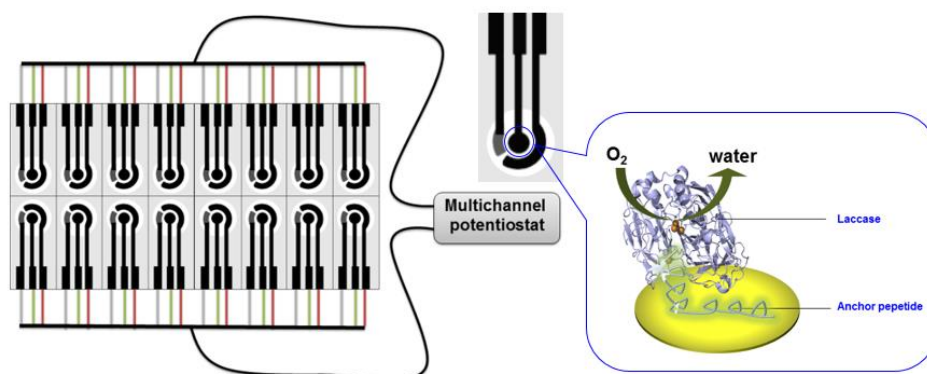


Research Internship or Bachelor Thesis

Electrochemical screening of directed laccase evolution

Description:

Enzymes with high catalytic activity and long lifetime are of crucial importance for all the biochemical reactions *in vivo* and *in vitro*, including the bioelectrochemical redox reactions at the electrode, referred to as bioelectrocatalysis. Important hereby is that the screening system is similar to the final application conditions. For enzymes that will be used in biosensors or biofuel cells an electrochemical screening is therefore necessary.



Aim:

The aim of the internship/thesis is to find laccase variant with high bioelectrocatalytic activity, which will be used for the biosensor development and biofuel cell assembly. Work will focus on laccase library establishment and electrochemical screening.

Techniques:

You will learn techniques in the interdisciplinary fields of molecular biology and electrochemistry:

- Gene cloning
- Protein expression & isolation
- Cyclic voltammetry
- Linear sweep voltammetry

Estimated time:

3 – 4 months (writing in English)

Contact: Lingling ZHANG, Room 4.132
Email: l.zhang@biotec.rwth-aachen.de

Phone: 0241 / 80 23638