

JIYING LI

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EDUCATION

2014 PhD Limnology and Oceanography, University of Minnesota, USA
2011 MSc Water Resources Science, University of Minnesota, USA
2008 BSc Environmental Science and Engineering, Shanghai Jiao Tong University, China

ACADEMIC APPOINTMENTS

2020—Present Assistant Professor, Department of Ocean Science, the Hong Kong University of Science and Technology, Hong Kong
2018—2020 Postdoctoral Researcher, Large Lakes Observatory, University of Minnesota Duluth, Minnesota, USA
2016—2018 Postdoctoral Researcher, Department of Physical and Environmental Sciences, University of Toronto, Scarborough, Toronto, Canada
2014—2016 Postdoctoral Researcher, Department of Plant and Soil Sciences, University of Delaware, Newark, Delaware, USA

RESEARCH INTERESTS

Marine biogeochemistry; sediment geochemistry; limnology; stable isotope geochemistry

TEACHING

Marine Chemistry UG, 3 credits, 35 students, spring 2021 and spring 2022 at HKUST
Chemical Oceanography UG, 3 credits, 12 students, spring 2022 at HKUST
Chemical Oceanography PG, 3 credits, 6-12 students, fall 2020, spring 2022 at HKUST
Ocean and Climate Change UG, 3 credits, 35 students, spring 2022 at HKUST
General Physics Laboratory I & II UG, 3 credits, 60 students, 2008 – 2009 at University of Minnesota

MENTORING

In progress	Jing Sun	PhD, Marine Environmental Science, HKUST
	Xingyu Yang	PhD, Marine Environmental Science, HKUST
	Rixuan Gao	MPhil, Marine Environmental Science, HKUST
	Yuxuan Lin	MPhil, Marine Environmental Science, HKUST
Completed	Lei Zhou	MPhil 2022, Marine Environmental Science, HKUST
	Blandine Barthod	Joint MSc 2018, Physical and Environmental Science, UTSC
	Olekasandra Kashun	UG research project, 2017, Chemistry, UTSC
	Dushara Ragavachari	UG research project, 2017, Chemistry, UTSC

PROFESSIONAL SERVICE

Manuscript reviewer: Continental Shelf Research, Journal of Coastal Research, Environmental Science & Technology, Geochemica et Cosmochimica Acta, Limnology & Oceanography, PLOS ONE, Journal of Great Lakes Research, Biogeoscience, Environmental Pollution, Science of Total Environment, Freshwater Science, Estuaries and Coasts, Marine Chemistry, Communications Earth and Environment

Proposal reviewer: Biological Oceanography Program, National Science Foundation, USA

AWARDS

Elsevier Early Career Scientist Award for Most Notable Paper (2018), International Association for the Great Lakes Research

GRANTS

Leading

- Phosphorus cycling and fluxes in the sediment of coastal waters in Hong Kong. RGC – General Research Fund. 2023 – (HK\$ 870,000)
- Polyphosphate dynamics in coastal oceans and roles in phosphorus cycling. RGC – Early Career Scheme. 2022 – (HK\$ 721,303)

Participating

- Diagnosis and prognosis of intensifying eutrophication, hypoxia and the ecosystem consequences around Hong Kong waters: coupled physical-biogeochemical-pollution studies. RGC-Theme-based Research Scheme, 2017 – 2022 (HK\$ 27,339,452; participate as Co-I; PC: Jianping Gan, HKUST)

PUBLICATIONS (* indicates contribution as corresponding author)

1. Yang, C., J. Li, and H Yin. 2022. Phosphorus internal loading and sediment diagenesis in a large eutrophic lake (Lake Chaohu, China). *Environmental Pollution* 292, 118471
2. Li, J.*, V. Ianaiev, A. Huff, J. Zalusky, T. Ozersky, & S. Katsev. 2021. Benthic invaders control the phosphorus cycle in the world's largest freshwater ecosystem. *Proceedings of the National Academy of Sciences* 118 (6). <https://doi.org/10.1073/pnas.2008223118>
3. Bai, Y., L., Stout, G. Unal-Tosun, J. Li, D. Jaisi. 2020. Synthesis and degradation of polyphosphate: Isotope effects in enzyme- and bacteria- catalyzed reactions. *ACS Earth and Space Chemistry* 4, 12: 2327-2336.
4. Alam, M. S., B. Barthod, J. Li, H. Liu, A. Zastepa, X. Liu, M. Dittrich. 2020. Geochemical controls on internal phosphorus loading in Lake of the Woods. *Chemical Geology*: 119873
5. Li, J.*, D. Plouchart, A. Zastepa and M. Dittrich. 2019. Picoplankton accumulate and recycle polyphosphate to support high primary productivity in coastal Lake Ontario. *Scientific Reports* 9: 19563
6. Li, J.* and M. Dittrich. 2019. Dynamic polyphosphate metabolism in cyanobacteria responding to phosphorus availability. *Environmental Microbiology* 21: 572- 583
7. Li, J.*, Y. Zhang, and S. Katsev. 2018. Phosphorus recycling in deeply oxygenated sediments in Lake Superior controlled by organic matter mineralization. *Limnology and Oceanography*. 63: 1372-1385
8. Li, J.*, E. T. Brown, S. A. Crowe, and S. Katsev. 2018. Sediment geochemistry and contributions to

- carbon and nutrient cycling in a deep meromictic tropical lake: Lake Malawi (East Africa). *Journal of Great Lakes Research*. 44: 1221-1234 (2018 Elsevier Early Career Most Notable Paper Award)
9. Li, J., P. Reardon, J. P. McKinley, Y. Bai, S. Joshi, K. Bear, and D. P. Jaisi. 2017. Water column particulate matter a key contributor to phosphorus regeneration in coastal eutrophic environments, the Chesapeake Bay. *Journal of Geophysical Research – Biogeosciences*. 122: 737-752
 10. Li, J., Y. Bai, K. Bear, S. Joshi, and D. P. Jaisi. 2017. Phosphorus availability and turnover in the Chesapeake Bay: Insights from nutrient stoichiometry and phosphate oxygen isotope ratios. *Journal of Geophysical Research – Biogeosciences*. 122: 811-824
 11. Fakhraee, M., J. Li and S. Katsev. 2017. Significant role of organic sulfur in supporting sedimentary sulfate reduction in low-sulfate environments. *Geochimica et Cosmochimica Acta*. 213: 502-516
 12. Katsev S., P. Verburg, M. Lliros, E. Minor, B. Kruger, and J. Li. 2017. Tropical meromictic lakes: Specifics of meromixis and case studies of Lakes Tanganyika, Malawi, and Matano. In *Ecology of Meromictic Lakes*, edited by R. Gulati, A. Degermendzhy, and E. Zadereev. Springer.
 13. Crowe, S. A., A. H. Treusch, M. Forth, J. Li, C. Magen, D. E. Canfield, B. Thamdrup, S. Katsev. 2017. Novel anammox bacteria and nitrogen loss from Lake Superior. *Scientific Reports*. 7: 13757
 14. Li, J.*, and S. Katsev. 2014. Nitrogen cycling in deeply oxygenated sediments: Results in Lake Superior and implication to marine sediments. *Limnol. Oceanogr.* 59 (2): 465–481
 15. Li, J., S. A. Crowe, D. Miklesh, M. Kistner, D. E. Canfield, and S. Katsev. 2012. Carbon mineralization and oxygen dynamics in sediments with deep oxygen penetration, Lake Superior. *Limnol. Oceanogr.* 57:1634-1650