

Nianhong Chen, PhD

EDUCATION EXPERIENCE

- 2002 Ph.D (Organic Geochemistry) Institute for Earth and Ecosystem Sciences, Tulane University, New Orleans, LA. (Advisor – Thomas S. Bianchi)
- 1998 M.S (Marine Science) Institute of Marine Sciences, University of Southern Mississippi, Stennis Space Center, MS. (Advisor – Steven E. Lohrenz)
- 1989 B.S. (Chemistry) Dept. of Chem., University of Science and Technology of China, Anhui, P.R. China.

PROFESSIONAL EXPERIENCE

- 2012-present Assistant Professor, Director of Instrumentation Lab, University of Maryland Eastern Shore.
- 2010-2012 Visiting Lecturer, Director of Instrumentation Lab, University of Maryland Eastern Shore.
- 2005-2009 Samax Technologies Inc.
- 2003-2005 Postdoctoral Fellow, Old Dominion University, Norfolk, Virginia
- 2002-2003 Postdoctoral Fellow, University of Maryland Eastern Shore, Maryland
- 1998-2002 Teaching/Research Assistant, Tulane University, New Orleans, Louisiana
- 1995-1998 Research Assistant, Institute of Marine Sciences, University of Southern Mississippi, Mississippi
- 1989-1995 Engineer, Institute of Oceanology, Chinese Academy of Sciences, Qingdao, P. R. China

HONORS & AWARDS

- 2002 DISCO XVII (Dissertations Symposium on Chemical Oceanography), Honolulu, Hawaii.
- 2002 Participant National Marine Innovation Achievement Award, State Oceanic Administration of China. Title: Marine primary productivity structure, new productivity and microbial production processes and mechanisms

PEER REVIEWS

Review of Submitted Manuscript

- 2013, *Geochemica Cosmochemica Acta* (Associate Editor: Ann Pearson)
- 2013, *Marine Progress Ecology Series* (Associate Editor: Steven Lohrenz)
- 2013, *Estuarine, Coastal and Shelf Science* (Associate Editor: Thomas Bianchi)
- 2012, *Organic Geochemistry* (Associate Editor: Philip Meyers)
- 2012, *Geochemica et Cosmochemica Acta* (Associate Editor: Thomas Bianchi)
- 2011, *Continental Shelf Research* (Associate Editor: Miguel Goni)
- 2011, *Estuaries, Coastal and Shelf Science* (Associate Editor: Eric Wolanski)
- 2010, *Marine Chemistry* (Associate Editor: Thomas Bianchi)
- 2006, *Estuaries, Coastal and Shelf Science* (Associate Editor: Elizabeth Canuel)
- 2004, *Organic Geochemistry* (Associate Editor: Thomas Bianchi)

Review of Research Project Proposal

- 2010, Review research proposal submitted to US-Israel Foundation (2010)

OCEANOGRAPHIC CRUISE EXPERIENCE

- 2011-2013, Monthly sampling of water and sediment, Maryland Coastal Bays
- 2004, R/V Endeavor, North Atlantic – 21 days – (Mar., 2004).
- 2003, R/V Endeavor, North Atlantic – 21 days – (Aug., 2003).

- 2000, R/V PELICAN, Gulf of Mexico – 10 days - (Apr., 2000).
- 1999, R/V PELICAN, Mississippi River and Gulf of Mexico - 6 days - (Jul., 1999).
- 1999, R/V PELICAN, Mississippi River and Gulf of Mexico - 6 days - (Apr., 1999).
- 1998, R/V PELICAN, Mississippi River and Gulf of Mexico - 6 days - (Sep., 1998).
- 1994, O/R/V DONGFANGHONG, East China Sea, Chinese JGOFS (Oct. – Nov., 1994).
- 1989-1995, O/R/V SCIENCEII, seasonal sampling, Jiaozhou Bay, P.R. China (3 to 4 days cruises per year).

LABORATORY EXPERIENCE

- 2010-present Maintenance of instruments in Water Quality Lab (HPLC, GC/MS ICP/MS etc.), development of methodology for research projects (LMSCRC, CREST etc.).
- 2003-2005 Characterization of low molecule-weight photochemical decay products of dissolved organic matter in aquatic environment.
- 2002-2003 Source and transport of terrestrial organic carbon in Mid-Atlantic back bays using biomarker techniques.
- 1998-2002 Carbon cycle study on continental shelf with high performance liquid chromatography (HPLC) coupled mass spectrometry (MS).
- 1996-1998 Transport of particulate organic carbon from continental shelf to slope. Development of gel permeation chromatography (GPC) method to separate chlorophyll degradation products in sediments.
- 1995-1996 Acid-volatile sulfide (AVS) and simultaneously extracted metals (SEM) study in sediments.
- 1993-1995 Marine primary production and pico-phytoplankton study in continental shelf. Development of HPLC method to separate divinyl chlorophyll.
- 1992-1993 Lipid chemistry of marine algae and animal.
- 1989-1993 Contaminants analysis in environmental samples. Development of HPLC method for polyaromatic hydrocarbons analysis, separation of Beta-carotene isomers in algae, and trace monochrotophos analysis in waters.

PRESENTATIONS AT PROFESSIONAL MEETINGS

Contributed Presentations

- 2013 ASLO Aquatic Meeting, New Orleans (paper presentation)
- 2012 Annual Symposium of the School of Graduate Studies, UMES (paper presentation)
- 2002 Gordon Conference (Organic Geochemistry), Plymouth, NH (paper presentation).
- 2002 DISCO XVII (Dissertations Symposium on Chemical Oceanography), Honolulu, Hawaii (paper presentation).
- 2001 American Society of Limnology and Oceanography, Albuquerque, NM (paper presentation).
- 2000 American Geophysical Union, Washington DC (paper presentation).
- 1998 American Geophysical Union, Boston, MA (paper presentation).
- 1998 Mississippi Academy of Sciences, Biloxi, MS (paper presentation).
- 1997 Mississippi Academy of Sciences, Biloxi, MS (paper presentation).
- 1996 Mississippi Academy of Sciences, Jackson, MS (paper presentation).

Invited Presentation

1999 Estuarine Research Federation, New Orleans, LA (invited paper presentation).

PUBLICATIONS

Research Papers

- Mark W., O. F. Ozuem, E. B. May, M. Mitra, and N. Chen, 2012. HPLC Analysis of Phytoplankton Pigments in Maryland Coastal Bays. *J. of Undergraduate Chemistry Research*. 11(4): 119-122.

- Chen, N., T. S. Bianchi and B. A. McKee, 2005. Early diagenesis of chlorophyll-a in the lower Mississippi River and Louisiana shelf: implications for carbon cycling in a river-dominated margin. *Mar. Chem.*, 93:159-177.
- Chen, N., T. S. Bianchi, J. M. Bland and B. A. McKee, 2003. Novel carotenoid chlorin esters in Louisiana shelf sediments: formation and transformation of CCEs. *Geochim. Cosmochim. Acta*, 67(11): 2027-2042.
- Borgendahl, J., P. Westman, T.S. Bianchi and N. Chen, 2003. Probable causes for cyanobacterial blooms in the Baltic Sea: The role of anoxia and phosphorus release. *Estuaries*, 26:680-689.
- Chen, N., T. S. Bianchi and J. M. Bland, 2003. Implications for the role of pre- versus post-depositional decay of chlorophyll-a in the lower Mississippi River and Louisiana shelf. *Mar. Chem.*, 81: 37- 55
- Chen, N., T. S. Bianchi, B. A. McKee and J. M. Bland, 2001. Historical Trends of Hypoxia on the Louisiana Shelf: Application of Pigments as Biomarkers. *Org. Geochem.*, 32:543-516.
- Jiao, N., Chen, N. and Ni, I-Hsun, 2000. Chromatographic evidence of the presence of Prochlorococcus in the East China Sea. *Acta Oceanographica Taiwanica*, 38: (1)
- Jiao, N., Y., Yang, S. W., Chisholm and N. Chen, 1998. Presence of Prochlorococcus marinus in the East China Sea. *Bull. Chin. Sci.*, 43(3): 16-318 Liu, J. G., C. Y. Wu, N. Chen, Y. J. Wang and L. D. Yu, 1996. Effect of nitrate and phosphate on accumulation of Beta-carotene isomers in *Dunaliella salina*. *Chin. J. Oceanol. and Limnol.*, 14(2): 165-171.
- Chen, N. and N. Z. Jiao, 1995. Flow cytometer and its application to the study of picoplankton. In: *Ecology of Jiaozhou Bay*, (Ed.), pp. 200-205. Science Press, Beijing, China.
- Jiao, N. Z. and N. Chen, 1995. Prochlorococcus--a new field of marine ecology. In: *Ecology of Jiaozhou Bay*, (Ed.), pp. 184-189. Science Press, Beijing, China.
- Svetashev, V. I., H. F. Li, F. C. Yu, Z. Q. Sun, N. Chen and X. J. Jiang, 1994. Fatty acid composition and total lipid content in the lancelet *Branchiostoma belcheri tsingtaoense*. *Comp. Biochem. Physiol.*, 108A(2/3): 325-329.
- Li, L. Y., N. Chen and Z. Q. Sun, 1995. Study of polar lipids and fatty acid composition in pylorus caecum of starfish (*Asterias amurensis*). *Marine Sciences*, 95(5): 49-52.
- Liu, J. G., X. W. Zhao, Y. J. Wang, N. Chen and L. D. Yu, 1994. Study on accumulation of Beta-carotene and its isomers in *Dunaliella salina* under environmental stress condition--salinity effect. *Oceanologia et Limnologia Sinica*, 25(1): 1-8.

Book/Book Chapter

- N. Chen, 2013. *Practical Undergraduate Instrumental Analysis Laboratory Experiments*. Createspace.
- Bianchi, T., M. Goni, M. Allison, N. Chen and B. McKee, 2013. Sedimentary carbon dynamics of the Atchafalaya and Mississippi river delta system and associated margin. In *Biogeochemical Dynamics at Large River-Coastal Interfaces: Linkages with Global Climate Change*, Cambridge University Press.

Thesis and Dissertation

- 2002 Early diagenesis of chlorophyll in a river-dominated margin. Ph.D dissertation, Institute for Earth and Ecosystem Sciences, Tulane University.

- 1998 Chloropigments composition and its relationship to total carbon in continental shelf sediments off Cape Hatteras, North Carolina. Master thesis, Institute of Marine Sciences at Stennis Space Center, University of Southern Mississippi.

GRANTS

- Participant, CREST center for the integrated study of coastal ecosystem processes and dynamic in the Mid-Atlantic region. Funding agent: NSF. Fund period: January 9, 2009 – January 9, 2014. Funding Level: \$5m.
- Senior Personnel, Establishment of a Network of Cooperative Science Centers and High Schools for Training High School Students in Geosciences: April 1, 2012 – March 31, 2015. Funding agent: NSF. Funding Level: \$0.5m.

INVITED SEMINAR

- 2012 University of Maryland Eastern Shore, MD. Title: From Louisiana continental shelf to Maryland coastal bays: nutrient is still the hot topic
- 2005 Hampton University, Hampton, VA. Title: Source of organic carbon in sediments of Pocomoke River: lipids as biomarkers.
- 2003 Old Dominion University, Norfolk, VA. Title: Hypoxia and chlorophyll biomarker diagenesis on the Louisiana Continental Shelf: Implications in coastal carbon cycling,
- 2001 Woods Hole Oceanographic Institution, Woods Hole, MA. Title: Chlorophyll-a diagenesis in the lower Mississippi River and adjacent (Louisiana) continental shelf: Effects of sedimentation and hypoxia events.