

## **Dr. Yiu Fai Tsang**

### **Academic qualifications:**

PhD in Environmental Engineering, The Hong Kong Polytechnic University (PolyU)

BEng in Environmental Engineering (1<sup>st</sup> Class Honours), PolyU

### **Previous academic positions held (with dates):**

2013-2017 Assistant Professor, Department of Science and Environmental Studies, The Education University of Hong Kong (EdUHK)

2012-2013 Assistant Professor and Laboratory-in-charge, Vocational Training Council

2010-2012 Research Fellow, Department of Civil and Environmental Engineering, PolyU

2008-2012 Lecturer, Vocational Training Council

2007-2007 Visiting Scholar, Department of Agricultural and Biological Engineering, University of Illinois at Urbana-Champaign (UIUC)

### **Present academic positions:**

2017-date Associate Professor, Department of Science and Environmental Studies, EdUHK

2016-date Adjunct Professor, Guizhou Academy of Sciences, China

2016-date Area Coordinator, Master of Education in Science and Environmental Studies, EdUHK

2014-date Adjunct PhD Supervisor, Tongji University, China

### **Editorship:**

2017-date Editor-in-Chief, *Energy & Environment* (SAGE Publishing, IF: 0.302)

2016-date Associate Editor, *Water Environment Research* (WEF; IF: 0.910)

2015-date Associate Editor, *RSC Advances* (Royal Society of Chemistry; IF: 3.108)

2016-date Subject Editor, *Process Safety and Environmental Protection* (Elsevier; IF: 2.905)

2016-date Topical Editor, *Environmental Engineering Research* (KSEE; SJR: 0.306)

2016-date Academic Editor, *PLOS ONE* (Public Library of Science; IF: 2.806)

2017-date Editorial Board Member, *Sustainable Environment Research* (Elsevier; SJR: 0.386)

2016-date Editorial Board Member, *Clean Technologies and Environmental Policy* (Springer; IF: 3.331)

2016-date Editorial Board Member, *Biodegradation* (Springer; IF: 2.018)

2017-date Lead Guest Editor, *Process Safety and Environmental Protection* (SI Topic: Biowaste for Energy Recovery and Environmental Remediation)

2016-date Lead Guest Editor, *Biodegradation* (SI Topic: Bioremediation of contaminated soil and water, GeoTrop 2017)

### **Previous relevant research work:**

Biological wastewater treatment, Microbial CO<sub>2</sub> fixation, Pharmaceuticals & personal care products (PPCPs), Inhibition mechanisms in bioreactors, Resource recovery from waste and wastewater

### **Selected competitive research funding received (22 PI/Co-PI (>HK\$9.50M) and 12 Co-I since 2005)**

1. Effects of Pharmaceuticals & Personal Care Products (PPCPs) on Removal Efficiency and Bacterial Community in Biological Sewage Treatment Plants with Varying Designs and Process Optimization (PI: RGC-GRF, HK\$482,605, 2017-Present).
2. Endocrine Disrupting Chemical in Hong Kong Water: Environmental Risk, Public Health Risk, Removal and Public Education (PI: EdUHK Dean's Strategic Research Area Fund, HK\$1,850,000, 2016-Present).
3. Inhibition Mechanisms of CO<sub>2</sub> Fixation in Non-photosynthetic Microbial Community by the Typical Soil Organics (PI: RGC-GRF/ECS, HK\$576,075, 2016-Present).
4. Utilization of Food Waste as Substrate for Biosynthesis of Biodegradable Plastics for Industrial Applications (PI: EdUHK Dean's Research Fund, HK\$120,000, 2016-Present).
5. Occurrence, Sorption Behaviour, and Biodegradability of Personal Care Products (PCPs) in Sewage Treatment Plants Treating Wastewater with Different Salinities in Hong Kong (PI: EdUHK Internal Research Grant, HK\$100,000, 2015-Present).
6. Scientific Investigation on the Effect of Bioaerosol on Indoor Environmental Quality of Green

Buildings (PI: HK\$300,000, 2015-2017).

7. Development of Air Pollution Control System for Street and Indoor Environment (Deputy PI: Innovation Technology Fund, HK\$4,308,000, 2012-2014)
8. Study of the Metabolism of Polyhydroxyalkanoates (PHAs) Using the Recombinant Strains with Desirable Characteristics (Co-I: PolyU Central Research Grant, HK\$672,000, 2009-2011).
9. Study of Biofiltration Using Waste Materials as Packing Medium on Ammonia Removal in Swine Buildings (PI: UIUC Joint Departmental Research Grant, US\$20,000, 2007-2008).
10. Novel Photo-, Electro-Chemical and Biofiltration Technology for Water, Air and Odour Treatment in Urbanised Environments (Co-I: PolyU-SHK Joint Research & Development Programme, HK\$5,000,000. 2005-2011).

**Publication records (46 journal papers, 5 book chapters, 1 edited book, 30 conference papers):**

**Section A –Five most representative publications in the recent five years**

1. Wang, Y.N., **Tsang, Y.F.\***, Wang, L., Fu, X.H., Li, H., Hu, J.J., Le, Y.Q. (2017). Influence of reduced sulfur on carbon fixation efficiency of *Halothiobacillus neapolitanus* and its mechanism. *Chemical Engineering Journal*, 326, 249-256.
2. Yang, Y., Ok, Y.S., Kim, K.H., Kwon, E.E., **Tsang, Y.F.\*** (2017). Occurrences and removal of pharmaceuticals and personal care products (PPCPs) in drinking water and water/sewage treatment plants: a review. *Science of the Total Environment*, 596-597, 303-320.
3. Wang, H.W., Sun, Y.J., Hao, Z.P., Wang, Y.N., Li, W.H., **Tsang, Y.F.\*** (2017). Transformation of dissolved organic matter (DOM) in concentrated leachate from nanofiltration during ozone-based oxidation processes (O<sub>3</sub>, O<sub>3</sub>/H<sub>2</sub>O<sub>2</sub> and O<sub>3</sub>/UV). *Journal of Environmental Management*, 191, 244-251.
4. Wang, Y.N., Wang, L., **Tsang, Y.F.\***, Fu, X., Hu, J., Li, H., Le, Y. (2016). Response of *cbb* gene transcription levels of four typical sulfur-oxidizing bacteria to the CO<sub>2</sub> concentration and its effect on their carbon fixation efficiency during sulfur oxidation. *Enzyme and Microbial Technology*, 92, 31-40.
5. **Tsang, Y.F.\***, Wang, L., Chua, H. (2015) Simultaneous hydrogen sulphide and ammonia removal in a biotrickling filter: Crossed inhibitory effects among selected pollutants and microbial community change. *Chemical Engineering Journal*, 281, 389-396.

**Section B - Five representative publications beyond the recent five-year period**

1. **Tsang, Y.F.\***, Sin, S.N., Chua, H. (2008). Nocardia foaming control in activated sludge process treating domestic wastewater. *Bioresource Technology*, 99(9), 3381-3388.
2. **Tsang, Y.F.\***, Chua, H., Sin, S.N., Chan, S.Y. (2008). Treatment of odorous volatile fatty acids using a biotrickling filter. *Bioresource Technology*, 99(3), 589-595.
3. Chan, S.Y., **Tsang, Y.F.**, Chua, H., Sin, S.N., Cui, L.H. (2008). Performance study of vegetated sequencing batch coal slag bed treating domestic wastewater in suburban area. *Bioresource Technology*, 99(9), 3774-3781.
4. **Tsang, Y.F.\***, Hua, F.L., Chua, H., Sin, S.N., Wang, Y.J. (2007). Optimization of biological treatment of paper mill effluent in a sequencing batch reactor, *Biochemical Engineering Journal*, 34, 193-199.
5. **Tsang, Y.F.\***, Chua, H., Sin, S.N., Tam, C.Y. (2006). A novel technology for bulking control in biological wastewater treatment plant for pulp and paper making industry, *Biochemical Engineering Journal*, (32), 127-134.

**Awards:**

1. 2016: Outstanding Reviewer - *Chemical Engineering Journal* (Elsevier, IF: 6.216)
2. 2016: Certificate of Excellence in Reviewing - *Chemosphere* (Elsevier, IF: 4.208)
3. 2016 & 2015: Outstanding Performance in Teaching Award 2015/16 & 2014/15, Department of Science and Environmental Studies, EdUHK
4. 2015: Outstanding Reviewer - *Journal of Environmental Management* (Elsevier, IF: 4.010)
5. 2015: Active Researcher with High Ranking Journal in 2014/15, Department of Science and Environmental Studies, EdUHK
6. 2015: Grand Award (as Team member), Knowledge Transfer Awards Scheme 2014/15, EdUHK
7. 2004: Best Paper Award in Paper Competition 2004, Institution of Civil Engineers-Hong Kong