

Wisdom

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Work experience/JOB

Distinguished associate

2023.5-present

researcher cooperative supervisor: Professor Cheng Hefa

Physical Geography, School of City and Environment, Peking University

Boya postdoctoral fellow; assistant

2021.6-2023.5

researcher Co-supervisor: Professor Cheng Hefa

Physical Geography, School of City and Environment, Peking University

Educational experience/EDUCATION

Doctor of Science Environmental Engineering GPA:

2016.1-2020.12

3.7/4.0 Supervisor: Professor Gregory H. LeFevre

University of Iowa, School of Civil and Environmental Sciences/Institute of Water Conservancy

MS Environmental Engineering GPA: 3.6/4.0

2013.8-2015.8

Supervisor: Prof. Leonard W. Lion

Cornell University School of Civil and Environmental Engineering

Bachelor of Science Environmental Science (Pharmacy) GPA: 3.6/4.0 School of

2009.9-2013.6

Science, China Pharmaceutical University

Publish articles/PUBLICATIONS

First/co-one/corresponding author

Cheng Hefa, Shen Guofeng, Zhizhi*, Tao Shu. (2023) Spatial distribution and risk assessment of new pollutants in typical rivers on the science pass report Qinghai-Tibet Plateau. (Accepted) <http://engine.scichina.com/doi/10.1360/TB-2023-0279>

Zhi, H., Cheng, H., Shen, G., Tao, S. (2023) Uncovering the dominant contribution of untreated domestic wastewater to antimicrobials in the lower reach of the Lhasa River on the Tibetan Plateau.

ACS ES&T Water. (Accepted on May 26, 2023)

Duan, W., # **Zhi, H.**, # Daniel W. Keefe, Bingtao Gao, Gregory H. LeFevre, Fatima Tour (2022)

Sensitive and Specific Detection of Estrogens Featuring Doped Silicon Nanowire Arrays. *ACS Omega*.

7: 47341-47348. <https://pubs.acs.org/doi/10.1021/acsomega.1c00210>

Zhi, H., Cheng, H. (2022) Development and validation of a solid phase extraction-UPLC-MS/MS method for the determination of fifty-nine antimicrobials in commercial organic fertilizers and amended soils. *Microchemical Journal*. 183: 108007. <https://doi.org/10.1016/j.microc.2022.108007>

Zhi, H., Webb, DT, Schnoor, LJ, Kolpin, WD, Klaper, DR, Iwanowicz, RL, LeFevre, HG (2022)

Modeling risk dynamics of emerging contaminants in a temperate-region wastewater effluent dominated stream. *Environmental Science: Water Research & Technology*. 8 (7) :1408-1422.

<http://xlink.rsc.org/?DOI=D2EW00157H>

Zhi, H., Mianeki, L.A., Kolpin, W.D., Klaper, D.R., Iwanowicz, R.L., LeFevre, H.G. (2020) Tandem field and laboratory approaches to quantify attenuation mechanisms of pharmaceutical and pharmaceutical transformation products in a wastewater effluent-dominated stream. *Water Research*.

203:117537 <https://doi.org/10.1016/j.watres.2021.117537>

Zhi, H., Kolpin, WD, Klaper, DR, Iwanowicz, RL, Meppelink, S., LeFevre, HG (2020)

Occurrence and spatiotemporal dynamics of pharmaceuticals in a temperate-region wastewater

effluent-dominated stream: variable inputs and differential attenuation yield evolving complex exposure mixtures.

Environmental Science & Technology. 54: 12967-12978.

<https://pubs.acs.org/doi/pdf/10.1021/acs.est.0c02328>

Zhi, H., Lion, W.L., Weber-Shirk, M. (2017) Arsenic (V) removal from drinking water by polyaluminum chloride in a sand filter medium. *Journal of Environmental Engineering*. 143(9): 04017051. [https://doi.org/10.1061/\(ASCE\)EE.1943-7870.0001250](https://doi.org/10.1061/(ASCE)EE.1943-7870.0001250)

Zhi, H., Zhao, Z., Zhang, L. (2015) The fate of polycyclic aromatic hydrocarbons and organochlorine pesticides in water from Poyang Lake, the largest freshwater lake of China. J. *Chemosphere*. 119C: 1134-1140. <https://doi.org/10.1016/j.chemosphere.2014.09.054>

other articles

Meade, E.B., Iwanowicz, L.R., Neureuther, LeFevre, G.H., Kolpin, D.W., **Zhi, H.**, Meppelink, S.M., Lane, R.F., Schmoldt, A., Mohaimani, A., Mueller, O., Klaper, R.D. (2022) Transcriptome signatures of wastewater effluent exposure in larval zebrafish vary with seasonal mixture composition in an effluent-dominated stream. *Science of the Total Environment*. 859: 159069.

<https://linkinghub.elsevier.com/retrieve/pii/S004896972206168X>

Schumann, P.G., Meade, E.B., **Zhi, H.**, LeFevre, G.H., Kolpin, D.W., Meppelink, S.M., Iwanowicz, L.R., Lane, R.F., Schmoldt, A., Mueller, O., Klaper, R.D. (2022) RNA-seq reveals potential gene biomarkers in fathead minnows (*Pimephales promelas*) for exposure to treated wastewater effluent.

Environmental Science: Processes and Impacts. Advance Article.

<https://pubs.rsc.org/en/content/articlepdf/2022/em/d2em00222a>

Webb, D.T., **Zhi, H.**, Kolpin, D.W., Klaper, R.D., Iwanowicz, L.R., LeFevre, G.H. (2021) Municipal Wastewater as a Year-Round Point-Source of Neonicotinoid Insecticides that persist in an Effluent Dominated Stream. *Environmental Science: Processes and Impacts*. 23: 678-688.

<https://doi.org/10.1039/D1EM00065A>

Qian, J., Martinez, A., Marek, R., Nagorzanski, M., **Zhi, H.**, Edward, F., Kolpin, W.D., LeFevre, H.G., Cwiertny, D. (2020) Polymeric nanofiber-carbon nanotube composite mats as fast-equilibrium passive samplers for polar organic contaminants. *Environmental Science & Technology*. 54 (11): 6703-6712.

<https://dx.doi.org/10.1021/acs.est.0c00609>

Research Program/PROPOSAL

Zhi, H. (PI), LeFevre, H.G. 2019 Graduate Student Supplemental Research Competition. Iowa Water Center. Quantifying Differential Sorption and Biodegradation of Pharmaceuticals in a Wastewater Effluent-dominated Stream in Iowa.

Academic Conference/PRESENTATIONS and POSTERS

Zhi, H., LeFevre, H.G., Kolpin, W.D., Meppelink, S., Iwanowicz, R.L., Meade, B.E., Klaper, D.R., Meyer, T.M. 2019. Quantifying the occurrence, fate, and implications of pharmaceutical mixtures in a temperate-region wastewater effluent-dominated stream, Muddy Creek, Iowa. American Chemical Society.

Zhi, H., Kolpin, W.D., Iwanowicz, R.L., Klaper, D.R., Meade, B.E., Meppelink, S., Meyer, T.M., Powers, M., Quin, J.IV, LeFevre, H.G. 2019. Pharmaceutical exposures in a temperate region wastewater effluent-dominated stream: Muddy Creek, Iowa. Society of Environmental Toxicology and Chemistry.

Zhi, H., Kolpin, W.D., Furlong, T.E., Iwanowicz, R.L., Klaper, D.R., Meppelink, S., Michael T. Meyer, T.M., LeFevre, H.G. 2018. Longitudinal pharmaceutical exposures in a temperate stream dominated by wastewater effluent. Emerging Contaminants in the Aquatic Environment Conference.

Zhi, H., Muerdter, P.C., LeFevre, H.G. 2017. Plant Uptake of Selected Contaminants of Emerging Concerns (CECs) Under Current Atmospheric and Elevated CO2 Condition. Society of Environmental Toxicology and Chemistry.

Internship experience/INTERNSHIP

Cooperative supervisor of Nanjing Institute of Geography and Limnology,
Chinese Academy of Sciences: Associate Researcher Zhao Zhonghua

06/2012-06/2013

Awards/AWARDS

Ballard Seashore Dissertation Fellowship Neil B. Fisher	2020
Environmental Engineering Fellowship Graduate College Post-	2019
Comprehensive Research Fellowship Graduate College Summer Research	2019
Fellowship Water and Environment 3MT Presentation Award at	2019
University of Iowa SETAC North America Student Travel Award	2018
	2017

The 3rd Prize Poster at Civil and Environmental Engineering Symposium at Cornell University 2015

"Challenge Cup" China College Students Innovation and Entrepreneurship Competition Jiangsu Province Gold Award, National Bronze Award 2013

China National First-class Scholarship (once), Second-class Scholarship (twice), Third-class Scholarship (three times)

2009-2013

Other activities/ACTIVITIES

Postdoctoral Party Branch Secretary, School of Urban and	09/2021-present
Environmental Sciences, Peking University Instructor of Beginning Mandarin CHIN 1102, Cornell University	01/2015-05/2015
Student and Scholars Association, Accountant,	04/2014-05/2015
Cornell University Chinese Project Instructor, Intensive Mandarin Program At Cornell (IMPAC) China	05/2014-08/2014
Pharmaceutical University School of Science, 09482 Class Branch Secretary	09/2010-06/2013