Chong ZHANG

Affiliation: Department of Chemical Engineering, Tsinghua University

Research title for the award: High-throughput genotype-phenotype association study to accelerate understanding of microbes and designing of MCFs

Prof. Chong Zhang received his B.Sc. and Ph.D. in chemical engineering at Department of Chemical Engineering, Tsinghua University in 2002 and 2008, respectively. He is now a tenured Associate Professor at the Department of Chemical Engineering, Tsinghua University.



The emerging of synthetic biology ignites the hope of building up microbial cell factory (MCF) through a designable assembly of well-defined and standardized biological parts. However, the application of MCF is challenged by the lagged understanding of the intrinsic complexity of biological system. Design-build-test cycle (DBT) remains to be routinely used. Prof. Zhang has directed his team towards developing high-throughput strategies to accelerate DBT cycle for construing microbial cell factory. Their progress in high-throughput strategies and techniques for constructing MCFs has been described in over 20 peer-reviewed papers in the past five years, including Biotechnology and Bioengineering (2020), Nature Chemical Biology (2020), Nature Communications (2018), Nucleic Acid Research (2018), Metabolic Engineering (2018, 2017, 2016) and ACS Synthetic Biology (2017), etc. Notably, their high-throughput microbial cultivation systems have been commercialized and sold more than 40 sets in total, serving more than 50 research institutes and enterprises in their researches on high-throughput cultivation and phenotype analysis of microbes. Prof. Zhang's efforts in advancing high-throughput strategies and techniques for constructing MCFs are honored through Young Yangzi River Scholar by Ministry of Education, China in 2019 and Outstanding Young Scholar Award in Fermentation Engineering by Lun Shiyi Education Fund in 2018.

[Message as a prize winner]

It is my great honor to receive the 2020 Young Asian Biotechnologist Prize awarded by the Society for Biotechnology, Japan. I would like to give my sincere thanks to the nominator and all the committee members for giving me this opportunity. The honourable prize of SBJ would encourage me to continuously work in my research area and devote myself in collaboration between China and Japan as well as the world.

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