Curriculum Vitae

Zhaohui Aleck Wang, PhD
Associate Scientist with Tenure
Department of Marine Chemistry & Geochemistry
Woods Hole Oceanographic Institution (WHOI)
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Education

1998-2003 Ph.D., Marine Science, University of Georgia, Athens, GA.
Advisor, Professor Weijun Cai.
1996-1998 M.Sc., Oceanography, University of New Hampshire, Durham, NH.
Advisor, Professor Theodore Loder.
1990-1994 Marine Chemistry, Xiamen University, Xiamen, China.

Professional Experience

2025-present	Senior Scientist	Woods Hole Oceanographic Institution
2018-2025	Associate Scientist with Tenure	Woods Hole Oceanographic Institution
2013-2018	Associate Scientist	Woods Hole Oceanographic Institution
2009-2013	Assistant Scientist	Woods Hole Oceanographic Institution
2003-2009	Postdoc Research Associate	University of South Florida (Mentor, Professor Robert Byrne)
1994-1996	Project Manager	State Oceanic Administration of China

Selected Awards

2003: Dissertations Symposium on Chemical Oceanography (DISCO XVIII) Invited Participant
2003: Dissertation Completion Assistantships, University of Georgia
2002: Student Travel Grant Award, American Geophysical Union
1996-1998: Departmental Tuition Scholarship, Department of Earth Science, University of New Hampshire.

Professional Affiliations

Member, American Geophysical Union
Member, Association for the Sciences of Limnology and Oceanography
Member, American Chemical Society
Member, Geochemical Society

Research Interests

Marine/aquatic biogeochemistry: CO_2 system (carbonate chemistry); Ocean acidification and its impacts; Carbon Dioxide Removal (CDR) and its monitoring, reporting, and verification (MRV); Blue carbon and carbon exports from coastal wetlands; Coastal carbon cycling
Sensing technology development: CO_2 system parameters (dissolved inorganic carbon, pH, pCO_2, and total alkalinity), dissolved oxygen, and other chemical species

Professional Activities and Service

Associate Editor, Marine Chemistry (Journal), 2023 – present
Board Member, Board of Directors, NERACOOS, 2022 – present

Lead organizer, OCB Scoping Workshop "*Building a Cost-effective Coastal Biogeochemical Observing Network in Collaboration with the Commercial Fishing Community*". Jan 18 – 20, 2023. Woods Hole, MA.

Chair, Plenary Session: *Tidal Carbon Exports from Coastal Wetlands as a Significant Component of Blue Carbon Sequestration*. OCB 2022 Summer Workshop. Jun 20 – 23, 2022. Woods Hole, MA.

NSF Coastlines and People (CoPe) Workshop (invited). September 26-28, 2018. San Diego, CA.

Committee member of OCB Workshop 'Lateral Carbon Fluxes in Tidal Wetlands.' Aug 21- 23, 2018. Woods Hole, MA.

Chair or co-chair of 9 program sessions in professional conferences and workshops (last 5 years)

Organizing Committee Member of the 4th Ocean Acidification PI Workshop (NSF), 2017-2018.

Co-chair, Plenary Session: *Carbon fluxes in coastal wetlands: What is state-of-the-art?* Ocean Carbon Biogeochemistry program Summer Workshop. June 26-29, 2017. Woods Hole, MA.

2nd State of the Carbon Cycle Report (SOCCR-2) contributing writer, 2016-2019 NSF

Graduate Research Fellowship Program review panelist, 2016

Member of Editorial Committee, Acta Oceanologica Sinica (Journal), China, 2016-present

Northeast Coastal Acidification Network (NECAN) Scientific Committee member. 2015-present

Panelist for the Northeast Coastal Acidification Network (NECAN), 2013-2014

Group leader for East Coast CO_2 flux synthesis, U.S. East Coast Carbon Cycle Synthesis Workshop, Ocean Carbon Biogeochemistry (OCB) and North America Carbon Program (NACP). January 19-20, 2012.

Member for Ocean Observatories Initiative instrument selection board, Consortium for Ocean Leadership, 2011

Invited instructor, Ocean Acidification Short Course (Ocean Carbon Biogeochemistry program sponsored), Woods Hole, MA. November 2009.

Journal reviewer: *Nature Reviews Earth & Environment; Nature Communication; Environmental Science and Technology; The ISME Journal; Marine Chemistry; Limnology and Oceanography; Limnology and Oceanography: Methods; Deep Sea Research; Proceedings of the Royal Society B (Biological Sciences); Continental Shelf Research; Biogeosciences; Aquatic Geochemistry; Journal of Marine Systems; Nature Scientific Reports; Journal of Geophysical Research; Methods in Oceanography*

Proposal reviewer: NSF, DOE, NOAA

Teaching

MIT-WHOI Joint Program: Geodynamics Seminar, Marine Climate Solutions (12.752), Spring 2022. Co-taught with Adam Subhas, Heather Kim, Tom Bell, Scott Lindell, Ken Buesseler, and Ken Kostel.

MIT-WHOI Joint Program: Geochemistry of Marine Sediments (12.743), Spring 2019. Co-taught with D. McCorkle and M. Long,

Invited lecturer, Seawater chemistry and ocean acidification, Sixth Intergovernmental Oceanographic Commission (IOC) Sub-Commission for the Western Pacific (WESTPAC) Summer School on Monsoon Onset Monitoring and its Social & Ecosystem Impacts (MOMSEI), Oct 2015. Phuket, Thailand.

Invited lecturer, Carbonate chemistry in natural waters (lecture for graduate students), College of Chemistry and Chemical Engineering Ocean University of China, Qingdao, China. 2011-2019

Invited lecturer, Training course on Basic Oceanography organized by IOC Sub-Commission for the Western Pacific (WESTPAC), Phuket Marine Biological Center (PMBC), Phuket, Thailand. May 2015.

Instructor, Ocean Acidification Short Course (Ocean Carbon Biogeochemistry program sponsored), Woods Hole, MA. November 2009.

Supervision and Advising

Visiting Scholars:

Mr. Xiaobo Ni, the Second Institute of Oceanography, State Oceanic Administration, China. 2018-2020

Dr. Boaz Lazar, the Fredy and Nadine Hermann Institute of Earth Sciences, the Hebrew University, Israel. 2017.

Dr. Xuewei Xu, The Second Institute of Oceanography, State Oceanic Administration of China. 2017.

Mr. Yabin Men, Chief Senior Engineer, National Ocean Technology Center, State Oceanic Administration of China. 2016-2017.

Dr. Enrique García Luque, Department of Physical Chemistry, University of Cadiz, Spain. 2016.

Dr. Chunlin Ning, The First Institute of Oceanography, State Oceanic Administration of China. 2014 – 2015.

Dr. Peisong Yu, The Second Institute of Oceanography, State Oceanic Administration of China. 2014 – 2015 and 2016 – 2017

Dr. Minhan Dai, Xiamen University, China, 2014, 2015

Dr. Quanlong Li, Xiamen University, China. 2011-2012

WHOI Postdoctoral Scholar:

Dr. Qipei Shangguan (co-advise with K. Kroeger at USGS), 2023 – present

Dr. Maggie Johnson (co-advise with A. Tarrant), 2020-2022

Dr. Adam Subhas (co-advise with D. McCorkle and M. Long), 2017-2019

Dr. Kristina Brown (co-advise with B. Peucker-Ehrenbrink and V. Galy), 2014-2017

Postdoctoral Investigators:

Dr. Mona Norbisrath, 2024 – present

Dr. Louise Cameron, 2020 – 2021

Dr. Eyal Wurgaft, 2017-2019

Technical Staff:

Even Lechner, Research Associate II, 2024 – present

Steve Learner, Senior Engineer, 2022 – present

Fritz Sonnichsen, Senior Engineer, 2021 – present

Kate Morkeski, Research Assistant III, 2016 – present

Dylan Titmuss, Research Assistant II, 2021 – 2023

Zoe Sandwith, Research Assistant III, 2015 – 2018

Katherine Hoering, Research Assistant II/III, 2010 – 2016

MIT-WHOI Joint Program Student:

Sophie Kuhl, MIT-WHOI Joint Program student, 2023-present
Jonathan Pfeifer, MIT-WHOI Joint Program student, 2022-present
Mallory Ringham, MIT-WHOI Joint Program student, 2016-present
Beckett Colson, MIT-WHOI Joint Program student, 2016-present (dissertation committee)
Sophie Chu, MIT-WHOI Joint Program student, 2011-2017

Visiting PhD Student:
Shuzhen Song, East China Normal University, 2016-2018
Haorui Liang, Ocean University of China, 2017-2019

WHOI Summer Student Fellow:
Casper Pratt, California Polytechnic State University, San Luis Obispo, 2023
Jonathan Pfeifer, Flathead Valley Community College, 2020
Maxwell Furigay, Trinity College, 2018
Stacey Felgate, University of the Highlands and Islands, 2016
Lloyd Anderson, Bowdoin College, 2015
Alterra Sanchez, San Diego State University, 2013
Jacinta Edebeli, University of Massachusetts Amherst, 2011

Undergraduate and Master Student Interns:
Sarvesh Tandel, Co-op M.S. student, Northeastern University, 2023
Kaleb Riggle, Blue Economy Internship Program, Cape Cod Community College, 2023
Jonathan Pfeifer, Cornell University, 2020 – 2022
Mackenzie Fiss, North Carolina State University, 2018
Katie Carter, Bowdoin College, 2015
Dmitro Martynowych, Scranton University, 2014
Lenna Quackenbush, Worcester Polytechnic Institute, 2013
Yue Qiu, Oberlin College, 2013
Yujuan Zhou, Ocean University of China, 2012-2013
Robert "Nick" Tuttle, Drexel University, 2012
Kelly Knorr, University of Rhode Island, 2012
Mohammad M. Uddin, University of New Hampshire, 2011
Cris Luttazi, Kingston University, 2010, 2011
Charles Zhu, Yale University, 2010

High School Intern Student:
Tonny Chen, 2025
Juliette Parmenter, Meridian Academy, 2014

Patents

Wang, Z. A. and F. N. Sonnichsen. System and Method to Measure Dissolved Gases in Liquid. 2015. US Patent No: 10,067,111.

Peer-reviewed Papers and Book Chapters

(* Advised students, postdocs, and visiting scholars; # Corresponding author)

60. Eagle, M. J., K. D. Kroeger, J. W. Pohlman, J. J. Tamborski, **Z. A. Wang**, T. W. Brooks, J. O'keefe Suttles, and A. Mann. 2025. The $\delta^{13}C$ Signature of Dissolved Organic and Inorganic Carbon Reveals Complex Carbon Transformations Within a Salt Marsh. Journal

of Geophysical Research: Biogeosciences **130:** e2025JG008898.

59. Tamborski, J. J., M. J. Eagle, M. T. Thorpe, M. A. Charette, B. L. Kurylyk, S. Rahman, K. D. Kroeger, J. O'keefe Suttles, A. G. Mann, T. W. Brooks, and **Z. A. Wang**. 2025. Evidence of Mineral Alteration in a Salt Marsh Subterranean Estuary: Implications for Carbon and Trace Element Cycling. Journal of Geophysical Research: Biogeosciences **130:** e2025JG008758.

58. Titmuss, F. D., J. E. Rheuban, L. P. Cameron, J. H. Grabowski, and **Z. A. Wang**. 2025. Multi-endmember mixing and primary productivity drive carbonate system variability on a highly heterogeneous, shallow productive bank. Limnol. Oceanogr. 70: 1296-1314.

57. Carter, B. R., J. D. Sharp, M. I. García-Ibáñez, R. J. Woosley, M. B. Fong, M. Álvarez, L. Barbero, S. L. Clegg, R. Easley, A. J. Fassbender, X. Li, K. M. Schockman, and **Z. A. Wang**. 2024. Random and systematic uncertainty in ship-based seawater carbonate chemistry observations. Limnol. Oceanogr. doi: https://doi.org/10.1002/lno.12674

56. Maas, A. E., G. L. Lawson, A. J. Bergan, **Z. A. Wang**, and A. M. Tarrant. 2024. Sea butterflies in a pickle: reliable biomarkers and seasonal sensitivity of Limacina retroversa to ocean acidification in the Gulf of Maine. Conservation Physiology 12. doi: 10.1093/conphys/coae040.

55. Ringham, M.*, **Z. A. Wang**[#], F. Sonnichsen, S. Lerner, G. McDonald, and J. Pfeifer. 2024. Development of the Channelized Optical System II for In Situ, High-Frequency Measurements of Dissolved Inorganic Carbon in Seawater. ACS ES&T Water. doi: 10.1021/acsestwater.3c00787.

54. **Wang, Z. A.** and W.-J. Cai. The Inorganic Carbon System across the Land-to-Ocean Continuum. 2024. Elsevier. Reference Module in Earth Systems and Environmental Sciences. Published at https://doi.org/10.1016/B978-0-323-99762-1.00032-2. *This article is a chapter in Treatise on Geochemistry, 3rd Edition, which will be released in Aug. 2024.*

53. Na, R., Z. Rong, **Z. A. Wang**, S. Liang, C. Liu, M. Ringham, and H. Liang. 2024. Air-sea CO_2 fluxes and cross-shelf exchange of inorganic carbon in the East China Sea from a coupled physical-biogeochemical model. Sci. Total Environ. 906: 167572. doi: 10.1016/j.scitotenv.2023.167572

52. Carter, B. R., J. D. Sharp, A. G. Dickson, M. Álvarez, M. B. Fong, M. I. García-Ibáñez, R. J. Woosley, Y. Takeshita, L. Barbero, R. H. Byrne, W.-J. Cai, M. Chierici, S. L. Clegg, R. A. Easley, A. J. Fassbender, K. L. Fleger, X. Li, M. Martín-Mayor, K. M. Schockman, and **Z. A. Wang**. 2024. Uncertainty sources for measurable ocean carbonate chemistry variables. Limnol. Oceanogr. 69: 1-21. doi: 10.1002/lno.12477

51. Reithmaier, G. M. S., A. Cabral, A. Akhand, M. J. Bogard, A. V. Borges, S. Bouillon, D. J. Burdige, M. Call, N. Chen, X. Chen, L. C. Cotovicz, M. J. Eagle, E. Kristensen, K. D. Kroeger, Z. Lu, D. T. Maher, J. L. Pérez-Lloréns, R. Ray, P. Taillardat, J. J. Tamborski, R. C. Upstill-Goddard, F. Wang, **Z. A. Wang**, K. Xiao, Y. Y. Y. Yau, and I. R. Santos. 2023. Carbonate chemistry and carbon sequestration driven by inorganic carbon outwelling from mangroves and saltmarshes. Nat. Commun. 14: 8196. doi: 10.1038/s41467-023-44037-w

50. Bansal, S., I. F. Creed, B. A. Tangen, S. D. Bridgham, A. R. Desai, K. W. Krauss, S. C. Neubauer, G. B. Noe, D. O. Rosenberry, C. Trettin, K. P. Wickland, S. T. Allen, A. Arias-Ortiz, A. R. Armitage, D. Baldocchi, K. Banerjee, D. Bastviken, P. Berg, M. J. Bogard, A.

T. Chow, W. H. Conner, C. Craft, C. Creamer, T. Delsontro, J. A. Duberstein, M. Eagle, M. S. Fennessy, S. A. Finkelstein, M. Göckede, S. Grunwald, M. Halabisky, E. Herbert, M. M. R. Jahangir, O. F. Johnson, M. C. Jones, J. J. Kelleway, S. Knox, K. D. Kroeger, K. A. Kuehn, D. Lobb, A. L. Loder, S. Ma, D. T. Maher, G. Mcnicol, J. Meier, B. A. Middleton, C. Mills, P. Mistry, A. Mitra, C. Mobilian, A. M. Nahlik, S. Newman, J. L. O'connell, P. Oikawa, M. P. Van Der Burg, C. A. Schutte, C. Song, C. L. Stagg, J. Turner, R. Vargas, M. P. Waldrop, M. B. Wallin, **Z. A. Wang**, E. J. Ward, D. A. Willard, S. Yarwood, and X. Zhu. 2023. Practical guide to measuring wetland carbon pools and fluxes. Wetlands 43: 105. doi: 10.1007/s13157-023-01722-2

49. Song, S.*, **Z. A. Wang**[#], K. D. Kroeger, M. Eagle, S. N. Chu, and J. Ge. 2023. High Frequency Variability of Carbon Dioxide Fluxes in Tidal Water Over a Temperate Salt Marsh. Limnol. Oceanogr. 68: 2108-2125. doi: 10.1002/lno.12409

48. Song, S., R. G. Bellerby, **Z. A. Wang**, E. Wurgaft, and D. Li. 2023. Organic alkalinity as an important constituent of total alkalinity and the buffer system in river-to-coast transition zones. J. Geophys. Res. – Oceans 128: e2022JC019270. doi: 10.1029/2022JC019270

47. Lima, I. D., **Z. A. Wang**, L. P. Cameron, J. H. Grabowski, and J. E. Rheuban. 2023. Predicting carbonate chemistry on the northwest Atlantic shelf using neural networks. J. Geophys. Res. – Biogeosci. 128: e2023JG007536. doi: 10.1029/2023JG007536

46. Wurgaft, E.*, **Z. A. Wang**, N. Shalevd, N. Moragc, R. Golane, I. Gavrielic. 2023. Precise determination of dolomite content in marine sediments. Limnol. Oceanogr. – Meth. 21: 13-23. doi: 10.1002/lom3.10518

45. Voss, B. M., T. I. Eglinton, B. Peucker-Ehrenbrink, V. Galy, S. Q. Lang, C. McIntyre, R. G.M. Spencer, E. Bulygina, **Z. A. Wang**, and K. A. Guay. 2023. Isotopic evidence for sources of dissolved carbon and the role of organic matter respiration in the Fraser River basin, Canada. Biogeochem. 164: 207-228. doi: 10.1007/s10533-022-00945-5

44. Xiao, K., N. Chen, Z. A. Wang, J. J. Tamborski, D. T. Maher, and X. Yu. 2022. Editorial: Advances in understanding lateral blue carbon export from coastal ecosystems. Front. in Mar. Sci. **9**. doi: 10.3389/fmars.2022.1060958.

43. Zhang, Y., C. Zou, **Z. A. Wang**, X. Wang, Z. Zeng, K. Xiao, H. Guo, X. Jiang, Z. Li, and H. Li. 2022. Submarine groundwater discharge in the northern Bohai Sea, China: Implications for coastal carbon budgets and buffering capacity. J. Geophys. Res. – Biogeosci. 127: e2022JG006810. doi: 10.1029/2022JG006810

42. Pousse, É., D. Munroe, D. Hart, D. Hennen, L. P. Cameron, J. E. Rheuban, **Z. A. Wang**, G. H. Wikfors, and S. L. Meseck. 2022. Dynamic energy budget modeling of Atlantic surfclam, *Spisula solidissima*, under future ocean acidification and warming. Mar. Environ. Res. 177: 105602. doi: 10.1016/j.marenvres.2022.105602

41. Jiang, L.-Q., D. Pierrot, R. Wanninkhof, R. A. Feely, B. Tilbrook, S. Alin, L. Barbero, R. H. Byrne, B. R. Carter, A. G. Dickson, J.-P. Gattuso, D. Greeley, M. Hoppema, M. P. Humphreys, J. Karstensen, N. Lange, S. K. Lauvset, E. R. Lewis, A. Olsen, F. F. Pérez, C. Sabine, J. D. Sharp, T. Tanhua, T. W. Trull, A. Velo, A. J. Allegra, P. Barker, E. Burger, W.-J. Cai, C.-T. A. Chen, J. Cross, H. Garcia, J. M. Hernandez-Ayon, X. Hu, A. Kozyr, C. Langdon, K. Lee, J. Salisbury, **Z. A. Wang**, and L. Xue. 2022. Best practice data standards for discrete chemical oceanographic observations. Front. In Mar. Sci. 8. doi:

10.3389/fmars.2021.705638

40. Siedlecki, S., J. Salisbury, D. Gledhill, C. Bastidas, S. Meseck, K. McGarry, C. Hunt, M. Alexander, D. Lavoie, **Z. A. Wang**, J. Scott, D. Brady, I. Mlsna, K. Azetsu-Scott, C. Liberti, D. Melrose, M. White, A. Pershing, D. Vandemark, D. Townsend, C. Chen, W. Mook, and R. Morrison. 2021. Projecting ocean acidification impacts for the Gulf of Maine to 2050: New tools and expectations. Elementa: Sci. Anthro. 9. doi: 10.1525/elementa.2020.00062.

39. Wurgaft, E.*, **Z. A. Wang**, J. H. Churchill, T. Dellapenna, S. Song, J. Du, M. C. Ringham, T. Rivlin, and B. Lazar. 2021. Particle triggered reactions as an important mechanism of alkalinity and inorganic carbon removal in river plumes. Geophys. Res. Lett. 48: e2021GL093178. doi: 10.1029/2021GL093178.

38. Tamborski, J. J., M. Eagle, B. L. Kurylyk, K. D. Kroeger, **Z. A. Wang**, P. Henderson, and M. A. Charette. 2021. Pore water exchange-driven inorganic carbon export from intertidal salt marshes. Limnol. Oceanogr. 66: 1774-1792. doi: https://doi.org/10.1002/lno.11721.

37. Yu, P.*#, **Z. A. Wang**#, J. Churchill, M. Zheng, J. Pan, Y. Bai, and C. Liang. 2020. Effects of Typhoons on surface seawater pCO_2 and air-sea CO_2 fluxes in the northern South China Sea. J. Geophys. Res. – Oceans 125: e2020JC016258. doi: 10.1029/2020jc016258.

36. Kipp, L. E., P. B. Henderson, **Z. A. Wang**, and M. A. Charette. 2020. Deltaic and estuarine controls on Mackenzie River solute fluxes to the Arctic Ocean. Estuaries Coasts 43: 1992-2014. doi: 10.1007/s12237-020-00739-8

35. Maas, A. E., G. L. Lawson, A. J. Bergan, **Z. A. Wang**, and A. M. Tarrant. 2020. Seasonal variation in physiology and shell condition of the pteropod *Limacina retroversa* in the Gulf of Maine relative to life cycle and carbonate chemistry. Prog. Oceanogr. 186: 102371. doi: 10.1016/j.pocean.2020.102371

34. Song, S.*, **Z. A. Wang**#, M. E. Gonneea, K. D. Kroeger, S. N. Chu, D. Li, and H. Liang. 2020. An important biogeochemical link between organic and inorganic carbon cycling: Effects of organic alkalinity on carbonate chemistry in coastal waters influenced by intertidal salt marshes. Geochim. Cosmochim. Acta 275: 123-139. doi: 10.1016/j.gca.2020.02.013

33. Turk, D., H. Wang, X. Hu, D. K. Gledhill, **Z. A. Wang**, L. Jiang, and W.-J. Cai. 2019. Time of Emergence of Surface Ocean Carbon Dioxide Trends in the North American Coastal Margins in Support of Ocean Acidification Observing System Design. Front. in Mar. Sci. 6. doi: 10.3389/fmars.2019.00091.

32. **Wang, Z. A.**, H. Moustahfid, A. V. Mueller, A. P. M. Michel, M. Mowlem, B. T. Glazer, T. A. Mooney, W. Michaels, J. S. McQuillan, J. C. Robidart, J. Churchill, M. Sourisseau, A. Daniel, A. Schaap, S. Monk, K. Friedman, and P. Brehmer. 2019. Advancing observation of ocean biogeochemistry, biology, and ecosystems with cost-effective in situ sensing technologies. Front. Mar. Sci. 6: 519. doi: 10.3389/fmars.2019.00519

31. Fennel, K., S. Alin, L. Barbero, W. Evans, T. Bourgeois, S. Cooley, J. Dunne, R. A. Feely, J. M. Hernandez-Ayon, X. Hu, S. Lohrenz, F. Muller-Karger, R. Najjar, L. Robbins, E. Shadwick, S. Siedlecki, N. Steiner, A. Sutton, D. Turk, P. Vlahos, and **Z. A. Wang.** 2019. Carbon cycling in the North American coastal ocean: a synthesis. Biogeosci. 16: 1281- 1304.

30. Chu, S. N.*, **Z. A. Wang**#, K. D. Kroeger, M. E. Gonneea, and N. K. Ganju. 2018. Deciphering the dynamics of inorganic carbon export from intertidal salt marshes using

high- frequency measurements. Mar. Chem. 206: 7-18. doi: 10.1016/j.marchem.2018.08.005

29. Liu, Q., Y.-H. Wu, L. Liao, D.-S. Zhang, Y. Yuan, **Z. A. Wang**, C.-S. Wang, and X.-W. Xu. 2018. Shift of bacterial community structures in sediments from the Changjiang (Yangtze River) Estuary to the East China Sea linked to environmental gradients. Geomicrobiol. J. 35: 898-907. doi: 10.1080/01490451.2018.1489914.

28. Najjar, R.G, M. Herrmann, R. Alexander, E. W. Boyer, D. Burdige, D. Butman, W.-J. Cai, E. A. Canuel, R. F. Chen, M. A. M. Friedrichs, R. A. Feagin, P. Griffith, A. L. Hinson, J. R. Holmquist, X. Hu, W. M. Kemp, K. D. Kroeger, A. Mannino, S. L. McCallister, W. R. McGillis, M. R. Mulholland, C. Pilskaln, J. Salisbury, S. Signorini, P. St-Laurent, H. Tian, M. Tzortziou, P. Vlahos, **Z. A. Wang**, and R. C. Zimmerman. 2018. Carbon budget of tidal wetlands, estuaries, and shelf waters of eastern North America. Global Biogeochem. Cy. 32: 389-416. doi: 10.1002/2017GB005790.

27. Fassbender, A. J., H. I. Palevsky, T. R. Martz, A. E. Ingalls, M. Gledhill, S. E. Fawcett, J. A. Brandes, L. I. Aluwihare, and Participants COME ABOARD DISCO XXV. 2017. Perspectives on Chemical Oceanography in the 21st century: Participants of the COME ABOARD Meeting examine aspects of the field in the context of 40 years of DISCO. Mar. Chem. 196: 181-190. doi: 10.1016/j.marchem.2017.09.002

26. Bergan, A. J., G. L. Lawson, A. E. Maas, and **Z. A. Wang**. 2017. The effect of elevated carbon dioxide on the sinking and swimming of the shelled pteropod *Limacina retroversa*. ICES J. Mar. Sci. 74: 1893-1905.

25. **Wang, Z. A.**, G. L. Lawson, C. H. Pilskaln, and A. E. Maas. 2017. Seasonal controls of aragonite saturation states in the Gulf of Maine. J. Geophys. Res. – Oceans 122: 372-389. doi: 10.1002/2016jc012373.

24. Maas, A. E., G. L. Lawson, and **Z. A. Wang**. 2016. The metabolic response of thecosome pteropods from the North Atlantic and North Pacific oceans to high CO_2 and low O_2. Biogeosci. 13: 6191-6210. doi: 10.5194/bg-13-6191-2016.

23. Chu, S. N.*, **Z. A. Wang** #, S. C. Doney, G. L. Lawson, and K. A. Hoering. 2016. Changes in anthropogenic carbon storage in the Northeast Pacific in the last decade. J. Geophys. Res. – Oceans 12: 4618-4632. doi: 10.1002/2016jc011775.

22. **Wang, Z. A.**, K. D. Kroeger, N. K. Ganju, M. E. Gonneea, and S. N. Chu. 2016. Intertidal salt marshes as an important source of inorganic carbon to the coastal ocean. Limnol. Oceanogr. 61: 1916-1931. doi: 10.1002/lno.10347.

21. **Wang, Z. A.**, F. N. Sonnichsen, A. M. Bradley, K. A. Hoering, T. M. Lanagan, S. N. Chu, T. R. Hammar, and R. Camilli. 2015. In situ sensor technology for simultaneous spectrophotometric measurements of seawater total dissolved inorganic carbon and pH. Environ. Sci. Technol. 49: 4441-4449. doi: 10.1021/es504893n

20. Gledhill, D. K., M. M. White, J. Salisbury, H. Thomas, I. Mlsna, M. Liebman, B. Mook, J. Grear, A. C. Candelmo, R. C. Chambers, C. J. Gobler, C. W. Hunt, A. L. King, N. N. Price, S. R. Signorini, E. Standoff, C. Stymiest, R. A. Wahle, J. D. Waller, N. D. Rebuck, **Z. A. Wang**, T. L. Capson, J. R. Morrison, S. R. Cooley, and S. C. Doney. 2015. Ocean and Coastal Acidification off New England and Nova Scotia. Oceanogr. 28: 182-197.

19. McGillis, W. R., D. Y. Hsueh, Y. Zheng, M. Markowitz, R. Gibson, G. Bolduc, F. J. Fevrin,

J. E. Thys, W. Noel, J. Paine, **Z. A. Wang**, K. Hoering, R. Hakimdavar, and P. J. Culligan. 2015. Carbon transport in rivers of southwest Haiti. Appl. Geochem. 63: 563-572. doi: 10.1016/j.apgeochem.2015.09.004.

18. Mann, P. J., R. G. M. Spencer, B. J. Dinga, J. R. Poulsen, P. J. Hernes, G. Fiske, M. E. Salter, **Z. A. Wang**, K. A. Hoering, J. Six, and R. M. Holmes. 2014. The biogeochemistry of carbon across a gradient of streams and rivers within the Congo Basin. J. Geophys. Res. – Biogeosci. 119: 687-702. doi:10.1002/2013JG002442.

17. Voss, B. M., B. Peucker-Ehrenbrink, T. I. Eglinton, G. Fiske, **Z. A. Wang,** K. A. Hoering, D. B. Montluçon, C. Lecroy, S. Pal, S. Marsh, S. L. Gillies, A. Janmaat, M. Bennett, B. Downey, J. Fanslau, H. Fraser, G. Macklam-Harron, M. Martinec, and B. Wiebe. 2014. Tracing river chemistry in space and time: Dissolved inorganic constituents of the Fraser River, Canada. Geochim. Cosmochim. Acta, 124: 283–308. doi: 10.1016/j.gca.2013.09.006.

16. Signorini, S. R., A. Mannino, R. G. Najjar, M. a. M. Friedrichs, W. J. Cai, J. Salisbury, **Z. A. Wang**, H. Thomas, and E. Shadwick. 2013. Surface ocean pCO_2 seasonality and sea-air CO_2 flux estimates for the North American east coast. J. Geophys. Res. – Oceans 118: 1–22. doi:10.1002/jgrc.20369.

15. Li, Q.*, Wang, F., **Wang, Z. A.**, Yuan, D., Dai, M., Chen, J., Dai, J., and Hoering, K. A. 2013. Automated spectrophotometric analyzer for rapid single-point titration of seawater total alkalinity. Environ. Sci. Technol. 47: 11139-11146. doi: 10.1021/es402421a.

14. **Wang, Z. A.**, Chu, S. N. and Hoering, H. A. 2013c. High-frequency spectrophotometric measurements of total dissolved inorganic carbon in seawater. Environ. Sci. Technol. 47: 7840-7847. doi: DOI: 10.1021/es400567k.

13. **Wang, Z. A.,** D. J. Bienvenu, P. J. Mann, H.A. Hoering, J. R. Poulsen, R. G. M. Spencer, and R. M. Holmes. 2013b. Inorganic carbon speciation and fluxes in the Congo River. Geophys. Res. Lett. 40: 511-516. doi: 10.1002/grl.50160.

12. **Wang, Z. A.,** R. Wanninkhof, W. J. Cai, R. H. Byrne, X. P. Hu, T. H. Peng, and W. J. Huang. 2013a. The marine inorganic carbon system along the Gulf of Mexico and Atlantic coasts of the United States: Insights from a transregional coastal carbon study. Limnol. Oceanogr. 58: 325-342. doi: 10.4319/lo.2013.58.1.0325.

11. **Wang, Z.A.** and Byrne, R.H. 2010. Summer-time CO_2 fluxes and carbonate system behavior in the Mississippi River and Orinoco River Plumes in *Proceedings of OceanObs'09: Sustained Ocean Observations and Information for Society (Annex)*, Venice, Italy, September 21-25, 2009. Hall, J., Harrison, D.E. & Stammer, D., Eds. ESA Publication WPP-306. doi:10.5270/OceanObs09.

10. **Wang, Z. A.,** X. W. Liu, R. H. Byrne, R. Wanninkhof, R. E. Bernstein, E. A. Kaltenbacher, and J. Patten. 2007. Simultaneous spectrophotometric flow-through measurements of pH, carbon dioxide fugacity, and total inorganic carbon in seawater. Anal. Chim. Acta 596: 23-36. doi: 10.1016/j.aca.2007.05.048.

9. John, D. E., **Z. A. Wang**, X. W. Liu, R. H. Byrne, J. E. Corredor, J. M. Lopez, A. Cabrera, D. A. Bronk, F. R. Tabita, and J. H. Paul. 2007. Phytoplankton carbon fixation gene (RuBisCO) transcripts and air-sea CO_2 flux in the Mississippi River plume. ISME J. 1: 517-531. doi:

10.1038/ismej.2007.70.

8. Liu, X. W., **Z. A. Wang**, R. H. Byrne, E. A. Kaltenbacher, and R. E. Bernstein. 2006. Spectrophotometric measurements of pH in-situ: Laboratory and field evaluations of instrumental performance. Environ. Sci. Technol. 40: 5036-5044. doi: 10.1021/es0601843.

7. **Wang, Z. A.**, W. J. Cai, Y. C. Wang, and H. W. Ji. 2005. The southeastern continental shelf of the United States as an atmospheric CO_2 source and an exporter of inorganic carbon to the ocean. Cont. Shelf Res. 25: 1917-1941.

6. Zhai, W. D., M. H. Dai, W. J. Cai, Y. C. Wang, and **Z. A. Wang**. 2005. High partial pressure of CO_2 and its maintaining mechanism in a subtropical estuary: the Pearl River estuary, China. Mar. Chem. 93: 21-32.

5. **Wang, Z. A.**, and W. J. Cai. 2004. Carbon dioxide degassing and inorganic carbon export from a marsh-dominated estuary (the Duplin River): A marsh CO_2 pump. Limnol. Oceanogr. 49: 341-354.

4. Cai, W. J., M. H. Dai, Y. C. Wang, W. D. Zhai, T. Huang, S. T. Chen, F. Zhang, Z. Z. Chen, and **Z. A. Wang**. 2004. The biogeochemistry of inorganic carbon and nutrients in the Pearl River estuary and the adjacent Northern South China Sea. Cont. Shelf Res. 24: 1301-1319.

3. Cai, W. J., **Z. A. Wang**, and Y. C. Wang. 2003. The role of marsh-dominated heterotrophic continental margins in transport of CO_2 between the atmosphere, the land-sea interface and the ocean. Geophys. Res. Lett. 30: 1849. doi: 10.1029/2003GL017633.

2. **Wang, Z. A.**, W. J. Cai, Y. C. Wang, and B. L. Upchurch. 2003. A long pathlength liquid-core waveguide sensor for real-time pCO_2 measurements at sea. Mar. Chem. 84: 73-84.

1. **Wang, Z. A.,** Y. H. Wang, W. J. Cai, and S. Y. Liu. 2002. A long pathlength spectrophotometric pCO_2 sensor using a gas-permeable liquid-core waveguide. Talanta 57: 69-80.

Other Publications

i. **Wang, Z. A.**, A. P. M. Michel, and T. A. Mooney. 2021. Accelerating Global Ocean Observing: Monitoring the Coastal Ocean Through Broadly Accessible, Low-Cost Sensor Networks. Mar. Technol. Soc. J. 55: 82-83.

ii. Windham-Myers, L., W.-J. Cai, S. R. Alin, A. Andersson, J. Crosswell, K. H. Dunton, J. M. Hernandez-Ayon, M. Herrmann, A. L. Hinson, C. S. Hopkinson, J. Howard, X. Hu, S. H. Knox, K. Kroeger, D. Lagomasino, P. Megonigal, R. G. Najjar, M.-L. Paulsen, D. Peteet, E. Pidgeon, K. V. R. Schäfer, M. Tzortziou, **Z. A. Wang**, and E. B. Watson, 2018: Chapter 15: Tidal wetlands and estuaries. In Second State of the Carbon Cycle Report (SOCCR2): A Sustained Assessment Report [Cavallaro, N., G. Shrestha, R. Birdsey, M. A. Mayes, R. G. Najjar, S. C. Reed, P. Romero-Lankao, and Z. Zhu (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, pp. 596-648, https://doi.org/10.7930/SOCCR2.2018.Ch15.

iii. Fennel, K., S. R. Alin, L. Barbero, W. Evans, T. Bourgeois, S. R. Cooley, J. Dunne, R. A. Feely, J. M. Hernandez-Ayon, C. Hu, X. Hu, S. E. Lohrenz, F. Muller-Karger, R. G. Najjar, L. Robbins, J. Russell, E. H. Shadwick, S. Siedlecki, N. Steiner, D. Turk, P.

Vlahos, and **Z. A. Wang**, 2018: Chapter 16: Coastal ocean and continental shelves. In Second State of the Carbon Cycle Report (SOCCR2): A Sustained Assessment Report [Cavallaro, N., G. Shrestha, R. Birdsey, M. A. Mayes, R. G. Najjar, S. C. Reed, P. Romero-Lankao, and Z. Zhu (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, pp. 649-688, https://doi.org/10.7930/SOCCR2.2018.Ch16.

iv. **Wang, Z. A.**, Cahill, B., Cai, W.-J., Fennel, K., Friedrichs, M., McGillis, W., Salisbury, J., Schaaf, C., and S. Signorini, S. 2012. Air-sea exchange. In: Najjar, R.G., Friedrichs, M., Cai, W.-J. (Editors), Report of the U.S. East Coast Carbon Cycle Synthesis Workshop, January 19-20, 2012, Ocean Carbon and Biogeochemistry Program and North American Carbon Program, pp. 11-12.

v. **Wang, Z. A.** Biogeochemical changes of chemical signals in the Georgia "land-to-ocean continuum". 2003. University of Georgia, Athens, GA. Ph.D. Thesis. doi: 10.13140/RG.2.1.1131.4809.

vi. **Wang, Z. A.** The annual and seasonal variations of nitrogen in Massachusetts Bay. 1998. University of New Hampshire, Durham, NH. M.S. Thesis.

Invited Lectures

Inorganic carbon and alkalinity exports from tidal wetlands: uncounted blue carbon (Keynote speech). Advanced Study Institute International Workshop on Blue carbon (2.0). May 13-14, 2024. Hongkong University of Science and Technology.

Towards high-frequency, low-cost in situ sensing of the seawater carbonate system. September 2023. NECAN 2023 Webinar Series.

Lateral exports of inorganic carbon and alkalinity from tidal wetlands: uncounted blue carbon capacity. March 2023. University of Massachusetts Dartmouth.

Developing Low-cost Chemical Sensors to Enable Fishery-based Biogeochemical Ocean Observing Networks. *Invited Panelist*. OCB Scoping Workshop "*Building a Cost-effective Coastal Biogeochemical Observing Network in Collaboration with the Commercial Fishing Community*". Jan 18 – 20, 2023. Woods Hole, MA.

Lateral exports of inorganic carbon and alkalinity fluxes from intertidal saltmarshes in the lens of Blue Carbon capacity. Invited Talk. Session B12B - *Coastal Wetland Carbon and Nitrogen Cycles: Recent Advances in Measurements, Modeling, and Syntheses*. AGU Fall Meeting 2022. Dec 12 – 16, 2022. Chicago, IL.

Assessing lateral exports of inorganic carbon and air-water CO_2 effluxes from saltmarshes over multiple spatiotemporal scales. *Invited Panelist*. Plenary session: Tidal Carbon Exports from Coastal Wetlands as a Significant Component of Blue Carbon Sequestration. OCB Summer Workshop 2022. Jun 20-23, 2022. Woods Hole, MA.

Building a cost-effective coastal biogeochemical observing network in collaboration with the commercial fishing community. *Invited Panelist*. Plenary session: Coastal observing systems to understand and predict ecosystem changes. OCB Summer Workshop 2022. Jun 20-23, 2022. Woods Hole, MA.

Accelerating Observation of Ocean Biogeochemistry through Broadly Accessible, Community-based Low-cost Sensor Networks. *Invited Panelist*. ACS Webinar Series: Taking Earth's

Pulse with Low-Cost Sensors: A Discussion of Opportunities and Obstacles. Talk. Virtual. May 05, 2022.

The Role of Inorganic Carbon Exports from Intertidal Salt Marshes in the Coastal Carbon Cycle: New Insights from Recent Measurements (virtual). April 2021. University of Georgia.

Advancing ocean carbon biogeochemistry research using in-situ sensing technologies. Inter-university Institute of Marine Sciences. June 2019. Eilat, Israel.

Shipboard Underway Measurements of Partial Pressure of CO_2. INMARTECH 2018 Symposium. October 16-18, 2018. North Falmouth, MA.

Advancing coastal carbon science with in-situ sensors: the role of lateral exports by tidal marshes in the coastal carbon cycle. September 2018. Texas A&M University, Galveston, TX.

Biogeochemistry and fluxes of lateral inorganic carbon exports by tidal salt marshes. Nov. 2018. Xiamen University, Xiamen, China.

Advancing coastal carbon science with in-situ sensors: the role of tidal marshes in the coastal carbon cycle. June 2018. Second Institute of Oceanography, State Oceanic Administration of China, Hangzhou, China.

The role of tidal salt marshes in the coastal carbon cycle. June 2018. Ocean University of China, Qingdao, China.

Advancing ocean carbon and acidification research with in-situ sensing technologies. June 2018. First Institute of Oceanography, State Oceanic Administration of China, Qingdao, China.

Carbonate Chemistry in Northeastern U.S. Shelf Waters: Sensitivity, Control and Linkage to Pteropods. Workshop: Coastal ocean acidification in the North Atlantic region, from science to outreach, A Sea Grant - NART regional integration project. UConn Avery Point, Groton, CT. April 10-12, 2018.

Resolving the Intricacies of Lateral Exports of Inorganic Carbon and Alkalinity from Coastal Salt Marshes (Invited). February 2018. Scripps Institute of Oceanography, La Jolla, CA.

Carbonate Chemistry in Northeastern U.S. Shelf Waters: Sensitivity, Control and Linkage to Pteropods. Workshop: Coastal ocean acidification in the North Atlantic region, from science to outreach, A Sea Grant - NART regional integration project. UConn Avery Point, Groton, CT. April 10-12, 2018.

How much did we miss? – Intertidal Salt Marshes as an Important Source of Inorganic Carbon to the Coastal Ocean. August 2016. College of Environmental Science & Engineering, Ocean University of China. Qingdao, China.

The Marine CO_2 system and Ocean Acidification. Sixth IOC Sub-Commission for the Western Pacific (WESTPAC) Summer School on Monsoon Onset Monitoring and its Social & Ecosystem Impacts (MOMSEI). October 26-30, 2015. Phuket, Thailand.

Simultaneous, in-situ measurements of seawater carbon dioxide system parameters – The development and potential application. The 3rd Ocean Acidification PI Workshop. June 2015. Woods Hole, MA.

Carbonate Chemistry in Seawater and Its Role in Climate Change. May 2015. Phuket Marine Biological Center (PMBC), Thailand.

The U.S. Northeast Coast: A Coastal Ocean Acidification Sensitive Region. Workshop "Latitude 41 under Siege: Impact of Nutrient Pollution & OA on Coastal Waters, Estuaries and Marine Life". February 12, 2015. University of Connecticut Avery Point, CT.

The Paradox of Salt Marshes as a Source of Alkalinity and Low pH, High Carbon Dioxide Water to the Ocean. The 2nd Xiamen Symposium on Marine Environmental Sciences. January 07 – 09, 2015. Xiamen, China.

High-frequency spectrophotometric measurements of seawater CO_2 system parameters – The need, development, and potential application. The 2nd Seafloor Observation Symposium of China. November 08 – 10, 2014. Xiamen, China.

Thousands of Miles of Carbonate Chemistry. September 2014. Ocean University of China, Qingdao, China.

The marine CO_2 system in the Northeast Coast of the United States: Ocean Acidification and Controlling Processes. April 2014. University of Massachusetts Boston. Boston, MA.

Ocean Acidification of the Shelf Waters of NECAN: The marine inorganic carbon system along the Atlantic and Gulf of Mexico coasts of the United States. November 2013. Northeastern Regional Association of Coastal and Ocean Observing Systems (NARACOOS) Webinar Series.

Towards a Better Understanding of Changes and Drivers of the CO_2 System in Aquatic Environments. June 2013. College of Chemistry and Chemical Engineering, Ocean University of China. Qingdao, China.

Real-time Measurements of the Marine CO_2 System. June 2013. Shandong Institute of Marine Instruments. Qingdao, China.

The Marine Inorganic Carbon System along the Gulf of Mexico and Atlantic Coasts of the United States. December 2011. School of Marine Science, University of Maine. Orono, ME.

Coastal CO_2 System: From Sensor Development to Observational Studies. December 2010. The Second Institute of Oceanography, State Oceanic Administration of China. Hangzhou, China.

Distributions of the CO_2 System along the US Atlantic and Gulf of Mexico Coast. December, 2010. State Key Laboratory of Estuarine and Coastal Research, East China Normal University. Shanghai, China.

Inorganic carbon fluxes in rivers and coastal oceans. December, 2010. College of Chemistry and Chemical Engineering, Ocean University of China. Qingdao, China.

Coastal CO_2 System: From Sensor Development to Observational Studies. April 2010. Department of Oceanography, Dalhousie University, Canada.

Coastal CO_2 System: From Instrumentation to Observation. March 2010. Department of Earth, Atmospheric and Planetary Sciences, MIT. Boston, MA.

Conference Papers and Abstracts (last 10 years)

(* Supervised students, postdocs, visiting scholars)

Wang, Z.A and W-J. Cai. The Inorganic Carbon System across the Land-to-Ocean Continuum: Impacts of Organic Alkalinity. Goldschmidt Conference 2024. Talk. Chicago, IL. August 18 – 23, 2024.

Wang, Z. A., S. Kuhl, K. Morkeski, E. Rivest, A. Hardison, and R. Najjar. Impacts of organic alkalinity on carbonate chemistry and carbon fluxes in the two tidal tributaries of the Chesapeake Bay. Chesapeake Community Research Symposium 2024. Talk. Annapolis, Maryland. Jun. 10 – 12, 2024.

R. Najjar, M. Herrmann, Matthew Fantle, J. Arriola, S. Ajayi, E. Rivest, M. Friedrichs, P. St-Laurent, A. Hardison, H. Walker, Q. Roberts, B. Thomas, A. Putney, A. Labossiere, J. Pujols, N. Mann, R. Woodland, L. Harris, L. Lapham, T. Murphy, C. Ross, **Z. A. Wang**, S Kuhl, C. Gurbisz, E. Stets, and R. Westman. The Chesapeake Carbon and Alkalinity Study (CHALK). Chesapeake Community Research Symposium 2024. Talk. Annapolis, Maryland. Jun. 10 – 12, 2024.

Mann, N., Q. Roberts, E. Rivest, A. Hardison, R. Najjar, and **Z. A. Wang**. Seasonal and Spatial Variability of Dissolved Inorganic Carbon (DIC) in the York River and Potomac River. Chesapeake Community Research Symposium 2024. Talk. Annapolis, Maryland. Jun. 10 – 12, 2024.

Arriola, J. M., R. G. Najjar, M. Herrmann, S. Ajayi, A. Hardison, Q. Roberts, H. Walker, E. Rivest, A. Putney, and **Z. A. Wang**. Seasonality of carbon and alkalinity export from a well-constrained brackish tidal creek along the York River, Virginia. Chesapeake Community Research Symposium 2024. Talk. Annapolis, Maryland. Jun. 10 – 12, 2024.

Kuhl, S.*, **Z.A. Wang**, K. Morkeski, E. B. Rivest, A. Hardison, and R. Najjar. Contrasting influence of organic alkalinity on carbonate chemistry between the York and Potomac River Estuaries in Chesapeake Bay. 2024 Ocean Sciences Meeting. Talk. New Orleans. Feb. 18-23, 2024.

Rheuban, J. E., H. H. Kim, K. Chen, **Z. A. Wang**, I. D. Lima, A. V. Subhas. Site selection characteristics for Ocean Alkalinity Enhancement determined through machine learning. 2024 Ocean Sciences Meeting. Talk. New Orleans. Feb. 18-23, 2024.

Pratt, C.*, Z. A. Wang, S. Kuhl, K. Morkeski, K. D. Kroeger, G. Andrews, T. P. Smith, E. Eitel and E. Jankowska. Enhanced coastal weathering as marine CO_2 removal – Biogeochemical effects of ultrabasic olivine deployment in low-pH tidal saltmarshes. 2024 Ocean Sciences Meeting. Talk. New Orleans. Feb. 18-23, 2024.

Wang, Z. A., K.D. Kroeger, G. Andrews, N. G. Walworth, T. P. Smith, S. Khul, C. Pratt, K. Morkeski, S. Fox, E. Jankowska, E. Eitel, O. van Loenen, M. McCormick, P. Zuniga, R. A. Sohn, M. A. Briggs, F. Montserrat and S. Meseck. Novel mCDR Approach: Coupling Blue Carbon capture with Olivine Weathering and Ocean Alkalinity Enhancement in Tidal Wetlands. 2024 Ocean Sciences Meeting. eLightning talk. New Orleans. Feb. 18-23, 2024.

Eitel, E. M., E. Jankowska, J. Cebrian, S. Kuhl, P. Zuniga, C. Pratt, O. van Loenen, H. van de Mortel, K. Morkeski, M. McCormick, F. Montserrat, N. Walworth, S. Fox, **Z. A. Wang**, T. P. Smith, G. Andrews and K. D Kroeger. Assessing ecosystem response to olivine placement within a salt marsh environment and implications for mCDR. 2024 Ocean Sciences Meeting. eLightning talk. New Orleans. Feb. 18-23, 2024.

Subhas, A., A. Michel, **Z. A. Wang**, J. E. Rheuban, H. H. Kim, K. Chen, D. C. McCorkle, J. Kapit, C. Dean, L. Marx, M. G. Hayden, K. Morkeski1, M. Burkitt-Gray and F. Elder1. Introducing the LOC-NESS Project and results from LOC-01, our first tracer release experiment. 2024 Ocean Sciences Meeting. Talk. New Orleans. Feb. 18-23, 2024.

Pfeifer, J.*, **Z. A. Wang**, J. E. Rheuban, M. Ringham, S. Lerner, F. N. Sonnichsen, S. Tandel, and G. McDonald. Development of high-frequency carbonate parameter sensors: from Channelized Optical System (CHANOS) to low-cost pH sensors. 2024 Ocean Sciences Meeting. Talk. New Orleans. Feb. 18-23, 2024.

Kroeger, K.D., **Z. A. Wang**, G. Andrews, N. G. Walworth, T. P. Smith, S. Khul, S. Fox, E. Jankowska, E. Eitel, O. van Loenen, M. McCormick, P. Zuniga, R. A. Sohn, M. A. Briggs, F. Montserrat and S. Meseck. Tidal wetlands as a low pH environment for accelerated and scalable olivine dissolution, driving carbon dioxide removal and ocean alkalinity enhancement. 2023 AGU Fall Meeting. Talk. San Francisco, CA. Dec. 11-15, 2023.

Jankowska, E. Eitel, S. Khul, P. Zuniga, M. J. McCormick, S. Fox, **Z. A. Wang**, T. Smith, G. Andrews and K. D. Kroeger. Response of a salt marsh ecosystem to coastal enhanced weathering (CEW) with olivine. 2023 AGU Fall Meeting. Poster. San Francisco, CA. Dec. 11-15, 2023.

Kroeger, K.D., **Z. A. Wang**, Z. Zhu, J. R. Holmquist, S. Crooks, L. Windham-Myers, P. Y. Oikawa, E. Ward, M. Tzortziou. Crediting blue carbon lateral fluxes from tidal wetlands to ocean retention. 2023 AGU Fall Meeting. Talk. San Francisco, CA. Dec. 11-15, 2023.

Wang, Z.A., A. V. Subhas, K. Morkeski, M. G. Hayden, and D. Titmuss. The Mississippi River as an Analog for Large-Scale Ocean Alkalinity Enhancement. Gordon Research Conference Chemical Oceanography. Poster. Manchester, NH. July 16 - 21, 2023.

Wang, Z.A., J. Rheuban, G. Gawarkiewicz, G. Maynard, J. Manning, D. Bethoney, A. Ellertson, C. Van Vranken, E. Pelletier, H. Xu. H. Benway and M. Maheigan. Building a Fishery-based Biogeochemical Observing Network in U.S. Coastal Waters: Major Findings from a Scoping Workshop. 2023 ASLO Aquatic Sciences Meeting. Talk. Palma de Mallorca, Spain. Jun 4 – 9, 2023.

Subhas, A. V., **Z. A. Wang**, M. G. Hayden, K. Morkeski, and D. Titmuss. The Mississippi River as an Analog for Large-Scale Ocean Alkalinity Enhancement. AGU Fall Meeting 2022. Poster. Chicago, IL. Dec 12 – 16, 2022.

Wang, Z.A. Beyond CO_2 Calculation Uncertainties: Contributions of Organic Alkalinity to the Carbonate System from River to Coastal Sea. 2022 Ocean Sciences Meeting. Talk. Virtual. Feb. 28 – Mar. 4, 2022.

Song, S.*, **Z.A. Wang**, K.D. Kroeger, M.E. Gonneea, J. Ge., and S.N. Chu. Developing High-resolution Carbon Dioxide Effluxes in Tidal Water Over a Temperate Salt Marsh using High-frequency Measurements. 2022 Ocean Sciences Meeting. Talk. Virtual. Feb. 28 – Mar. 4, 2022.

Ringham, M.C.*, **Z.A. Wang**, F.N. Sonnichsen, and S. Lerner. High-frequency time series and spatial mapping of Dissolved Inorganic Carbon using CHANnelizd Optical System II in-situ carbonate chemistry sensor. Talk. Ocean Sciences Meeting. Talk. Virtual. Feb 24-March 4, 2022.

Ringham, M.C.*, **Z.A. Wang**, S. Brook, and M. Jiang. Exploration of fine-scale physical-

biogeochemical environment over deep coral reefs on the West Florida slope using integrated ROV-lander-sensor systems. 16th Deep Sea Biology Symposium. Virtual. September 2021

Ringham, M.C.*, **Z.A. Wang**, F.N. Sonnichsen, S. Lerner, G. McDonald, S. Brook, M. Jiang. A first look at high-resolution, in-situ seawater carbonate chemistry across deep coral reefs using CHANOS II. 2021 OCB Summer Workshop. Virtual. June, 2021.

Wang, Z.A., J. Rheuban, L. Cameron, and J. Grabowski. Assessing the vulnerability of Atlantic sea scallop stocks under future ocean acidification and warming. Scallop Research Share Day, New England Fishery Management Council. Virtual. May 12, 2021.

Wang, Z.A., A.P.M. Michel, T.A. Mooney. Accelerating coastal ocean observing through broadly accessible, low-cost sensor networks. Ocean Visions Summit 2021. Virtual via the Scripps Institution of Oceanography. May 18-21, 2021.

Wang, Z. A. and M.C. Ringham, Channelized Optical System (CHANOS): An In-situ Sensor Technology for High-resolution Measurements of Seawater CO_2 Parameters. Smart Ocean 2020. Virtual via MIT and WHOI, October 2020.

Hoelscher, C.E., T. Dellapenna, J.H. Churchill, **Z.A. Wang**, and E. Wurgaft. Mapping the Migration Pattern of the Hurricane Harvey Flood Deposit on the Brazos Subaqueous Delta (Poster). Ocean Sciences Meeting, San Diego, CA. Feb 16-21, 2020.

Wang, Z.A., E. Wurgaft, M.C. Ringham, S. Song, T. Dellapenna, J. H. Churchill, T. Rivlin and B. Lazar. The role of particle-triggered calcium carbonate precipitation in the coastal ocean: A significant factor to seawater carbonate chemistry? (Talk). Ocean Sciences Meeting, San Diego, CA. Feb 16-21, 2020.

Sugar, J.T., M. Omand, A. Adams, K. Katija, **Z.A. Wang**, K. Buesseler, D. Yoerger, I. Cetinic, and H.T. Rossby (Poster). MINIONS: Small, cheap, Lagrangian floats for measurement of the biological carbon pump. Ocean Sciences Meeting, San Diego, CA. Feb 16-21, 2020.

Ringham, M.C.*, **Z.A. Wang**, F.N. Sonnichsen, S. Lerner, G. McDonald and K. Morkeski. Developing an In-situ Sensor for High-frequency Measurements of Dissolved Inorganic Carbon, fCO_2, and pH to Enable Fine-scale Studies of Seawater Carbonate Chemistry (Talk). Ocean Sciences Meeting, San Diego, CA. Feb 16-21, 2020.

Chen, S., C.P. Ward, **Z.A. Wang** and M.H. Long. PhRePhOx — an in-situ approach to quantifying carbon cycling processes (Poster). Ocean Sciences Meeting, San Diego, CA. Feb 16-21, 2020.

Cones, S., K. Katija, K.A. Shorter, F. Jensen, D. Mann, P. Afonso, J. Fontes, **Z.A. Wang** and T.A. Mooney. Diel Vertical Migrations and Climb-and-Glide Ascents in Veined Squid (Loligo forbesi) (Talk). Ocean Sciences Meeting, San Diego, CA. Feb 16-21, 2020.

Melrose, C. and **Z.A. Wang**. Climatology of spatial and seasonal patterns of carbonate chemistry parameters on the Northeast U.S. Continental Shelf (Poster). Ocean Sciences Meeting, San Diego, CA. Feb 16-21, 2020.

Wang, Z. A., H. Moustahfid, A. V. Mueller, A. P. M. Michel, M. Mowlem, B. T. Glazer, T. A. Mooney, W. Michaels, J. S. McQuillan, J. C. Robidart, J. Churchill, M. Sourisseau, A. Daniel, A. Schaap, S. Monk, K. Friedman, and P. Brehmer. Advancing Observation of Ocean Biogeochemistry, Biology, and Ecosystems With Cost-Effective in situ Sensing

Technologies (Poster). OceanObs'19 Conference. Honolulu, HI. September 16-20, 2019.

Wang, Z.A., M. Ringham, F. Sonnichsen, K. Morkeski, S. Lerner, G. McDonald, and E. Wurgaft. Developing An In-Situ Sensor Technology for High-frequency Measurements of Dissolved Inorganic Carbon, pH, and pCO_2 on Mobile Platforms. 4th Global Ocean Acidification Observing Network (GOA-ON) International Workshop. April 14-17 2019. Hongzhou, China.

Song, S.*, **Z.A. Wang**, M.E. Gonneea, K.D. Kroeger, S.N. Chu, and D. Li. The effects of organic alkalinity on pH and carbonate speciation in coastal waters influenced by intertidal salt marshes. The 4th Global Ocean Acidification Observing Network (GOA-ON) International Workshop. April 14-17, 2019. Hongzhou, China.

Tamborski, J., M. Charette, B. Kurylyk, P. Henderson, M. E. Gonneea, K. Kroeger, **Z. A. Wang**. Spatial variability of inorganic carbon export from intertidal salt marshes. Goldschmidt Conference. Aug. 18 – 23, 2019. Barcelona, Spain.

Wang, Z.A., Song, S., M.E. Gonneea, K.D. Kroeger, S.N. Chu, D. Li, and H. Liang. An Ignored Biogeochemical Link between Organic and Inorganic Carbon: Effects of Organic Alkalinity. Gordon Research Conference. July 14-18, 2019. Holderness School, Holderness, NH.

Kroeger, K.D., Gonneea, M.,**Wang, Z.A.**, Ganju, N.K., Pohlman, J.W., Abdul-Aziz, O., Tang, J., Spivak, A., Moseman-Valtierra, S. Salt Marsh Net Ecosystem Carbon Balance: Comprehensive Measurements of the Lateral Flux. CERF Meeting. 2019.

Wang, Z.A. Lateral exports of inorganic carbon and alkalinity from tidal salt marshes. PIE-LTER Annual Science Meeting. Woods Hole, MA. Mar. 6-8, 2018.

Wang, Z.A., R. Ji, W. Yu, S. Khokiattiwong, C. Davis, W.G. Zhang, and A. Cohen. Multi-scale effects of internal waves on carbonate chemistry, planktons, and coral reefs in the Andaman Sea. Ocean Sciences Meeting 2018. Portland, OR. Feb 11-16, 2018.

Wurgaft, E.*, **Z.A. Wang**, M. Ringham, S. Song, T. Dellapenna, J. Churchill and B. Lazar. Nuclei induced $CaCO_3$ precipitation in the northern Gulf of Mexico. Ocean Sciences Meeting 2018. Portland, OR. Feb 11-16, 2018.

Ringham, M.*, **Z.A. Wang**, F.N. Sonnichsen, K. Morkeski, S. Lerner, G. McDonald, and E. Wurgaft. Developing an In-situ Sensor for Continuous Measurements of Total CO2 on Mobile Platforms. Ocean Sciences Meeting 2018. Portland, OR. Feb 11-16, 2018.

Song, S.*, Z.A. Wang, K.D. Kroeger, M.E. Gonneea, D. Li. Contribution and composition of organic alkalinity in export of alkalinity from intertidal salt marshes. Ocean Sciences Meeting 2018. Portland, OR. Feb. 11-16, 2018.

Najjar, R. et al. Carbon Budget of Tidal Wetlands, Estuaries, and Shelf Waters of Eastern North America. Ocean Sciences Meeting 2018. Portland, OR. Feb 11-16, 2018.

Wang, Z. A., S. Chu, K.D. Kroeger, M.E. Gonneea, and N.K. Ganju. Resolving the Intricacies of Lateral Exports of Inorganic Carbon and Alkalinity from Coastal Salt Marshes (Invited). AGU Fall Meeting 2017. New Orleans, LA. Dec. 11-15, 2017.

Song, S.*, **Z.A. Wang**, K.D. Kroeger, M.E. Gonneea, D. Li. Alkalinity export from intertidal salt marshes: evaluating the contribution and composition of organic alkalinity. Coastal &

Estuarine Research Federation 2017. Providence, RI. Nov. 5-9, 2017.

Wang, Z. A., G. L. Lawson, C. H. Pilskaln, and A. E. Maas. Seasonal Controls of Aragonite Saturation States in an Ocean Acidification Vulnerable Shelf Region – the Gulf of Maine, USA. Gordon Research Conferences, Chemical Oceanography. Colby-Sawyer College, New London, NH. Jul 23 – 28, 2017.

Wang, Z. A., Chu, S. N, Kroeger, K. D., Gonneea, M.E., and Ganju, N. K. Intertidal Salt Marshes as an Important Source of Inorganic Carbon to the Coastal Ocean. OCB Summer Workshop. Woods Hole, MA. Jun 26-29, 2017.

Chu, S. N.*, **Z. A. Wang**, K. D. Kroeger, M. E. Gonneea, and N. K. Ganju. Revealing the intricacies of lateral inorganic carbon fluxes from intertidal salt marshes using high-frequency measurements. OCB Summer Workshop. Woods Hole, MA. Jun 26-29, 2017.

Wang, Z. A., Ji, R., Yu, W., Khokiattiwong, S., Davis, C., Zhang, W.G., Barkley, H., Middleton, J., Cohen, A. Multi-scale effects of internal waves on carbonate chemistry and biology in the Andaman Sea. 10th IOC Sub-Commission for the Western Pacific (WESTPAC) International Scientific Conference. Qingdao, China. Apr 17-20, 2017.

Zhang, W.G., Cohen, A., Davis, C., Ji, R., Khokiattiwong, S., **Wang, Z. A.**, and Yu, W. Internal Waves in the Andaman Sea – Connecting the Open Ocean to Shelf Processes and Coral Reef Biogeochemistry. 10th IOC Sub-Commission for the Western Pacific (WESTPAC) International Scientific Conference. Qingdao, China. Apr 17-20, 2017.

Wang, Z. A., Chu, S. N., Kroeger, K. D., Gonneea, M.E., and Ganju, N. K. How much did we miss? – Intertidal Salt Marshes as an Important Source of Inorganic Carbon to the Coastal Ocean. 2017 ASLO Aquatic Sciences Meeting, Honolulu, HI. Feb 26- Mar 03, 2017.

Brown, K. A., Peucker-Ehrenbrink, B., Blusztajn, J., Francois, R., Fiske, G., Williams, W., Carmack, E., McLennan, D., Schimnowski, A., Galy, V. and **Wang, Z.A**. 87Sr/86Sr Traces Riverine Inputs to the Canadian Arctic Archipelago. 2017 ASLO Aquatic Sciences Meeting, Honolulu, HI. Feb 26- Mar 03, 2017.

Wang, Z. A., Kroeger, K. D., Ganju, N. K., Gonneea, M.E., and Chu, S. N. Intertidal Salt Marshes as an Important Source of Inorganic Carbon to the Coastal Ocean. 2016 OCB Summer Workshop. Woods Hole, MA. July 25-28, 2016.

Brown, K. A.*, Williams, W., Carmack, E., McLennan, D., Fiske, G., Francois, R., Galy, V., **Wang**, **Z.A.**, and Peucker-Ehrenbrink, B. Permafrost Draining Rivers in the Canadian Arctic Archipelago: BiogGeochemical Properties and Carbon Export Potential. 11th International Conference on Permafrost. Potsdam, Germany. June 20-24, 2016.

Jiang, M., Dalgleish, F., **Wang, Z.A.**, Elvander, J., and Reed, J. Measurements of Underwater Carbonate Chemistry using a Prototype Hybrid AUV/ROV and Automatic Sensors: A demonstration project. 13th International Coral Reef Symposium. Honolulu, HI. June 19-24, 2016.

Maas, A.E., Tarrant, A.M., Bergan, A.J., **Wang**, **Z.A.**, and Lawson, G.L. The Response of the Thecosomatous Pteropod Limacina retroversa to CO_2 in the Gulf of Maine: Seasonality and Sensitivity. ICES/PICES 6th Zooplankton Production Symposium. Bergen, Norway. May 9-13, 2016.

Lawson, G.L., Lavery, A.C., Wiebe, P.H., Bergan, A.J., **Wang**, **Z.A.**, Maas, A.E., and Copley,

N. J. Application of Acoustic, Optical, and Net Sampling Techniques to Understand the Ecology of Thecosomatous Pteropods. ICES/PICES 6th Zooplankton Production Symposium. Bergen, Norway. May 9-13, 2016.

Wang, Z.A., Lawson, G.L., Pilskaln, C.H., and Maas, A.E. Water-column Controls on the Carbonate Cycle and Potential Ocean Acidification Impacts in the Gulf of Maine. 4th International Symposium on the Ocean in a High-CO_2 World. Hobart, Australia. May 03-06, 2016

Wang, Z.A., Sonnichsen, F.N., Chu, S.N., Bradley, A.M., and Hoering, K.A. Development of Fast Response In-situ Sensors for Simultaneous Measurements of Seawater Carbon Dioxide Parameters. 2016 Ocean Sciences Meeting. New Orleans, LA, US. Feb. 21-26, 2016.

Wang, Z. A., K. D. Kroeger, N. K. Ganju and S. N. Chu. Evaluating the Roles of Intertidal Salt Marshes to the Coastal CO_2 System and Coastal Carbon Budget. 2016 Ocean Sciences Meeting. New Orleans, LA, US. Feb. 21-26, 2016.

Chu, S.N.*, **Wang, Z.A.**, Kroeger, K.D., and Gonneea, M.E. Alkalinity and inorganic carbon export from intertidal salt marshes. 2016 Ocean Sciences Meeting. New Orleans, LA, US. Feb. 21-26, 2016.

Pilskaln, C.H., **Wang, Z.A.**, Lawson, G.L., Hayashi, K., and Salisbury, J. Drivers of Water Column Calcium Carbonate Fluxes and Dissolution in the Gulf of Maine: Impacts on the Carbon Cycle. 2016 Ocean Sciences Meeting. New Orleans, LA, US. Feb. 21-26, 2016.

Anderson L.B.*, Gonneea M.E., **Wang, Z.A.**, and Chu, S.N. Alkalinity export from intertidal salt marshes: evaluating the contribution of non-carbonate species to coastal buffering capacity. 2016 Ocean Sciences Meeting. New Orleans, LA, US. Feb. 21-26, 2016.

Lawson, G.L., Maas, A.E., **Wang, Z.A.**, Bergan, A.J., Wiebe, P.H., Blanco-Bercial, L., Lavery, A.C., and Copley, N.J. Pteropod ecology and physiology in relation to natural variability in carbonate chemistry. 2016 Ocean Sciences Meeting. New Orleans, LA, US. Feb. 21-26, 2016.

Maas, A.E., Tarrant, A.M., Bergan, A.J., **Wang, Z.A.**, and Lawson, G. Seasonality and the response of the thecosome pteropod Limacina retroversa to CO_2 in the Gulf of Maine. 2016 Ocean Sciences Meeting. New Orleans, LA, US. Feb. 21-26, 2016.

Reimer, J., Cai, W.J., Noakes, S., Hu, X., Chen, B., **Wang, Z.A.**, Jiang, L., Salisbury, J., Wanninkhof, R.H., Barbero, L., Feely, R.A., Sutton, A., Mathis, J.T., and Sabine, C.L. pCO_2 time series ground truthing and internal consistency at the Gray's Reef mooring (NDBC-41008) in the South Atlantic Bight. 2016 Ocean Sciences Meeting. New Orleans, LA, US. Feb. 21-26, 2016.

Najjar, R. et al. The carbon budget for coastal waters of Eastern North America. AGU Fall Meeting. San Francisco, CA. Dec 12-16, 2015.

Brown, K.A.*, Williams, W., Carmack, E., McLennan, D., Pedersen, A., Schimnowski, A., Fiske, G., Galy, V., **Wang**, **Z.A.**, and Peucker-Ehrenbrink, B. Geochemical Fingerprints Characteristics of Permafrost Draining Rivers in the Canadian Arctic Archipelago. ArcticNet Annual Scientific Meeting. Vancouver, BC, Canada. Dec 7 – 11, 2015.

Wang, Z.A., Gonneea, M.E., Kroeger, K.D., Ganju N.K, and Chu, S. Intertidal Salt Marshes: A Diminishing Source of Buffering Capacity to the Coastal Ocean. Goldschmidt Meeting.

Prague, Czech Republic. Aug 16-21, 2015.

Wang, Z.A., Gonneea, M.E., Kroeger, K.D., Ganju N.K, Chu, S., and Hoering, K.H. Intertidal Salt Marshes as an Important Source of Inorganic Carbon and Buffering Capacity to the Coastal Ocean. Chemical Oceanography, Gordon Research Conference. Holderness, NH. Jul 27-31, 2015.

Chu, S.N.*, **Wang, Z.A.,** Sonnichsen, F.N., Bradley, A.M., Hoering, K.A., Lanagan, T.M., Hammar, T.R., and Camilli, R. A new in-situ sensor for characterizing full carbonate chemistry in aquatic environments: Development and Application. Chemical Oceanography, Gordon Research Conference. Holderness, NH. Jul 27-31, 2015.

Wang, Z.A., Chu, S., Gonneea, M.E., Kroeger, K.D., and Hoering, K.A. Intertidal Salt Marshes as a Carbon Dioxide and Alkalinity Pump to the Coastal Ocean. 2015 Society of Wetland Scientists Annual Meeting. Providence, RI. May 31 - Jun 4, 2015.

Kroeger, K.D. Ganju, N.K. **Wang, Z.A.,** Pohlman, J.W. Gonneea, and M.E. Building a Salt Marsh Greenhouse Gas Budget: Lateral Fluxes. 2015 Society of Wetland Scientists Annual Meeting. Providence, RI. May 31 - Jun 4, 2015.

Wang, Z.A., Chu, S.N., Kroeger, K.D, Hoering, K.A., and Gonneea, M.E. 2015. The Paradox of Salt Marshes as a Source of Alkalinity and Low pH, High Carbon Dioxide Water to the Ocean. ASLO Aquatic Sciences Meeting. Granada, Spain. February 22 – 27, 2015.

Chu, S.N.*, **Wang, Z.A.**, Sonnichsen, F.N., Bradley, A.M., Hoering, K.A., Lanagan, T.M., Hammar, T.R., and Camilli, R. 2015. A high resolution, in situ sensor to simultaneously measure total dissolved inorganic carbon and pH in aquatic environments. ASLO Aquatic Sciences Meeting. Granada, Spain. February 22 – 27, 2015.

Wang, Z.A., Hoering, K.A., and Chu, S.N. Riverine CO_2 and dissolved inorganic carbon fluxes: Organic carbon titration effects and estimate uncertainties. The 5th North America Carbon Program PI Meeting. Washington D.C. Jan. 26 – 29, 2015.

Wang, Z.A., Kroeger, K.D., Green, A., Hoering, K.A., Pohlman, J.W., Ganju, N., Moseman-Valtierra, S., and Tang, J. 2014. Salt Marsh Carbon Budgets: Biogeochemistry of the CO_2 System and Tidal Exchanges of Inorganic Carbon. Joint Aquatic Sciences Meeting. Portland, OR. May 18-23, 2014.

Kroeger, K.D., Pohlman, J.W., Ganju, N., Spivak, A., **Wang, Z.A.**, Green, A., Brooks, T.W., Baldwin, S., Moseman-Valtierra, S., and Tang, J. 2014. Salt Marsh Carbon Budgets: The Role of Tidal Exchanges of Dissolved and Particulate Organic Carbon. Joint Aquatic Sciences Meeting. Portland, OR. May 18-23, 2014.

Wang, Z.A., Sonnichsen, F.N., Hoering, K.A., and Chu, S.N. 2014. A Buoy-based Sensor Technology for Simultaneous, In-situ Measurements of Seawater pH and Total Dissolved Inorganic Carbon. 2014 Ocean Sciences Meeting. Honolulu, HI. Feb. 23-28, 2014.

Chu, S.N.*, **Wang, Z.A.**, and Hoering, K.A., and Lawson, G.L. 2014. Anthropogenic Carbon Increase in the Northeast Pacific Over the Past Decade. 2014 Ocean Sciences Meeting. Honolulu, HI. Feb. 23-28, 2014.

Sanchez, A.*, Signell, J., **Wang, Z.A.**, and Kroeger, K.D. 2014. Calibration of a CO_2 and pH Sensor: Enabling the Measurement of Blue Carbon Flux. 2014 Ocean Sciences Meeting. Honolulu, HI. Feb. 23-28, 2014.

Wang, Z. A., Pilskaln, C. H., Maas, A., Hayashi, K., and Lawson, G. L. 2013. Coastal Ocean Acidification in the Gulf of Maine: Potential Drivers and Impacts. Ocean Acidification PI Workshop. Sept 18 - 20, 2013. Washington DC.

Lawson, G.L., **Wang, Z. A.**, Wiebe, P. E., Lavery, A. C., Copley, N. J., Chu, S., and Hoering, K. A. 2013. Ocean Acidification and Pteropods in the Northwest Atlantic and Northeast Pacific. Ocean Acidification PI Workshop. Washington DC. Sept 18 - 20, 2013.

Maas, A. E.*, Lawson, G. L., **Wang, Z. A.**, and Tarrant, A. M. 2013. 'RNA-seq'ing the Effects of CO_2 on Sea Butterflies: Physiology and Gene-expression Studies of Thecosome Pteropods. Ocean Acidification PI Workshop. Washington DC. Sept 18 - 20, 2013.

Wang, Z. A., Wanninkhof, R., Cai, W. J., Byrne, R. H., Hu, X. P., Peng, T. H. and 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. 9th International Carbon Dioxide Conference. Beijing, China. June 3-7, 2013.

Chu, S.*, **Wang, Z. A.**, and Hoering, K. Ocean Acidification in the Northeast Pacific Oxygen Minimum Zone. ASLO 2013 Aquatic Sciences Meeting. New Orleans, LA, USA. February 17 – 22.