

Chemoenzymatic Synthesis of Fatty Alcohols

Master thesis
at the Institute for Technical Biocatalysis

Motivation

Fatty alcohols are important intermediates in industry. For example, they are used as detergents, emulsifiers in soaps and crèmes. Currently they are produced in industry by the Lurgi process. In contrast to this process, we are developing a sustainable chemoenzymatic approach for the synthesis of fatty alcohols. It is consisting of an enzyme-catalysed esterification and chemo-catalysed hydrogenation.

Possible topics:

- Screening of different parameter for both process steps, especially the hydrogenation
- Development of an inline FTIR analytical method for both reaction steps
- Development of a recycling method for the chemocatalyst

We offer:

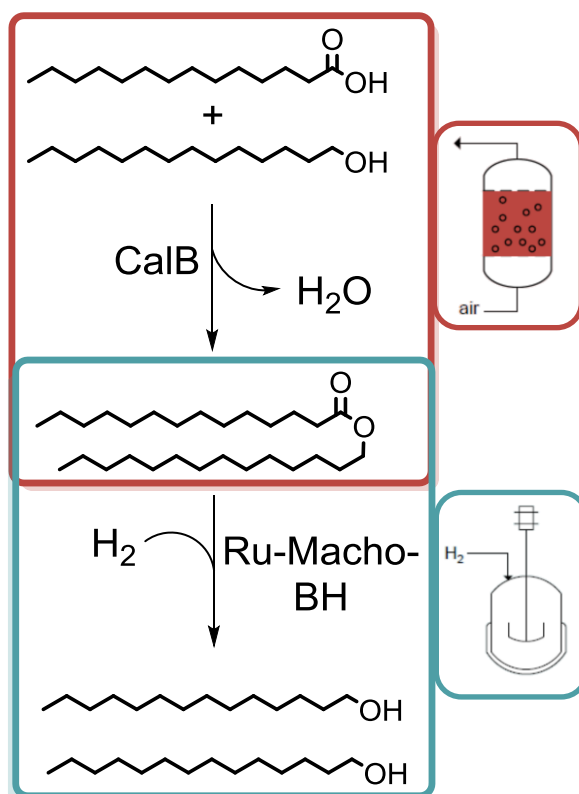
- Interdisciplinary team consisting of chemists, biologist and engineers
- Motivating & pleasant working atmosphere
- Direct support & feedback from the whole team

You should bring:

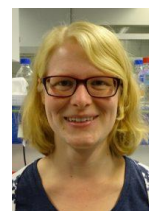
- Engagement & knowledge of laboratory work
- Safe and conscientious work in the laboratory
- Team player as well as independently working
- Interest in interdisciplinary work



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Esterification of myristic acid with myristyl alcohol catalysed by immobilized CalB & hydrogenation of myristyl myristate with homogeneous Ru-Macho-BH



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