

*** Data underlying the publication: An alginate-confined peroxygenase-CLEA for styrene epoxidation ***

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General Introduction

This dataset contains data collected during experiments at Delft University of Technology and ETH Zürich, as chapter 3 of Yinqi Wu's PhD Thesis (September 2023):

It is being made public for both to act as supplementary data for publications and the PhD thesis of Yinqi Wu and in order for other researchers to use this data in their own work.

The data in this dataset was collected in the Biocatalysis Laboratory of the Delft University of Technology - Faculty of Applied Sciences and department of Biosystems Science and Engineering - ETH Zürich, between October 2019 and September 2023.

This research project was made possible by a grant from the China Scholarship Council (CSC), German Academic Exchange Service, the German Academic Scholarship Foundation and European Research Council (ERC Consolidator Grant No. 648026).

Purpose of the test campaign

The purpose of these experiments was to investigate the alginate-confined peroxygenase-CLEA for styrene epoxidation.

Test equipment

Test equipment information could be found in the supplementary information of the publication (DOI: 10.1039/d1cc01868j).

Description of the data in this data set

The data included in this dataset has been organised based on the following table. Corresponding methods and conditions could be found in the supporting information of the publication (DOI: 10.1039/d1cc01868j).

Experiment	Category	Description Category	Analysis	Experiment Description
P2.E1	EC	Enzyme Characterization	UV-VIS	UPO activity and concentration
P2.E2	OI	Optimization of immobilization	UV-VIS	CLEA optimization
P2.E3	EC	Enzyme Characterization	SDS-PAGE	SDS PAGE_CLEA
P2.E4	EC	Enzyme Characterization	UV-VIS	Encapsulation
P2.E5	BC	Bioconversion	GC	Neat styrene biotransformation
P2.E6	EC	Enzyme Characterization	Microscopy	Microscopy analysis for imm-enzyme size measurement
P2.E7	EC	Enzyme Characterization	UV-VIS	UPO activity and concentration_after shipment
P2.E8	BC	Bioconversion	GC	Neat reaction_methyl styrene
P2.E9	EC	Enzyme Characterization	UV-VIS	Stability of enzyme
P2.E10	PI	Product isolation	flash column chromatography	Purification of epoxide product