

Professor Xinping Hu

Texas A&M University-Corpus Christi
Science & Engineering, Physical & Environmental Sciences
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Education

PhD, Old Dominion University, 2007.

BS, Peking University, 1997.

Professional Employment

Assistant Professor, Texas A&M University - Corpus Christi. (September 2012 - Present).

Assistant Research Scientist, University of Georgia. (February 2012 - October 2012).

Post Doctoral Associate, University of Georgia. (January 2007 - January 2012).
Paper writing, conduct lab and field experiments

Research Assistant, Institute of Oceanology, Chinese Academy of Sciences. (September 1997 - April 2000).
Routine lab work, sample analysis, report writing

Professional Memberships

Coastal & Estuarine Research Federation
American Geophysical Union
Association for the Sciences of Limnology and Oceanography

TEACHING

Teaching Experience

CHEM 1411, GENERAL CHEMISTRY I
CHEM 4344, CHEMICAL OCEANOGRAPHY
CHEM 4490, SPECIAL TOPICS: Aquatic Chemistry
CHEM 5421, AQUATIC CHEMISTRY
CHEM 5490, ADVANCE TOPICS: Chemical Oceanography
CMSS 6102, SEMINAR IN EARTH SYSTEM SCIENC
CMSS 6357, GLOBAL GEOCHEMICAL CYCLES-CHNG
CMSS 6596, DIS: Estuarine Biogeochemistry
CMSS 6996, RESEARCH
ESCI 5392, THESIS I: THESIS PROPOSAL
ESCI 5393, THESIS II: THESIS RESEARCH
ESCI 5394, THESIS III: THESIS SUBMISSION
ESCI 5940, PROJECT RESEARCH

SCHOLARLY AND CREATIVE ACTIVITIES

Publications

Refereed

Journal Articles

Xue, L., Cai, W.-J., Hu, X., Sabine, C. L., Jones, S., Sutton, A. J., Jiang, L.-Q., Reimer, J. J. (2016). Sea surface carbon dioxide at the Georgia time series site (2006-2007): air-sea flux and controlling processes. *Progress in Oceanography*, 140, 14-26.
<http://www.sciencedirect.com/science/article/pii/S0079661115001986>

Hoadley, K. D., Pettay, D. T., Grotoli, A. G., Cai, W.-J., Melman, T. F., Schoepf, V., Hu, X., Li, Q., Xu, H., Wang, Y., Matsui, Y., Baumann, J. H., Warner, M. E. (2015). Physiological response to elevated temperature and pCO₂ varies across four Pacific coral species: Understanding the unique host+symbiont response. *Scientific Reports*, 5, DOI: 10.1038/srep18371. www.nature.com/articles/srep18371

Xue, J., Cai, W.-J., Hu, X., Huang, W.-J., Lohrenz, S. E. (2015). Temporal variation and stoichiometric ratios of organic matter remineralization in bottom waters of the northern Gulf of Mexico during late spring and summer. *Journal of Geophysical Research - Oceans*, 120(2), 23. <http://onlinelibrary.wiley.com/doi/10.1002/2015JC011453/full>

Huang, W.-J., Cai, W.-J., Wang, Y., Hu, X., Chen, B., Lohrenz, S. E., Chakraborty, S., He, R., Brandes, J., Hopkinson, C. S. (2015). The response of inorganic carbon distributions and dynamics to upwelling favorable winds on the northern Gulf of Mexico during summer. *Continental Shelf Research*, 111 Part B, 211-222.
<http://www.sciencedirect.com/science/article/pii/S0278434315300406>

Hu, X., Pollack, J., McCutcheon, M. R., Montagna, P. A., Ouyang, Z. (2015). Long-term alkalinity decrease and acidification of estuaries in Northwestern Gulf of Mexico. *Environmental Science & Technology*, 49(6), 3401-3409.
pubs.acs.org/doi/abs/10.1021/es505945p

Levas, S., Grotoli, A. G., Warner, M. E., Cai, W.-J., Bauer, J., Schoepf, V., Baumann, J. H., Matsui, Y., Gearing, C., Melman, T. F., Hoadley, K. D., Pettay, D. T., Hu, X., Li, Q., Xu, H., Wang, Y. (2015). Organic carbon fluxes mediated by corals at elevated pCO₂ and temperature. *MARINE ECOLOGY PROGRESS SERIES*, 519, 153-164.
www.int-res.com/articles/meps2014/519/m519p153.pdf

Rabalais, N. N., Cai, W.-J., Carstensen, J., Conley, D. J., Fry, B., Hu, X., Rosenberg, R., Slomp, C. P., Turner, R. Eugene, Voss, M., Wissel, B., Zhang, J. Eutrophication-driven deoxygenation in the coastal ocean. *Oceanography*, 27, 172-183.
www.tos.org/oceanography/archive/27-1_rabalais.html

Schoepf, V., Grotoli, A. G., Warner, M. E., Cai, W.-J., Melman, T. F., Hoadley, K. D., Pettay, D. T., Hu, X., Li, Q., Xu, H., Wang, Y., Matsui, Y., Baumann, J. H. (2013). Coral energy reserves and calcification in a high-CO₂ world at two temperatures. *PLOS One*, 8(e75049), doi:10.1371/journal.pone.0075049.
www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0075049;jsessionid=4227036BFAA26303244CA4EB2155D878

Hu, X., Cai, W.-J. (2013). Estuarine acidification and minimum buffer zone - a conceptual study. *Geophysical Research Letters*, 40(19), 5176-5181.
onlinelibrary.wiley.com/doi/10.1002/grl.51000/abstract

Wang, Z. A., Wanninkhof, R., Cai, W.-J., Byrne, R. H., Hu, X., Peng, T.-H., Huang, W.-J. (2013). The marine inorganic carbon system along the Gulf of Mexico and Atlantic coasts of

the United States: Insights from a transregional coastal carbon study. *Limnology and Oceanography*, 58, 325-342.

Presentations

Yao, H. (Author & Presenter), Hu, X. (Author), "Seasonality of Carbonate Chemistry and CO₂ Flux in a Northwestern Gulf of Mexico Estuary," 2016 Ocean Sciences Meeting, New Orleans, LA. (February 26, 2016).

Reimer, J. (Author & Presenter), Cai, W.-J. (Author), Noakes, S. (Author), Hu, X. (Author), Chen, B. (Author), Wang, A. Z. (Author), Jiang, L. (Author), Salisbury, J. (Author), "pCO₂ time series ground truthing and internal consistency at the Gray's Reef mooring (NDBC-41008) in the South Atlantic Bight," 2016 Ocean Sciences Meeting, J. Reimer, W.-J. Cai, S. Noakes, X. Hu, B. Chen, A.Z. Wang, L. Jiang, and J. Salisbury., New Orleans, LA. (February 25, 2016).

Huang, W.-J. (Author & Presenter), Cai, W.-J. (Author), Wang, Y. (Author), Hu, X. (Author), "Spatial and Temporal Distributions of Carbonate Saturation State on the Mississippi River Dominated Northern Gulf of Mexico," 2016 Ocean Sciences Meeting, New Orleans, LA. (February 23, 2016).

Wang, Q. (Author & Presenter), Evans, M. (Author), Bacosa, H. (Author), Hu, X. (Author), Liu, Z. (Author), "The Fate of Crude Oil during Photooxidation under Natural Sunlight," 2016 Ocean Sciences Meeting, New Orleans, LA. (February 23, 2016).

Wang, H. (Author & Presenter), Hu, X. (Author), Rabalais, N. N. (Author), Cai, W.-J. (Author), "Comparison of fCO₂ trends in a river dominated and an ocean dominated ocean margins," 2016 Ocean Sciences Meeting, New Orleans, LA. (February 22, 2016).

McCutcheon, M. R. (Author & Presenter), Hu, X. (Author), "Exploring relationships of calcification rate with respiration rate and predator cue presence in juvenile *Crassostrea virginica*," 2016 Ocean Sciences Meeting, New Orleans, LA. (February 22, 2016).

Wang, H. (Author), Hu, X. (Author & Presenter), Rabalais, N. N. (Author), "What Drives Oxygen Consumption in the Northern Gulf of Mexico? – A Stable Isotope Perspective," 2016 Ocean Sciences Meeting, New Orleans, LA. (February 22, 2016).

Hu, X. (Author & Presenter), "Ocean Acidification – Myths, Facts, and a Case Study in a South Texas Estuary," Harte Seminar Series, TAMUCC, Corpus Christi. (February 19, 2016).

Wang, H. (Author), Hu, X. (Author & Presenter), Rabalais, N. N. (Author), "What Drives Oxygen Consumption in the Northern Gulf of Mexico? – A Stable Isotope Perspective," Gulf of Mexico Oil Spill & Ecosystem Science Conference, Tampa, FL. (February 3, 2016).

Hayes, K. (Author & Presenter), Cira, E. K., Hu, X., Wang, H., Wetz, M. S., "Spatial-temporal distribution of organic carbon and nitrogen in a eutrophic estuary (Baffin Bay, TX)," Coastal & Estuarine Research Federation Meeting, CERF, Portland, OR. (November 2015).

Hu, X. (Author & Presenter), Staryk, C. J. (Author), Yao, H. (Author), "Acidification of a Shallow Subtropical Estuary - Reduced Freshwater Inflow, Hypoxia, and Ocean Acidification," 23rd Biannual Conference of the Coastal and Estuarine Research Federation, Portland, OR. (November 8, 2015).

Wang, H. (Author), Hayes, K. (Author), Wetz, M. S., Hu, X. (Author & Presenter), "Acidification of a Shallow Subtropical Estuary - Reduced Freshwater Inflow, Hypoxia, and Ocean Acidification,"

23rd Biannual Conference of the Coastal and Estuarine Research Federation, Portland, OR. (November 8, 2015).

Wang, H. (Author & Presenter), Sterba-Boatwright, B. D. (Author), Hu, X. (Author), "A new statistical approach for interpreting the ocean fCO₂ record," Gordon Research Conference on Chemical Oceanography, Gordon Research Conferences, Holderness, NH. (July 26, 2015).

Yao, H. (Author & Presenter), Hu, X. (Author), "Seasonality of Carbonate Chemistry and CO₂ Flux in a Northwestern Gulf of Mexico estuary," Texas Bays and Estuaries Meeting, UTMSI, CBBEP, Port Aransas. (April 8, 2015).

Wang, H. (Author & Presenter), Hu, X. (Author), Cai, W.-J. (Author), Rabalais, N. N. (Author), Huang, W.-J. (Author), Xue, J. (Author), "Evidence of Cross-shelf Inorganic Carbon Export in the Northern Gulf of Mexico," Gulf of Mexico Oil Spill & Ecosystem Science Conference, Houston, TX. (February 16, 2015).

Hu, X. (Author & Presenter), Bacosa, H. (Author), Liu, Z. (Author), "Photo-oxidation of Louisiana Sweet Crude Oil in Gulf Waters - A Preliminary Result," Gulf of Mexico Oil Spill & Ecosystem Science Conference, Houston, TX. (February 16, 2015).

Hu, X. (Author & Presenter), "Long - term alkalinity decrease and acidification of estuaries in southwestern United States," Coastal CARBON Synthesis (CCARS) Community Workshop, NSF, NASA, Woods Hole, MA. (August 19, 2014).

Besonen, M. (Author & Presenter), Zimba, P. V. (Author), Hill, E. M. (Author), Tissot, P. (Author), McKay, M. C. (Author), Nicolau, B. (Author), Hu, X., Silliman, J. E., "Long-term Water Quality and Environmental Changes in Baffin Bay as Inferred from Sediment Cores—Preliminary Results," Texas Bays and Estuaries Meeting, University of Texas Marine Sciences Institute, Port Aransas, TX. (April 2014).

McCutcheon, M. (Author & Presenter), Hu, X. (Author), Pollack, J. (Author), Montagna, P. (Author), Ouyang, Z. (Author), "Alkalinity Trends in the Dewatering Estuaries of the Texas Coastal Bend.," Texas Bays and Estuaries Meeting, UTMSI, CBBEP, Port Aransas. (April 23, 2014).

Hu, X. (Author & Presenter), "EXPLORING ESTUARINE ACIDIFICATION AND MINIMUM BUFFER ZONE," Ocean Science Meeting, AGU, ASLO, TOS, Honolulu, HI. (February 23, 2014).

Wang, H. (Author & Presenter), Hu, X. (Author), Cai, W.-J. (Author), Rabalais, N. N. (Author), "Stable Isotope Composition of Remineralizing Organic Carbon In The Northern Gulf of Mexico Continental Shelf Sediments," Gulf of Mexico Oil Spill & Ecosystem Science Conference, Mobile, AL. (January 26, 2014).

Hu, X. (Author & Presenter), "Estuarine Acidification in the Context of Ocean Acidification a Theoretical Exploration," TAMU Galveston Marine Biology Seminar Series, Department of Marine Biology - TAMU Galveston, Galveston, TX. (November 21, 2013).

Hu, X. (Author & Presenter), "Estuarine Acidification in the Context of Ocean Acidification a Theoretical Exploration," UTMSI Technician Seminar Series, University of Texas Marine Science Institute, Port Aransas. (October 25, 2013).

Hu, X. (Author), Cai, W.-J. (Author), Rabalais, N. N. (Author), "Organic carbon remineralization stoichiometry - a useful indicator for detecting oil degradation in water column," Gulf of Mexico Oil Spill & Ecosystem Science Conference, New Orleans. (January 21, 2013).

Contracts, Grants and Sponsored Research

Grant

Wetz, Michael S (Co-Principal), Montagna, Paul A. (Principal), Hu, Xinping (Co-Principal), "Ocean Acidification: A hydrologic switch explains hypoxia and acidification in estuaries," Sponsored by NOAA, Federal, \$1,265,000.00. (September 2015 - August 2018).

Wetz, Michael S (Co-Principal), Montagna, Paul A. (Principal), Hu, Xinping (Co-Principal), "Ocean Acidification: A hydrologic switch explains hypoxia and acidification in estuaries," Sponsored by NOAA, Federal, \$1,265,000.00. (September 2015 - August 2018).

Hu, Xinping, Murgulet, Dorina, "Evaluating Groundwater Exported Acidity in Copano Bay," Sponsored by Texas General Land Office, State, \$98,206.00. (October 1, 2016 - March 31, 2018).

Wetz, Michael S (Principal), Hu, Xinping (Co-Principal), "Water quality monitoring of mid-coast estuaries," Sponsored by Texas Water Development Board, State, \$19,500.00. (January 2016 - July 2017).

Wetz, Michael S (Principal), Hu, Xinping (Co-Principal), "Identification of organic matter sources contributing to hypoxia formation in two eutrophic South Texas estuaries: relationships to watershed land use practices," Sponsored by Texas Sea Grant, Federal, \$273,314.00. (January 2014 - January 2017).

Hu, Xinping, "Ocean and Coastal Acidification Monitoring," Sponsored by Coastal Bend Bays and Estuaries Program, Local, \$65,000.00. (November 1, 2015 - October 31, 2016).

Hu, Xinping (Principal), "Ocean and Estuarine Acidification Monitoring," Sponsored by Coastal Bays and Estuaries Program, Local, \$65,000.00. (November 2015 - October 2016).

Hu, Xinping (Co-Principal), "Dynamics of Dissolved Inorganic Carbon and Dissolved Oxygen Following Natural or Man-made Petroleum Carbon Release into Marine Environments," Sponsored by Gulf Research Initiative, Other, \$288,441.00. (December 1, 2012 - August 31, 2016).

Wetz, Michael S, Hu, Xinping, "Water quality monitoring of mid-coast estuaries," Sponsored by Texas Water Development Board, State, \$20,000.00. (July 2014 - June 2015).

Besonen, Mark (Supporting), Cifuentes, Luis (Principal), Hu, Xinping (Co-Principal), Stunz, Gregory W. (Co-Principal), Wetz, Michael S (Co-Principal), Naehr, Thomas H. (Co-Principal), Fahlman, Andreas (Supporting), Montagna, Paul A. (Supporting), Pollack, Jennifer (Supporting), Hogan, James D (Supporting), Zimba, Paul V. (Supporting), Coffin, Richard (Supporting), "CKD--FUNDED--MRI: Acquisition of Elemental Stable Isotope Chemistry (ESIC) Mass Spectrometer," Sponsored by U.S. National Science Foundation, Federal, \$419,259.00. (October 1, 2013 - September 30, 2014).

Stunz, Gregory W. (Co-Principal), Cifuentes, Luis (Principal), Wetz, Michael S (Co-Principal), Hu, Xinping (Co-Principal), "MRI: Acquisition of Elemental Stable Isotope Chemistry (ESIC) Mass Spectrometer," Sponsored by NSF - Major Research Instrumentation, \$419,259.00. (October 1, 2013 - September 30, 2014).

Naehr, Thomas H. (Co-Principal), Cifuentes, Luis (Principal), Stunz, Gregory W. (Co-Principal), Hu, Xinping (Co-Principal), Wetz, Michael S (Co-Principal), "Acquisition of Elemental Stable

Isotope Chemistry (ESIC) Mass Spectrometer," Sponsored by NSF OCE/MRI, Federal, \$419,259.00. (September 1, 2013 - August 31, 2014).

Sponsored Research

Hu, Xinping, "Alkalinity Decline and Acidification in Dewatering Estuaries," Texas A&M University-Corpus Christi, \$20,000.00. (September 1, 2014 - August 31, 2015).

Hu, Xinping (Principal), "Estuarine Minimum Buffer Zone - a Proof of Concept," Sponsored by TAMUCC Research Enhancement Fund, Texas A&M University-Corpus Christi, \$5,000.00. (September 1, 2013 - August 31, 2014).

Scholarly and Creative Awards and Honors

Outstanding Ph.D. Student, Department of Ocean, Earth and Atmospheric Sciences. (2007).

SERVICE

Department

Committee Member, Marine Chemistry Faculty Search Committee. (November 2014 - October 2015).

Committee Chair, Environmental Chemistry Faculty Search Committee. (November 2014 - May 2015).

Committee Member, Environmental Science Non-Tenure Track Search Committee. (May 2014 - August 2014).

Committee Chair, Chemistry Faculty Search Committee. (September 2013 - March 2014).

College

Committee Member, College of Science and Engineering - Strategic Plan Committee. (September 2014 - Present).

Committee Member, Chair Search Committee - Physical and Environmental Sciences. (October 2012 - April 2013).

Committee Member, Faculty Search Committee for Microbiologist in Life Sciences Department. (September 2012 - March 2013).

Professional

Reviewer, Journal Article, Marine Chemistry. (April 2016).

Reviewer, Journal Article, Environmental Science and Pollution Research. (March 2016).

Reviewer, Journal Article, Limnology and Oceanography. (February 2016).

Reviewer, Grant Proposal, New Hampshire Sea Grant. (February 2016).

Reviewer, Journal Article, Geophysical Research Letters. (January 2016).

Reviewer, Journal Article, Scientific Reports. (December 2015).

Reviewer, Journal Article, Deep Sea Research I. (November 2015).

Reviewer, Journal Article, Chemical Geology. (October 2015).

Reviewer, Journal Article, Estuaries and Coasts. (October 2015).

Reviewer, Journal Article, Chemical Geology. (August 2015).

Reviewer, Journal Article, Journal of Geophysical Research - Biogeosciences. (July 2015).

Reviewer, Journal Article, Chemical Geology. (June 2015).

Reviewer, Journal Article, Marine Chemistry. (April 2015).

Reviewer, Journal Article, Journal of Marine Systems. (March 2015).

Reviewer, Journal Article, Journal of Geophysical Research - Oceans. (February 2015).
Reviewer, Journal Article, Palaeogeography, Palaeoclimatology, Palaeoecology. (December 2014 - January 2015).
Reviewer, Journal Article, Marine Pollution Bulletin. (September 2014 - October 2014).
Reviewer, Journal Article, Environmental Science and Technology. (September 2014 - October 2014).
Reviewer, Journal Article, Journal of Marine Systems. (August 2014).
Reviewer, Journal Article, Environmental Science and Technology. (July 2014).
Reviewer, Journal Article, Deep Sea Research I. (June 2014).
Reviewer, Journal Article, Scientific Reports. (April 2014).
Reviewer, Grant Proposal, National Science Foundation. (March 2014).
Reviewer, Journal Article, Deep Sea Research II. (December 2013 - January 2014).
Reviewer, Grant Proposal, Fonds de recherche du Québec – Nature et technologies. (November 2013 - January 2014).
Reviewer, Journal Article, Geophysical Research Letters. (December 2013).
Reviewer, Journal Article, The ISME Journal. (November 2013 - December 2013).
Reviewer, Journal Article, Estuarine, Coastal and Shelf Science. (August 2013 - September 2013).
Reviewer, Journal Article, Aquatic Geochemistry. (July 2013 - August 2013).
Reviewer, Journal Article, Biogeoscience. (April 2013 - June 2013).
Reviewer, Journal Article, Deep Sea Research II. (March 2013).
Reviewer, Journal Article, Aquatic Geochemistry. (February 2013).
Reviewer, Journal Article, Journal of Geophysical Research - Oceans. (December 2012).
Reviewer, Journal Article, Rapid Communications in Mass Spectrometry. (November 2012).
Reviewer, Journal Article, Geochimica et Cosmochimica Acta. (October 2012).

Public

Guest Speaker, Windsor Park Elementary School. (April 2016).