



MAX-PLANCK INSTITUT FÜR  
CHEMISCHE ENERGIEKONVERSION

## Master or Bachelor Thesis 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:

Long chain alcohols are discussed as bio based fuel additives with improved combustion behavior. Newly developed rhodium/amine catalysts allow for an efficient one step conversion of olefins into alcohols and show increased robustness towards oxygen and temperature. Your thesis would deal with the investigation of rhodium/amine catalyst on a molecular level, designing new amine ligands for the purpose of catalyst recycling and in the end the development of a successful catalyst recycling strategy.

### What do we offer?

- A sustainable chemistry related project
- Versatile work right at the interface between metal organic chemistry and process intensification
- Training and experience with high pressure reactions
- Front end analytical techniques
- A fun international environment at a great institution

### What do we require?

- True interest in the field of sustainable chemistry and molecular catalysis
- Base level working experience in organic chemistry and working under inert gas conditions

If this description sounds like you and you are in for doing your thesis with us, do not hesitate to contact with a short description of your background and interests.

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