

**Bachelor or Master Thesis (f/m/d)**  
**catalysis | process intensification | technical chemistry**

**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:**

Chemo- and biocatalysis are highly specified and different fields. However, the combination of chemo- and biocatalysis affords numerous benefits for the design of a sustainable reaction process. In order to realise this combination, a fitting process window for both reaction steps are essential. This will improve our understanding around combining chemo- and biocatalysis, which will further drive future developments in this research field.

In this project, the combination of chemo- and biocatalysis will be investigated. This part of the project will only focus on the chemocatalysis part, while the biocatalysis part will be investigated by our Cooperation partner. Herein, the identification of interactions and the optimization of the chemo-catalysed part regarding the conditions and substances which the biocatalysed reaction needs, is essential and will be investigated.

**What is waiting for you?**

- A sustainable chemistry related project
- Training and working with high pressure autoclaves and/or a miniplant
- Various analytical techniques (GC-FID, GC-MS, NMR, ICP-MS, endoscopy...)
- A fun and friendly international work environment at an excellent research institute

**Requirements:**

- Interest to work in the interdisciplinary field of chemo- and biocatalysis with technical aspects
- Some knowledge of the English language due to the international working environment

If this project has caught your interest, do not hesitate to contact me!

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