



Tsinghua University & The University of Tokyo PhD-Students' Online Workshop on Health Biotechnology and Engineering 清华大学&东京大学生命健康工程 博士生在线研讨会会议议程

13:00-13:05 CST (中国时间), 14:00-14:05 JST(日本时间)

Opening remarks

Professor Xinhui Xing^{1,2}

1. Institute of Biopharmaceutical and Health Engineering, Shenzhen International Graduate School, Tsinghua University
2. Department of Chemical Engineering, Tsinghua University

Presentations by Ph.D. students

(12 minutes presentation + 3 minutes Q&A)

13:05-14:05 CST (中国时间), 14:05-15:05 JST (日本时间)

Session 1

Chair: Assoc. Professor Chong Zhang (Tsinghua University)

Chair: Assoc. Professor Yukiko Matsunaga (The University of Tokyo)

Freeform bioprinting of vascularized tissue with polymer gel bath

Karn Changsoorn¹, Yuan Pang^{2,3}, Mathieu Danoy¹, Masaki Nishikawa¹, Rubina Khadim¹, Yasuyuki Sakai¹

1. Department of Chemical System Engineering, Graduate School of Engineering, the University of Tokyo
2. Biomanufacturing Center, Department of Mechanical Engineering, Tsinghua University, Haidian District
3. Biomanufacturing and Rapid Forming Technology Key Laboratory of Beijing, Beijing, China

Genome-scale identification of cellular determinants affecting secretory protein production via CRISPRi-microfluidic screening

Xinyu YU^{1,2}, Shuang LI², Zhonghu Bai¹, Xin-Hui Xing^{2,3}, ChongZhang²

1. Key Laboratory of Industrial Biotechnology, Ministry of Education, School of Biotechnology, Jiangnan University, Wuxi, China
2. MOE Key Laboratory for Industrial Biocatalysis, Institute of Biochemical Engineering, Department of Chemical Engineering, Tsinghua University, Beijing, China
3. Institute of Biopharmaceutical and Health Engineering, Tsinghua Shenzhen International Graduate School, Shenzhen, 518055, China

Structure Optimization for Soft Actuator with Phase Transition Alloy Stiffness Adjustment Mechanism

Chengquan Hu¹, Jiaqi Chen¹, Jie Wang¹, Hongen Liao¹

1. Department of Biomedical Engineering, School of Medicine, Tsinghua University, Beijing 100084, China

Polyion complex micelles based on flexible cationomers for mRNA delivery

Mixich Lucas¹, Takuya Miyazaki¹, Eger Boonstra¹, Wenqian Yang¹, Satoshi Uchida², Horacio Cabral¹

1. Department of Bioengineering, Graduate School of Engineering, The University of Tokyo
2. Graduate School of Medicine, Kyoto Prefectural University of Medicine, Japan

14:05-15:05 CST (中国时间), 15:05-16:05 JST (日本时间)

Session 2

Chair: Assoc. Professor Seiichi Ohta (The University of Tokyo)

Chair: Assoc. Professor Shaohua Ma (Tsinghua University)

Mueller matrix microscope for label-free and cross-scale imaging

Tongyu Huang^{1,2}, Qianhao Zhao¹, Yang Dong³, Hui Ma^{1,2,3,4*}

1. Shenzhen International graduate school, Tsinghua University, Shenzhen, Guangdong, China.
2. Department of Biomedical Engineering, Tsinghua University, Beijing, China.
3. Center for Precision Medicine and Healthcare, Tsinghua-Berkeley Shenzhen Institute, Shenzhen, Guangdong, China.
4. Department of Physics, Tsinghua University, Beijing, China.

Crack growth behavior in polymer gels with homogeneous network structure

Chiaki Saito¹, Naoyuki Sakumichi¹, Takamasa Sakai¹

1. Department of Bioengineering, Graduate School of Engineering, The University of Tokyo

Antioxidative composites based on multienzyme systems encapsulated in metal-organic frameworks

Yu Liu¹, Xun Cao¹, and Jun Ge^{1,2}

1. Key Laboratory of Industrial Biocatalysis, Ministry of Education, Department of Chemical Engineering, Tsinghua University, Beijing, 100084, China
2. Institute of Biopharmaceutical and Health Engineering, Tsinghua Shenzhen International Graduate School, Shenzhen, 518055, China

Oncogenic Potential and Pharmacological Inhibition of TFF3 is Mediated through P53 Signaling Pathway in Gastric Cancer

Xuejuan Wang¹, Yi-Shiou Chiou^{1,2}, Chuyu He¹, Wenjing Zhong³, Basappa⁴, Vijay Pandey¹, Peter E. Lobie^{1*}

1. Tsinghua-Berkeley Shenzhen Institute, Tsinghua University, Shenzhen 518055, China.
2. Master Degree Program in Toxicology, College of Pharmacy, Kaohsiung Medical University, Kaohsiung, 807, Taiwan.
3. Department of Gastrointestinal surgery, Second Affiliated Hospital of Fujian Medical University, Quanzhou 362000, China.
4. Laboratory of Chemical Biology, Department of Chemistry, Bangalore University, 560001 Bangalore, India

Organizer (举办单位):

Tsinghua University (清华大学)

- Tsinghua Shenzhen International Graduate School
清华大学深圳国际研究生院
- Department of Biomedical Engineering
生物医学工程系
- Department of Chemical Engineering
化学工程系

The University of Tokyo (东京大学)



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15:05-16:20 CST (中国时间), 16:05-17:20 JST (日本时间)

Session 3

Chair: Professor Masaki Sekino (The University of Tokyo)

Chair: Assistant Professor Tatsuhisa Tsuboi (Tsinghua University)

Development of Cherenkov TlBrCl detector toward a reconstruction-less TOF-PET

Cheonghun Kim¹, Kenji Shimazoe¹, Hiroyuki Takahashi¹, Keitaro Hitomi², Mitsuhiro Nogami², Ikuo Kurachi³, Yasuo Arai³

1. Department of Bioengineering, Graduate School of Engineering, The University of Tokyo

2. Department of Quantum Science and Energy Engineering, Graduate School of Engineering, Tohoku University

3. High Energy Accelerator Research Organization (KEK)

Optimizing the growth of *Haematococcus pluvialis* based on a novel microbubble-driven photobioreactor

Kebi Wu^{1,2}, Kezhen Ying^{2,5}, Jin Zhou², Dai Liu², Lu Liu^{1,2}, Yi Tao³, James Hanotu⁴, Xiaoshan Zhu², Zhonghua Cai^{1,2*}

1. School of Life Sciences, Tsinghua University, Beijing, 100086, China

2. Shenzhen Public Platform for Screening and Application of Marine Microbial Resources, Shenzhen International Graduate School, Tsinghua University, Shenzhen 518055, China

3. Guangdong Provincial Engineering Research Centre for Urban Water Recycling and Environmental Safety, Shenzhen International Graduate School, Tsinghua University, Shenzhen 518055, China

4. Department of Chemical and Biological Engineering, The University of Sheffield, S13JD, United Kingdom

5. Oasis Photobio Tech Ltd, Overseas Chinese Scholars Venture Building, South District of High-Tech Industrial Park, Shenzhen, China

Deep-learning based acceleration for CEST molecular MR imaging towards clinical application

Chuyu Liu, Xiaolei Song

Center for Biomedical Imaging Research, Department of Biomedical Engineering, Tsinghua University, Beijing 100084, China

Hands-free wearable electrolarynx using LPC residual waves

Masaki Takeuchi¹, Masaki Sekino²

1. Department of Electrical Engineering and Information Systems, Graduate School of Engineering, The University of Tokyo

2. Department of Bioengineering, Graduate School of Engineering, The University of Tokyo

The dimeric TFF3 inhibitor overcomes tamoxifen resistance and enhances taxol efficiency in ER+ Breast Cancer

Hui Guo¹, Yan Qin Tan¹, Vijay Pandey^{1,2}, Peter E. Lobie^{1,2}

1. Tsinghua Berkeley Shenzhen Institute and The Institute of Biopharmaceutical and Health Engineering Tsinghua Shenzhen International Graduate School, Tsinghua University, Shenzhen 518055, Guangdong, People's Republic of China.

2. Shenzhen Bay Laboratory, Shenzhen 518055, Guangdong, People's Republic of China.

16:20-16:25 CST (中国时间), 17:20-17:25 JST (日本时间)

Closing Remarks

Professor Hiroyuki TAKAHASHI

Head of Department of Bioengineering, Graduate School of Engineering, the University of Tokyo

16:25-17:00 CST (中国时间), 17:25-18:00 JST (日本时间)

Faculty meeting on the joint education program

Chair: Assoc. Professor Shaohua Ma (Tsinghua University)

December 21st, 2021

2021年12月21日

13:00 - 17:00 in China (中国时间)

14:00 - 18:00 in Japan (日本时间)

Organizer (举办单位):

Tsinghua University (清华大学)

· Tsinghua Shenzhen International Graduate School

清华大学深圳国际研究生院

· Department of Biomedical Engineering

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