Curriculum Vitae

Liu, Hongbin

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EDUCATION

1983 B.S. Shandong College of Oceanology, China (Marine Biology)
1994 M.S. University of Hawaii at Manoa (Oceanography)
1997 Ph.D. University of Hawaii (Oceanography)

PROFESSIONAL EXPERIENCE

1983-1991 Assistant and Associate Researcher, 2nd Institute of Oceanography, SOA China
1991-1997 Research & Teaching Assistant, Dept. of Oceanography, Univ. of Hawaii at Manoa
1997-1999 Postdoctoral Research Fellow, Marine Science Institute, Univ. of Texas at Austin
1999-2000 JSPS Special Research Fellow, Nagoya University, Japan
2000-2005 Senior Research Associate, Louisiana Universities Marine Consortium
2004-2005 Assistant Professor, Institute of Oceanography, National Taiwan University
2005-2010 Assistant Professor, Hong Kong University of Science and Technology
2010-2015 Associate Professor, HKUST
2015-2021 Professor, HKUST
2021- Chair Professor, HKUST

RESEARCH INTERESTS

Microbial diversity, function, and food web dynamics
Biogeochemical cycling of carbon and nitrogen in ocean
Global change biology and biological oceanography
Human impact on coastal ecosystems

TEACHING EXPERIENCE

Current: *OCES2001* Survey of Ocean Science, *OCES3130* Marine Biology, *OCES3201* Biological Oceanography, *ENVS5112* Environmental Hazard, *ENVS5116* Environmental Impact and Risk Assessment
Past: Introductory Oceanography, Marine Microbial Ecology, Ecotoxicology, Microbiology, Dynamics of Marine Ecosystems, Biostatistics, Biodiversity

RESEARCH PROJECTS (PI and co-PI, LAST 5 YEARS)

- Provision of service on water quality monitoring at fish culture zones (AFCD 2010-)
- Stoichiometric dynamics of carbon and nitrogen in two major hypoxia zones of Chinese coastal water (NSFC/RGC 2016-2019)
- Microbial food web dynamics in hypoxic coastal waters: Effects of hypoxia on biodiversity, ecological function and physiological condition of protistan grazers (RGC 2017-2020)
- Diagnosis and prognosis of intensifying eutrophication, hypoxia and ecosystem consequences around Hong Kong waters: coupled physical-biogeochemical-pollution studies (Theme-based Research Scheme 2017-2021)

- Microzooplankton grazing on unicellular cyanobacterial diazotroph (UCD) (RGC 2018-2020)
- Provision of Consultancy Study on Development of Supplementary Criteria to Improve Water Quality Assessment on Impacts of Nutrient Enrichment (EPD 2018-2020)
- The effect of warming on the growth and metabolism of auto-, hetero- and mixotrophic marine protists (RGC 2019-2021)
- Response and adaptation of marine microbial communities to environmental stresses in a warming ocean (Southern Marine Science & Engineering Guangdong Laboratory (Guangzhou) 2020-2022)
- Diversity of phytoplankton species in Hong Kong coastal waters (ECF 2022-2024)
- Gut microbiota may help copepod to avoid the toxic effect of domoic acid produced by diatom Pseudo-nitzschia spp. (RGC 2023-2025)
- Evolution, tipping point and reconstruction of planktonic ecosystems in typical coastal waters Topic 1: Spatiotemporal patterns and trends of planktonic diversity in typical coastal regions of China Seas (MOST, China 2023-2025)
- Blue carbon and the role of coastal sea in carbon sequestration (Croucher Foundation 2023-2024)
- Using DNA metabarcoding to reveal the biodiversity and spatiotemporal dynamics of harmful algal bloom species in Hong Kong coastal waters (ECF 2024-2025)
- Identifying the Seagrass Conservation and Restoration Priorities in Hong Kong in relation to Anthropogenic Pressure (MEEF, 2024-2025)
- Biodiversity, metabolic characteristics and temperature sensitivity of epiphytic diatoms on seagrass (RGC 2025-2027)
- Coastal Blue Carbon Ecosystems in Hong Kong and the Greater Bay Area: Carbon Sequestration Capacity, Biogeochemical and Microbial Processes, and Control Mechanisms (STG 2026-2030)
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SHIP TIME

1. Participated in about 15 scientific cruises in China between 1983 and 1990, ranging from coastal to oceanic with cruise length from 2 weeks to 2 months.
2. R/V Yoko Maru, (Japan) 1987 and 1991, Kuroshio in the East China Sea
3. Participated 14 HOT (Hawaii Ocean Time-series) cruises between 1991 and 1996.
4. French JGOFS' FLUPAC cruise in equatorial Pacific on board l'Atalante, Sept. – Oct., 1994.
5. US JGOFS Arabian Sea Process Study, Nov. – Dec., 1995, R/V Thompson.
6. 4 short cruises in Laguna Madre, Texas, on board R/V Longhorn in 1998.
7. R/V Hakuho Maru (Japan), North Pacific and Bering Sea, June – July, 1999.
8. R/V Pelican, Gulf of Mexico, October 2000.
9. R/V Alpha Helix, April, May and July 2001, US-GLOBEC, Gulf of Alaska.
10. R/V Ocean Research 3 (Taiwan), October 2001, South China Sea
11. R/V Pelican, Gulf of Mexico, March, April and October 2002.
12. R/V Alpha Helix, April-May 2003, US-GLOBEC, Gulf of Alaska.
13. R/V Pelican, Gulf of Mexico, April 24 – May 3, and August 9-12, 2004
14. R/V Ocean Research 1 (Taiwan), December 2004 (3 days), East China Sea
15. R/V Professor Khromov (Russia), August 13 – Sept. 14, 2006, Sea of Okhotsk
16. R/V Pelican, Gulf of Mexico, 15-20 August 2010
17. R/V Tansei Maru (Japan), western North Pacific, 7 – 12 May 2011
18. R/V Tansei Maru (Japan), Tokara strait, East China Sea, 16-24 November 2012
19. R/V Professor Multanovskiy (Russia), 2 June – 8 July, 2014, Sea of Okhotsk
Total sea time is more than 104 weeks.

MEMBERSHIP IN PROFESSIONAL SOCIETIES

American Geophysical Union (AGU)

American Society for Microbiology (ASM)
American Society of Limnology and Oceanography (ASLO)
Coastal & Estuarine Research Federation (CERF)

STUDENTS AND POSTDOCTORAL FELLOWS TRAINED (AS OF FEBRUARY 2025)

Current: Postdoc: 2; PhD students: 10; MPhil students: 3; MSc project: 1; FYP:
Past: Postdoc: 6; **PhD completed: 22**; **MPhil completed: 14**; MSc project: 32; FYP: 37+
Member of supervisory committees for >60 PG students

SYNERGISTIC ACTIVITIES

Editor: ***Journal of Oceanography*** (2012-2018)
Editorial Board Member: ***PLoS One*** (2018-2024)
Associate Editor: ***Frontiers in Marine Science*** (2014-)
Associate Editor: ***Frontiers in Microbiology*** (since 2016)
Associate Editor: Estuaries and Coasts (since 2019)
Editorial Board Member: ***Journal of Plankton Research*** (Since 2008)
Editorial Board Member: ***Scientific Reports*** (since 2014)

Guest Editor*, "Upwelling Ecosystem in the Southern Taiwan Strait".* ***Continental Shelf Research*** *31(6S), May 2011*
Guest Editor, "*Biogeochemical and physical processes in the Sea of Okhotsk and the linkages to the Pacific Ocean*", ***Progress in Oceanography*** 126 (2014)
Guest Editor, "*Biogeochemistry and ecosystems in the western north Pacific continental margins under climate change and anthropogenic forcing*" ***Biogeosciences*** (2014)
Guest Editor, "*The Oceanography of the Northern South China Sea Shelf-sea (NoSoCS) and Adjacent Waters*" ***Deep-Sea Research II*** 117 (2015)
Guest Editor, "*River-estuary-coast continuum: biogeochemistry and ecological response to increasing human and climatic changes*" ***Estuarine, Coastal and Shelf Science*** Volume 166, Part B, Pages 143-240 (2015)
Guest Editor, "*Biogeochemistry and ecology and their coupling with physical dynamics in the South China Sea: processes and global implications*" ***Progress in Oceanography*** (current)

Review manuscripts for many international journals.

Review proposals for NSF (bio-ocean), NOAA (ECOHAB), NERC (UK), NSFC, Hong Kong RGC, JSPS (Japan), and funding agencies in Kuwait, Netherland, among others.

Elected **ASLO Fellow (2019)**

Chair, **Gordon Research Conference**, Marine Molecular Ecology (2015)

Director, Croucher Summer Course, Climate Change and Marine Ecosystems (2013, 2015, 2017, 2019, 2023, 2025)

Director, ASI (Advanced Study Institute) supported by Croucher Foundation: Blue carbon and the role of coastal sea in carbon sequestration (2023 and 2024)

Co-Director, CAS-HKUST Sanya Joint Laboratory of Marine Science Research (2020 -)

Associate Head, Department of Ocean Science (2021-2022)
Director, Environmental Health and Safety MSc Program (2022-2025)

Winner, Frontiers Community Support Fund (2017)

Member, The Society of Hong Kong Scholars
Member, Red Tide Expert Advisory Group (RTEAG), Hong Kong SAR Government
Member, Dumping at Sea Appeal Board Panel, Hong Kong SAR Government (ended Jan 2025)
Member, Water Pollution Control Appeal Board Panel, Hong Kong SAR Government
Member, Drinking Water Safety Advisory Committee (DWSAC) HKSAR (2023-)
Member, Appeal Board Panel (Town Planning), HKSAR (10/2024-)

Research.com **Best Environmental Sciences Scientists in China, #140 (2025)**
https://research.com/scientists-rankings/environmental-sciences/cn?page=2
Research.com **Best Biology and Biochemistry Scientists in China, #236 (2025)**
https://research.com/scientists-rankings/biology-and-biochemistry/cn?page=3

PUBLICATIONS

Total Journal paper >310. Google Scholar Citations: 9HwTkSsAAAAJ [Citations: 10170, h-index: 54, i10-index: 194]

BOOK

Phytoplankton Species in Hong Kong Coastal Waters (香港海域浮游植物) First edition, March 2024 by Zhang, Xiaodong and **Liu, Hongbin** ISBN: 978-988-78037-9-9

PEER-REVIEWED PAPERS IN LAST 5 YEARS (* - Corresponding Author)

Zhao, Y., Liu, J., Uthaipan, K., Song, X., Xu, Y., He, B., **Liu, H.**, Gan , J., Dai, M. (2020) Dynamics of inorganic carbon and pH in a large subtropical continental shelf system: Interaction between eutrophication, hypoxia and ocean acidification. Limnol. Oceanogr. DOI: 10.1002/lno.11393

Zou D, Pan J, Liu Z, Zhang C, **Liu H*** and Li M* (2020) The distribution of Bathyarchaeota in surface sediments of the Pearl River Estuary along salinity gradient. Front. Microbiol. 11:285. doi: 10.3389/fmicb.2020.00285

Li, X., Lu, C., Zhang, Y., Zhao, H., Wang, J., **Liu, H**., Yin, K. (2020) Low dissolved oxygen in the Pearl River estuary in summer: Long-term spatio-temporal patterns, trends, and regulating factors. Mar. Poll. Bull. 151: 110814.

Deng, L., Cheung, S., **Liu, H.*** (2020) Protistal grazers increase grazing on unicellular cyanobacteria diazotroph at night. Front. Mar. Sci. 7:135. doi: 10.3389/fmars.2020.00135

Xu, Z., Li, Y., Lu, Y., Li, Y., Yuan, Z., Dai, M., **Liu, H.*** (2020) Impacts of the Zhe-Min Coastal Current on the biogeographic pattern of microbial eukaryotic communities. Prog. Oceanogr. https://doi.org/10.1016/j.pocean.2020.102309

Li, Y., Jing, H., Kao, S.-J., Zhang, W., **Liu H.*** (2020) Metabolic response of prokaryotic microbes to sporadic hypoxia in a eutrophic subtropical estuary. Mar. Poll. Bull. 154:111064

Jiang, T., Guo, C., Wang, M., Wang, M., You, S., Liu, Y., Zhang, X., **Liu, H.**, Jiang, Y., Shao, H., Liang, Y., McMinn, A. (2020) Isolation and complete genome sequence of a novel cyanophage, S-B05, infecting an estuarine *Synechococcus* strain: insights into environmental adaptation. *Arch Virol* (2020). https://doi.org/10.1007/s00705-020-04595-6

Zou, D., Wan, R., Han, L., Xu, M., Liu, Y., **Liu, H.**, Kao, S.-J, Li, M. (2020) Genomic characteristics of a novel species of ammonia-oxidizing archaea from the Jiulong River estuary. Appl. Environ. Microbiol. 86 (18), e00736-20

Liu, K., Chen, B., Huang, B., Zheng, L., Su, S., Chen, M., **Liu, H**.* (2020) What controls microzooplankton biomass and herbivory across marginal seas of China? Limnol. Oceanogr. 66(1): 61-75. doi: 10.1002/lno.11588

Zou, D., **Liu, H.**, Li, M. (2020) Community, distribution, and ecological roles of estuarine Archaea. Frontiers in Microbiology. DOI: 10.3389/fmicb.2020.02060

Liu, K., Suzuki, K., Chen, B**., Liu, H**.* (2020) Are temperature sensitivities of *Prochlorococcus* and *Synechococcus* suppressed by resource availability in the western North Pacific Ocean? Limnol. Ocenogr. 66(3): 639-651. DOI: 10.1002/lno.11629

Cheung, S., Nitanai, R., Tsurumoto, C., Endo, H., Nakaoka, S., Cheah, W., Färber Lorda, J., Xia, X., **Liu*, H**., Suzuki*, K. (2020) Physical forcing controls the basin-scale occurrence of nitrogen-fixing organisms in the North Pacific Ocean. Global Biogeochemical Cycles 34, e2019GB006452. DOI:10.1029/2019GB006452

Wang, M., Gao, C., Jiang, T., You, S., Jiang, Y., Guo, C., He, H., Liu, Y., Zhang, X., Shao, H., **Liu, H**., Liang, Y., Wang, M., McMinn, A. (2020) Genomic analysis of *Synechococcus* phage S-B43 and its adaption to the coastal environment. Virus Research 289: 198155. https://doi.org/10.1016/j.virusres.2020.198155

Gu, B., Lee, C., Ma, X., Tan, Y., **Liu, H.***, Xia, X.* (2020) Effect of warming on growth, grazing, and community composition of free-living bacterioplankton in subtropical coastal waters during winter and summer. Front. Microbiol. 11:534404. doi: 10.3389/fmicb.2020.534404

Zhong, Q., Xue, B., Noman, M.A., Wei, Y., Liu, H., **Liu, H**., Zheng, L. Jing, H., Sun, J. (2020) Effect of river plume on phytoplankton community structure in Zhujiang River estuary. Journal of Oceanology and Limnology https://doi.org/10.1007/s00343-020-9213-7

Zhang, S., Li, C., Sun, M., Cheung, S., Song, S., Guo, W., Guo, C., Wu, G. **Liu, H**.* (2020). Snapshot of peptidomics of the red tide forming species *Noctiluca scintillans*. Front. Mar. Sci. doi: 10.3389/fmars.2020.569807

Chen, B., **Liu, H**., Xiao, W., Wang, L., Huang, B. (2020) A machine-learning approach to modeling picophytoplankton abundances in the South China Sea. Progress in Oceanography 189:102456

Chen, L., Zhang, X., He, B., Liu, J., Lu, Y., **Liu, H**., Dai, M., Gan, J., Kao, S.J. (2020) Dark ammonium transformations in the Pearl River Estuary during summer. Journal of Geophysical Research doi: 10.1029/2019JG005596

Lu, Y., Cheung, S., Chen, L., Kao, S.-J., Xia, X., Gan, J., Dai, M., **Liu, H.*** (2020) New insight to niche partitioning and ecological function of ammonia oxidizing archaea in subtropical estuarine ecosystem. Biogeosciences, 17, 6017–6032, https://doi.org/10.5194/bg-17-6017-2020

Xia, X.*, Lee, P., Cheung, S., Lu, Y., **Liu H**.* (2020) Discovery of euryhaline phycoerythrobilin-containing *Synechococcus* and their mechanisms for adaptation to estuarine environments. mSystems 5:e00842-20. https://doi.org/10.1128/mSystems.00842-20

Yao, J., Wang, J., **Liu, H.**, and Yin, K. (2020) An interrupting mechanism to prevent the formation of coastal hypoxia by winds, Biogeosciences Discuss. [preprint], https://doi.org/10.5194/bg-2020-188, 2020.

Li, Y., Xu, Z., **Liu, H**.* (2021) Prey quality plays a role on the interdependence and interplay between zooplankton and its gut microbiota. BMC Genomics 22:37 https://doi.org/10.1186/s12864-020-07333-z

Zhang, S., Xia, X., Ke, Y., Song, S., Shen, Z., Cheung, S., **Liu, H.*** (2021) Factors influence the successive blooms induced by *Noctiluca scintillans* and *Mesodinium rubrum.* Science of Total Environment 755, February 2021, article number 142349

Wu, W., Xu., Z., Dai, M., Gan, J., **Liu, H**.* (2021) Homogeneous selection shapes free-living and particle-associated bacterial communities in a subtropical estuary. Diversity and Distributions DOI: 10.1111/ddi.13193

Zhao, Y., Uthaipan, K., Lu, Z., Li, Y., Liu, J., **Liu, H.**, Gan, J., Meng, F., Dai, M. (2021) Destruction and reinstatement of coastal hypoxia in the South China Sea off the Pearl River estuary, Biogeosciences, 18, 2755–2775, https://doi.org/10.5194/bg-18-2755-2021.

Cheung, Y.Y., Cheung, S.*, Mak, J., Liu, K., Xia, X., Yung, Y.K., Zhang, X., **Liu, H**.* (2021) Distinct interaction effects of warming and anthropogenic input on diatoms and dinoflagellates in an urbanized estuarine ecosystem. Global Change Biology **DOI:** 10.1111/gcb.15667

Cheung, S., Zehr, J. P., Xia, X., Tsurumoto, C., Endo, H., Nakaoka, S., Mak, W., Suzuki, K.*, **Liu, H.*** (2021) Gamma4: a genetically versatile Gammaproteobacterial nifH phylotype that is widely distributed in the North Pacific Ocean. Environ. Microbiol. 23(8), 4246–4259 https://doi.org/10.1111/1462-2920.15604

Xu, Z., Li, Y., Li, M., **Liu, H**.* (2021) Transcriptomic response of *Daphnia magna* to nitrogen or phosphorus limited diet. Ecology and Evolution DOI: 10.1002/ece3.7889

Xu, H., Shi, Z., Zhang, X., Pang, M., Pan, K.*, **Liu, H**.* (2021) Diatom frustules with different silica contents affect copepod grazing due to differences in the nanoscale mechanical properties. Limnol. Oceanogr. 66(9):3408-3420. doi: 10.1002/lno.11887

Ma, L., Tan, S., **Liu, H.**, Kao, S.-J., Dai, M., Yang, J.-Y. T. (2021) Distribution and Activity of Ammonia-Oxidizers on the Size-Fractionated Particles in the Pearl River Estuary. Front. Mar. Sci. 8:685955. doi: 10.3389/fmars.2021.685955

Xia, X.*, Zheng, Q., Leung, S. K., Wang, Y., Lee, P. Y., Jing, H., Jiao, N., **Liu, H.*** (2021) Distinct metabolic strategies of the dominant heterotrophic bacterial groups associated with marine *Synechococcus*. Science of the Total Environment 798: 149208

Liu, K., Ng, H. Y-T, Zhang, S., **Liu, H**.* (2021) Effects of temperature on a mixotrophic dinoflagellate (*Lepidodinium* sp.) under different nutritional strategies. Mar. Ecol. Prog. Ser. 678: 37–49, https://doi.org/10.3354/meps13865

Zhang, Y., Huang, N., Wang, M., **Liu, H.**, Jing, H.* (2021) Predominance of potentially parasitic microbial eukaryotes in the sediment of deep-sea cold seeps. Frontiers in Microbiology 12:782004. doi: 10.3389/fmicb.2021.782004

Yi J, Lo LSH, **Liu H**, Qian P-Y and Cheng J (2021) Study of Heavy Metals and Microbial Communities in Contaminated Sediments Along an Urban Estuary. Front. Mar. Sci. 8:741912. doi: 10.3389/fmars.2021.741912

Liu, K., Chen, B., **Liu, H.*** (2021) Evidence of partial thermal compensation in natural phytoplankton assemblages. Limnol. Oceanogr. Lett. 7(2): 122-130. doi: 10.1002/lol2.10227

Chen, J., Li, Y., Jing, H., Xu, Z., Zhang, X., **Liu, H**.* (2022) Metagenome and metatranscriptome reveal metabolic adaptations of subcluster 5.2 and 5.3 *Synechococcus* to mesoscale eddies. New Phytologist 233(4): 1828-1842.

Li, Y., Wang, W.*, **Liu, H.*** (2022) Gut-microbial adaptation and transformation of silver nanoparticles mediated the physiology of *Daphnia magna* and offsprings. *Environ. Sci.: Nano*, **9**, 361-374 DOI: 10.1039/D1EN00765C

Xu, Z., Cheung, S., Endo, H., Xia, X., Wu, W., Chen, B., Ho, N. H. E., Suzuki, K., Li, M., **Liu, H.*** (2022) Disentangling the ecological processes shaping the latitudinal pattern of phytoplankton communities in the Pacific Ocean. mSystem 7(1): e01203-21

Deng, L., Cheung, S., Kang, C.-K., Liu, K., Xia, X., **Liu, H**.* (2022) Elevated temperature relieves phosphorus limitation of marine unicellular diazotrophic cyanobacteria. Limnol. Oceanogr. 67:122-134

Pang, M., Liu, K., **Liu, H**.* (2022) Evidence for mixotrophy in pico-chlorophytes: study based on a new *Picochlorum* (Trebouxiophyceae) strain. J. Phycol. 58, 80–91. DOI: 10.1111/jpy.13218

Zhang, X., Cheung, S., Wang, J., Zhang, G., Wei, Y., Liu, H., Sun, J., **Liu, H.*** (2022) Highly diverse *Synechococcus* pigment types in the eastern Indian Ocean. Frontiers in Microbiology

Wang, T., Xia, X., Chen, J., **Liu, H.***, Jing, H.* (2022) Spatio-temporal Variation of *Synechococcus* Assemblages at DNA and cDNA Levels in the Tropical Estuarine and Coastal Waters. Frontiers in Microbiology 13:837037. doi: 10.3389/fmicb.2022.837037

Jiang, S. Hashihama, F., Masumoto, Y., **Liu, H**., Ogawa, H., Saito, H. (2022) Dynamic phytoplankton responses to physical events in the oligotrophic Eastern Indian Ocean. Progress in Oceanography

Liu, K., Ng, H. Y-T, Gao, Z., **Liu, H.*** (2022) Selective feeding of a mixotrophic dinoflagellate (*Lepidodinium* sp.) in response to experimental warming and inorganic nutrient imbalance. Front. Microbiol. 13:805306. doi: 10.3389/fmicb.2022.805306

Feng, M., Lin, S., Zhang, W.*, Wang, C.*, **Liu, H.**, Cheung, S., Li, H., Stukel, M.R., Irving, J.P., Li, N. (2022) Micro-/Meso-Scale Distinction and Horizontal Migration of Tintinnid (Ciliophora: Tintinnida) Assemblages in Three Regions Around the North Pacific Ocean. Front. Mar. Sci., 25 March 2022 | https://doi.org/10.3389/fmars.2022.863549

Liu, H., Zhou, P., Cheung, S., Lu, Y., **Liu, H.**, Jing, H. (2022) Distribution and oxidation rates of ammonia-oxidizing archaea influenced by the coastal upwelling off eastern Hainan Island. Microorganisms 10, 952. https://doi.org/10.3390/microorganisms10050952

Ferrieux M, Dufour L, Doré H, Ratin M, Guéneuguès A, Chasselin L, Marie D, Rigaut-Jalabert F, Le Gall F, Sciandra T, Monier G, Hoebeke M, Corre E, Xia X, **Liu H**, Scanlan DJ, Partensky F and Garczarek L (2022) Comparative thermophysiology of marine *Synechococcus* CRD1 strains isolated from different thermal niches in iron-depleted areas. Front. Microbiol. 13:893413. doi: 10.3389/fmicb.2022.893413

Cheung, S., Liu, K., Turk-Kubo, K. A., Nishioka, J., Suzuki, K., Landry, M.R., Zehr, J.P., Leung, S., Deng, L., **Liu, H**.* (2022) High biomass turnover rates of endosymbiotic nitrogen-fixing cyanobacteria in the western Bering Sea. Limnol. Oceanogr, Lett. DOI: 10.1002/LOL2.10267.

Zou, D., Li, H., Du, P., Wang, B., Lin, H., **Liu, H**., Chen, J., Li M. (2022) Distinct features of sedimentary archaeal communities in hypoxia and non-hypoxia regions off the Changjiang River Estuary. Microbiology Spectrum, 10.1128/spectrum.01947-22

Guo, C., Ke, Y., Chen, B., Zhang, S., **Liu, H**.* (2022) Making comparable measurements of bacterial respiration and production in the subtropical coastal waters. Marine Life Science & Technology https://doi.org/10.1007/s42995-022-00133-2

Wu, W., **Liu, H**. (2022) Cell size is a key ecological trait associated with biogeographic patterns of microbial eukaryotes in coastal waters. Front. Mar. Sci. DOI 10.3389/fmars.2022.933256

Zhang, S., **Liu, H.**, Xia, X. (2022) Community dynamics of free-living and particle-attached bacteria over sequential blooms of heterotrophic dinoflagellate *Noctiluca scintillans* and mixotrophic ciliate *Mesodinium rubrum*. Appl. Environ. Microbiol. DOI 10.1128/aem.01323-22

Xia, X., Liao, Y., Liu, J., Leung, S. K., Lee, P. Y., Zhang, L., Tan, Y., **Liu, H.** (2022) Genomic and transcriptomic insights into salinity tolerance-based niche differentiation of *Synechococcus* clades in estuarine and coastal waters. mSystem DOI: 10.1128/msystems.01106-22

Liu H, Wang F, **Liu H** and Jing H (2022) Metabolic activity and community structure of prokaryotes associated with particles in the twilight zone of the South China Sea. Front. Microbiol. 13:1056860. doi: 10.3389/fmicb.2022.105686

Wang, K., Yao, J., Wang, J.Y., **Liu, H.B.**, Yin, K. (2022) Role of Winds in Interrupting the Formation of Coastal Hypoxia. Front. Mar. Sci. 9: 839812. DOI10.3389/fmars.2022.839812

Lo, LSH, Xu, ZM, Lee, SS, Lau, WK, Qiu, JW, **Liu, HB**, Qian, PY, Cheng, JP (2022) How elevated nitrogen load affects bacterial community structure and nitrogen cycling services in coastal water? Front. Microbiol. 13:1062029. DOI10.3389/fmicb.2022.1062029

Liu, K., Nishioka, J., Chen, B., Suzuki, K., Cheung, S., Lu, Y., Wu, H., **Liu, H**.* (2023) Phytoplankton and microzooplankton population dynamics along the western area from the North Pacific to the Bering Sea in summer. Limnol. Oceanogr. 68: 649–665. doi: 10.1002/lno.12300

Chen, B., Montagnes, D. J. S., Wang, Q., **Liu, H.**, Menden-Deuer, S. (2023) Partitioning the apparent temperature sensitivity into within- and across-taxa responses: revisiting the difference between autotrophic and heterotrophic protists. The American Naturalist. 201(4) DOI: 10.1086/723243

Chen, F., Ma, J., Zhong, Z., **Liu, H.**, Miao, A., Zhu, X., Pan, K.* (2023) Silicon Limitation Impairs the Tolerance of Marine Diatoms to Pristine Microplastics. Environmental Science & Technology DOI: 10.1021/acs.est.2c09305

Shekarriz, E., Chen, J., Xu, Z., **Liu, H**.* (2023) Methane-Solubilizing Filamentous Fungi Play Dominant Roles in Cold Seep Sediment as Revealed by Network Analysis. Microbiology Spectrum 10.1128/spectrum.01978-22

Liu, K., Jiang, S., Montagnes, D.J.S., Zheng, Z., **Liu, H**., Huang, B., Liu, X., Chen, B. (2023) Do marine planktonic ciliates follow Bergmann's rule? Ecography

Chen, J., Li, Y., Xu, Z., Lu, G., Zhong, C., Jing, H., **Liu, H**.* (2023) A genomic perspective of niche partitioning across sediment depth among anaerobic methane-oxidizing archaea in global methane seeps. mSystem. 8(2): e01179-22 https://doi.org/10.1128/msystems.01179-22

Zhang, Y., Xia, X. Wan, L., Han, B.-P., **Liu, H**.*, Jing, H.* (2023) Microbial Communities Are Shaped by Different Ecological Processes in Subtropical Reservoirs of Different Trophic States. Microbial Ecology. https://doi.org/10.1007/s00248-023-02216-8

Ma, Y., Lee, J.H.W., Chang, L., Tang, H., **Liu, H.** (2023) Field measurements of the carbon to chlorophyll *a* ratio using Imaging FlowCytobot: implications for dissolved oxygen modeling. Estuarine, Coastal and Shelf Science 285, 108304. https://doi.org/10.1016/j.ecss.2023.108304

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RECENT CONFERENCE PRESENTATIONS (LAST 5 YEARS)

Characteristics of ecosystem and food web dynamics in hypoxia off PRE: Cause and response. Symposium on Ocean Circulation, Ecosystem, Hypoxia and Consequences (OCEAN_HK) 2019. Hong Kong, June 13-14, 2019

Thermal adaptation compensates thermal sensitivity of phytoplankton growth in subtropical coastal waters. Forth Symposium on Key Processes and Resources of the Costal Ecosystems. Guangzhou Qingyuan 21 December 2019 (invited), also in 中国科学院海南热带海洋生物实验站建站 40 周年暨 2019 年学术年会。5 January 2020

What Controls Microzooplankton Biomass and Herbivory Across Marginal Seas of China? Ocean Science Meeting, San Diego, 16-21 February 2020

Is temperature sensitivity of cyanobacteria suppressed by resource supply in the oligotrophic Western Pacific Ocean? Ocean Science Meeting, San Diego, 16-21 February 2020

Effects of temperature on a mixotrophic dinoflagellate (*Lepidodinium* sp.) under different nutritional strategies. ASLO 2021, June 2021

Effects of Warming on Marine Plankton. BECoME 2022. January 3-7, 2022. Hong Kong (invited)

Diversity and adaptation of *Synechococcus* in estuarine waters. ProSynFest 2020, Córdoba, Spain from 16-19 March 2022 (invited)

Effects of Warming on Marine Phytoplankton. 2022 Wando International Seaweed Symposium, May 5-7, 2022, Wando, Korea (invited)

Application of Flow-through Instruments in Marine Biogeochemical Research. 2022 International Symposium on Marine Engineering Equipment Technology. July 30-31, 2022, Hangzhou, China

Main environmental issues associated with floating structures. RISUD Annual International Symposium (RAIS) 2023. Hong Kong (invited speech)

Coastal Blue Carbon: An Important Carbon Sink to Achieve Carbon Neutrality. The 2nd International Marine Economy and Maritime Services Forum. Parallel Forum II: Blue Carbon Economy and Green Development. 2023,7,18. Ningbo, China (Keynote Speech)

Effect of Nutrient Limitation on Thermal Sensitivity of Marine Phytoplankton. International Conference on Algal Research, Application and Management. 22-24 August, Hong Kong (invited speech)

暖化会使混合营养的浮游生物变得更异养吗？第十三届海峡两岸海洋科学研讨会, 中国·杭州 2023 年 8 月 31 日-9 月 3 日

Coastal Blue Carbon: An Important Carbon Sink to Achieve Carbon Neutrality. 2nd China and Portuguese-specking Countries Ocean Research and Education Symposium (CPCORES). Universidade de Macau, 2023/10/12-13 (invited speech)

Will warming cause mixoplankton to become more heterotrophic? The 7th International Zooplankton Production Symposium, Hobart, Tasmania, Australia, 22 March 2024 (invited)

ISME

Recent Studies on the Effect of Warming on Marine Plankton and the Underlaying Mechanisms. 2024 CHINA-NORWAY MARINE UNIVERSITY CONSORTIUM ALLIANCE ANNUAL ACADEMIC CONFERENCE, Qingdao, China, 26 October 2024 (invited)

香港水域浮游植物小型化研究, 第 23 届中国生态学大会，沈阳，2024 年 10 月 27 日 (invited)

Effect of Warming on Marine Plankton and the Underlaying Mechanisms: Two Case Studies. 海洋元素地球化学循环驱动的近海增汇机制与潜力国际会议暨 2024 年 NSFC-RGC 青年学者论坛。Ningbo, China, 1 November 2024 (invited)

Chair of the roundtable discussion: Archaeal genomics and ecology. The International Conference on Geo-Omics of Archaea 2024, Shenzhen, China, November 10, 2024