CURRICULUM VITAE

Personal Information			
Name	Shuke Wu	Gender	Male
Position Title		Professor in Biotechnology	
Working Department		College of Life Sciences & Technology	
Email	shukewu@mail.hzau.edu.cn		
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Research Interest

Biocatalysis, Enzyme Engineering, Synthetic Biology, Industrial Biotechnology

1) Discover of novel enzymes and new pathways in microbes.
2) Directed evolution and engineering of important enzymes in biological systems.
3) Engineering of (chemo)-microbial cells factory for green agrochemical & pharmaceutical synthesis.

Professional Memberships

Guest Editor for Journals: *Bioresources and Bioprocessing*, *Frontiers in Catalysis*

Reviewing for Journals: *ACS Catalysis*, *ACS Synthetic Biology*, *ACS Chemical Biology*, *ACS Sustainable Chemistry & Engineering*, *Angewandte Chemie International Edition, Chemical Review, ChemSusChem, ChemCatChem, Journal of Agricultural and Food Chemistry, Chemical Engineering Science*, *Biochemical Engineering Journal*, *Bioresources and Bioprocessing*, *Frontiers in Bioengineering and Biotechnology,* etc.

Other Roles

Awards:

Alexander von Humboldt Fellowship for Postdoctoral Researchers (2018-2020)
Seal of Excellence in Marie Skłodowska-Curie Actions (H2020-MSCA-IF-2017)
Swiss Government Excellence Scholarship (2017-2018, for postdoc study)
Singapore-MIT Alliance Fellowship (2010–2014, for PhD study)

Education & Working Experience

Working Experience:

2020.12–current: Full Professor, College of Life Sciences & Technology, Huazhong Agricultural University, China
2018.09–2020.11: Humboldt Postdoc Fellow with Prof. Uwe T. Bornscheuer, Institute of Biochemistry, University of Greifswald, Germany.
2017.07–2018.08: Postdoc with Prof. Thomas R. Ward, Department of Chemistry, University of Basel (UniBasel), Switzerland.
2016.01–2017.06: Research Fellow (Postdoc) with Prof. Zhi Li, NUS Synthetic Biology for Clinical and Technological Innovation (SynCTI), National University of Singapore (NUS), Singapore.

Education:
2010.07–2015.11: Ph.D. in Chemical and Pharmaceutical Engineering, Singapore-MIT Alliance, National University of Singapore. Advisors: Prof. Zhi Li (NUS) and Prof. Daniel I. C. Wang (MIT).
2013.03-2013.08: Visiting Ph.D. student, Chemical Engineering, MIT, USA.
2006.09–2010.07: B.S. in Biotechnology (honors), Yuanpei College, Peking University, China.

Publications

Selected First/Corresponding-Author Publications: (#: equal contribution; *: corresponding author)

1. Shuke Wu,#* Chao Xiang,# Yi Zhou, Mohammad Saiful Hasan Khan, Weidong Liu, Christian G. Feiler, Ren Wei, Gert Weber, Matthias Höhne, Uwe T. Bornscheuer*. A growth selection system for the directed evolution of amine-forming or converting enzymes. *Nature Communications* **2022**, *13*, 7458. [IF 17.694] DOI: 10.1038/s41467-022-35228-y

2. Shuke Wu, Radka Snajdrova, Jeffrey C. Moore, Kai Baldenius,* Uwe T. Bornscheuer*. Biocatalysis: Enzymatic Synthesis for Industrial Applications. *Angewandte Chemie International Edition* **2021**, *60* (1), 88-119. [IF 15.336] DOI: 10.1002/anie.202006648
   ❖ ESI highly cited paper.

3. Shuke Wu,* Yi Zhou, Daniel Gerngross, Markus Jeschek, Thomas R. Ward*. Chemo-enzymatic Cascades to Produce Cycloalkenes from Bio-based Resources. *Nature Communications* **2019**, *10*, 5060. [IF 14.919] DOI: 10.1038/s41467-019-13071-y

4. Shuke Wu,# Yi Zhou,# Johannes G. Rebelein,# Miriam Kuhn, Hendrik Mallin, Jingming Zhao, Nico V. Igareta, Thomas R. Ward*. Breaking Symmetry: Engineering Single-Chain Dimeric Streptavidin as Host for Artificial Metalloenzymes. *Journal of the American Chemical Society* **2019**, *141* (40), 15869-15878. [IF 15.419] DOI: 10.1021/jacs.9b06923

5. Shuke Wu, Yi Zhou, Tianwen Wang, Heng-Phon Too, Daniel I. C. Wang, Zhi Li*. Highly Regio- and Enantioselective Multiple Oxy- and Amino-functionalizations of Alkenes by Modular Cascade Biocatalysis. *Nature Communications* **2016**, *7*, 11917. [IF 14.919] DOI: 10.1038/ncomms11917

International Patents:

1. Zhi Li, Shuke Wu, Yi Zhou, Benedict Ryan Lukito. "Bioproduction of Phenethyl Alcohol, Aldehyde, Acid, Amine, and Related Compounds." WO2018217168.

2. Zhi Li, Shuke Wu. "Production of Chiral 1,2-Amino Alcohols and α-Amino Acids from Alkenes by Cascade Biocatalysis." US20170067084.

3. Zhi Li, Shuke Wu. "Production of Enantiopure α-Hydroxy Carboxylic Acids from Alkenes by Cascade Biocatalysis." WO2014189469.

Additional Information

Website (English): https://faculty.hzau.edu.cn/shukewu/en/index
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https://scholar.google.com/citations?user=KDE8huoAAAAJ&hl=en