

China-Taipei

GEOTRACES related activities in 2011:

1. Taiwanese most modern open ocean research vessel, R/V 5, launched in June 2011 (Figure 1). R/V 5, 72.6 m long, 15.4 m wide, and 2700 ton, is also equipped with a 20 ft trace metal clean container. The first GEOTRACES test cruise of R/V 5 will be carried out in July 2013 in the Western Philippine Sea.
2. The laboratory of Tung-Yuan Ho was invited to attend Japanese 2011 GEOTRACES cruise carried out in the northwestern Pacific. The measurement of dissolved trace metal samples was all finished. A couple manuscripts are under preparation by the leading Japanese scientists and Tung-Yuan Ho.
3. There were about 10 GEOTRACES related research papers published by Taiwanese scientists in 2011. Some examples are shown below:

Ho, T.-Y., W.-C. Chou, H.-L. Lin, and D. D. Sheu (2011) Trace metal cycling in the deep water of the South China Sea: The composition, sources, and fluxes of sinking particles. *Limnology and Oceanography* 56: 1225-1243.

Huh, C.-A., W. Chen, F.-H. Hsu, C.-C. Su, J.-K. Chiu, S. Lin, C.-S. Liu and B.-J. Huang (2011) Modern (<100 years) sedimentation in the Taiwan Strait: rates and source-to-sink pathways elucidated from radionuclides and particle size distribution. *Continental Shelf Research* 31: 47-63.

Shen, C.-C., C.-C. Wu, Y. Liu, J. Yu, C.-C. Chang, D.-D. Lam, C.-J. Chou, L. Lo, K.-Y. Wei (2011) Measurements of natural carbonate rare earth elements in femtogram quantities by inductive coupled plasma sector field mass spectrometry. [Analytical Chemistry](#) 83: 6842-6848.

Wei, C.-L., S.-Y. Lin, D. D. Sheu, W.-C. Chou, M.-C. Yi, P. H. Santschi, and L.-S. Wen (2011) Particle-reactive radionuclides (^{234}Th , ^{210}Pb , ^{210}Po) as tracers for the estimation of export production in the South China Sea, *Biogeosciences* 8: 3793-3808.

Wei, C.-L., K.-T. Jiann, L.-S. Wen, J.-R. Tsai, and D. D. Sheu (2011) Removal fluxes of Mn and Fe from the nearshore waters along the west coast of Taiwan. *Marine Pollution Bulletin* 62: 1081-1087.



Figure 1: New Taiwanese R/V 5