

## Assistant Professor (Research) Kai Zhang

Department of Environmental Science and Engineering  
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### Academic Qualification

**Ph.D. in** Environmental Science, City University of Hong Kong, Hong Kong, China

**Ph.D. in** Environmental Science, Institute of Hydrobiology, Chinese Academy of Sciences, China

**BSc in** Bioinformation and technology, Huazhong University of Science and Technology, China

### Teaching Area

Environmental Science, Environmental Monitoring

### Research Area

Emerging chemicals of concern/ Microplastic pollution/ Risk assessment/ Environmental monitoring

### Working Experience

Assistant Professor, Macau University of Science and Technology (MUST) (Jan 2022 -)

Research Associate (formerly named Research Fellow), State Key Laboratory of Marine Pollution (SKLMP), City University of Hong Kong (CityU) (March 2021-December 2021)

Postdoctoral Fellow, SKLMP, CityU (August 2018-February 2021)

Research Associate, SKLMP, CityU (March 2018-July 2018)

### Research Grants

- (i) Research on the occurrence and composite ecological risks of microplastics and their surface biofilms in the Greater Bay Area, taking Macau as an example, CORE, 01/04/2022-31/03/2023, HKD 300,000, Principal Investigator
- (ii) Bioavailability of plastic additives released from microplastics, NSFC Young Scientists Fund, 01/01/2020-31/12/2022, RMB 270,000, Principal Investigator
- (iii) Baseline Survey on Condition of Microplastic Pollution in Hong Kong's Marine Waters, Environment International
- (iv) Baseline Survey on Pollution of Small-Sized Microplastics in Hong Kong's Marine Waters, Environment Protection Department, 28/12/2020 – 31/12/2021, HKD 680,400, Principal Investigator
- (v) Microplastics Survey in Sewage Treatment Works, Drainage Services Department, 29/12/2020 – 30/12/2021, HKD 916,780, Principal Investigator
- (vi) Microplastics Survey in Stormwater Discharge, Drainage Services Department, 08/01/2021 – 31/12/2021, HKD 524,800, Co-Principal Investigator

### Representative publications (Complete publication refer to my webpage)

1. Zhang, K., Xu, S., Zhang, Y., Lo, Y., Liu, M., Ma, Y., Chau H. S., Cao, Y., ... & Lam, P. K.\* (2022). A systematic study of microplastic occurrence in urban water networks of a metropolis. *Water Research*, 118992.
2. Cao, Y., Xu, S., Zhang, K.\*, Lin, H., Wu, R., Lao, J. Y., Tao, D., Liu, M., Leung, K. M., & Lam, P. K. (2022). Spatiotemporal occurrence of phthalate esters in stormwater drains of Hong Kong, China: Mass loading and source identification, *Environmental Pollution*, 119683.
3. Cao, Y., Lin, H., Zhang, K.\*, Xu, S., Yan, M., Leung, K. M., & Lam, P. K. (2022). Microplastics: A major source of phthalate esters in aquatic environments. *Journal of Hazardous Materials*, 128731.
4. Xu, S., Chen, L., Zhang, K.\*, Cao, Y., Yue, M., Chau, H., Tao, D., Wu, C., Li, C., Lam, P. K. (2022). Microplastic occurrence in the northern South China Sea, A case for Pre and Post cyclone analysis. *Chemosphere*, 133980
5. Tao, D., Zhang, K.\*, Xu, S., Lin, H., Liu, Y., Kang, J., ... & Leung, K. M.\* (2022). Microfibers Released into the Air from a Household Tumble Dryer. *Environmental Science & Technology Letters*, 9(2), 120-126.
6. Liu, Y., Zhang, K.\*, Xu, S., Yan, M., Tao, D., Chen, L., ... & Lam, P. K. (2021). Heavy metals in the “plastisphere” of marine microplastics: adsorption mechanisms and composite risk. *Gondwana Research*. 108,171-180.
7. Zhang K, Hamidian A. H., Tubić A., Zhang Y., Fang J. K. H., Wu C. X\*, Lam P. K. S. (2021) Understanding plastic degradation and microplastic formation in the environment: A review. *Environmental Pollution*, 116554
8. Zhang, K. Shi, H. H. Peng, J. P. Wang, Y. H. Xiong, X. Wu, C. X\*. Lam, P. K. S., (2018) Microplastic pollution in China's inland water systems: A review of findings, methods, characteristics, effects, and management. *Science of the Total Environment*. 630: 1641-1653.
9. Zhang, K.; Xiong, X.; Hu, H. J.; Wu, C. X\*.; Bi, Y. H.; Wu, Y. H.; Zhou, B. S.; Lam, P. K. S.; Liu, J. T., (2017) Occurrence and Characteristics of Microplastic Pollution in Xiangxi Bay of Three Gorges Reservoir, China. *Environmental Science & Technology*, 51 (7): 3794-3801.
10. Zhang, K.; Su, J.; Xiong, X.; Wu, X.; Wu, C. X\*.; Liu, J. T., (2016) Microplastic pollution of lakeshore sediments from remote lakes in Tibet plateau, China. *Environmental Pollution*, 219: 450-455.

### Professional Certification and Awards

Young Scientist Award (Best Talks and Best Posters)

the 13th International Symposium on Persistent Toxic Substances, October 2016, Leipzig, Germany

### Journal Editorship

Editorial Board, Cambridge Prisms: Plastics (2022- )

Early Career Editorial Board, Resources, Environment and Sustainability (2022- )

Review Editor, Frontiers in Environmental Chemistry, Frontiers (2019- )

Topic Editor, Frontiers in Environmental Chemistry, Frontiers (2020-2022)

Guest Editor, Water, MDPI (2021-2022)

### Personal Website

<https://scholar.must.edu.mo/scholar/104336>

