Xinxin Li

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Ph.D. Chemical Oceanography, Texas A&M University, 2012

M.S. Marine Chemistry, Ocean University of China, 2008

B.S. Applied Chemistry, Qingdao University, 2005

RESEARCH INTERESTS

- Organic biomarkers (eg. plant pigment, lignin-phenols, fatty acids) in the marine environment
- Biogeochemistry of the carbon cycling in the coastal/estuarine systems
- Environmental chemistry

I have focused on the organic carbon cycling in large river dominated delta front estuaries (LDEs). Multiple biogeochemical proxies have been applied in my Ph.D project. For example, radionuclides, organic biomarkers, stable carbon, and radiocarbon isotopes were analyzed to explore the sources, age, and digenetic status of organic carbon in the East China Sea shelf sediments off the Changjiang River, one of the biggest river systems in the world. Low oxygen tolerated foraminifera assemblages were also applied in my study to link the carbon cycling with eutrophication and the mechanisms of hypoxia. In addition, I have studied the dissolved and particulate organic carbon cycling in the sediment and/or water column in a variety of projects such as the Mechanisms Controlling Hypoxia off the Mississippi River delta in Gulf of Mexico (GOM) and the Deep Water Horizon oil spill in GOM. Therefore, the comparison of organic carbon cycling in the two LDEs between the GOM and the East China Sea was initially researched.

PUBLICATIONS

- S. E. Schüller, T.S. Bianchi, Xinxin Li, M. A. Allison, C. Savage. 2014. Degradation of phytoplankton chlorophyll across strong physicochemical gradients in Fiordland, New Zealand. Estuaries and Coasts, 1-16.
- Xinxin Li, T.S. Bianchi, M.A. Allison, L.E. Osterman, P. Chapman, and GP Yang. Early decay and preservation of organic carbon in the East China Sea sediments. Journal of Geophysical Research, 118, 1-15.
- T.S. Bianchi, M.A. Allison, J Zhao, Xinxin Li, R. S. Comeaux, R. A. Feagin, and R.W. Kulawardhana. 2013. Historical Reconstruction of mangrove expansion in the Gulf of Mexico: linking climate change with carbon sequestration in coastal wetlands. Continental Shelf Research, 119, 7-16.
- Xinxin Li, T.S. Bianchi, M.A. Allison, P. Chapman, S. Mitra, GP Yang and ZG Yu. 2012. The age, composition, and abundance of organic matter in surface sediments from the inner shelf of the East China Sea. Marine Chemistry, 145-147, 37-52.
- Jun Zhao, T.S. Bianchi, Xinxin Li, M.A. Allison, Yao, P. & Yu, ZG. 2012. Historical eutrophication in the Changjiang and Mississippi delta-front estuaries: Stable sedimentary chloropigments as biomarkers. Continental Shelf Research, 47, 133-144.
- Richard W. Smith, T.S. Bianchi, Xinxin Li. 2012. A re-evaluation of the use of branched GDGTs as terrestrial biomarkers: Implications for the BIT and TEX86 Indices. Geochimica et Cosmochimica Acta, 80(1), 14-29.
- Xinxin Li, T.S. Bianchi, ZS Yang, L.E. Osterman, M.A. Allison, S.F. DiMarco and GP Yang.2011. Historical trends of hypoxia in Changjiang River estuary: applications of chemical biomarkers and microfossils. Journal of Marine Systems, 86(3-4), 57-68.
- Gui-Peng Yang, Qiang Chen, Xinxin Li, Xiao-Yan Cao, 2010. Study on the sorption behaviors of Tween-80 on marine sediments. Chemosphere 79(11): 1019-1025.
- Xinxin Li, Guipeng Yang, Xiaoyan Cao. 2008. Sorption behaviors of sodium dodecylbenzene sulfonate (SDBS) on marine sediments. Water, Air & Soil Pollution, 194, 23-30.
- GP Yang, Xinxin Li, XY Cao. 2008. Sorption behaviors of Tween20 on marine sediments. Periodical of Ocean University of China, 38(2), 309-314 (In Chinese).

AFFILIATIONS

- American Geophysical Union (AGU)
- American Association for the Advancement of Science (AAAS)