Hui Lin

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RESEARCH INTERESTS

Global biogeochemistry cycle; (Chromophoric) Dissolved Organic Matter; Size distribution and chemical composition of colloids

PEER-REVIEWED PUBLICATIONS

Lin, H., Bartlett, S., Guo, L. 2023. Distinct variations in fluorescent DOM components along a trophic gradient in the lower Fox River-Green Bay as characterized using one-sample PARAFAC approach, 902, 3, 165891, doi: 10.1016/j.scitotenv.2023.165891

Li, D., **Lin, H.,** Guo, L. 2023. Comparisons in molecular weight distributions and size-dependent optical properties among model and reference natural dissolved organic matter, Environmental Science and Pollution Research, 30, 20, 57638-57652, https://doi.org/10.1007/s11356-023-26398-3

Lin, H., Matsui, K., Newton, R. J., Guo, L. 2022. Disproportionate Changes in Composition and Molecular Size Spectra of Dissolved Organic Matter between Influent and Effluent from a Major Metropolitan Wastewater Treatment Plant, ACS ES&T:Water, 2, 1, 216-225. Doi: 10.1021/acsestwater.1c00391.

Lin, H., Xu, H., Cai, Y. Belzile, C. Macdonald, R.W. and Guo, L. 2021. Dynamic changes in size-fractionated dissolved organic matter composition from the seasonally ice-covered Yukon River as characterized using fluorescence EEM-PARAFAC, FT-IR and data fusion. Limnology and Oceanography, 66, 8, 3085-3099, doi: 10.1002/lno.11862. (IF = 3.78)

Wang, C.Y., Yang, Y., Yang, B., **Lin, H.**, Miller, T.R., Newton, R.J., and Guo, L. 2021. Causal relationship between alkaline phosphatase activities and phosphorus dynamics in a eutrophic coastal lagoon in Lake Michigan. Science of the Total Environment, 787, 147681. doi: 10.1016/j.scitotenv.2021.147681 (IF = 6.55)

Yang, B., **Lin, H.**, Bartlett, S.L., Houghton, E.M., Robertson, D.M. and Guo, L. (2021). Partitioning and transformation of organic and inorganic phosphorus among dissolved, colloidal and particulate phases in a hypereutrophic freshwater estuary. Water Research, 196, 117025. doi: 10.1016/j.watres.2021.117025. (IF = 7.91)

Lin, H., and Guo, L. (2020). Variations in Colloidal DOM Composition with Molecular Weight within Individual Water Samples as Characterized by Flow Field-Flow Fractionation and EEM-PARAFAC Analysis. Environmental Science & Technology, 54(3):1657-1667. (IF = 7.27)

Zeng, J., Chen, M., Guo, L., **Lin, H.**, Mu, X., and Fan, L. (2019). Role of organic components in regulating denitrification in the coastal water of Daya Bay, southern China. Environmental Science: Processes & Impacts, 21(5), 831–844. (IF = 3.24)

Xu, H., **Lin, H.**, Jiang, H., and Guo, L. (2018). Dynamic molecular size transformation of aquatic colloidal organic matter as a function of pH and cations. Water Research, 144, 543–552. (IF = 7.91)

Xu, H., Guan, D.-X., Zou, L., **Lin, H.**, and Guo, L. (2018). Contrasting effects of photochemical and microbial

degradation on Cu(II) binding with fluorescent DOM from different origins. Environmental Pollution, 239, 205–214. (IF = 5.71)

Li, Q., Chen, M., Jia, R., Zeng, J., **Lin, H.**, Zheng, M., and Qiu, Y. (2017). Transit time of river water in the Bering and Chukchi Seas estimated from $\delta^{18}O$ and radium isotopes. Progress in Oceanography, 159, 115–129. (IF = 4.06)

Lin, H., Chen, M., Zeng, J., Li, Q., Jia, R., and Sun, X. (2016). Size characteristics of chromophoric dissolved organic matter in the Chukchi Sea. Journal of Geophysical Research: Oceans, 121(8), 6403–6417. (IF = 3.56)

Lin, H., Cai, Y., Sun, X., Chen, G., Huang, B., Cheng, H., and Chen, M. (2016). Sources and mixing behavior of chromophoric dissolved organic matter in the Taiwan Strait. Marine Chemistry, 187, 43–56. (IF = 2.93)

PRESENTATIONS/CONFERENCE ABSTRACTS

Lin, H. and Guo, L. 2020. Variations in size and fluorescent components of dissolved organic matter in a negative estuary. 2020 Ocean Science Meeting, February 16-21, 2020, San Diego, CA. Abstract#: CT44B-1005 (Poster presentation).

Lin, H. and Guo, L. 2019. Data fusion applications: Interpreting DOM properties from coupling Fourier Transform infrared (FT-IR) spectra and fluorescence excitation emission matrices (EEMs), Independent study public presentation, December 11, 2019, School of Freshwater Sciences, University of Wisconsin-Milwaukee, WI. (Oral presentation).

Lin, H. and Guo, L. 2019. Molecular size distribution and size-dependent composition of a single DOM sample as characterized using FlFFF-EEM-PARAFAC coupling techniques. The fourth Xiamen Symposium on Marine Environmental Sciences, January 6-9 (8), 2019. Xiamen, China (Oral presentation).

Lin, H., Joung, D.J., Kessler, J., and Guo, L. 2018. Composition and size-distribution of dissolved organic matter in the two largest Great Lakes: Lakes Superior and Michigan. 2018 Ocean Science Meeting, February 11-16, 2018, Portland, OR, Abstract#: CT24B-1316 (Poster presentation).

Lin, H. and Guo L. 2017. Optical and size characterization of dissolved organic matter from the lower Yukon River. 2017 AGU Fall Meeting, December 11-15, 2017, New Orleans, LA. Abstract# 266361 (Oral presentation).

Lin, H. and Chen, M. 2017. Size-fractionated dissolved organic nitrogen profile in the Chukchi Sea and Canada Basin. The third Xiamen Symposium on Marine Environmental Sciences, Student Session, January 9-11, 2017. Xiamen, China (Oral presentation).

Lin, H., Chen, M., Zeng, J. 2016 Size characteristics of chromophoric dissolved organic matter in the Chukchi Sea. The Arctic Science Summit Week (ASSW), Student Session. March 8-11, 2016, Fairbanks, AK. (Poster presentation).

AD-HOC MANUSCRIPT REVIEWERS

-Scientific Reports.

-Limnology and Oceanography Methods

HONORS AND AWARDS

Distinguished Dissertator Fellowship (University of Wisconsin-Milwaukee)	2020-2021
Graduate Student Excellence Fellowship (University of Wisconsin-Milwaukee)	2019-2020
Distinguished Graduate Student Fellowship (University of Wisconsin-Milwaukee)	2017-2018
Fellowship from China Scholarship Council	2016-2020
First State University Scholarship & TA fellowship (Xiamen University)	2013-2016
First State University Scholarship (Xiamen University)	2010-2013
The honor of "3A Students" (Xiamen University)	2010-2013

WORK EXPERIENCE

Assistant Researcher Sept 2021-Now

Polar Research Institute of China

EDUCATION

Ph.D Sept 2016 - May 2021

School of Freshwater Science

University of Wisconsin-Milwaukee, Milwaukee, WI

Major: Aquatic Sciences

Advisor: Dr. Laodong Guo

Thesis: Molecular weight distributions and size-dependent composition of dissolved organic matter in the aquatic continuum

M.S. Marine Chemistry Sept 2013 - June 2016

Xiamen University, Xiamen, China

Department of Marine Science

Major: Isotope Marine Chemistry

Advisor: Dr. Chen Min

Thesis: Molecular size distribution of dissolved organic matter in the Chukchi Sea and Daya Bay

B.Sc. Marine Chemistry Sept 2009 - May 2013

Xiamen University, Xiamen, China

Department of Marine Science

Major: Marine Chemistry

Advisor: Dr. Yihua Cai

Thesis: The Spatiotemporal Distribution and Dynamics of Chromophoric Dissolved Organic Matter in the wersten Taiwan Strait.

RESEARCH EXPERIENCE

Cruise attended:

38th Chinese Anarctic Research Expedition (CHINARE) Cruise Nov. 2021- Apr. 2022

Sampling Area: the Amundsen Sea, the Ross Sea

Experiments on board: DOC, CDOM, DON, Ultrafiltration (Stirred Cell System), Primary Production

6th Chinese Arctic Research Expedition (CHINARE) Cruise Jul. - Sep. 2014

Sampling Area: the Bering Sea, Bering Strait, Chukchi Shelves, Chukchi Sea, Beaufort Sea

Experiments on board: DOC, CDOM, DON, Ultrafiltration (Stirred Cell System), Primary Production, New Production, ^{2}H,

^{18}O, POC, PN, ^{210}Po, ^{210}Pb, Nutrient (Nitrate, Phosphate, Silicate), ^{238}U, ^{234}Th, $^{15}NO_3^-$, Sediment Core, Ice Core Sampling.

2013 Western South China Sea Cruise Jul. - Sep. 2013

Sampling Area: South China Sea Bain, East of Hainan Island

Experiments on board: Nutrients, POC, PN, Nitrogen Fixation, New production, Primary Production

2012 Spring & Summer Western Taiwan Strait Cruise Apr. 2012 & Jul. 2012

Sampling Area: the western Taiwan Strait

Sampling on board: DOC, CDOM, DIP, DO^{13}C, Ultrafiltration (tangential ultrafiltration).

OUTREACH ACTIVITIES

Volunteer for Open Doors Milwaukee at School of Freshwater Sciences, University of Wisconsin-Milwaukee - September 28, 2019

Volunteer for Lake Sturgeon Bowl Competition at School of Freshwater Sciences, University of Wisconsin-Milwaukee - 2018 and 2019

SKILLS

Laboratory Instrument: (In accordance of familiarity) Asymmetric Filed Flow-Field Fractionation (AF2000, Postnova, Germany), Spectrophotometer (UV2450, Shimadzu), Spectrofluorometer (Varian, Australian), Liquid Scintillation Counter (TriCarb 2900TR, PerkinElmer, America), TOC V_{CPH} Analyzer (Shimadzu). Knowledge of EA-IRMS (Carlo Erba NC2500-Finnigan MAT Delta^{plus} XP).

Computer Programs: Matlab, R, ODV, Origin, Surfer, Grapher, Sigmaplot, MS Office, Photoshop etc.

Computer Languages: Microsoft Visual Basic (VB), HTML, Python.

ADDITIONAL INFORMATION

A bachelor's degree in Economic obtained in 2013

A clean driving license in US and China

Good at sports: Starter of College Soccer/Basketball/Swimming teams