Conference Program

PROGRAM OVERVIEW

Date	Time	NUS LT1 & LT2	Lobby
16th May 2018	8:50 am – 11:00 am	Session I: plenary talk I	Poster Presentation and Exhibition
	11:00 am – 11:30 am	Tea break and networking session	
	11:30 am – 13:10 pm	Session II: Food and Ingredients	
	13:10 pm – 14:00 pm	Lunch break (poster session)	
	14:00 pm – 16:00 pm	Session III: Fuels and Bioenergy I	
	16:00 pm – 16:30 pm	Tea break and networking session	
	16:30 pm – 18:30 pm	Session IV: Biobased Chemicals	
	18:00 pm	End of Day 1	
17th May 2018	9:00 am – 11:00 am	Section V: Plenary talk II	
	11:00 am – 11:30 am	Tea break and networking session	
	11:30 am – 13:10 pm	Section VI: Waste treatment and valorisation	
	13:10 pm – 14:00 pm	Lunch break	
	14:00 pm – 16:00 pm	Section VII: Fuels and Bioenergy II	
	16:00 pm – 16:30 pm	Tea break and networking session	
	16:30 pm – 17:30 pm	Section VIII: Young Scientist Symposium	
	17:30 pm – 18:00 pm	Award presentation	
	18:00 pm – 21:00 pm	Conference Dinner	
18th May 2018	8:30 am – 13:00 pm	Technical Tours (Optional)	
	13:00 pm – 14:00 pm	Lunch	

ORAL PRESENTATIONS

Day 1 – 16th May 2018, NUS LT1 & LT2

8:50 am – 11:00 am

Session I: Plenary talk I

Session Chair – Dr. GENG Anli, President, BioEnergy Society of Singapore

8:50 am – 9:00 am: Welcome Address by Dr. GENG Anli

9:00 am – 9:40 am: Integrated biomolecular engineering framework for "molecules- 2-market", by Dr. MURALI P.M., Managing Director & CEO, Evolva Biotech Pvt Ltd.

9:40 am – 10:20 am: Sustainable products innovation, by Dr Magali BONNIER, Global R&D Director -Beauty Formulation, CRODA.

10:20 am – 11:00 am: ARTP mutagenesis as an enabling discovery and evolution tool for systematic biobreeding of cell factories, by Prof. XING Xin-Hui, Director, Institute of Biochemical Engineering, Tsinghua University, China.

Technical talks

Day 1 – 16th May 2018

11:30 am – 13:10 pm

Session II: Food and Ingredients

Session Chair: Dr JI Lianghui, Head, Biomaterials & Biocatalysts Laboratory, Temasek Life Sciences Laboratory, Singapore

11:30 am – 12:00 pm: Functional food ingredients from underutilized vegetable biomass via lactic acid fermentation, by Dr. Shiferaw Terefe NETSANET, Senior Research Scientist, CSIRO Agriculture and Food.

12:00 pm – 12:30 pm: Paradigm shift for grain processing: minimizing the wastage by reclaiming the proteins and soluble fibres from spent grains and oil seeds, by Prof. HUANG Dejian, Food Science and Technology Program, National University of Singapore.

12:30 pm – 12:50 pm: High efficiency lipid production by *Rhodotorula glutinis* with lignocellulosic biomass, by Prof. LIU Hongjuan, Tsinghua University, China

12:50 pm – 13:10 pm: From discovery to prediction of terpene biosynthesis in Fungi, by Dr. ZHANG Congqiang, Biotransformation Innovation Platform, Agency for Science, Technology and Research (A*STAR), Singapore

Day 1 – 16th May 2018

14:00 pm – 16:00 pm

Session III: Fuels and Bioenergy I

Session Chair – Assoc/Prof. YANG Kun-Lin Department of Chemical and Biomolecular Engineering, National University of Singapore

14:00 pm – 14:30 pm: Fundraising for bioenergy and biorefinery startups, Mr. Saku RANTANEN, CEO, Tasma Bioenergy.

14:30 pm – 15:00 pm: Chemical modifications of celluloses, by Prof. Tsutomu INOKUCHI, Graduate School of Natural Science and Technology, Okayama University, Japan.

15:00 pm – 15:20 pm: Develop *Zymomonas mobilis* as a chassis for lignocellulosic bioproducts, by Prof. YANG Shihui, Distinguished Professor, The College of Life Sciences, Hubei University, China.

15:20 pm – 15:40 pm: Depolymerization of lignin to value-added chemicals by Dr. Jayasree SEAYAD, Scientiest III, Institute of Chemical and Engineering Sciences, A*Star, Singapore.

15:40 pm – 16:00 pm: A comparative life cycle assessment on four waste-to-energy scenarios for food waste generated in eateries, by Dr. TONG Huan Huan, Research Fellow, Environmental Research Institute, National University of Singapore

Day 1 – 16th May 2018

16:30 pm – 18:30 pm

Session IV: Biobased Chemicals

Session Chair: WU Jinchuan, Head, Industrial Biotechnology, Institute of Chemical and Engineering Sciences, A*star, Singapore

16:30 pm – 17:00 pm: Rational regulation of enzyme-catalyzed stereoselective organic synthesis reaction, by Prof. ZHENG Liangyu, Professor, Jilin University, China

17:00 pm – 17:30 pm: Engineering new enzymes and new cascade biotransformations for green and sustainable chemical synthesis, by Assoc/Prof. LI Zhi, Department of Chemical and Biomolecular Engineering, National University of Singapore.

17:30 pm – 18:00 pm: Biocatalytic oxidation of C-H and C-N bond for fine chemicals, Prof. CHEN Yong-Zheng, Dean of the School of Pharmacy, Zunyi Medical University, China.

18:00 pm – 18:30 pm: Tapping into C1 metabolism to produce bio-based products, by Prof. Patrick LEE, School of Energy and Environment, City University of Hong Kong.

Day 2 – 17th May 2018

9:00 am – 11:00 am

Session V: Plenary talk II

Session Chair: Assoc/Prof. LI Zhi, Department of Chemical and Biomolecular Engineering, National University of SingaporeDr

9:00 am – 9:40 pm: Synthetic biology for bio-based polyesters: new polyester creation and oligomer secretion, Prof. Seiichi TAGUCHI, Tokyo University of Agriculture, Japan.

9:40 am – 10:20 am: Construction and expression of a synthetic pathway in a microbial cell for the production of an economically smart chemical precursor of methionine and other added-value products, by Prof. Jean-Marie FRANCOIS, Professor of Industrial Microbiology, Functional Genomics and BioNanotechnology, LISBP, France.

10:20 am-11:00 am: Enzyme molecular evolution in synthetic biology: a key role from proof-of-concept towards precision functions, by Prof. FENG Yan, Distinguished Professor, Vice dean, School of Life Sciences and Biotechnology, Shanghai Jiao Tong University, China

Technical talks

Day 2 – 17th May 2018

11:30 am – 13:10 pm

Session VI: Waste treatment and valorisation

Session Chair: Prof. TONG Yen Wah, Department of Chemical and Biomolecular Engineering, National University of Singapore, Singapore.

11:30 am – 12:00 pm: Unlocking the potential of wastewater via turning waste into worth, by Mr. Andre STOLZ, CEO, EcoWorth Tech Pte. Ltd. EcoWorth Tech.
12:00 pm – 12:30 pm: Transforming agricultural and textile wastes into high value-added products, by Prof. Carol Sze Ki LIN, School of Energy and Environment, City University of Hong Kong.
12:30 pm – 12:50 pm: Supercritical fluid processing for waste volarization, by Dr. Cindy LEE Lai Yeng, Director of Excellence in Learning and Teaching (DELT) & Assistant Professor, Newcastle University in Singapore.
12:50 pm – 13:10 pm: Hydrothermal liquefaction of food wastes, by Dr. Shy Chyi WUANG, Domain Lead, Water Technology, Temasek Polytechnic, Singapore

Day 2 – 17th May 2018

14:00 pm – 16:00 pm

Session VII: Fuels and Bioenergy II

Session Chair – Assist/Prof. YAN Ning, Department of Chemical and Biomolecular Engineering, National University of Singapore

14:00 pm – 14:30 pm: Updated situation of *Jatropha curcas:* biodiesel raw material alternative, by Prof. Penjit SRINOPHAKUN, Center of Excellence for Jatropha, Kasetsart University, Thaliland.
14:30 pm – 15:00 pm: Xylose-fermenting yeast improvement with comparative genome analysis and identification of a novel acetic acid resistance target gene in S. cerevisiae, by Dr. GENG Anli, School of Life Sciences and Chemical Technology, Ngee Ann Polytechnic, Singapore.
15:00 pm – 15:20 pm: Construction of multigene transcription programs and RFN-based biosensor in Bacillus subtilis, by Prof. ZHANG Guimin, The College of Life Sciences, Hubei University, China.

15:20 pm – 15:40 pm: Energy recovery from food waste by using an integrated anaerobic digestion waste-to-energy system, by Dr. ZHANG Jingxin, Research Fellow, Environmental Research Institute, National University of Singapore, Singapore

15:40 pm – 16:00 pm: Butanol and isopropanol production from sugarcane through Clostridium beijerinckii BGS1, by Mr. ZHANG Chen, Department of Civil & Environmental Engineering, National University of Singapore, Singapore.

Day 2 – 17th May 2018

16:30 pm – 17:30 pm

Session VIII: Young Scientist Symposium

Session Chair: Assoc/Prof. HE Jianzhong, Department of Civil and Environmental Engineering, National University of Singapore

16:30 pm – 16:50 pm: The anaerobic digestion of cellulosic substrates by pure microbial consortia, by Mr. Jonathan LEE, Department of Chemical and Biomolecular Engineering, National University of Singapore, Singapore.

16:50 pm – 17:10 pm: Novel homodimer laccase from a white-rot fungus Cerrena unicolor BBP6 – characterization, heterologous expression, directed evolution and potential applications, by ZHANG Ji, R&D Scientist, School of Life Sciences and Chemical Technology, Ngee Ann Polytechnic, Singapore.

17:10 pm – 17:30 pm: Photosynthetic aeration: an approach for carbon footprint reduction in biological wastewater treatment, by Sheetal Kishor PARAKH, Department of Chemical and Biomolecular Engineering, National University of Singapore, Singapore.

Day 2 – 31st May 2016

17:30 pm – 18:00 pm

Session IX: Awards Presentation

- **Best poster awards**
- **BESS Achievement Awards**

Day 2 – 17th May 2018

18:30 pm – 21:00 pm: Conference Dinner

Day 2 – 18th May 2018

Technical Tour

- National University of Singapore
- Temasek Life Sciences laboratories
- Wilmar Research Institutes (TBA)

Poster presentation

1. Directed evolution of alcohol dehydrogenase for non-enantioselective oxidation of secondary alcohols, by Dr. TIAN Kaiyuan, Department of Chemical and Biomolecular Engineering, National University of Singapore, Singapore
2. Production of natural 2-phenylethanol by cascade biotransformation of L-phenylalanine, by Mr. Benedict Ryan LUKITO, Department of Chemical and Biomolecular Engineering, National University of Singapore, Singapore
3. Stabilisation of acidified milk drinks by addition of gold kiwifruit pectin, By Dr. Yuliarti ONI, Singapore Polytechnic, Singapore
4. Encapsulation of green jelly leaf extract through caseinate reinforced alginate gel beads, by Dr. Adeline WONG, Singapore Polytechnic, Singapore
5. Butanol fermentation by symbiotic strain TSH06, by Dr. ZHANG Jianan, Institute of Nuclear and New Energy Technology, Tsinghua University, China
6. Using Design of Experiment (DOE) to optimize bio-process for humulene production by Red Yeast, by Mr. NGOH Si Te, Temasek Lifesciences Laboratories, Singapore
7. Heterologous rhamnolipid production in *Pantoea* sp. 37, by Miss Margarete NAWRATH, Industrial Biotechnology, Institute of Chemical and Engineering Sciences, A*star, Singapore
8. Enhancing soluble expression of antifreeze protein by using fusion tags, by Mr. WEI Zhen, School of Life Sciences and Chemical Technology, Ngee Ann Polytechnic, Singapore
9. High-level biosynthesis of terpenoids in *Escherichia coli*, by Dr. ZHANG Congqiang, Biotransformation Innovation Platform, Agency for Science, Technology and Research (A*STAR), Singapore
10. Bioactive compounds from *Chaenomeles speciose* and their antimicrobial activities, by Prof. HE Donglan, South-Central University for Nationalities, China

11. Production improvement and a novel separation method of bacteriocin Y31 produced by *Enterococcus faecium* Y31, by Dr. LIU Wenli, College of Chemistry & Environmental Engineering, Shenzhen University, China
12. Strain improvement of cellulase-producing fungus, *Talaromyces pinophilus* EMM through random mutagenesis and genetic engineering, by Dr. Rupali Rahul MANGLEKAR, School of Life Sciences and Chemical Technology, Ngee Ann Polytechnic, Singapore