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Education:

PhD: **Environmental Engineering**

MS: **Environmental Biology**

BS: **Environmental Biology**

General Areas of Expertise:

Environmental Microbiology, Wastewater Engineering, Anaerobic Digestion

Short Bio:

Prof. Zhang is a Professor in Environmental Biotechnology Laboratory in Department of Civil Engineering, The University of Hong Kong. He got his Bachelor and Master degrees in Environmental Science and Engineering from Nanjing University (China), and his Ph.D. degree from The University of Hong Kong. Prof. Zhang's researches include anaerobic digestion and bioenergy from wastes/wastewater (cellulosic biomass, sludge, kitchen waste, and wastewater), biological wastewater treatment (N removal and P recovery), biodegradation of emerging pollutants (antibiotics, PPCP and EDCs), antibiotic and antibiotic resistance genes, etc. He has published over 180 peer-reviewed papers on the above topics, and got more than 9000 citations (Google Scholar). He has a H index of 52 and is Top 1% researcher (Essential Science Indicators) for 8 years from 2009 to 2016. He is the editorial board members of a few international peer-reviewed journals, and had served as an advisor for BGI (Beijing Genomics Institute) on Environmental Microbiology and Biotechnology from 2011 to 2014, and ASM (American Society of Microbiology) Country Liaison to China (Hong Kong) from 2012 to 2014. He was Yi Xing Chair Professor of Nanjing University from 2013 to 2016. He won First-Class Award in Natural Science of China Ministry of Education in 2015 and Second-Class Award State Natural Science Award of China State Council in 2016.

Five Representative Publications:

1. Ju F, Lau F, Zhang T*. 2017. Linking microbial community, environmental variables and methanogenesis in anaerobic biogas digesters of chemically enhanced primary treatment sludge. *Environmental Science & Technology*. 51(7), 3982-3992.
2. Deng Y, Mao YP, Li B, Yang C, Zhang T*. 2016. Aerobic degradation of sulfadiazine by *Arthrobacter* spp.: kinetics, pathways, and genomic characterization. *Environmental Science and Technology*. 50(17), 9566-9575.
3. Yang Y, Jiang XT, Chai BL, Ma LP, Li B, Cole J, Tiedje MJ*, Zhang T*. 2016. ARGs-OAP: online analysis pipeline for antibiotic resistance genes detection from metagenomic data using an integrated structured ARG-database. *Bioinformatics*. 32 (15), 2346-51.
4. Li B, Yang Y, Ma LP, Ju F, Guo F, Tiedje JM, Zhang T*. 2015. Metagenomic and network analysis reveal wide distribution and co-occurrence of environmental antibiotic resistance genes. *The ISME Journal*. 9 (11):2490-502.
5. Zhang T*, Yang Y, Pruden A. 2015. Effect of Temperature on removal of antibiotic resistance genes by anaerobic digestion of activated sludge revealed by metagenomic approach. *Applied Microbiology and Biotechnology*. 99(18), 7771-9.

FEWSTERN Symposium 2017 Presentation Title and Abstract:

Title : **Anaerobic digestion as an effective strategy to control ARGs in animal waste from livestock and recover energy**

Abstract

ARGs are emerging biological environmental pollutants from various sources. Animal waste from livestock contributed significantly to the environmental dissemination of ARGs and is considered as one of the hotspots of ARGs pollution. Anaerobic digestion (AD) could be an effective mitigation strategy to eliminate ARGs in animal waste. As a one-stone-two-birds technology, AD not only reduces the discharge of ARGs and antibiotics but also recovers energy from organics in livestock waste. This presentation will discuss diversity and level of ARGs in animal waste and demonstrate effectiveness of AD in removal of ARGs and recovery of energy.

SUBMIT

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