

University of Groningen

Designing biocatalysts for non-natural carboligations

Kunzendorf, Andreas

DOI:
[10.33612/diss.206450318](https://doi.org/10.33612/diss.206450318)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2022

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Kunzendorf, A. (2022). *Designing biocatalysts for non-natural carboligations*. [Thesis fully internal (DIV), University of Groningen]. University of Groningen. <https://doi.org/10.33612/diss.206450318>

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

Propositions

Belonging to the thesis

Designing Biocatalysts for Non-Natural Carbonylations

by Andreas Kunzendorf

1. Novel concepts for enzymatic carbon-carbon bond formations are of high industrial and academic interest.
2. A PhD is like a long-distance cycling trip: Just push the pedals. When you feel lost – stop – and reevaluate your directions. Warning: you may make new discoveries in the process!
3. The catalytic diversity in the tautomerase superfamily provides a huge playing field for promiscuous biocatalysis.
4. Looking at the dark side of the moon: Even well-studied enzymes, such as DERA, can provide unsuspected access to novel promiscuous reactions.
5. Directed evolution is a very powerful tool to tailor enzymes for biocatalytic processes. Picking bacterial colonies is also highly tedious.
6. When you can create one carbon-carbon bond with an enzyme, you might also make two new carbon-carbon bonds in one reaction.
7. Even though it costs some time, purification of enzyme variants during rounds of directed evolution is a crucial step to identify improved variants.