



MAX-PLANCK INSTITUT FÜR  
CHEMISCHE ENERGIEKONVERSION

## Master or Bachelor Thesis reaction engineering | catalysis | process intensification

### Our group:

The Multiphase Catalysis Group in the department of Molecular Catalysis at the Max Planck Institute for Chemical Energy Conversion (MPI CEC) is currently looking for students interested in conducting research in the field of catalysis and reaction engineering. Bachelor and Master students as well as researchers are most welcome.

Our research is focused on green chemistry, catalysis and process intensification. We work at the interface between chemistry and engineering and therefore offer a very versatile work environment. Projects include the development of new reactions, design of suitable catalysts, and scale-up of processes into continuously operated miniplants.

### Your thesis:

Your work will be in the context of the EU-funded project REDIFUEL. The goal of this project is the production of a 2nd generation Bio-Diesel from renewable feedstocks. Several international partners from various fields (e.g. catalysis, engine development) are working on a drop-in capable fuel which can be directly used in existing engines while improving their combustion and emission properties.

Our group contributes to this project with a novel catalytic system for an intermediate upgrading step of the fuel by reductive hydroformylation. We have already designed and built a continuously operated miniplant to investigate reaction kinetics and catalytic stability. By conducting batch and continuous experiments, you will further develop and optimize a novel catalytic system.

### What do we offer?

- A green and sustainable chemistry related project
- Work directly on the interface between research and industry
- A fun international environment at a great institution

### Requirements:

- Basic knowledge in homogeneous catalysis and industrial chemistry
- Motivation to work experimentally on a continuously operated pilot plant
- A good level (B2) of spoken English

If this description sounds like you and you are in for doing your thesis with us, do not hesitate to contact me with a short description of your background and interests and why you want to join the team:

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**PhD Student**

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