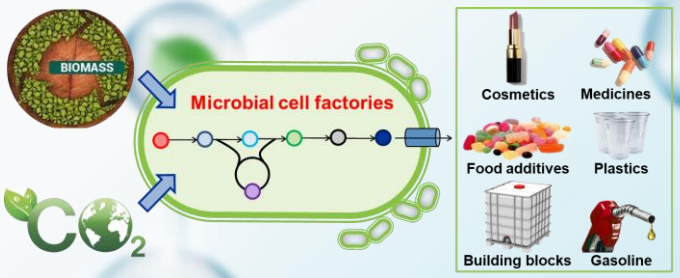

CCIB Workshop on

Green Biomanufacturing of Bio-based Chemicals

Friday, October 28, 2022
@14:30, Beijing time (GMT+8)

Converting renewable resources to bio-based chemicals by biomanufacturing is an important technical route to deal with the current energy, resource, and environmental problems. In addition to traditional feedstocks such as starch, utilization of agricultural biomass, marine biomass, and one-carbon compounds as substrates for biomanufacturing of chemical is drawing more and more attention. Meanwhile, related technologies for bioconversion are developing rapidly. Under the demand of carbon peak and carbon-neutrality development, the biomanufacturing of chemicals is an important direction of scientific research and becomes a new highlight of green and low-carbon development in industry.

This workshop aims to promote dialogue between scientists and enterprises and explore potential cooperation opportunities for joint R&D and industrial collaboration on bio-based chemicals.

VooV Meeting Link :
https://voovmeeting.com

ID: 102456455

Speakers

Prof. Jibin Sun is the Deputy Director-General of Tianjin Institute of Industrial Biotechnology (TIB), Chinese Academy of Sciences (CAS); Secretary-General of Biomanufacturing Industry (Talent) Alliance; as well as the founding Director of CCIB, which is an open, shared and innovative cooperation platform to promote the development of biotechnology and bioindustry in the Global South. Prof. Sun is among eminent figures in the area of industrial biotechnology in China with research focus on understanding and upgrading the industrial strains. He contributed substantially to the foundation of the National Center of Technology Innovation for Synthetic Biology, which is hosting CCIB and offers a unique platform for international cooperation. He has been actively participating in the activities of COMSATS Network and is the co-organizer of the 22nd Meeting of COMSATS Coordinating Council.

Prof. Yu Wang is the Coordinator of the CCIB Joint R&D Group on Biochemicals. He graduated from Shanghai Jiao Tong University with his Ph.D. degree in Biology in 2016. His recent researches focus on development of genome engineering technologies for de novo design and construction of microbial strains for biomanufacturing using C1 and lignocellulosic feedstocks. He has published more than 60 peer-reviewed papers in international journals such as *Nature Communications, Metabolic Engineering, Biosensor and Bioelectronics, and Trends in Biotechnology* and filed more than 20 patents. He has been selected as a recipient of the Excellent Young Scientists Fund (National Natural Science Foundation of China) and the winner of the DaSilva Award by the Society for Biotechnology, Japan.

Prof. Akihiko Kondo is a Professor at School of Science, Technology and Innovation, Kobe University, Japan. He received his Ph.D. from Kyoto University in Chemical Engineering in 1988. He was appointed as full professor of Kobe University in Department of Chemical Science and Engineering in 2003. He was appointed a dean of School of Science, Technology and Innovation at Kobe University in 2016, a deputy director of RIKEN CSRS in 2020 and a vice president at Kobe University in 2021. He has developed various platform technologies such as cell surface display systems, metabolic pathway design tools, metabolic analysis technologies, genome editing and long chain DNA synthesis technologies. He is a co-founder of several companies including BioPalette (genome editing), Synprogen (genome synthesis), AlgaeNexus (microalgae) and Bacchus Bioinovation (Biofundry).

Prof. Volker F. Wendisch holds the Chair of Genetics of Prokaryotes at the Faculty of Biology at Bielefeld University, Germany. He serves as deputy scientific director of its Center for Biotechnology CeBiTec and is member of the board of CLIB2021, an international open innovation cluster of stakeholders active in biotechnology and bioeconomy from academic institutes and universities, investors, SMEs, and industry based in Düsseldorf, Germany. Volker F. Wendisch received his diploma in biology from Cologne University, Germany. After having completed his PhD at the Institute of Biotechnology 1 of the Research Center Jülich in 1997, he worked as postdoctoral researcher at the University of California, Berkeley, CA, USA. From 2006-2009 he was Professor for Metabolic Engineering at Münster University. Prof. Wendisch's research interests concern genome-based metabolic engineering of industrially relevant microorganisms, systems and synthetic microbiology.

Prof. Fengxue Xin is a full professor in Nanjing Tech University, China. He obtained his PhD degree from National University of Singapore. Currently, his research mainly focuses on the bioconversion of renewable resources into value added bio-products and construction of synthetic microbial consortia for bio-manufacturing. By now, he has published 67 SCI papers with first or correspondence authors in some reputational journals, including *Green Chemistry, ACS Synthetic Biology, Biotechnology and Bioengineering, Trends in Biotechnology, Biotechnology Advances* et al. He has also authorized 12 Chinese patents, and published 2 English book chapters. He joined the editorial member of Biotechnology for *Biofuels, BioDesign Research, Frontiers in Bioengineering and Biotechnology and Frontiers in Energy Research*.

Prof. Verawat Champreda is the Director of the Biorefinery and Bioproduct Technology Research Group, National Center for Genetic Engineering and Biotechnology (BIOTEC), Thailand. He finished his Ph.D. from Imperial College London, UK in 2003 in biocatalysis. His research interest is focused on enzyme discovery using metagenomic technology, biomass conversion, and enzyme applications in biorefinery. His research also extends to development of green process for biomass fractionation and integrative bio/catalytic approach for production of biofuels and commodity chemicals from renewable carbon resources. To date, Dr. Verawat has more than 140 publications in international journals with awards from local and international institutions, including the Young Scientist award 2010 from the Foundation for the Promotion of Science and Technology, Thailand and the Young Asian Biotechnologist Prize 2018 from the Society of Biotechnology, Japan, and the Taguchi Award 2019 from the Thai Society of Biotechnology.

Prof. Shuang Li currently holds a position as full professor in the School of Biology and Biological Engineering, South China University of Technology. She obtained her B.S. and Ph.D. degrees in Chemical Engineering from Tsinghua University in 2001 and 2006. She is interested in the aspect of synthetic biology, including the development of micro-organisms for the total and sustainable conversion of biomass into bio-based products and the screening and evolution of new functional enzymes.

For more information, please contact:

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Program

14:30-14:35 **Introductory Remarks**
Prof. Jibin Sun
TIB Deputy Director-General & CCIB Founding Director

14:35-14:40 **Opening Remarks**
Hon. Ghulam Muhammad Memon
Executive Director COMSATS

14:40-15:10 **Keynote Speech：Bio-digital Fusion to Establish Biofoundry Technology for Rapid Development of Microbial Cell Factories**
Prof. Akihiko Kondo
Kobe University, Japan

15:10-15:40 **Keynote Speech：Synthetic and Systems Metabolic Engineering of *Corynebacterium glutamicum* for Bioprocesses: a Focus on Nitrogen**
Prof. Volker F. Wendisch
Bielefeld University, Germany

15:40-15:55 **Application of Synthetic Microbial Consortia for Biochemicals Production from Renewable Resources**
Prof. Fengxue Xin
Nanjing Tech University, China

15:55-16:10 **Integrated Utilization of Fractionated Sugarcane Waste to Biochemical by Enzymatic and Microbial Conversion**
Prof. Verawat Champreda
National Center for Genetic Engineering and Biotechnology (BIOTEC), Thailand

16:10-16:25 **Efficient Production of Sesquiterpenoid Valencene Using Blue-carbon of Mannitol as Substrate in *Saccharomyces cerevisiae***
Prof. Shuang Li
South China University of Technology, China

16:25-16:40 **Development of Genome Editing Technologies for Construction of Microbial Strains for Biochemical Production**
Prof. Yu Wang
TIB, CAS, China

16:40-17:05 **Panel Discussion/ Q&A**
(Moderated by Prof. Yu Wang, the Coordinator of CCIB Joint R&D Group on Biochemicals)

17:05-17:10 **Closing Remarks**