

# Master Thesis Projects

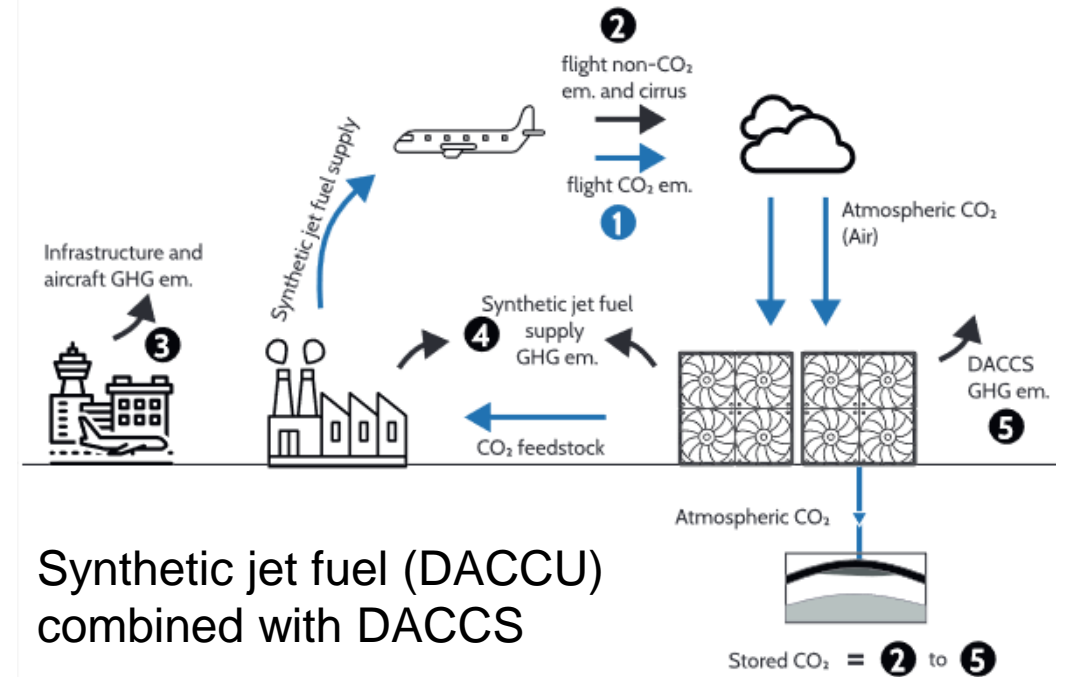
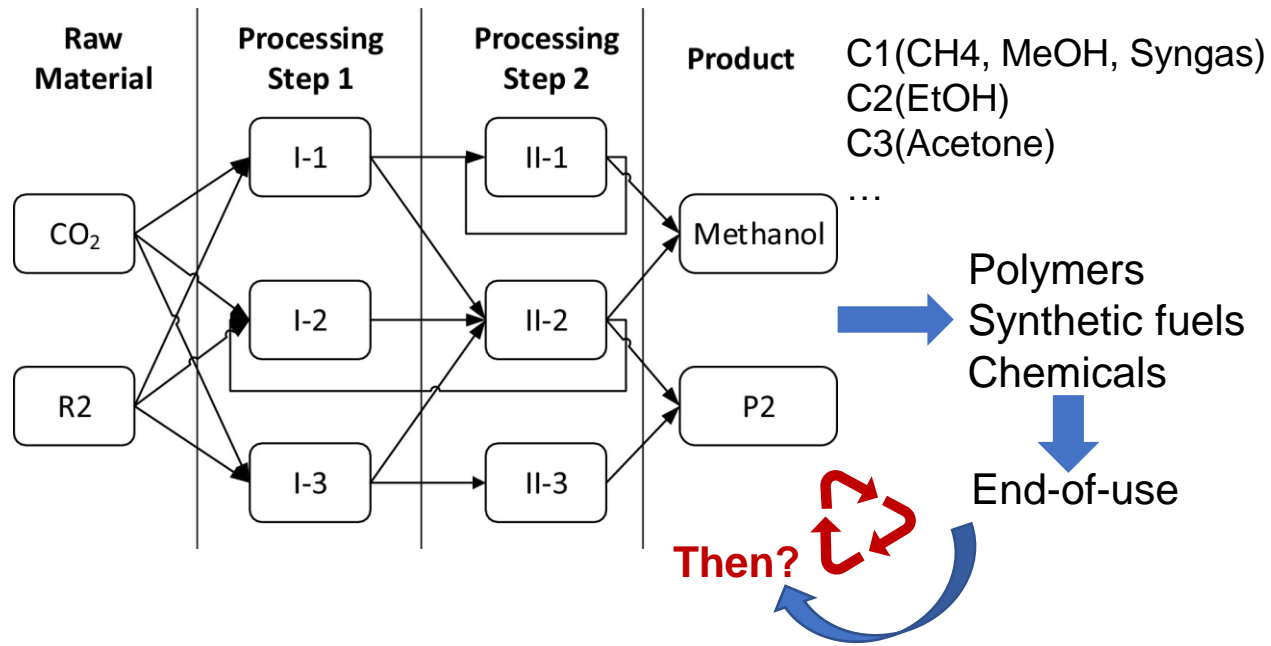
- ❑ Project 2: Evaluation of Technologies for Sustainable Carbon Capture and Utilization (CCU) using A Superstructure Approach

Pingping Wang

PhD Student

[pingping.wang@tuwien.ac.at](mailto:pingping.wang@tuwien.ac.at)

# □ Evaluation of Technologies for **Sustainable** Carbon Capture and Utilization (CCU) using A Superstructure Approach



## Direct Air Capture—Removing CO<sub>2</sub> from Air

### Main research work & methods:

- Review and develop the superstructure of CCU technologies
- Life cycle evaluation (LCA & LCC) for **a closed carbon loop** for CO<sub>2</sub>-based synthetic products
- Multi-objective mathematical optimization for a CCU system network

### What you will learn & use:

Python & Jupyter Notebook/VS Code, Activity-Browser(LCA), GAMS /JuMP/Pyomo (Optimization)