What to do with CO₂?

- Huge amounts available!
  - EU goals: - 80% CO₂ by 2050
  - Potential for reuse ~ 4 Gt/y

- 2 ways to replace petrochemical C
  => Biomass and CO₂

- Green alternatives to conventional products + new products

Source: CO2Chem
The FRITCO\textsubscript{2}T Platform

**Synthetic Fuels**

**Mono/Polymers, Composite and Biomaterials**

**Mineralization**

**Pharmaceutics & Cosmetology**

**Direct CO\textsubscript{2} use (solvent, foaming...)**

**Process sustainability (LCA and economics)**

**CO\textsubscript{2} Sourcing**

**Capture & Purification**

**Chemical Transformation**

**Physical Use**

**Transversal**

www.chemeng.uliege.be/FRITCO2T
Success stories

- More than 45 research projects, 15 on-going
- About 12 M€ funding achieved, > 3 M€ unique equipment
- > 200 publications, patents, communications…
- ~ 20-25 full-time researchers

From lab to pilot scale

High performance analytical tools

CO₂-assisted processes

Process modelling
Missions of the FRITCO$_2$T Platform

- Market needs, fundamental pushes
  - Give rationals and scientific backgrounds to new ideas
  - **Accelerate climbing of the TRL scale**

- Lead large-scale research projects
  - From Regional to European projects

- Support technological developments
  - Support for operational issues
  - Holistic view: Circular economy and life cycle thinking

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