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Seasonal variation of phosphorus in sediments, overlying water, interstitial water in Lake Taihu

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To investigate the effect of benthic organisms on migration and conversion of phosphorus, our research carried out a quarterly monitoring at two fixed sample points in Lake Taihu, between October 2017 and April 2018. The main contents of the monitoring were the changes of phosphorus in the sediments, overlying water, interstitial water and microorganism in sediments. Microbial content is characterized by using FDA hydrolase analysis. The SMT sequential extraction method was applied in morphometry of phosphorus contained in surface sediment samples in two different trophic level regions of northeast of Lake Taihu. The sum of all forms of phosphorus, which including $\text{NH}_4\text{Cl-P}$, Fe-P, Al-P, Org-P, Ca-P, and Res-P is regarded as total phosphorus. Through analysis all of them, we can obtain the migration and conversion of phosphorus in sediments in different seasons. Through the determination and analysis of microbial content and bioavailable phosphorus which including WSP, RDP, AAP, Olsen-P, the effect of microorganisms on migration and conversion of phosphorus can be drawn. Then we can explore the role of benthos in it.

Recent Publications

1. Li D P and Huang Y (2010) Sedimentary phosphorus fractions and bioavailability as influenced by repeated sediment resuspension. *Ecological Engineering* 36(7):958-962.
2. Li D P, Huang Y, Fan C X and Yuan Y (2011) Contributions of phosphorus on sedimentary phosphorus bioavailability under sediment resuspension conditions. *Chemical Engineering Journal* 168(3):1049-1054.
3. Li D P and Huang Y (2013) Phosphorus uptake by suspended sediments from a heavy eutrophic and standing water system in Suzhou China. *Ecological engineering* 60(11):29-36.
4. Li D P and Huang Y (2014) Distribution of added phosphorus in sediment under intermittent resuspension conditions. *Environmental Engineering and Management Journal* 13(10):2593-2600.
5. Wu Xiaofei, Li Dapeng, Wang Ren and Wang Ming (2015) Bioavailability of sedimentary phosphorus under repeated sediment resuspension with the addition of algae. *Environmental Science and Pollution Research* 22(17):13004-13013.

Biography

Dapeng Li has completed his PhD at Harbin Institute of Technology and Postdoctoral studies at Nanjing Institute of Geography and Limnology, Chinese Academy of Science. He is the Professor of Environmental Science and Engineering College at Suzhou University of Science and Technology, mainly engaged in the research of phosphorus migration and transformation in sediments and overlying water in shallow lakes. He is the Director of Collaborative Innovation Centre at Suzhou University of Science and Technology. He has published more than 50 papers in reputed journals and has been serving as an Editorial Board Member of reputed journals.

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