

Turning CO<sub>2</sub> into energy storage



## first-ever Ionic Liquid sorbent Methanol synthesis In order To Enable over 80% yield

### Technology:

- Uses ionic liquid sorbents to capture and convert CO<sub>2</sub>
- Achieves over 80% methanol single pass yield, surpassing the 60% state of the art
- Features a 3D-printed reactor for improved fluid dynamics

### Impact:

- Enables low-pressure methanol synthesis from biogas-derived CO<sub>2</sub>
- Positions wastewater plants as potential biorefineries
- By 2030, implement small-scale CO<sub>2</sub> and electrical energy storage and utilization systems

Total Budget € 3 578 568.06

Duration 01.2025 | 12.2027


EU contribution € 2 497 753.75

Coordinated by  
National Institute of Chemistry,  
Slovenia



**Funded by  
the European Union**

Project funded by

 Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs,  
Education and Research EAER  
State Secretariat for Education,  
Research and Innovation SERI

The ILIMITED project is funded under Horizon Europe Grant Agreement n°101192964.