

Chawalit “Net” Charoenpong

Clark 403C, MS#25
Woods Hole Oceanographic Institution
266 Woods Hole Rd
Woods Hole, MA 02543
Tel. 508-289-4819
ccharoenpong@whoi.edu

Education:

- Ph.D. in Chemical Oceanography, MIT/WHOI Joint Program in Oceanography, expected 2019
- M.S. in Marine Sciences and Technology, University of Massachusetts Dartmouth, 2013
- Summer course in Microbial Oceanography, Bermuda Institute of Ocean Science, 2011
- B.S. in Marine Science (First class honors), Chulalongkorn University, Thailand, 2004
- Summer course in Marine Ecology, Phuket Marine Biological Center, 2003

Research interests:

Marine nitrogen cycle using natural variations in isotopic ratios, such as $\delta^{15}\text{N}$ and $\delta^{18}\text{O}$, and dissolved gas dynamics with emphasis on near-shore basins, oxygen minimum zones, estuaries and salt marshes

Research experience:

- September 2013 - present: Graduate research assistant. Advisor: Scott Wankel, Department of Marine Chemistry and Geochemistry, Woods Hole Oceanographic Institution.

Research projects:

- Biogeochemistry of nitrous oxide in tidal flats

- September 2010 - August 2013: Graduate research assistant. Advisor: Mark Altabet, School for Marine Sciences and Technology, University of Massachusetts Dartmouth.

Research projects:

- Fixed nitrogen removal processes in California borderland suboxic basins and ETSP OMZ, using N_2/Ar ratios, nitrate deficit and nitrate isotopes
- Nitrogen fixation rate measurements in the North Atlantic

- May 2003-2004: Undergrad research on the stomach contents of dugongs from Trang and Phuket Provinces, Thailand. Advisors: Ajcharaporn Piumsomboon (Chulalongkorn University) and Kanjana Adulyanukosol (Phuket Marine Biological Center)

- June-July 2002: Internship at marine biodiversity group at Phuket Marine Biological Center. Research project on macrofauna diversity in the sandy beaches and mud flats.

Publications:

- Charoenpong, C., Bristow, L. A. and Altabet, M. A. (accepted). A continuous flow isotope ratio mass spectrometry method for high precision determination of dissolved gas ratios and isotopic composition. *Limnology and Oceanography: Methods*.
- Charoenpong, C., Lee, E., Bristow, L. and Altabet, M. A. (in prep). Long-term storage and analysis of nitrite oxygen isotopes in seawater.

Presentations:

- AGU/ASLO Ocean Sciences Meeting, Honolulu, HI (Feb 2014)
Poster: Enhancement of isotope ratio mass spectrometry measurements of N_2/Ar ratios and $\delta^{15}N_2$ through O_2 removal
- The workshop on the influence of eddies on oxygen minimum zones (SFB 754), GEOMAR, Kiel, Germany (Nov 2013)
Invited talk: Development of biogenic N_2 in Peru OMZ eddies and its stoichiometry with N deficit
- AGU Fall Meeting, San Francisco, CA (Dec 2012)
Poster: Nitrogen fixation rates at BATS and along the North Atlantic subtropical front
- AGU/ASLO Ocean Sciences Meeting, Salt Lake City, UT (Feb 2012)
Poster: Nitrogen-loss pathways in the San Pedro and Santa Monica Basins detected from N_2/Ar ratios and nitrate isotopes
- University of Massachusetts SMS Research Colloquium, Boston, MA (Jan 2012)
Talk: Nitrogen-loss pathways detected from N_2/Ar ratios and nitrate isotopes
- Gordon Research Conference in Chemical Oceanography, Andover, NH (Aug 2011)
Poster: Nitrogen cycle dynamics in the Santa Monica Basin from nitrate isotopes and N_2/Ar ratios

Honors and awards:

- June 2012: Teaching assistantship for Chemical Oceanography (Spring 2013)
- June 2009: Thailand's Ministry of Science and Technology Scholarship
- August 2004: Professor Tab Nilanidhi Foundation award for outstanding overall academic achievement in Marine Science

Teaching Experience:

- Spring 2013: Teaching assistant for Chemical Oceanography class
- January 2008: 3-hour lecture on "Management of Marine Endangered Species" for the course, "Marine Resource Management", Burapha University, Chantaburi, Thailand

Cruise Experience:

- R/V Meteor: Lothar Stramma (Chief Scientist) M90, Kiel's research initiative 'SFB-754' (Oct 29-Nov 28, 2012)
 - Sampling dissolved gases/isotopic samples and measuring denitrification/anammox rates in the ETSP and eddies off the coast of Peru
- R/V Atlantic Explorer: Pia Moisander (PI) (Aug 16-28 & Jul 11-16, 2012)
 - Measuring N_2 fixation rates at BATS and along the transect southward into the subtropical front
- R/V Atlantic Explorer: Craig Carlson (PI) (Jun 23-25, 2012)
 - Collecting bacteria and virus samples, DOC, and nutrient along the transect between BATS and Hydrostation S
- R/V Connecticut: Mark Altabet (PI) (Aug 1-9, 2012)
 - Collecting DNA/RNA, dissolved gas and nutrient, and conducting incubation for respiration rate in the Long Island Sound
- R/V Clifford A Barnes: Laura Bristow (PI) (Apr 8-9, 2011)
 - Collecting dissolved gas and Winkler O_2 samples in the Hood Canal, Puget Sound, WA