

Offer for Master Thesis (m/w/d)

At **TUM Campus Straubing for Biotechnology and Sustainability**, the **Chair of Chemistry of Biogenic Resources (Prof. Volker Sieber)** deals with the development of chemical and biotechnological processes for the conversion of biomass to base chemicals, biofuels, and fine chemicals. For this work, the focus of research is on protein biochemistry (enzyme engineering), molecular biology (cloning, mutagenesis), microbiology (biotransformation, fermentation), chemical (organic synthesis, heterogenic catalysis), & analytical methods (chromatography, spectroscopy, electrophoreses).

In the field of **Multienzyme Cascades: Converging conversion of renewable raw materials to base chemicals via multi-enzymatic cascades**

Goal

- Development of an enzymatic cascade for the converging conversion of various sugar acids into chemicals
- Enzyme and medium engineering
- Production and analysis of enzymes (k_{cat} , K_m , T_m , T_{50})
- Synthesis and analysis of products (HPLC, GC, NMR)

Requirements

- Majoring in biochemistry, chemistry, biotechnology, biocatalysis or related science majors with prove of above average academic performance in the past
- Having experience working with enzymes
- Experience with the analysis of product mixtures
- Curiosity and interest in scientific problem solving
- Strong dedication, soft skills and creative thinking

We offer

- Balanced supervision and weekly scientific seminars
- A young and international team of talented scientists
- Working at the new TUM Campus Straubing of Biotechnology and Sustainability
- Possibility of providing a Hiwi position
- Possibility of authorship in publication

Application

I am looking forward to receiving your application via email to luca.schmermund@tum.de. Regarding any inquiries contact me by email. The application phase starts immediately and ends when a suitable candidate has been found.

Dr. Luca Schmermund

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