

Dr Kai Zhang

Assistant Professor
Macau University of Science and Technology
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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>