

ANNUAL REPORT ON GEOTRACES ACTIVITIES IN CHINA-BEIJING
JUNE 2013 – JUNE 2014

Activities

- Two cruises were carried out to investigate the role of injection of interstitial waters on the mass balance of ^{224}Ra , Mn, and Fe in the water column of the Pearl River Estuary and the Jiulingjiang Estuary
- We participated in two GEOTRACES cruises in the western North Pacific held by Tung-Yuan Ho in Taiwan. Mo and ^{230}Th samples were collected and analyzed during the two cruises.
- Two cruises in 2013 summer and fall were carried out to investigate mercury, mercury methylation and Demethylation in the Bohai Sea and Yellow Sea.

Capacity building

- Clean sampling facilities which can be used in normal research vessels (X-Niskin, Kevlar cable and special winch) have been ordered by Ocean University of China and will be inter-calibrated with Japanese research vessel (by Prof. Jing Zhang from University of Toyama) at cross station of PN section in the East China Sea.

New funding

- “The role of dissolved organic matter (DOM) in methyl mercury photo degradation in natural aquatic environments”, funded by National Natural Science Foundation of China (2013/1-2016/12, PI: Jingling Ren).
- “Reconstruct the deep circulation in South China Sea over the past 150ka based on the proxy of sedimentary $^{231}\text{Pa}/^{230}\text{Th}$ activity ratio”, funded by National Natural Science Foundation of China (2013/1-2016/12, PI: Yihua Cai).

Publications

- Cai Pinghe, Williard Moore, Xiangming Shi, Shiyun Peng, Guizhi Wang, Minhan Dai (2014), $^{224}\text{Ra}:$ ^{228}Th disequilibrium in coastal sediments: Implications for solute transfer across the sediment-water interface. *Geochimica et Cosmochimica Acta* 125,68-84.
- Yan Li, Rujun Yang, Aibin Zhang, Shirong Wang. The distribution of dissolved lead in the coastal waters of the East China Sea. *Marine Pollution Bulletin* (2014), <http://dx.doi.org/10.1016/j.marpolbul.2014.02.010>.
- Lei Li, Jing-Ling Ren, Zhe Yan, Su-Mei Liu, Ying Wu, Feng Zhou, Cheng-Gang Liu and Jing Zhang. Behavior of arsenic in the coastal area of the Changjiang (Yangtze River) Estuary: Influences of water mass mixing, the spring bloom and hypoxia. *Continental Shelf Research*, [doi.org/10.1016/j.csr.2014.02.021](http://dx.doi.org/10.1016/j.csr.2014.02.021).
- Wang D.*, Zhao, Z., Dai, M., 2013. Tracing the recently increasing anthropogenic Pb inputs into the East China Shelf sediments using Pb isotopic analysis. *Marine Pollution Bulletin*, [10.1016/j.marpolbul.2013.11.032](http://dx.doi.org/10.1016/j.marpolbul.2013.11.032).
- Du J, Moore W. S, Hsh H. F, Wang G, Scholten J, Henderson P, Men W, Rengarajan R, Sha Z, Jiao J. (2013) Inter-comparison of radium analysis in coastal sea water of the Asian region. *Marine Chemistry* 156: 138-145.

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