



Industrial Biocatalysis
12th Wädenswil
Day of Life Sciences

hosts

3rd CCBIO Symposium

June 10th, 2021
online

www.zhaw.ch/ccbio
www.zhaw.ch/icbt/day-of-lifesciences

Introduction

Biocatalysis has become a vibrant scientific discipline with an increasing number of industrial applications emerging in recent years. Products manufactured by enzymatic transformations are used in the food, feed, chemical, pharmaceutical and cosmetic industries and the number of compounds produced using biocatalysts is expected to increase further.

Future innovations in biocatalysis will be fueled by a close cooperation between experts from chemistry, micro- and molecular biology, biotechnology, bioinformatics and engineering. In a transdisciplinary environment, the 3rd CC BIO Symposium on Industrial Biocatalysis will provide a platform for scientific knowledge transfer and dialog for participants from industry and academia and bring together renowned researchers to discuss recent advances and future directions of the field. The symposium will cover cutting edge topics of biocatalysis, ranging from the evolution of synthetically valuable enzyme families, genetic code expansion and the design and optimization of artificial enzymes, to the development of computational approaches for enzyme engineering. In addition, the symposium will feature several successful biocatalysis examples from industry.

The Competence Center of Biocatalysis at the ZHAW promotes biocatalysis as a complementary method to classic organic synthesis and aims to help bridge the gap between academic laboratories and the production plant. By connecting relevant research competences CC BIO strives to develop a comprehensive biocatalytic toolbox consisting of enzyme libraries and methods, which will facilitate the development of biocatalytic and biosynthetic processes for the chemical and pharmaceutical industry.

Scientific Lead

Prof. Dr. Rebecca Buller,
Head CC BIO,
Institute of Chemistry und Biotechnology,
ZHAW Wädenswil



Competence Center
for **Biocatalysis**

Program – Thursday, June 10th, 2021

08.30	Registration
09.00	Welcome to the ZHAW, news and outlook Prof. Dr. Christian Hinderling, Zurich University of Applied Sciences (CH)
09.15	Engineering new-to-nature enzymes, synthetic pathways and artificial cells for sustainable carbon capture Prof. Dr. Tobias Erb MPI for Terrestrial Microbiology (DE)
09.45	Enzymatic synthesis of hydroxylated pipecolic acids Mr. Hiroshi Kawabata, Mitsubishi Chemical Corporation (JP)
10.15	Recent advances in enzymatic reduction of carboxylic acids PD Dr. Margit Winkler, acib GmbH/TU Graz (AT)
10.45	A biocatalytic process for sustainable Ambrofix production Dr. Eric Eichhorn Givaudan SA (CH)
11.15	Evolving Fe/α-ketoglutarate-dependent enzymes Prof. Dr. Rebecca Buller, Zurich University of Applied Sciences (CH)
11.45	Virtual networking and exhibition
13.00	Design and evolution of enzymes using an expanded genetic code Dr. Anthony Green, University of Manchester (UK)
13.30	Engineering lanthanide-dependent artificial metalloenzymes Prof. Dr. Cathleen Zeymer, TU Munich (DE)
14.00	Engineered metalloprotein catalysts for abiological carbene transfer reactions Prof. Dr. Rudi Fasan, University of Rochester (US)
14.30	Development and scale-up of biocatalytic water-addition and oxidation technology for the production of oxy-functionalized products Dr. Martin Schürmann, InnoSyn B.V. (NL)
15.00	Virtual networking

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15.30	Enzymatic Pictet-Spengler reactions Dr. Hans Iding, F. Hoffmann-La Roche AG (CH)
16.00	Fast kinetics and microfluidics for biocatalyst engineering Prof. Dr. Zbyněk Prokop, Masaryk University Brno (CZ)
16.30	Expanding the synthetic potential of O-methyltransferases via protein engineering Prof. Dr. Ioannis Pavlidis, University of Crete (GR)
17.00	How esterases evolved into hydroxynitrile lyases Prof. Dr. Romas Kazlauskas, University of Minnesota (US)
17.30	Closing remarks Dr. Hans-Peter Meyer, HES-SO and Expertinova AG (CH)
	Virtual networking
Chair	Prof. Dr. Roland Wohlgemuth, Lodz University of Technology (PL)

General Information

Exhibitors

CCOS AG • INOFEA AG • Merck/ Sigma-Aldrich • Microsynth AG •
TECAN Sales Switzerland AG • Twist Bioscience

Fee

Participants online CHF 100.-

Registration

Online registration: www.zhaw.ch/icbt/day-of-lifesciences

E-Mail: weiterbildung.lsfm@zhaw.ch

The registration deadline is June 4th, 2021

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Partner



SWISS NATIONAL SCIENCE FOUNDATION

Location

ZHAW Zurich University of Applied Sciences GA 203, Campus Grüental

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