break and Discussion*

- Opportunity for attendees to discuss morning presentations and networking.

11:15 AM – 1:00 PM: *Session 2: Materials and Processes for CO₂RR*

- **11:15 AM – 11:45 AM:** (30 min) **Prof. Joanna Kargul**, Centre of New Technologies, University of Warsaw

"Solar-driven CO₂ reduction to fuel and chemicals with enzymatic cascades"



- **11:45 AM – 12:05 PM:** (20 min) **Prof. Hung Son Nguyen**, Faculty of Mathematics, Informatics and Mechanics, University of Warsaw

"An overview of the opportunities and challenges of applying machine learning to advanced materials processing"

- **12:05 PM – 12:25 PM:** (20 min) **Prof. Marcin Pisarek**, IChF, Polish Academy of Science

"Functionalization of TiO_2 nanotubes for photoelectrochemical application"

- **12:25 PM – 12:45 PM:** (20 min) **Dr Krzysztof Bienkowski**, Faculty of Chemistry, University of Warsaw

"Terahertz Spectroscopy in Unraveling CO_2 Reduction Mechanisms"

- **12:45 PM – 13:00 PM:** (15 min) **Dr Linh Trinh**, Centre of New Technologies, University of Warsaw

"Designs of New Materials for CO_2RR Applications"