Serial Lectures of Tsinghua Forum on

Industrial Biocatalysis

Tsinghua University & The University of Tokyo Forum on Health Biotechnology and Engineering

Organizer: MOE Key Lab of Industrial Biocatalysis, Tsinghua University

Tsinghua University & The University of Tokyo

Forum on Health Biotechnology and Engineering

Place: Meeting room 201, Yingshi Building, Tsinghua
Time: July 10th-11th, 2019

July 10th	
Time	**Topic**
	Opening Remarks
13:00-13:20	**Prof. Jinsong Zhao,** Dean, Department of Chemical Engineering, Tsinghua University
13:20-13:30	**Group photo**
Session I	**Chair: Prof. Xin-Hui Xing,**Tsinghua University
	Lecture
13:30-13:50	**Prof. Hitoshi Tabata,** The University of Tokyo
	Near IR Plasmonics for Bio-Medical Application
13:50-14:10	**Prof. Huimin Yu,** Tsinghua University
	Superior *Rhodococcus* Cell Biocatalyst: Fundamentals and Applications
14:10-14:30	**Associate Prof. Masahiro Kawahara,** The University of Tokyo
	Synthetic Engineering of Signalobodies for Versatile Regulation of Cellular Fates
14:30-14:50	**Associate Prof. Jun Ge,** Tsinghua University
	Enzyme-metal Hybrid Catalysts
14:50-15:10	**Associate Prof. Masaki Sekino,** The University of Tokyo
	Flexible and Wearable Electronics for Biomedical Applications
15:10-15:30	**Coffee Break**

Time	Topic
Session II	**Chair: Prof. Hitoshi Tabata,** The University of Tokyo
	Lecture
15:30-15:50	**Associate Prof. Sen Song,** Tsinghua University
	Application of Brain-like Artificial Intelligence in Medical Treatment
15:50-16:10	**Lecturer Masaki Nishikawa,** The University of Tokyo
	Structural Refinement of Kidney Organoids
16:10-16:30	**PhD student Yikang Zhou,** Tsinghua University
	MiYA, an efficient machine-learning workflow in conjunction with the YeastFab assembly strategy for combinatorial optimization of heterologous metabolic pathways in Saccharomyces cerevisiae
16:30-16:50	**PhD student Jian Gu,** The University of Tokyo
	Development of Tissue Circulation Monitoring Algorithm and System Using Flexible Probe
16:50-17:10	**PhD student Boyu Zhang,** Tsinghua University
	Design and Applications of Multi-DoF Soft Robotic Actuators
17:10-17:30	**Master student Yukinori Ikeda,** The University of Tokyo
	In Vitro Microvessel Model for the Cancer Research
17:30-18:00	**Prof. Xin-Hui Xing,** Tsinghua University
	Introduction to Biopharmaceutical and Health Engineering, Tsinghua Shenzhen International Graduate School (Tsinhgua SIGS)
18:00-20:30	**Dinner Party**

July 11th	
Session III	**Chair: Prof. Hongen Liao,** Tsinghua University
	Lecture
8:00-8:20	**Prof. Yasuyuki Sakai,** The University of Tokyo
	Tissue Engineering for Physiological Cell-based Assays
8:20-8:40	**Associate Prof. Chong Zhang,** Tsinghua University
	Precisely Coordinated Transcription-translation Dynamics Modularly Ttune Bacterial Indole Signaling
8:40-9:00	**Associate Prof. Yukiko Matsunaga,** The University of Tokyo
	Microvessel Chip for Evaluation of Vascular Function
9:00-9:20	**Associate Prof. Peng Liu,** Tsinghua University
	High-Throughput Superhydrophobic Microwell Array for Phenotypic and Genotypic Cell Assays
9:20-9:40	**Associate Prof. Hirotaka Ejima,** The University of Tokyo
	Metal-polyphenol Complexation for Bio- and Nano-interface Engineering
9:40-10:00	**Associate Prof. Jianwen Luo,** Tsinghua University
	Ultrasound Carotid Elastography for Identification of Vulnerable Atherosclerotic Plaques
10:00-10:20	**Coffee Break**
Session IV	**Chair: Associate Prof. Jun Ge,** Tsinghua University
10:20-10:40	**PhD student Longfei Ma,** Tsinghua University
	Augmented Reality-guided Knee Arthroscopic Surgery using Self-positioning Technology
10:40-11:00	**PhD student Stephany Mai Nishikawa,** The University of Tokyo
	Brain on a Chip: Biomimetic Spike Timing Based Stimulation for Neuronal Culture
11:00-11:20	**Master student Yuki Hishikawa,** Tsinghua University & Tokyo Institute of Technology
	Molecular Dynamics Simulation of Gold Clusters at 2-fold Interface in Designed Ferritin Cage

11:20-11:40	**Master student Karn Chansorn,** The University of Tokyo
	Bioprinting-based Vascularized Pancreatic Tissue
	Closing Remarks
11:40-12:00	**Prof. Yasuyuki Sakai,** The University of Tokyo
12:00	**Brief Lunch**

Note: Each presenter includes 18min Presentation+2min Q&A