

CHUNMIAO ZHENG, PH.D.

Chair Professor of Water and Environment

Contact Information:

Eastern Institute of Technology, Ningbo

2911 Haijiang Avenue, Zhenhai District, Ningbo, Zhejiang, China, 315200

Website: <https://www.eitech.edu.cn/en> | [personal webpage](#)

Email: czheng@eitech.edu.cn

[Google Scholar](#) | [Web of Science](#) | [Scopus](#) | [ORCID](#)

Professional Overview

Chunmiao Zheng is an internationally recognized hydrogeologist and environmental engineer whose work has made fundamental contributions to contaminant transport modeling, groundwater–surface water interactions, ecohydrology, and sustainable water resources management. He currently serves as Chair Professor and Vice President at the Eastern Institute of Technology (EIT) in Ningbo, China. His previous academic and leadership appointments have included Founding Dean of the School of Environmental Science and Engineering and Vice Provost for Global Strategies at the Southern University of Science and Technology (SUSTech) in Shenzhen; Inaugural Director of the Institute of Water Sciences at Peking University; and George Lindahl III Endowed Professor at the University of Alabama, United States.

Professor Zheng was elected a Fellow of the American Geophysical Union (AGU) in 2019. His major honors include the 11th Prince Sultan Bin Abdulaziz International Prize for Water in 2024, the O.E. Meinzer Award and the M. King Hubbert Award in 2013, and the John Hem Excellence in Science and Engineering Award in 1998. He is widely known for developing the MT3D/MT3DMS solute transport models, which have been used in more than 100 countries. Over the past three decades, these models have become standard tools for groundwater contamination assessment, remediation design, and water resources management worldwide, and have helped shape the way contaminant transport problems are analyzed in research, consulting, and regulatory settings.

He is the Founding Editor-in-Chief of the international journal *Sustainable Horizons*. He has also served as President of the International Commission on Groundwater of the International Association of Hydrological Sciences (IAHS) and as Associate Editor of five leading hydrology journals, including *Water Resources Research*. He is the author or co-author of more than 500 peer-reviewed publications and six books, including *Applied Contaminant Transport Modeling*. He has been named a Clarivate Highly Cited Researcher, and his publications have been cited more than 42,880 times on Google Scholar as of July 2026.

Education

- 1985–1988 Ph.D., Hydrogeology; minor in Civil and Environmental Engineering, University of Wisconsin–Madison, WI, USA.
- 1983–1984 Postgraduate Studies in Geology and Applied Mathematics, Chengdu University of Technology (formerly Chengdu College of Geology), China.
- 1979–1983 B.S., Geology, specializing in Hydrogeology, Chengdu University of Technology (formerly Chengdu College of Geology), China.

Employment History

- 2022–present Chair Professor and Vice President (Global Engagement & Engineering), Eastern Institute of Technology, Ningbo, China.
- 2022–2026 Chair Professor and Director, Shenzhen Institute of Sustainable Development, Southern University of Science and Technology, Shenzhen, China (joint appointment).
- 2015–2022 Chair Professor and Vice Provost for Global Strategies (2018–2022), Founding Dean of the School of Environmental Science and Engineering (2015–2018), Southern University of Science and Technology, Shenzhen, China.
- 2010–2018 Chair Professor and Founding Director, Institute of Water Sciences, Peking University, Beijing, China (joint appointment after 2015).
- 1993–2018 George Lindahl III Endowed Professor (2010–2018; on leave after 2013), Professor (2002–2010), Associate Professor (1997–2002), Assistant Professor (1993–1997), Department of Geological Sciences, University of Alabama.
- 1988–1993 Senior Hydrogeologist, S.S. Papadopoulos & Associates, Inc., Bethesda, Maryland.

Professional Experience

- 2025–present Guest Professor, Shanghai Jiao Tong University, Shanghai, China.
- 2018–present Lindahl Professor Emeritus and Adjunct Professor, Department of Geological Sciences, University of Alabama.
- 2006–2009 Visiting Professor and Founding Director, Center for Water Research, Peking University, Beijing, China.
- 2001 Visiting Fellow, University of Sheffield, United Kingdom.
- 2000 Visiting Associate Professor, Stanford University, Palo Alto, California.
- 2000 Visiting Scientist, U.S. Geological Survey, Menlo Park, California.
- 1995 Visiting Fellow, Australian Nuclear Science and Technology Organisation, Sydney.
- 1991 Assistant Professional Lecturer, George Washington University, Washington, D.C.

Awards and Honors

- 2024, 2025 **Clarivate Highly Cited Researcher**
(<https://clarivate.com/highly-cited-researchers/>)
- 2024 **Prince Sultan Bin Abdulaziz International Prize for Water (PSIPW)** (Groundwater category); PSIPW is a leading global scientific award focusing on cutting-edge innovation in water research (<https://www.psipw.org>)
- 2019 **Fellow**, American Geophysical Union (AGU)
(<https://eos.org/agu-news/2019-class-of-agu-fellows-announced>)
- 2014 **Distinguished Alumni Award**,
Department of Geoscience, University of Wisconsin–Madison, WI.
- 2013 **O.E. Meinzer Award**, Hydrogeology Division, Geological Society of America
(<https://community.geosociety.org/hydrodivision/awards/meinzer/past>)
- 2013 **M. King Hubbert Award**, National Ground Water Association.
(<https://www.ngwa.org/members/awards/m-king-hubbert-award-recipients>)

- 2012 **Distinguished Lecturer for the Hydrology Section**, AOGS–AGU (WPGM) Joint Assembly, Singapore.
- 2009 **Birdsall–Dreiss Distinguished Lecturer**, Hydrogeology Division, Geological Society of America (<https://community.geosociety.org/hydrodivision/aboutus/birdsall-lectures/past>)
- 2008 **DuPont Lecturer**, University of Delaware, DE.
- 2005 **Oliver Lectureship in Hydrogeology**, Jackson School of Geosciences, University of Texas at Austin, TX.
- 1999 **Fellow**, Geological Society of America.
- 1998 **John Hem Excellence in Science and Engineering Award**, National Ground Water Association.

Primary Research Interests

- Impacts of global change and emerging contaminants on groundwater sustainability
- Integrated studies of hydrologic and ecological processes at watershed scales
- Surface water–groundwater interactions and their ecological and environmental effects
- Effects of physical and chemical heterogeneities on contaminant transport and remediation
- Novel technologies integrating sustainable environmental remediation with nature-based carbon sequestration

Professional Affiliations

- American Geophysical Union (AGU, **Fellow**)
- National Ground Water Association (NGWA)
- Geological Society of America (GSA, **Fellow**)
- International Association of Hydrological Sciences (IAHS)
- Chinese Society for Environmental Sciences (CSES, **Fellow**)

Teaching and Mentoring

- Established and advanced programs in hydrogeology and environmental science and engineering across four institutions in the United States and China: the University of Alabama; Peking University; Southern University of Science and Technology (SUSTech), Shenzhen; and the Eastern Institute of Technology (EIT), Ningbo.
- Designed and delivered more than 10 distinct undergraduate and graduate courses in hydrogeology, groundwater flow and contaminant transport modeling, geostatistics, integrated hydrological and environmental systems, water resources management, hydrogeological field techniques, and quantitative analysis.
- Supervised and mentored over 120 graduate students and postdoctoral researchers (more than half of whom are women), many of whom have advanced to leadership roles in academia, government, and industry worldwide.

Grants and Research Funding

- Professor Zheng has secured funding for 58 projects, including 50 as Principal Investigator (PI) and 8 as Co-PI. His portfolio includes approximately RMB 200 million in funding as PI while at Peking University, SUSTech, and the Eastern Institute of Technology (EIT), as well as approximately USD 19 million as PI or Co-PI during his tenure at the University of Alabama.
- These projects have been supported by major funding agencies in China and the United States, including the National Natural Science Foundation of China (NSFC), the Ministry of Science and Technology of China (MOST), the China Geological Survey (CGS), the U.S. National Science Foundation (NSF), and the U.S. Environmental Protection Agency (EPA).

Representative Publications

10 papers in Hydrological Sciences and 10 papers in Environmental and Interdisciplinary Sciences

(* indicates corresponding author.)

[Summary] Professor Zheng has authored or co-authored more than 500 peer-reviewed journal articles and six books. Selected recent representative publications are listed below. A complete publication list appears later in this document.

[Hydrological and groundwater sciences]

1. Kuang, X., J. Liu*, B.R. Scanlon, J.J. Jiao, S. Jasechko, M. Lancia, B.K. Biskaborn, Y. Wada, H. Li, Z. Zeng, Z. Guo, Y. Yao, T. Gleeson, J.-P. Nicot, X. Luo, Y. Zou, **C. Zheng***, 2024, The changing nature of groundwater in the global water cycle, *Science*, 383(6686), eadf0630, <https://doi.org/10.1126/science.adf0630>.
2. Yu, J., Y. Tian*, X. Wang, T. Sun, M. Lancia, C.B. Andrews, **C. Zheng***, 2024, Integrated modeling of flow, soil erosion, and nutrient dynamics in a regional watershed: Assessing natural and human-induced impacts, *Water Resour. Res.*, 60(9), e2024WR037531, <https://doi.org/10.1029/2024WR037531>.
3. Pang, M., E. Du*, **C. Zheng***, 2024, Contaminant transport modeling and source attribution with attention-based graph neural network, *Water Resour. Res.*, 60(6), e2023WR035278, <https://doi.org/10.1029/2023WR035278>.
4. Ma, R., K. Chen, C.B. Andrews, S.P. Loheide, A.H. Sawyer, X. Jiang, M.A. Briggs, P.G. Cook, S.M. Gorelick, H. Prommer, B.R. Scanlon, Z. Guo, **C. Zheng***, 2024, Methods for quantifying interactions between groundwater and surface water, *Annual Review of Environment and Resources*, 49, 623–653, <https://doi.org/10.1146/annurev-environ-111522-104534>.
5. Chen, K., X. Chen, J.C. Stegen, ..., E.E. Roden*, **C. Zheng***, 2023, Vertical hydrologic exchange flows control methane emissions from riverbed sediments, *Environ. Sci. Technol.*, 57(9), 4014–4026, <https://doi.org/10.1021/acs.est.2c07676>.
6. Du, E., Y. Tian, X. Cai, Y. Zheng, F. Han, X. Li, M. Zhao, Y. Yang, **C. Zheng***, 2022, Evaluating distributed policies for conjunctive surface water–groundwater management in large river basins: Water uses versus hydrological impacts, *Water Resour. Res.*, 58(1), e2021WR031352, <https://doi.org/10.1029/2021WR031352>.
7. Yin, M., R. Ma, Y. Zhang*, K. Chen, Z. Guo, **C. Zheng***, 2022, A dual heterogeneous domain model for upscaling anomalous transport with multi-peaks in heterogeneous aquifers, *Water Resour. Res.*, 58(4), e2021WR031128, <https://doi.org/10.1029/2021WR031128>.
8. Lancia, M., Y. Yao, C.B. Andrews, X. Wang, X. Kuang, J. Ni, S.M. Gorelick, B.R. Scanlon, Y. Wang, **C. Zheng***, 2022, The China groundwater crisis: A mechanistic analysis with implications for global sustainability, *Sustainable Horizons*, 4, 100042, <https://doi.org/10.1016/j.horiz.2022.100042>.
9. **Zheng, C.** and Z. Guo, 2022, Plans to protect China's depleted groundwater, *Science*, 375 (6583), 827, <https://doi.org/10.1126/science.abn8377>.
10. Yao, Y., **C. Zheng***, C.B. Andrews, B.R. Scanlon, X. Kuang, Z. Zeng, S. Jeong, 2021, Role of groundwater in sustaining northern Himalayan rivers, *Geophysical Research Letters*, 48, e2020GL092354, <https://doi.org/10.1029/2020GL092354>.

[Environmental and interdisciplinary sciences]

1. Chen, H., Z. Liu, W. Qiu, ..., **C. Zheng**, 2026, Tumour recurrence, gastrointestinal symptoms and inflammation associated with microplastic-positive intestinal tumours, *Nature Health*, <https://doi.org/10.1038/s44360-026-00123-z>.
2. Qiu, W., G. Yang, L. Cao, ..., **C. Zheng***, 2025, Risks of per- and polyfluoroalkyl substance exposure through marine fish consumption, *Science*, 390 (6779), 1305–1309, <https://doi.org/10.1126/science.adr0351>.

3. Fan, L., X. Kuang, C. Ouyang, K. Chen, **C. Zheng***, 2025, Climatic controls on hydrological landslide triggering in the northern Himalayas, *Water Resour. Res.*, 61(2), e2024WR039611, <https://doi.org/10.1029/2024WR039611>.
4. Wu, Y., L. Feng*, S. Yang, **C. Zheng***, 2025, Satellite observations reveal recent increases in water clarity in Chinese coastal waters, *Environ. Sci. Technol.*, 59(38), 20452–20461, <https://doi.org/10.1021/acs.est.5c07097>.
5. Feng, L., Y. Wang, X. Hou, B. Qin, T. Kutser, F. Qu, N. Chen, H.W. Paerl, **C. Zheng**, 2024, Harmful algal blooms in inland waters, *Nature Reviews Earth & Environment*, 5, 631–644, <https://doi.org/10.1038/s43017-024-00578-2>.
6. Gu, X., X. Feng, ..., **C. Zheng**, Z. Xu, H. Chen, 2024, Photovoltaic-driven dual-oxidation seawater electrolyzer for sustainable lithium recovery, *Proceedings of the National Academy of Sciences*, 121(43), e2414741121, <https://doi.org/10.1073/pnas.2414741121>.
7. Dai, Y., S. Yang, D. Zhao, ..., **C. Zheng**, L. Feng, 2023, Coastal phytoplankton blooms expand and intensify in the 21st century, *Nature*, 615 (7951), 280–284, <https://doi.org/10.1038/s41586-023-05760-y>.
8. Lin, S., H. Zhang, C. Wang, ..., Z. Cai*, and **C. Zheng***, 2022, Metabolomics reveal nanoplastic-induced mitochondrial damage in human liver and lung cells, *Environ. Sci. Technol.*, 56(17), 12483–12493, <https://doi.org/10.1021/acs.est.2c03980>.
9. Feng, Y., Z. Zeng*, T.D. Searchinger, ..., **C. Zheng***, 2022, Doubling of annual forest carbon loss over the tropics during the early twenty-first century, *Nature Sustainability*, 5, 444–451, <https://doi.org/10.1038/s41893-022-00854-3>.
10. Ben, Y., C. Fu, M. Hu, L. Liu, M. H. Wong, **C. Zheng***, 2019, Human health risk assessment of antibiotic resistance associated with antibiotic residues in the environment: A review, *Environmental Research*, 169, 483–493, <https://doi.org/10.1016/j.envres.2018.11.040>.

Major Books and Computer Software

1. National Research Council (NRC), 2012, *Challenges and Opportunities in the Hydrologic Sciences*, The National Academies Press, Washington, D.C., 188 pp. (Chunmiao Zheng was a member of the NRC committee that authored this consensus study report, <https://doi.org/10.17226/13293>).
2. Zheng, C., 2010, *MT3DMS v5.3 Supplemental User's Guide*, Report to the U.S. Army Engineer Research and Development Center, Department of Geological Sciences, University of Alabama, <https://web.archive.org/web/20170129200934/http://hydro.geo.ua.edu/mt3d/>.
3. Zheng, C. and G.D. Bennett, 2009, *Applied Contaminant Transport Modeling*, Chinese Edition, Higher Education Press, Beijing, China, in collaboration with John Wiley & Sons, New York, 417 pp.
4. Zheng, C. and others (Committee on Chinese Groundwater Science), 2009, *Challenges and Opportunities in Chinese Groundwater Science*, Science Press, Beijing, China, 200 pp. (Chunmiao Zheng was chair of the committee that authored this report.)
5. Zheng, C. and G.D. Bennett, 2002, *Applied Contaminant Transport Modeling, Second Edition*, John Wiley & Sons, New York, 621 pp. (Available at the Wiley [website](#)).
6. Zheng, C. and P.P. Wang, 1999, *MT3DMS: A Modular Three-Dimensional Multispecies Transport Model for Simulation of Advection, Dispersion, and Chemical Reactions of Contaminants in Groundwater Systems; Documentation and User's Guide*, Contract Report SERDP-99-1, U.S. Army Engineer Research and Development Center, Vicksburg, MS, 221 pp., <https://web.archive.org/web/20170129200934/http://hydro.geo.ua.edu/mt3d/>.
7. Zheng, C. and G.D. Bennett, 1995, *Applied Contaminant Transport Modeling: Theory and Practice*, Van Nostrand Reinhold (now John Wiley & Sons), New York, 440 pp.
8. Zheng, C., 1990, *MT3D: A Modular Three-Dimensional Transport Model for Simulation of Advection, Dispersion and Chemical Reactions of Contaminants in Groundwater Systems*, Report to the United States Environmental Protection Agency, 170 pp.

Major Committees and Editorial Boards

2025–present	Board of Directors, The Groundwater Project , a global, freely accessible online platform for groundwater knowledge and education, based in Ontario, Canada
2024–present	Steering Group, GEWEX Global Groundwater Network , International GEWEX Project Office, Fairfax, Virginia
2023–2025	Hydrology Section Fellows Committee, Hydrology Section, American Geophysical Union (AGU)
2021–present	Founding Editor-in-Chief, <i>Sustainable Horizons</i> , an international open-access journal in partnership with Elsevier
2019–present	Advisory Panel, Section on Environmental Earth Science, National Natural Science Foundation of China
2016–present	Associate Editor, <i>Vadose Zone Journal</i>
2015–present	Deputy Chair, Steering Committee, Major Research Program “Runoff Change in the Headwater Region of China’s Southwestern Rivers and Their Adaptive Management”, National Natural Science Foundation of China
2013–2018	Deputy Editor-in-Chief, <i>Acta Geologica Sinica</i> (English Edition)
2010–2018	Member, Steering Committee, Major Research Program “An Integrated Study of Ecohydrological Processes in the Heihe River Basin”, National Natural Science Foundation of China
2010–2015	Associate Editor, <i>Water Resources Research</i>
2009–2013	Blue Ribbon Panel on “Challenges and Opportunities in the Hydrologic Sciences”, National Research Council, Washington, D.C.
2007–2014	Associate Editor, <i>Journal of Hydrology</i>
2007–2013	President-elect and President, International Commission on Groundwater, International Association of Hydrological Sciences (IAHS)
2005–2015	Standing Committee on Hydrologic Science, National Research Council, Washington, D.C.
2005–2007	Treasurer, Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI), Washington, D.C.
2004–2008	Science and Technology Center Site Review Team, National Science Foundation, United States
2003–2007	Associate Editor, <i>Hydrogeology Journal</i> , International Association of Hydrogeologists (IAH) and Geological Society of America (GSA)
1998–2010	Associate Editor and Software Column Editor (2002–2010), <i>Ground Water</i> (now <i>Groundwater</i>), National Ground Water Association

Selected Professional Activities (since 2000)

2026	Scientific Committee Member and Keynote Speaker, IAH 2026 World Groundwater Congress , Budapest, Hungary, September 14–18, 2026.
2026	Scientific Committee Member and Keynote Speaker, Groundwater Modeling and More, Princeton University, New Jersey, June 7–10, 2026.
2025	Invited Speaker, AGU Annual Meeting (AGU25), New Orleans, USA, December 15–19, 2025.
2025	Plenary Speaker, 4 th Conference on New Technology and Methodology for Groundwater Pollution Prevention and Control, Chengdu, August 24–26, 2025.
2025	Plenary Speaker, International Groundwater Forum 2025, Chengdu, July 12–13, 2025.
2025	Invited Speaker, Earth Science and Engineering Colloquium, Nanjing University, Nanjing, March 6, 2025.
2025	Guest Professor Appointment and Inaugural Lecture, Shanghai Jiao Tong University, Shanghai, February 28, 2025.

- 2024 Scientific Committee Member, IAH 2024 World Groundwater Congress, Davos, Switzerland, September 8–13, 2024.
- 2024 Invited Speaker, [Recent Advances in Modeling Groundwater Dynamics](#), Google/Alphabet-wide Modeling Talk Series, August 27, 2024.
- 2024 Organizing Committee Member and Keynote Speaker, GEWEX Groundwater Workshop, Hokkaido University, Sapporo, Japan, July 6–7, 2024.
- 2024 Organizing Committee Member and Keynote Speaker, MODFLOW and More 2024, Princeton University, NJ, June 2–5, 2024.
- 2024 Plenary Speaker, HIC 2024 – 15th International Conference on Hydroinformatics, Beijing, May 27–30, 2024.
- 2024 Plenary Speaker, First National Congress on Groundwater Resources and Eco-Environment, Wuhan, April 12–15, 2024.
- 2023 Keynote Speaker, First IAHR International Conference on Global Water Security, Changzhou, October 30–November 1, 2023.
- 2023 Chair, First International Conference on Eco-geology and Environment, sponsored by the Chinese Society for Environmental Sciences, Chengdu, October 27–31, 2023.
- 2022 Chair, Plenary Keynote Session, 49th IAH Congress, International Association of Hydrogeologists, Wuhan, China, September 19–22, 2022.
- 2022 Distinguished Lecturer, Recent Advances in Groundwater Research and Groundwater Management Challenges under Global Change, Center for International Collaboration, Ministry of Water Resources of China, June 28, 2022.
- 2022 Distinguished Lecturer, Advances in Groundwater Modeling, Technical Center for Soil, Agriculture, and Rural Ecology and Environment, Ministry of Ecology and Environment, June 4, 2022.
- 2022 Distinguished Lecturer, Contaminant transport in heterogeneous aquifers: A critical review of mechanisms and numerical methods of non-Fickian dispersion, Chinese Research Academy of Environmental Sciences, January 14, 2022.
- 2021 Conference Chair, International Conference on Sustainable Technology and Development 2021, sponsored by Elsevier and Southern University of Science and Technology, Shenzhen, October 31–November 2, 2021.
- 2021 Invited Panelist, Times Higher Education (THE) Asia Summit, Session on “Close integration with industry is essential to problem-solving and producing world-leading research. How is this best achieved?” June 2, 2021.
- 2021 Distinguished Lecturer, Challenges and Opportunities for Environmental Water Sciences in China, Yangtze Institute for Conservation and Development, Hohai University, Nanjing, May 14, 2021.
- 2020 Invited Panelist, Dialogue with the Vice Minister of Science and Technology of China on the trend of international research collaboration, Beijing, December 2, 2020.
- 2020 Invited Speaker, 82nd Westlake Master Forum, 50 Years of Groundwater Contaminant Transport Modeling, Westlake University, Hangzhou, China, October 21, 2020.
- 2020 Invited Speaker, Forum on the Future of Sino-US Research Collaboration, National Natural Science Foundation of China, Beijing, September 24–25, 2020.
- 2019 Invited Panelist, U.S.–China Environment and Sustainability Forum at the University of Michigan, October 1–2, 2019.
- 2019 Co-organizer and Keynote Speaker, “MODFLOW and More 2019: Groundwater Modeling and Beyond”, Golden, Colorado, June 2–5, 2019.
- 2018–2020 “Paul A. Witherspoon Lecture in Hydrologic Sciences” Award Committee, American Geophysical Union.
- 2018 Plenary Speaker, RISUD Annual International Symposium 2018 (RAIS 2018), Hong Kong Polytechnic University, June 29–30, 2018.
- 2018 Keynote Speaker, Computational Methods in Water Resources XXII (CMWR 2018), St. Malo, France, June 3–7, 2018.

- 2018 Keynote Speaker, China–US Workshop on Soil Contamination Risk Management and Remediation Technology, University of California, Riverside, Palm Desert Center, Palm Desert, California, April 3, 2018.
- 2017 Keynote Speaker, Annual Meeting of the Chinese Society for Environmental Sciences, Xiamen, China, October 20–22, 2017.
- 2017 Organizer, EPRI Workshop on Advanced Hydrogeologic Characterization, Palo Alto, California, August 29, 2017.
- 2017 Keynote Speaker, 11th International Symposium on Geochemistry of the Earth Surface, Guiyang, China, June 11–16, 2017.
- 2017 Co-organizer and Keynote Speaker, “MODFLOW and More 2017: Modeling for Sustainability and Adaptation”, Golden, Colorado, May 21–24, 2017.
- 2016 Chair, 9th IAHS Groundwater Quality Conference (Groundwater Quality 2016, GQ16), Shenzhen, China.
- 2016 Advisory Panel, Research Program “GEOCON”, Technical University of Denmark, April 25–26, 2016.
- 2016 Review Panelist, Office of Biological and Environmental Research (BER), Department of Energy, Washington, D.C., April 4–5, 2016.
- 2016 Invited Speaker, Joint KAPSARC-NUS Workshop “Emerging Issues Facing the Water-Energy-Food Nexus in the Middle East and Asia”, Singapore, January 22, 2016.
- 2016 Invited Panelist, 9th Rosenberg Forum on International Water Policy, Panama City, January 25–28, 2016.
- 2015 Scientific Advisory Committee Member and Keynote Speaker, 42nd Congress of the International Association of Hydrogeologists, Rome, Italy, September 13–18, 2015.
- 2015 Organizing Committee Member, International Conference “MODFLOW and More 2015: Modeling a Complex World”, Colorado, May 31–June 3, 2015.
- 2014 Co-chair and host, U.S.–China EcoPartnership Conference “Water-Energy Nexus: Sustainability and Global Challenges”, Beijing, China, April 17, 2014.
- 2014 Invited Speaker, Faculty Summit, Microsoft Research, Redmond, Washington, July 14–15, 2014.
- 2013 Chair, International Workshop “Observation and Modeling of Ecohydrological Processes in Inland River Basins: A Vision for Transformative Science”, Beijing, China, July 5–8, 2013.
- 2013 Keynote Speaker, IAH 2013 – 40th Congress of the International Association of Hydrogeologists, Perth, Australia, September 15–20, 2013.
- 2013 Co-chair, MODFLOW and More 2013: Translating Science into Practice, Golden, Colorado, June 2–5, 2013.
- 2013 Co-chair, International Workshop “Managing River Basins as Coupled Human-Natural Systems”, sponsored by U.S. NSF and NSFC, Beijing, May 6–7, 2013.
- 2013 Invited Panelist, Rosenberg International Forum on Water Policy, 8th Biennial Meeting, Aqaba, Jordan, March 22–25, 2013.
- 2012 Co-organizer, Water Management and Global Challenges: Advances in Technology, Innovation, Health and Policy, Beijing, China, October 15–16, 2012.
- 2012 Keynote Speaker, The 5th International Workshop on Catchment Hydrological Modeling and Data Assimilation (CAHMDA-V), University of Twente, Enschede, the Netherlands, July 9–13, 2012.
- 2012 International Expert on Global Water Crisis, 30th Annual Meeting, The InterAction Council, Tianjin, China, May 10–12, 2012.
- 2011 Organizing Committee Member, International Conference “MODFLOW and More 2011: Integrated Hydrologic Modeling”, Golden, Colorado, June 6–9, 2011.
- 2011 Chair, Forum on International Water Resources, The 4th World Economic and Environmental Conference, Beijing, China, September 19–21, 2011.
- 2010 Organizing Committee Chair, International Groundwater Forum 2010, Peking University, Beijing, China, July 8–9, 2010.

- 2010 Co-Director, International Summer School on International River Basin Management, Peking University, China.
- 2010 “Humanity 3000” workshop on the world’s water crisis, Foundation for the Future, Seattle, Washington.
- 2009 International Advisory Committee, HydroPredict 2010 International Conference, Prague, Czech Republic.
- 2009 Keynote Speaker, NovCARE International Conference on Aquifer Characterization, Leipzig, Germany.
- 2009 Luncheon Speaker, California Biennial Groundwater Conference, Sacramento, CA.
- 2009 Keynote Speaker, Ground Water Summit, Tucson, Arizona.
- 2009 International Advisory Committee, “Groundwater Quality 2010” International Conference, Zurich, Switzerland.
- 2009 Organizing Committee Member, “ModelCARE 2009” International Conference, China University of Geosciences (Wuhan), China.
- 2008 Organizing Committee Member, “MODFLOW and More 2008” International Conference, Golden, Colorado.
- 2008 Invited Speaker, 33rd International Geological Congress, Oslo, Norway.
- 2007 Panel of Experts for *The New York Times* on water and environmental issues in China.
- 2007 International Advisory Committee, “ModelCARE 2007”, Copenhagen, Denmark.
- 2007 International Advisory Panel, “Groundwater Quality 2007”, Perth, Australia.
- 2007 International Advisory Committee, “Water Down Under 2008”, Adelaide, Australia.
- 2006 Organizing Committee Member, International Conference “MODFLOW and More 2006,” Colorado School of Mines, Golden, Colorado.
- 2006 Panelist, Research Grant Review Panel for Environmental Remediation Programs, Department of Energy, Washington, D.C.
- 2006 Invited Speaker, Special session on “Innovations in field characterization of physical and chemical heterogeneities,” GSA Annual Meeting, Philadelphia.
- 2006 Invited Seminar Speaker, Department of Hydrology and Water Resources, University of Arizona.
- 2006 Seminar Speaker, University of Tübingen, Germany.
- 2006 Seminar Speaker, University of Sheffield, U.K.
- 2005 Keynote Speaker, 2005 Conference on Ground Water Remediation, National Ground Water Association (NGWA).
- 2005 Panelist, EPRI Arsenic Modeling Workshop, Tampa, Florida.
- 2005 Invited Speaker, Special session on “Field-scale characterization of hydraulic properties,” AGU Fall Meeting, San Francisco.
- 2005 Co-chair, Working Group on Challenges and Opportunities in Chinese Groundwater Science, National Natural Science Foundation of China.
- 2005 Co-instructor, 1st Geochemical and Reactive Transport Modeling Course, Australian Centre for Groundwater Studies, Brisbane, Australia.
- 2005 Invited Lecturer, School of Chemistry, Physics and Earth Sciences, Flinders University of South Australia, Adelaide, Australia.
- 2005 Invited Lecturer, Australian Contaminated Land Consultants Association (ACLCA), Victoria, Australia.
- 2005 Invited Lecturer, Research Center for Deep Geological Environment, AIST, Tsukuba, Japan.
- 2005 Invited Lecturer, Research and Development Center, Nippon Koei Co., Tokyo.
- 2004 Scientific Advisory Committee Member, International Conference on *Finite-Element Models, MODFLOW, and More 2004*, Karlovy Vary, Czech Republic.
- 2004 Co-instructor, Short course on Groundwater Flow and Contaminant Transport Modeling with Introduction to Data Assessment, Sensitivity Analysis, Model Calibration and Uncertainty Evaluation, Charles University, Czech Republic.
- 2004 Organizing Committee Chair, International Symposium on Earth, Environment, and Human Impacts, IPACES 2004 Annual Meeting and Workshops, Chengdu, China.
- 2004 NSF IGERT Program “GIScience” Advisory Board, SUNY at Buffalo.

- 2003–2004 Chair-elect and Chair, International Professionals for the Advancement of Chinese Earth Sciences (IPACES).
- 2003 Organizing Committee Member, International Conference on MODFLOW and More 2003, Colorado School of Mines, Golden, Colorado.
- 2003 Invited Seminar Speaker, Department of Earth Sciences, University of Hong Kong.
- 2002 Review Panelist, Global Water Cycle Research Program, U.S. NSF.
- 2002 Invited Speaker, Special session on Use Ground-Water Models to Guide Field Data Collection, AGU 2002 Fall Meeting, San Francisco.
- 2002–2004 Standing Committee on Hydrologic Information Systems, Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI).
- 2002 Peer Reviewer, Assessment of Long-Term Sustainability of Monitored Natural Attenuation of Chlorinated Solvents, SERDP Program, DOD/EPA/DOE.
- 2002 Invited Seminar Speaker, Institute of Applied Geology, University of Tübingen.
- 2001–2003 Instructor, Short course on Reactive Transport Modeling, University of Sheffield, U.K.
- 2001 Scientific Advisory Committee Member and Keynote Speaker, GQ-2001: 3rd International Conference on Groundwater Quality, University of Sheffield, United Kingdom.
- 2001 Invited Geology Seminar Speaker, University of Tennessee, Knoxville, TN.
- 2001 Invited Lecturer, Earth Science Symposium, Peking University, China.
- 2001 Organizing Committee Member and Keynote Speaker, *MODFLOW 2001 and Other Modeling Odysseys*, Colorado School of Mines, Colorado.
- 2000 Invited Speaker, *International Symposium on Groundwater Contamination*, sponsored by the Japanese Association of Groundwater Hydrology, Tokyo, Japan.
- 2000 Lecturer, Short course on Mass Transport in Groundwater, Freiberg University of Mining and Technology, Freiberg, Germany.
- 2000 Invited Speaker, Western Pacific Geophysics Meeting, Tokyo, Japan.
- 2000 Graduate Fellowship Grant Application Review Panel, U.S. EPA, Washington, D.C.

(A complete list of publications and funded research projects appears next.)

Complete List of Publications and Funded Research Projects
for Chunmiao Zheng

Publications

[Summary] Professor Zheng is the author or co-author of **500+ peer-reviewed journal articles and six books**, with **42,880+ citations** on Google Scholar at <https://scholar.google.com/citations?hl=en&user=g0FPeQsAAAAJ> (accessed July 2026).

(* indicates corresponding author.)

[Published in 2026]

- Zheng, T., B. Guo, Q. Chang, Q. Sun, X. Chen, X. Zheng, J. Wu, Z. Zheng, S. Gao, **C. Zheng**, ..., J. Luo, A. Guadagnini, 2026, Paleo-salt water dominates coastal aquifer salinization: A continental-scale study in China, *Science Advances*, 12(21), eady2322, <https://doi.org/10.1126/sciadv.ady2322>.
- Chen, H., Z. Liu, W. Qiu, Y. Zhou, E. G. Xu, J. T. Magnuson, J. Zhao, W. Zhao, S. Hou, H. Shi, B. Xing, **C. Zheng**, 2026, Tumour recurrence, gastrointestinal symptoms and inflammation associated with microplastic-positive intestinal tumours, *Nature Health*, <https://doi.org/10.1038/s44360-026-00123-z>.
- Zhang, N., L. Feng*, **C. Zheng***, 2026, Two decades of ocean color and thermal front variability in the Chinese coastal ocean, *Journal of Geophysical Research: Oceans*, 131, e2026JC024446, <https://doi.org/10.1029/2026JC024446>.
- Xu, S., W. Zhang, Y. Tian*, S.-C. Hsu, **C. Zheng***, 2026, Mechanism-guided dynamic machine learning overcomes environmental non-stationarity in algal bloom prediction, *J. Hydrol.*, 677, Part C, 135987, <https://doi.org/10.1016/j.jhydrol.2026.135987>.
- Kong, L., H. Xu, Y. Wang, Y. Tao*, ..., **C. Zheng***, 2026, Single-cell profiling reveals hidden drivers of sediment phosphorus release, *Environ. Sci. Technol.*, 60(6), 4830–4839, <https://doi.org/10.1021/acs.est.5c15684>.
- Kong, M., Y. Feng*, Z. Lin, **C. Zheng***, 2026, Divergent trends in global vegetation sensitivity to soil moisture and atmospheric dryness, *J. Hydrol.*, 676, 135721, <https://doi.org/10.1016/j.jhydrol.2026.135721>.
- Guo, S., Y. Yao, Z. Wu, G. Jia, W. Liang, M. Lancia, **C. Zheng**, 2026, Integrating socioeconomic withdrawals into a deep learning framework for high-resolution groundwater storage prediction in the Yellow River Basin, *Water Resour. Res.*, 62(7), e2025WR043071, <https://doi.org/10.1029/2025WR043071>.
- Li, H., Z. Guo, Z. Pan, Y. Zhan, S. Wan, H. Zhong, C. Lu, **C. Zheng**, 2026, Thermal effects on aquifer storage and recovery in brackish aquifers, *J. Hydrol.*, 678, 136054, <https://doi.org/10.1016/j.jhydrol.2026.136054>.
- Shu, Y., Y. Liu, L. Song, E. Ytreberg, L. Gan, S. Xu, **C. Zheng**, 2026, Temporal and spatial distribution of ship wastewater generated in the Yangtze River, *Journal of Cleaner Production*, 568, 148710, <https://doi.org/10.1016/j.jclepro.2026.148710>.
- Shi, X., X. Kuang, M. Zhu, L. Fan, G. Zheng, X. Wang, J. Chen, Y. Hao, X. Zhang, **C. Zheng**, 2026, Inter-basin groundwater flow pathways and hydrogeochemical evolution regulated by deep fault systems, *Applied Geochemistry*, 208, 106971, <https://doi.org/10.1016/j.apgeochem.2026.106971>.
- Petchamé-Guerrero, J., J. Carrera, J. Wang, **C. Zheng**, 2026, Decoupling transport and reactions in reactive transport simulations, *Advances in Water Resources*, 215, 105366.
- Chen, J., X. Kuang, L. Fan, J. Shan, X. Shi, Y. Feng, **C. Zheng**, 2026, Anomalous sample detection tool and its application in identifying interbasin groundwater flow in the Yarlung Zangbo River basin, Tibetan Plateau, *Water Resour. Res.*, 62(6), e2024WR038701.
- Shi, X., X. Kuang, M. Zhu, L. Fan, X. Wang, G. Zheng, Y. Hao, **C. Zheng**, 2026, Radon-222 as an effective tracer to distinguish groundwater circulation patterns in the deep fault-controlled geothermal system, *Geophysical Research Letters*, 53 (10), e2026GL122566.
- Wang, M., G. Yang, J. T. Magnuson, **C. Zheng**, W. Qiu, 2026, Machine learning-based prediction of NOECs for over 10,000 PFAS across multiple fish species enables large-scale toxicological analysis, *Environ. Sci. Technol.*, 60(21), 14837–14848.
- Ding, C., Z. Guo, K. Chen, Y. Zhan, H. Li, S. Wan, L. Fan, X. Kuang, **C. Zheng**, 2026, Freeze-thaw controls on dissolved organic carbon export: A numerical investigation of hydrological mechanisms in a hillslope, *Water Resources Research*, 62(5), e2026WR043497.
- Zhao, Y., Y. Yao, H. Jin, T. Wang, X. Wu, X. Meng, **C. Zheng**, D. Yang, 2026, Prevailing thermal models underestimate permafrost thermal state in the Tibetan Plateau: Implications for cryosphere adaptation, *Advances in Climate Change Research*, 17(2), 324–337.

- Ding, C., K. Chen, Y. Zhan, **C. Zheng**, Z. Guo, 2026, Evaporation-induced hysteresis in surface water–groundwater exchange in wetlands, *Water Resour. Res.*, 62, e2025WR041445, <https://doi.org/10.1029/2025WR041445>.
- Li, H., Z. Guo, K. Chen, R. Wu, X. Zhai, Z. Zeng, **C. Zheng**, 2026, Impact of density-dependent flow and aquifer heterogeneity on virus transport and removal during aquifer storage and recovery, *Water Resour. Res.*, 62, e2025WR040755, <https://doi.org/10.1029/2025WR040755>.
- Xu, S., Y. Tian*, S.-C. Hsu, **C. Zheng***, 2026, Integrating process-based and machine learning models for high temporal-resolution algal bloom prediction in rivers with sparse monitoring data, *ACS ES&T Water*, 6 (5), 3162–3174, <https://doi.org/10.1021/acsestwater.6c00132>.
- Lin, Z., Y. Feng, J. Wu, D. Gong, J. Xiong, X. Cao, **C. Zheng**, 2026, Data-driven attribution of evapotranspiration dynamics in the Heihe River Basin: Controlling factors from site measurements to regional satellite observations, *Agricultural Water Management*, 328, 110324.
- Hu, X., Y. Hu, C. Liu, W. Wang, S. Pu, T. Jiao, **C. Zheng**, 2026, Enhanced performances of the coupled thermal conductive heating-groundwater circulation well approach, *Journal of Contaminant Hydrology*, 280, 104928.
- Zhu, Y., Z. Zeng*, J. Wu, Y. Feng, **C. Zheng***, 2026, Carbon fluxes from urban land-use change in Zhejiang Province, China, *Sustainable Horizons*, 18, 100181.
- Wu, Y., K. Xiao, F. Pan, Y. Zhang, X. Yang, X. Yu, L. Zhang, H. Li, P. Wu, G. Han, **C. Zheng**, 2026, Rainstorm regulates phosphorus composition and migration along an ecological continuum of mudflat-mangrove-creek, *Marine Environmental Research*, 216, 107912.
- Zhu, Y., Z. Guo, S. Wan, K. Chen, Y. Wang, Z. Zeng, H. Shen, J. Ye, **C. Zheng**, 2026, Evaluating long-term effectiveness of managed aquifer recharge for groundwater recovery and nitrate mitigation in an overexploited aquifer system, *Hydrology and Earth System Sciences*, 30(3), 693–708.
- Li, Z., Y. Wang, Y. Qi, K. Xiao, G. Han, H. Li, L. Liu, D. Jiang, X. Zhang, **C. Zheng**, 2026, Vertical sediment stratification regulates dissolved nutrient dynamics and interface fluxes along the intertidal zone, *J. Hydrol.*, 668, 134980.
- Xu, B., L. Fan, G. Zheng, W. Schwanghart, **C. Zheng**, 2026, Increasing glacial lake outburst flood hazard on the eastern Tibetan Plateau and implications for the Sichuan-Tibet Railway, *Environ. Res. Lett.*, 21(1), 014014.
- Zhu, M., X. Kuang, Y. Feng, E. Ma, C. Song, Z. Hu, X. Shi, L. Fan, F. Ji, T. Zhao, N.C. Ren, **C. Zheng**, 2026, Variations of stable carbon isotope imply sources of DIC in an alpine catchment, *J. Hydrol.*, 666, 134802.
- Xiao, P., C. Zhang, Y. Tao, ..., **C. Zheng**, A. Wang, D. Savic, N. Ren, 2026, Ultrahigh-resolution 3D monitoring reveals sediment-derived plumes as algal bloom precursors, *Environmental Science and Ecotechnology*, 29, 100652.
- Kang, C., L. Song, H. Zhang, S. Xu, **C. Zheng**, Y. Shu, 2026, Modeling the instant acidification effects of open-loop scrubber discharges along shipping routes, *Ocean & Coastal Management*, 270, 107887.
- Sun, X., L. Tian, H. Fang, D. E. Walling, J. Syvitski, L. Huang, D. Li, **C. Zheng**, L. Feng, 2026, Mapping pan-Arctic riverine particulate organic carbon from space (1985 to 2022), *Science Advances*, 12(3), eady6314, <https://doi.org/10.1126/sciadv.ady6314>.
- Luo, Q., E. Park, E.M. Latrubesse, ..., **C. Zheng**, P. Liu, L. Feng, 2026, Global alluvial channel patterns, *Nature Communications*, 17, 1950, <https://doi.org/10.1038/s41467-026-68569-z>.
- Zhou, Y., X. Liang, N. Shan, C. Yang, H. Yuan, **C. Zheng**, 2026, Temporal scaling in hydrological variables: Methods, patterns, and comparative insights, *Sustainable Horizons*, 17, 100170, <https://doi.org/10.1016/j.horiz.2025.100170>.
- Yuan, H., X. Liang*, J. Chen, H. Shi, Y. Tian, **C. Zheng***, 2026, Climate change-driven propagation of meteorological-hydrological-groundwater drought: insights from the Pearl River Basin, China, *J. Hydrol.*, 669, Part B, 135121, <https://doi.org/10.1016/j.jhydrol.2026.135121>.
- Liu, Z., G. Li, Z. Li, H. Li, **C. Zheng**, K. Xiao, 2026, Seasonal fluctuations of nutrient characteristics and interfacial fluxes in mangrove intertidal groundwater, *Journal of Geophysical Research: Oceans*, 131, e2025JC023280, <https://doi.org/10.1029/2025JC023280>.
- Zhao, M., Y. Zhang, A. M. Wilson, W. S. Moore, E. Smith, S. Q. Lang, C. Sheng, **C. Zheng**, H. Li, B. Xu, G. Han, K. Xiao, 2026, Large blue carbon export through submarine groundwater discharge: Insights from a

- marsh-creek basin system, *Global Biogeochemical Cycles*, 40, e2025GB008781, <https://doi.org/10.1029/2025GB008781>.
- Jing, H., Y. Tian*, M. Lancia, **C. Zheng***, 2026, Multi-task deep learning for spatiotemporal reconstruction of groundwater dynamics in the North China Plain, *J. Hydrol.*, 667, 134829, <https://doi.org/10.1016/j.jhydrol.2025.134829>.
- Yang, S., L. Feng, Y. Dai, X. Liu, **C. Zheng**, D.-Z. Wang, et al., 2026, Phytoplankton blooms in the coastal seas around China increase in response to warming, *Journal of Geophysical Research: Oceans*, 131, e2025JC022348, <https://doi.org/10.1029/2025JC022348>.
- Ji, F., J. Shi, S. Yuan, Z. Li, L. Fan, J. Jin, L. Zhu, Y. Yao, **C. Zheng**, 2026, Holistic assessment of seasonally frozen ground changes on the Qinghai–Tibet Plateau, *J. Hydrol.*, 666, 134791.

[Published in 2025]

- Qiu, W., G. Yang, L. Cao, ..., **C. Zheng***, 2025, Risks of per- and polyfluoroalkyl substance exposure through marine fish consumption, *Science*, 390 (6779), 1305–1309, <https://doi.org/10.1126/science.adr0351>.
- Wu, Y., L. Feng*, S. Yang, **C. Zheng***, 2025, Satellite observations reveal recent increases in water clarity in Chinese coastal waters, *Environ. Sci. Technol.*, 59(38), 20452–20461, <https://doi.org/10.1021/acs.est.5c07097>.
- Huang, Z., X. Wang, L. Yang*, A. Palomo, B. Liu, C. Qin, J. Yang, C.B. Andrews, **C. Zheng***, 2025, Quorum sensing enhances Mn(II) oxidation by *Pseudomonas* sp. YoHu13 via elevated Mn(III) intermediate formation, *Journal of Hazardous Materials*, 501, 140735.
- Qiu, W., S. Liu, X. Kang, Y. Liu, B. Xu, C. Pan, J. T. Magnuson, X. Yang, J. Zheng, **C. Zheng**, E. G. Xu, 2025, Tetrabromobisphenol S (TBBPS) causes non-negligible and multigenerational reproductive toxicity in zebrafish, *Environ. Sci. Technol.*, 59(48), 25549–25560.
- Zhang, L., K. Xiao, P. Zhang, K. Wang, D. He, G. Han, **C. Zheng**, 2025, Response of dissolved organic carbon molecular footprints in mangrove tidal flats to extreme rainstorm events, *Carbon Footprints*, 4, 34.
- Li, Z., F. Li, L. Hua, F. Chai, L. Xie, D. Wang, S. Zhang, **C. Zheng**, Z. Wang, X. Jiang, 2025, Unlocking Zeptomolar Single-Molecule Detection by Synergizing Digital Microfluidics and Digital CRISPR, *Journal of the American Chemical Society*, 147(47), 43870–43883.
- Wu, Z., Y. Yao, S. Guo, S. Yang, X. He, M. Lancia, **C. Zheng**, 2025, Graph Fourier deep learning for spatiotemporal and hydrogeological interpretation of groundwater levels in the Yellow River Basin, *Water Resour. Res.*, 61(11), e2025WR041215.
- Li, H., Z. Guo, K. Chen, Y. Zhan, Y. Wang, C. Ding, C. Lu, **C. Zheng**, 2025, Modeling land subsidence under future water stress: The influence of groundwater exploitation, climate change, and inter-basin water diversion, *Water Resour. Res.*, 61(11), e2025WR041105.
- Jing, H., Y. Tian, **C. Zheng***, 2025, Spatiotemporal modeling of surface water–groundwater interactions via multi-task transformer-based learning, *Hydrology*, 12(11), 291.
- Ling, Y., M. Hu, Y. Zeng, Q. Mao, W. Deng, Y. Ben, C.B. Andrews, Z. Xu, M. H. Wong, **C. Zheng**, 2025, Characterizing human exposure to multi-class antibiotics through urine biomonitoring in a Chinese population, *Emerging Contaminants*, 11(4), 100587.
- Yao, Y., S. Guo, C.B. Andrews, F. Zhang, M. Lancia, X. Kuang, **C. Zheng***, 2025, Seeing China’s invisible groundwater: Advances and challenges, *Water Resour. Res.*, 61, e2024WR038980, <https://doi.org/10.1029/2024WR038980>.
- Kong, L., Y. Wang, P. Xiao, Y. Tao, **C. Zheng***, 2025, Typhoon-induced depth-dependent nitrogen release from reservoir sediments: Insights from high-resolution ROV monitoring, *J. Hydrol.*, 663, Part B, 134242, <https://doi.org/10.1016/j.jhydrol.2025.134242>.
- Huggins, X., T. Gleeson, J. S. Famiglietti, ..., **C. Zheng**, 2025, A review of open data for studying global groundwater in social-ecological systems, *Environ. Res. Lett.*, 20, 093002, <https://doi.org/10.1088/1748-9326/adf127>.
- Galluzzi, M., M. Lancia, **C. Zheng**, V. Castelvetro, E. Lichtfouse, 2025, Do microplastics affect human immune defenses? *Environ. Chem. Lett.*, <https://doi.org/10.1007/s10311-025-01869-w>.
- Yu, S., X. Wang, H. Li, Z. Deng, **C. Zheng**, 2025, Tidal pumping controls transport of foodborne microbial pathogens between coastal groundwater and seawater, *Journal of Hazardous Materials*, 498, 139903, <https://doi.org/10.1016/j.jhazmat.2025.139903>.

- Wu, Y., L. Feng*, X. Liu, Y. Wang, C. Zheng*, 2025, Declining phytoplankton biomass in Chinese coastal oceans linked to climate warming, *Environ. Sci. Technol.*, 59(23), 11607–11615.
- Zhan, Y., Z. Guo, J. Podgorski, ..., C. Zheng, 2025, Changes in meat consumption can improve groundwater quality, *Nature Food*, 6(7), 703–714, <https://doi.org/10.1038/s43016-025-01188-x>.
- Chen, K., E.E. Roden, C. Zheng, 2025, Hydrological controls on riverbed methane emissions: A numerical investigation of hydrodynamic and ebullitive mechanisms from site to basin scales, *Environ. Sci. Technol.*, 59(29), 15170–15180, <https://doi.org/10.1021/acs.est.5c03453>.
- Wei, X., Y. Zhao, Y. Ling, X. Chen, B. Liang, Y. Ben*, C.B. Andrews, Z. Sun, C. Zheng*, 2025, Advancing antibiotic detection in environmental waters: Standardization of solid phase extraction procedures and development of certified reference materials, *Sustainable Horizons*, 15, 100153, <https://doi.org/10.1016/j.horiz.2025.100153>.
- Zhang, R., L. Fan, M. Huang, C. Zheng*, 2025, Spatiotemporal dynamics of land cover on the Tibetan Plateau (2000–2020): Evidence of greening and wetting, *Ecological Frontiers*, <https://doi.org/10.1016/j.ecofro.2025.07.006>.
- Kong, L., Q. Wang, Y. Zhang, Y. Wang, C. Zheng*, 2025, Ultralight TETA-functionalized cellulose aerogels for ultrahigh synchronous indigo and Congo red adsorption: Combined experimental and detailed DFT mechanistic insights, *Journal of Environmental Chemical Engineering*, 13(5), 118444, <https://doi.org/10.1016/j.jece.2025.118444>.
- Tan, Z., H. Zou, M. Lancia, L. Kong, G. Liu, C. Zheng, 2025, Murray’s Law-inspired bionic vein-shaped flow electrode channel on flow capacitive deionization systems: Anti-clogging design and desalination performance optimization, *ACS ES&T Engineering*, 5(11), 3064–3072, <https://doi.org/10.1021/acsestengg.5c00450>.
- Wang, J., J.T. Magnuson, Y. Feng, W. Zhao, C. Gao, C. Zheng, W. Qiu, 2025, High-throughput screening identifies bisphenol P as a potent cardiotoxin, inducing cardiotoxicity through apoptosis and the NF- κ B pathway, *Environ. Sci. Technol.*, 59(29), 14870–14880, <https://doi.org/10.1021/acs.est.5c00573>.
- Ji, F., S. Yuan, L. Fan, L. Zhu, J. Jin, Y. Yao, Y. Liu, T. Guan, C. Zheng, J. Zhang, 2025, Thresholds in land-atmosphere interactions on the Qinghai–Tibet Plateau: Impacts of permafrost degradation via vegetation changes, *J. Hydrol.*, 662, 133912, <https://doi.org/10.1016/j.jhydrol.2025.133912>.
- Wang, X., X. Zhang, Z. Wang, M. Luo, H. Li, C. Zheng, X. Geng, C. Liu, 2025, Review of seawater–groundwater interactions in the coastal earth critical zone of the Bohai Sea, *Earth Critical Zone*, 2, 100041, <https://doi.org/10.1016/j.ecz.2025.100041>.
- Wang, C., J.T. Magnuson, C. Zheng, W. Qiu, 2025, Incidence of pollution, bioaccumulation, biomagnification, and toxic effects of per- and polyfluoroalkyl substances (PFAS) in aquatic ecosystems: A review, *Aquatic Toxicology*, 286, 107469.
- Yan, J., S. Wang, J. Feng, H. He, L. Wang, Z. Sun, C. Zheng, 2025, New 30-m resolution dataset reveals declining soil erosion with regional increases across Chinese mainland (1990–2022), *Remote Sensing of Environment*, 323, 114681.
- Guo, S., Y. Yao, Q. Ji, H. Jin, T. Wang, M. Lancia, X. Meng, C. Zheng, D. Yang, 2025, Groundwater depletion intensified by irrigation and afforestation in the Yellow River Basin: A spatiotemporal analysis using GRACE and well monitoring data with implications for sustainable management, *Journal of Hydrology: Regional Studies*, 59, 102324.
- Zhao, Y., Y. Yao, H. Jin, X. Li, B. Cao, Y. Ran, X. Kuang, C. Zheng, 2025, TTOP model simulation of long-term (1981–2100) permafrost dynamics of the Tibetan Plateau, *Geoderma*, 457, 117287, <https://doi.org/10.1016/j.geoderma.2025.117287>.
- Ji, F., L. Fan, S. Yuan, X. Kuang, L. Zhu, J. Jin, Y. Yao, J. Zhang, C. Zheng, 2025, Permafrost-vegetation controls on water availability over the Qinghai–Tibet Plateau, *Advances in Climate Change Research*, 16(3), 526–537, <https://doi.org/10.1016/j.accre.2025.04.013>.
- Chen, J., X. Kuang, L. Fan, C. Zheng, 2025, Inter-basin groundwater flows in the Yarlung Zangbo River Basin and its surrounding areas: A perspective, *Science China Technological Sciences*, 68(4), 1450501.
- Yao, Y., C. Zheng, 2025, Groundwater in the Tibetan Plateau: Advances and challenges, *Hydrogeology & Engineering Geology*, 52(5), 24–33, <https://doi.org/10.16030/j.cnki.issn.1000-3665.202409034>.

- Lancia, M., L. Yang*, Z. Liu, J. Xu, J. Yu, S. Viaroli, J. Zou, C.B. Andrews, **C. Zheng***, 2025, Undervalued groundwater resources over the major tectonic lines of southeastern China, *Water Resour. Res.*, 61(3), e2024WR038754.
- Wang, Y., D. Zhao, R.I. Woolway, H. Yan, H.W. Paerl, Y. Zheng, **C. Zheng**, L. Feng, 2025, Global elevation of algal bloom frequency in large lakes over the past two decades, *National Science Review*, 12 (3), nwaf011.
- Fan, L., X. Kuang, C. Ouyang, K. Chen, **C. Zheng***, 2025, Climatic controls on hydrological landslide triggering in the northern Himalayas, *Water Resour. Res.*, 61(2), e2024WR039611.
- Sun, X., L. Tian, H. Fang, D.E. Walling, L. Huang, E. Park, D. Li, **C. Zheng**, L. Feng, 2025, Changes in global fluvial sediment concentrations and fluxes between 1985 and 2020, *Nature Sustainability*, 8, 142–151.
- Zhai, X., K. Chen, X. Liang, G. Wang, X. Zhao, Z. Guo, R. Zhou, C. Ding, C. Liu, **C. Zheng**, 2025, Assessment of ensemble data assimilation based heat tracer method for estimating surface water–groundwater interaction at seasonal timescale under complex field conditions, *J. Hydrol.*, 649, 132469.
- Kong, M., Q. Guan*, L. Feng, **C. Zheng***, J. Tang, 2025, Changes in land-leaching nitrogen and its linkages to lake algal blooms in China, *Environmental Research: Ecology*, 4, 025002.
- Pan, Z., Z. Guo, K. Chen, W. Lu, **C. Zheng**, 2025, A deep adaptive bidirectional generative adversarial neural network (Bi-GAN) for groundwater contamination source estimation, *J. Hydrol.*, 653, 132753.
- Galluzzi, M., M. Lancia, **C. Zheng**, V. Re, V. Castelvetro, S. Guo, S. Viaroli, 2025, Atomic Force Microscopy (AFM) nanomechanical characterization of micro- and nanoplastics to support environmental investigations in groundwater, *Emerging Contaminants*, 11, 100478.
- Xu, S., Z. Ye, S.C. Hsu*, X. Liu, **C. Zheng***, 2025, Development of data-driven algal bloom alert models with low temporal resolution data and application to Hong Kong rivers, *Journal of Hydrology: Regional Studies*, 57, 102108.
- Wang, J., D. Fang, J. T. Magnuson, B. Xu, **C. Zheng**, D. Schlenk, L. Tang, W. Qiu, 2025, Perfluorodecanoic acid (PFDA) disrupts immune regulation via the toll-like receptor signaling pathway in zebrafish, *Environ. Sci. Technol.*, 59(36), 19119–19130, <https://doi.org/10.1021/acs.est.5c04320>.
- Huang, Y., P. Zhang, H.B. Peng, F. Pan, Y. Liu, K. Wang, Y. Cai, J. Wang, Z. Wang, **C. Zheng**, H. Li, D. He, J. Wang, C. Dang, P. Wu, J. Chen, D. Maher, K. Xiao, 2025, Benthic bioturbations weaken the stability of blue carbon storage, *National Science Open*, 4, 20240052.
- Fang, D., G. Yang, B. Xu, J. Li, J. Lin, **C. Zheng**, J.T. Magnuson, W. Qiu, 2025, A universal method for the simultaneous determination of environmental pollutants in marine biological samples: Per- and polyfluoroalkyl substances and antibiotics as a case study, *ACS ES&T Water*, 5(1), 274–283.

[Published in 2024]

- Liao, H., Y.J. He, S. Zhang, X. Kang, X. Yang, B. Xu, J.T. Magnuson, S. Wang, **C. Zheng**, W. Qiu, 2024, Perfluorohexanesulfonic acid (PFHxS) induces hepatotoxicity through the PPAR signaling pathway in larval zebrafish (*Danio rerio*), *Environ. Sci. Technol.*, 58(52), 22894–22906.
- Wang, X., P. Xu, M. Lu, X. Li, M. Luo, S. Yu, C. Zhang, H. Li, **C. Zheng**, 2024, Metagenomics evidence of a novel Thermoplasmata-like archaeon decomposing heterodisulfide in nonacidic estuary–ocean sediment, *ACS ES&T Water*, 4(12), 5800–5810.
- Ding, C., Z. Guo, K. Chen, L. Fan, Y. Zhan, X. Kuang, B. Cui, **C. Zheng**, 2024, The effect of seasonally frozen ground on rainfall infiltration and groundwater discharge in Qinghai Lake Basin, China, *Frontiers in Water*, 6, 1495763.
- Xu, Y., L. Feng, H. Fang, X.P. Song, F. Giesecke, A. Kariryaa, S. Oehmcke, L. Gibson, X. Jiang, R. Lin, R.I. Woolway, **C. Zheng**, M. Brandt, R. Fensholt, 2024, Global mapping of human-transformed dike–pond systems, *Remote Sensing of Environment*, 313, 114354.
- Gao, C., H. Liao, Y. Wang, Y. Zheng, **C. Zheng**, W. Qiu, 2024, Research progress of ecotoxicology of PPCP pollutants, *Progress in Chemistry*, 36(9), 1363–1379.
- Kong, L., Y. Wang, D. Cui, W. He, C. Zhang, **C. Zheng**, 2024, Application of single-cell Raman-deuterium isotope probing to reveal the resistance of marine ammonia-oxidizing archaea SCM1 against common antibiotics, *Chemosphere*, 362, 142500.

- Shu, Y., H. Cui, L. Song, L. Gan, S. Xu, J. Wu, **C. Zheng**, 2024, Influence of sea ice on ship routes and speed along the Arctic Northeast Passage, *Ocean & Coastal Management*, 256, 107320, <https://doi.org/10.1016/j.ocecoaman.2024.107320>.
- Zhan, Y., B. Murugesan, Z. Guo, H. Li, K. Chen, V. Babovic, **C. Zheng**, 2024, Managed aquifer recharge in island aquifer under thermal influences on the fresh-saline water interface, *J. Hydrol.*, 638, 131496, <https://doi.org/10.1016/j.jhydrol.2024.131496>.
- Zhan, Y., Z. Guo, B. Yan, K. Chen, Z. Chang, V. Babovic, **C. Zheng**, 2024, Physics-informed identification of PDEs with LASSO regression, examples of groundwater-related equations, *J. Hydrol.*, 638, 131504, <https://doi.org/10.1016/j.jhydrol.2024.131504>.
- Viaroli, S., M. Lancia, J.Y. Lee, Y. Ben, R. Giannecchini, V. Castelvetro, R. Petrini, **C. Zheng**, V. Re, 2024, Limits, challenges, and opportunities of sampling groundwater wells with plastic casings for microplastic investigations, *Sci. Total Environ.*, 946, 174259.
- Kuang, X., J. Liu*, B.R. Scanlon, J.J. Jiao, S. Jasechko, M. Lancia, B.K. Biskaborn, Y. Wada, H. Li, Z. Zeng, Z. Guo, Y. Yao, T. Gleeson, J.-P. Nicot, X. Luo, Y. Zou, **C. Zheng***, 2024, The changing nature of groundwater in the global water cycle, *Science*, 383, eadf0630, <https://doi.org/10.1126/science.adf0630>.
- Ma, R., K. Chen, C.B. Andrews, S.P. Loheide, A.H. Sawyer, X. Jiang, M.A. Briggs, P.G. Cook, S.M. Gorelick, H. Prommer, B.R. Scanlon, Z. Guo, **C. Zheng***, 2024, Methods for quantifying interactions between groundwater and surface water, *Annual Review of Environment and Resources*, 49, 623–653, <https://doi.org/10.1146/annurev-environ-111522-104534>.
- Chen, K., Z. Guo*, M. Yin, X. Liang, Z. Chang, S. Yang, X. Wei, X. Zhai, **C. Zheng***, 2024, Using rainfall-induced groundwater temperature response to estimate lateral flow velocity, *Water Resour. Res.*, 60(11), e2023WR036715, <https://doi.org/10.1029/2023WR036715>.
- Yu, J., Y. Tian*, X. Wang, T. Sun, M. Lancia, C.B. Andrews, **C. Zheng***, 2024, Integrated modeling of flow, soil erosion, and nutrient dynamics in a regional watershed: Assessing natural and human-induced impacts, *Water Resour. Res.*, 60(9), e2024WR037531, <https://doi.org/10.1029/2024WR037531>.
- Yin, M., M. Lancia, Y. Zhang, W. Qiu, **C. Zheng***, 2024, Experimental and modeling insights into mixing-limited reactive transport in heterogeneous porous media: Role of stagnant zones, *Water Research*, 266, 122383, <https://doi.org/10.1016/j.watres.2024.122383>.
- Chen, K., Z. Guo, Y. Zhan, E.E. Roden*, **C. Zheng***, 2024, Heterogeneity in permeability and particulate organic carbon content controls the redox condition of riverbed sediments at different timescales, *Geophysical Research Letters*, 51 (11), e2023GL107761.
- Pang, M., E. Du*, **C. Zheng***, 2024, Contaminant transport modeling and source attribution with attention-based graph neural network, *Water Resour. Res.*, 60(6), e2023WR035278.
- Hua, S., H. Jing, G. Qiu, X. Kuang, C.B. Andrews, X. Chen, **C. Zheng***, 2024, Long-term trends in human-induced water storage changes for China detected from GRACE data, *Journal of Environmental Management*, 368, 122253, <https://doi.org/10.1016/j.jenvman.2024.122253>.
- Zhan, Y., Z. Guo*, S. Ruzzante, T. Gleeson, C.B. Andrews, V. Babovic, **C. Zheng***, 2024, Assessment of spatiotemporal risks for nationwide groundwater nitrate contamination, *Sci. Total Environ.*, 947, 174508, <https://doi.org/10.1016/j.scitotenv.2024.174508>.
- Xu, S., S.C. Hsu*, E. Du, L. Song, C.M. Lam, X. Liu, **C. Zheng***, 2024, Agent-based modeling in water science: From macroscale to microscale, *ACS ES&T Water*, 4(4), 1206–1219, <https://doi.org/10.1021/acsestwater.3c00574>.
- Fan, L., F. Ji, X. Kuang, Z. Guo, R. Zhang, **C. Zheng***, 2024, Impacts of permafrost degradation on streamflow in the northern Himalayas, *Science China Earth Sciences*, 67, 1990–2000, <https://doi.org/10.1007/s11430-023-1297-4>.
- Zhou, Y., X. Liang, E. Ma, K. Chen, K. Schilling, T. Zheng, Y. Zheng, Y.-K. Zhang, **C. Zheng**, 2024, Spectral analysis of hydrological signals to estimate watershed properties considering impacts of unsaturated zone, *Water Resour. Res.*, 60(11), e2023WR036680, <https://doi.org/10.1029/2023WR036680>.
- Feng, L., Y. Wang, X. Hou, B. Qin, T. Kutser, F. Qu, N. Chen, H.W. Paerl, **C. Zheng**, 2024, Harmful algal blooms in inland waters, *Nature Reviews Earth & Environment*, 5, 631–644, <https://doi.org/10.1038/s43017-024-00578-2>.
- Gu, X., X. Feng, S. Yang, R. Wang, Q. Zeng, Y. Shangguan, J. Liang, H. Zhou, Z. Li, Z. Lin, **C. Zheng**, Z. Xu, H. Chen, 2024, Photovoltaic-driven dual-oxidation seawater electrolyzer for sustainable lithium

- recovery, *Proceedings of the National Academy of Sciences*, 121(43), e2414741121, <https://doi.org/10.1073/pnas.2414741121>.
- Qiu, L., J. He, C. Yue, P. Ciais, **C. Zheng**, 2024, Substantial terrestrial carbon emissions from global expansion of impervious surface area, *Nature Communications*, 15, 6456, <https://doi.org/10.1038/s41467-024-50840-w>.
- Xiao, K., Y. Wu, F. Pan, Y. Huang, H. Peng, M. Lu, Y. Zhang, H. Li, Y. Zheng, **C. Zheng**, et al., 2024, Widespread crab burrows enhance greenhouse gas emissions from coastal blue carbon ecosystems, *Communications Earth & Environment*, 5, 437, <https://doi.org/10.1038/s43247-024-01621-2>.
- Akbariforouz, M., Q. Zhao, A. Stocchino, **C. Zheng**, 2024, Evaluating the deformation modulus at representative elementary volume using electrical resistivity tomography, *International Journal of Rock Mechanics and Mining Sciences*, 183, 105935, <https://doi.org/10.1016/j.ijrmms.2024.105935>.
- He, Y.-J., H. Liao, G. Yang, W. Qiu, R. Xuan, G. Zheng, B. Xu, X. Yang, J.T. Magnuson, D. Schlenk, **C. Zheng**, 2024, Perfluorohexanesulfonic acid (PFHxS) impairs lipid homeostasis in zebrafish larvae through activation of PPAR α , *Environ. Sci. Technol.*, 58(37), 16258–16268, <https://doi.org/10.1021/acs.est.4c03053>.
- Chen, H., Y. Zou, X. Kang, G. Yang, X. Yang, Y. Yao, J.T. Magnuson, X. Cao, W. Qiu, E.G. Xu, **C. Zheng**, 2024, Perfluorooctane sulfonamide induced autotoxic effects on the zebrafish immune system, *Environ. Sci. Technol.*, 58(30), 13205–13216, <https://doi.org/10.1021/acs.est.4c01153>.
- Shu, Y., B. Han, L. Song, T. Yan, L. Gan, Y. Zhu, **C. Zheng**, 2024, Analyzing the spatio-temporal correlation between tide and shipping behavior at estuarine port for energy-saving purposes, *Applied Energy*, 367, 123382, <https://doi.org/10.1016/j.apenergy.2024.123382>.
- Wu, R., Z. Guo, Y. Zhan, G. Cao, K. Chen, Z. Chang, H. Li, X. He, **C. Zheng**, 2024, Impacts of land surface nitrogen input on groundwater quality in the North China Plain, *ACS ES&T Water*, 4(6), 2369–2381, <https://doi.org/10.1021/acsestwater.3c00712>.
- Zhu, M., X. Kuang, C. Song, Y. Feng, Q. He, Y. Zou, H. Zhou, **C. Zheng**, 2024, Glacier-fed lakes are significant sinks of carbon dioxide in the Southeastern Tibetan Plateau, *Journal of Geophysical Research: Biogeosciences*, 129 (4), e2023JG007774.
- Feng, Y., K. Jiang, X. Kuang, Y. Yao, S. Liang, K. Yu, J. Liu, **C. Zheng**, 2024, The dual role of meltwater in buffering river runoff in the Yarlung Zangbo Basin, Tibetan Plateau, *Journal of Hydrology: Regional Studies*, 54, 101857, <https://doi.org/10.1016/j.ejrh.2024.101857>.
- Chang, Z., Z. Guo, K. Chen, Z. Wang, Y. Zhan, W. Lu, **C. Zheng**, 2024, A comparison of inversion methods for surrogate-based groundwater contamination source identification with varying degrees of model complexity, *Water Resour. Res.*, 60(4), e2023WR036051, <https://doi.org/10.1029/2023WR036051>.
- Li, Z., K. Xiao, Y. Li, F. Pan, H. Li, Y. Zheng, **C. Zheng**, Y. Liu, 2024, Surface water–groundwater interactions drive the spatial variability of dissolved heavy metals and interfacial fluxes in mangrove intertidal zones, *J. Hydrol.*, 632, 130884, <https://doi.org/10.1016/j.jhydrol.2024.130884>.
- Hao, Y., Q. Gong, X. Kuang, Y. Feng, H. Zhou, **C. Zheng**, 2024, Degassing of mantle-derived helium from hot springs along the India-Asia continental collision settings: Origins, migration velocity and flux, *Geochemistry, Geophysics, Geosystems*, 25, e2023GC011297, <https://doi.org/10.1029/2023GC011297>.
- Zhang, Y., Y. Guo, J. Wang, D.T. Maher, X. Geng, Q. Wang, K. Xiao, H. Ding, H. Li, **C. Zheng**, Z. Wang, X. Wang, 2024, Dissolved carbon dynamics and exchange in a high permeability beach aquifer, *Geochimica et Cosmochimica Acta*, 368, 64–75, <https://doi.org/10.1016/j.gca.2024.01.014>.
- Wang, Y., J. Ni, J. Wan, J. Xu, **C. Zheng**, A.G.L. Borthwick, 2024, Global river economic belts can become more sustainable by considering economic and ecological processes, *Communications Earth & Environment*, 5(1), 18, <https://doi.org/10.1038/s43247-023-01189-3>.
- Wang, J., W. Qiu, H. Cheng, T. Chen, Y. Tang, J.T. Magnuson, X. Xu, E.G. Xu, **C. Zheng**, 2024, Caught in fish gut: Uptake and inflammatory effects of nanoplastics through different routes in the aquatic environment, *ACS ES&T Water*, 4 (1), 91–102, <https://doi.org/10.1021/acsestwater.3c00392>.
- Xu, B., M. Pu, K. Jiang, W. Qiu, E.G. Xu, J. Wang, J.T. Magnuson, **C. Zheng**, 2024, Maternal or paternal antibiotics? Intergenerational transmission and reproductive toxicity in zebrafish, *Environ. Sci. Technol.*, 58 (2), 1287–1298, <https://doi.org/10.1021/acs.est.3c06090>.

He, Q., X. Kuang, E. Ma, J. Chen, Y. Feng, **C. Zheng**, 2024, Evolution of runoff components and groundwater discharge under rapid climate warming: Lhasa river basin, Tibetan Plateau, *J. Hydrol.*, 628, 130556, <https://doi.org/10.1016/j.jhydrol.2023.130556>.

[Published in 2023]

- Liu, C., T.K. Lowenstein, A. Wang, **C. Zheng**, J. Yu, 2023, Brine: Genesis and sustainable resource recovery worldwide, *Annual Review of Environment and Resources*, 48, 371–394, <https://doi.org/10.1146/annurev-environ-112621-094745>.
- Wang, X., Y. Tian*, J. Yu, M. Lancia, J. Chen, K. Xiao, Y. Zheng, C.B. Andrews, **C. Zheng***, 2023, Complex effects of tides on coastal groundwater revealed by high-resolution integrated flow modeling, *Water Resour. Res.*, 59 (10), e2022WR033942.
- Chen, K., S. Yang, E.E. Roden, X. Chen, K.Y. Chang, Z. Guo, X. Liang, E. Ma, L. Fan, **C. Zheng***, 2023, Influence of vertical hydrologic exchange flow, channel flow, and biogeochemical kinetics on CH₄ emissions from rivers, *Water Resour. Res.*, 59(12), e2023WR035341.
- Yin, M., K. Xiao*, P. Xin, H. Li, **C. Zheng***, E. Smith, A.M. Wilson, 2023, Randomly distributed crab burrows enhance groundwater flow and salt transport in creek-marsh systems, *Water Resour. Res.*, 59(11), e2023WR035612.
- Fan, L., X. Kuang, D. Or, **C. Zheng***, 2023, Streamflow composition and water “imbalance” in the northern Himalayas, *Water Resour. Res.*, 59(10), e2022WR034243.
- Guo, Z., G.E. Fogg*, K. Chen, R. Pauloo, **C. Zheng***, 2023, Sustainability of regional groundwater quality in response to managed aquifer recharge, *Water Resour. Res.*, 59(1), e2021WR031459, <https://doi.org/10.1029/2021WR031459>.
- Wang, Z., Q. Wang, Y. Guo, S. Yu, K. Xiao, Y. Zhang, H. Li, **C. Zheng**, X. Geng, X. Zhang, H. Li, X. Wang, 2023, Seawater–groundwater interaction governs trace metal zonation in a coastal sandy aquifer, *Water Resour. Res.*, 59(9), e2022WR032828.
- Dai, Y., S. Yang, D. Zhao, C. Hu, W. Xu, D.M. Anderson, Y. Li, X. Song, D.G. Boyce, L. Gibson, **C. Zheng**, L. Feng, 2023, Coastal phytoplankton blooms expand and intensify in the 21st century, *Nature*, 615 (7951), 280–284.
- Scanlon, B.R., S. Fakhreddine, A. Rateb, I. de Graaf, J. Famiglietti, T. Gleeson, R.Q. Grafton, E. Jobbagy, S. Kebede, S.R. Kolusu, L.F. Konikow, D. Long, M. Mekonnen, H.M. Schmied, A. Mukherjee, A. MacDonald, R.C. Reedy, M. Shamsudduha, C.T. Simmons, A. Sun, R.G. Taylor, K.G. Villholth, C.J. Vörösmarty, **C. Zheng**, 2023, Global water resources and the role of groundwater in a resilient water future, *Nature Reviews Earth & Environment*, 4, 87–101, <https://doi.org/10.1038/s43017-022-00378-6>.
- Chen, K., X. Chen, J.C. Stegen, J.A. Villa, G. Bohrer, X. Song, K.Y. Chang, M. Kaufman, X. Liang, Z. Guo, E.E. Roden*, **C. Zheng***, 2023, Vertical hydrologic exchange flows control methane emissions from riverbed sediments, *Environ. Sci. Technol.*, 57(9), 4014–4026, <https://doi.org/10.1021/acs.est.2c07676>.
- Cai, Y., Y. Yin, X. Kuang, Y. Hao, J. Liu, **C. Zheng**, 2023, Review: Specific storage in aquitards, *Hydrogeology Journal*, 31(8), 1999–2019.
- Xuan, R., X. Qiu, J. Wang, S. Liu, J.T. Magnuson, B. Xu, W. Qiu, **C. Zheng**, 2023, Hepatotoxic response of perfluorooctane sulfonamide (PFOSA) in early life stage zebrafish (*Danio rerio*) is greater than perfluorooctane sulfonate (PFOS), *Journal of Hazardous Materials*, 461, 132552.
- Qiu, L., L. Fan, L. Sun, Z. Zeng, L. Feng, C. Yue*, **C. Zheng***, 2023, Higher burn severity stimulates postfire vegetation and carbon recovery in California, *Agricultural and Forest Meteorology*, 342, 109750.
- Xie, X., J. Shi, K. Pi, Y. Deng, B. Yan, L. Tong, L. Yao, Y. Dong, J. Li, L. Ma, **C. Zheng**, G. Jiang, 2023, Groundwater quality and public health, *Annual Review of Environment and Resources*, 48, 395–418.
- Hao, Y., X. Kuang, Y. Feng, Y. Wang, H. Zhou, **C. Zheng**, 2023, Discovery and genesis of helium-rich geothermal fluids along the India–Asia continental convergent margin, *Geochimica et Cosmochimica Acta*, 360, 175–191.
- Ye, H., K. Xiao, L. Zhang, F. Pan, H. Li, E. Hou, Y. Zheng, **C. Zheng**, 2023, Extreme rainstorms change organic matter compositions and regulate greenhouse gas production in mangrove sediments, *Agriculture, Ecosystems & Environment*, 357, 108694.

- Lu, M., X. Luo, J.J. Jiao, H. Li, X. Kuang, X. Wang, Y. Feng, **C. Zheng**, 2023, Uncovering the processes of microbial community assembly in the near-surface sediments of a climate-sensitive glacier-fed lake, *Journal of Environmental Management*, 345, 118714.
- Yao, Y., Y. Zhao, X. Li, D. Feng, C. Shen, C. Liu, X. Kuang, **C. Zheng**, 2023, Can transfer learning improve hydrological predictions in the alpine regions? *J. Hydrol.*, 625, 130038.
- Yang, S., K. Chen*, B. Zhu, W. Zhang, M. Yin, E. Du, **C. Zheng***, 2023, The influence of nitrogen fertilization on crop production and ecohydrology in an endorheic river basin, *J. Hydrol.*, 625, 130035.
- Wei, X., J. Yu, Y. Tian*, Y. Ben, Z. Cai, **C. Zheng***, 2023, Comparative performance of three machine learning models in predicting influent flow rates and nutrient loads at wastewater treatment plants, *ACS ES&T Water*, 4(3), 1024–1035, <https://doi.org/10.1021/acsestwater.3c00155>.
- Dong, P., M. Yin, Y. Zhang, K. Chen, M. Finkel, P. Grathwohl, **C. Zheng***, 2023, A Fractional-order dual-continuum model to capture non-Fickian solute transport in a regional-scale fractured aquifer, *Journal of Contaminant Hydrology*, 258, 104231.
- He, Q., X. Kuang, E. Ma, J. Chen, Y. Feng, **C. Zheng**, 2023, Reconstructing runoff components and glacier mass balance with climate change: Niyang River basin, southeastern Tibetan Plateau, *Frontiers in Earth Science*, 11, 1165390, <https://doi.org/10.3389/feart.2023.1165390>.
- Du, E., F. Wu, H. Jiang, N. Guo, Y. Tian, **C. Zheng***, 2023, Development of an integrated socio-hydrological modeling framework for assessing the impacts of shelter location arrangement and human behaviors on flood evacuation processes, *Hydrology and Earth System Sciences*, 27 (7), 1607–1626.
- Zhang, S., M. Zheng, G. Yang, T. Zhang, J.T. Magnuson, H. Chen, **C. Zheng***, W. Qiu*, 2023, Sunlight-mediated CaO₂ inactivation of pathogen indicator organisms in surface water system: Roles of reactive species, characterization of pathogen inactivation, *Water Research*, 233, 119756.
- Long, Y., L. Song, Y. Shu, B. Li, W. Peijnenburg, **C. Zheng**, 2023, Evaluating the spatial and temporal distribution of emerging contaminants in the Pearl River Basin for regulating purposes, *Ecotoxicology and Environmental Safety*, 257, 114918.
- Wu, J., Y. Feng, **C. Zheng**, Z. Zeng, 2023, Dense flux observations reveal the incapability of evapotranspiration products to capture the heterogeneity of evapotranspiration, *J. Hydrol.*, 622, 129743.
- Pan, F., K. Xiao, Y. Cai, H. Li, Z. Guo, X. Wang, Y. Zheng, **C. Zheng**, B.C. Bostick, H.A. Michael, 2023, Integrated effects of bioturbation, warming and sea-level rise on mobility of sulfide and metalloids in sediment porewater of mangrove wetlands, *Water Research*, 233, 119788.
- Tang, L., W. Qiu, S. Zhang, J. Wang, X. Yang, B. Xu, J.T. Magnuson, E.G. Xu, M. Wu, **C. Zheng**, 2023, Poly- and perfluoroalkyl substances induce immunotoxicity via the TLR pathway in zebrafish: Links to carbon chain length, *Environ. Sci. Technol.*, 57(15), 6139–6149.
- He, Q., X. Kuang, J. Chen, Y. Hao, Y. Feng, P. Wu, **C. Zheng**, 2023, Glacier retreat and its impact on groundwater system evolution in the Yarlung Zangbo source region, Tibetan Plateau, *Journal of Hydrology: Regional Studies*, 47, 101368.
- Wang, Y., S. Yuan, J. Shi, T. Ma, X. Xie, Y. Deng, Y. Du, Y. Gan, Z. Guo, Y. Dong, **C. Zheng**, G. Jiang, 2023, Groundwater quality and health: Making the invisible visible, *Environ. Sci. Technol.*, 57(13), 5125–5136.
- Yu, J., Y. Tian*, H. Jing, T. Sun, X. Wang, C.B. Andrews, **C. Zheng***, 2023, Predicting regional wastewater treatment plant discharges using machine learning and population migration big data, *ACS ES&T Water*, 3 (5), 1314–1328.
- Akbariforouz, M., Q. Zhao, R. Taherdangkoo, A. Baghbanan, C. Butscher, **C. Zheng**, 2023, Prediction of tunnel squeezing in soft sedimentary rocks by geoelectrical data, *Environmental Earth Sciences*, 82(7), 159.
- Deng, Y., Y. Yao, Y. Zhao, D. Luo, B. Cao, X. Kuang, **C. Zheng**, 2023, Impact of climate change on the long-term water balance in the Yarlung Zangbo basin, *Frontiers in Earth Science*, 11, 1107809, <https://doi.org/10.3389/feart.2023.1107809>.
- Xiao, K., F. Pan, Y. Li, Z. Li, H. Li, Z. Guo, X. Wang, **C. Zheng**, 2023, Coastal aquaculture regulates phosphorus cycling in estuarine wetlands: mobilization, kinetic resupply, and source-sink process, *Water Research*, 234, 119832.

- Liu, S., W. Qiu, R. Li, B. Chen, X. Wu, J.T. Magnuson, B. Xu, S. Luo, E.G. Xu, **C. Zheng**, 2023, Perfluorononanoic acid induces neurotoxicity via synaptogenesis signaling in zebrafish, *Environ. Sci. Technol.*, 57(9), 3783–3793.
- Zhang, Y., H. Zheng, X. Zhang, L.R. Leung, C. Liu, **C. Zheng**, Y. Guo, F.H.S. Chiew, D. Post, D. Kong, H.E. Beck, C. Li, G. Blöschl, 2023, Future global streamflow declines are probably more severe than previously estimated, *Nature Water*, 1, 261–271, <https://doi.org/10.1038/s44221-023-00030-7>.
- Kong, L., Q. Wang, Y. Wang, Q. Yan, W. Qiu, **C. Zheng***, 2023, Sustainable Cu₂(OH)₂CO₃/g-C₃N₄/cellulose acetate-derived porous composite membrane for Congo red and tetracycline removal with photocatalytic self-cleaning properties under natural solar irradiation, *Sustainable Horizons*, 5, 100047, <https://doi.org/10.1016/j.horiz.2023.100047>.
- Pang, M., E. Du*, **C. Zheng***, 2023, A data-driven approach to exploring the causal relationships between distributed pumping activities and aquifer drawdown, *Sci. Total Environ.*, 870, 161998, <https://doi.org/10.1016/j.scitotenv.2023.161998>.
- Xu, R., Z. Zeng, M. Pan, A.D. Ziegler, J. Holden, D.V. Spracklen, L.E. Brown, X. He, D. Chen, B. Ye, H. Xu, S. Jerez, **C. Zheng**, J. Liu, P. Lin, Y. Yang, J. Zou, D. Wang, M. Gu, Z. Yang, D. Li, J. Huang, V. Lakshmi, E.F. Wood, 2023, A global-scale framework for hydropower development incorporating strict environmental constraints, *Nature Water*, 1, 113–122, <https://doi.org/10.1038/s44221-022-00004-1>.
- Zhou, H., X. Kuang, Y. Hao, C. Wang, Y. Feng, Y. Zou, M. Zhu, **C. Zheng**, 2023, Magmatic fluid input controlling the geochemical and isotopic characteristics of geothermal waters along the Yadong-Gulu rift, southern Tibetan Plateau, *J. Hydrol.*, 619, 129196, <https://doi.org/10.1016/j.jhydrol.2023.129196>.
- Chen, K., M. Yin, Z. Guo, X. Liang, X. Wei, S. Yang, X. Zhai, **C. Zheng***, 2023, Estimating lateral groundwater inflow to rivers using heat as a tracer, *J. Hydrol.*, 617, 128965.
- Guo, Z., K. Chen, S. Yi, **C. Zheng***, 2023, Response of groundwater quality to river-aquifer interactions during managed aquifer recharge: A reactive transport modeling analysis, *J. Hydrol.*, 616, 128847.
- Jing, H., X. He, Y. Tian, M. Lancia, G. Cao, A. Crivellari, Z. Guo, **C. Zheng***, 2023, Comparison and interpretation of data-driven models for simulating site-specific human-impacted groundwater dynamics in the North China Plain, *J. Hydrol.*, 616, 128751.
- Akbariforouz, M., Q. Zhao, K. Chen, A. Baghbanan, R.N. Dehnavi, **C. Zheng**, 2023, Statistical study of squeezing for soft rocks based on factor and regression analyses of effective parameters, *International Journal of Rock Mechanics and Mining Sciences*, 163, 105306.
- Yin, M., R. Ma, Y. Zhang, J. Lin, Z. Guo, **C. Zheng**, 2023, Competitive control of multiscale aquifer heterogeneity on solute transport in an alluvial aquifer, *J. Hydrol.*, 616, 128819.
- Uchenna, U.P., M. Lancia, S. Viaroli, A.N. Ugbaja, M. Galluzzi, **C. Zheng**, 2023, Groundwater sustainability in African Metropolises: Case study from Calabar, Nigeria, *Journal of Hydrology: Regional Studies*, 45, 101314.
- Sun, H., S. Nie, A.I. Packman, Y. Zhang, D. Chen, C. Lu, **C. Zheng**, 2023, Application of Hausdorff fractal derivative to the determination of the vertical sediment concentration distribution, *International Journal of Sediment Research*, 38, 12–23.
- Zheng, C.**, S. Yi, K. Xiao, K. Chen, 2023, *Compendium of Regulations and Technologies for Joint Monitoring and Management of Groundwater and Eco-Environment*, China Environmental Science Press, Beijing, 280 pp.

[Published in 2022]

- Zheng, C.**, 2022, The winding road of a hydrogeologist, *Perspectives of Earth and Space Scientists*, 3, e2020CN000139, <https://doi.org/10.1029/2020CN000139>.
- Lancia, M., Y. Yao, C.B. Andrews, X. Wang, X. Kuang, J. Ni, S.M. Gorelick, B.R. Scanlon, Y. Wang, **C. Zheng***, 2022, The China groundwater crisis: A mechanistic analysis with implications for global sustainability, *Sustainable Horizons*, 4, 100042, <https://doi.org/10.1016/j.horiz.2022.100042>.
- Yu, J., Y. Tian*, X.J. Wang, X.L. Wang, M. Lancia, H. Li, C.B. Andrews, **C. Zheng***, 2022, A new simulation-optimization framework for estimation of submarine groundwater discharge based on hydrodynamic modeling and isotopic data, *Geophysical Research Letters*, 49, e2022GL098893.

- Xuan, R., W. Qiu, Y. Zhou, J.T. Magnuson, S. Luo, J.B. Greer, B. Xu, J. Liu, E.G. Xu, D. Schlenk, **C. Zheng**, 2022, Parental transfer of an antibiotic mixture induces cardiotoxicity in early life-stage zebrafish: A cross-generational study, *Sci. Total Environ.*, 849, 157726.
- Xu, S., S. Zheng, Z. Huang, L. Song, Y. Long, X. Zhan, L. Jiang, Y. Wang, Y. Shu, **C. Zheng**, 2022, Assessing progress towards sustainable development in Shenzhen 2005–2019, *Journal of Cleaner Production*, 349, 131496.
- Xiao, K., F. Pan, I.R. Santos, Y. Zheng, **C. Zheng**, N. Chen, Z. Lu, F. Wang, Z. Li, H. Li, 2022, Crab bioturbation drives coupled iron-phosphate-sulfide cycling in mangrove and salt marsh soils, *Geoderma*, 424, 115990.
- Tong, Y., L. Feng, D. Zhao, W. Xu, **C. Zheng**, 2022, Remote sensing of chlorophyll-a concentrations in coastal oceans of the Greater Bay Area in China: Algorithm development and long-term changes, *International Journal of Applied Earth Observation and Geoinformation*, 112, 102922.
- Shuai, C., B. Zhao, X. Chen, J. Liu, **C. Zheng**, S. Qu, J.-P. Zou, M. Xu, 2022, Quantifying the impacts of COVID-19 on Sustainable Development Goals using machine learning models, *Fundamental Research*, 4(4), 890–897, <https://doi.org/10.1016/j.fmre.2022.06.016>.
- Ma, R., M. Yan, P. Han, T. Wang, B. Li, S. Zhou, T. Zheng, Y. Hu, A.G.L. Borthwick, **C. Zheng**, J. Ni, 2022, Deficiency and excess of groundwater iodine and their health associations, *Nature Communications*, 13, 7354.
- Lu, M., X. Wang, H. Li, J.J. Jiao, X. Luo, M. Luo, S. Yu, K. Xiao, X. Li, W. Qiu, **C. Zheng**, 2022, Microbial community assembly and co-occurrence relationship in sediments of the river-dominated estuary and the adjacent shelf in the wet season, *Environmental Pollution*, 308, 119572.
- Li, Z., F. Pan, K. Xiao, H. Li, **C. Zheng**, X. Wang, Y. Zhang, Q. Wang, L. Zhang, 2022, An integrated study of the spatiotemporal character, pollution assessment, and migration mechanism of heavy metals in the groundwater of a subtropical mangrove wetland, *J. Hydrol.*, 612, 128251.
- Li, X., G. Cheng, B. Fu, J. Xia, L. Zhang, D. Yang, **C. Zheng**, S. Liu, X. Li, C. Song, S. Kang, X. Li, T. Che, Y. Zheng, Y. Zhou, H. Wang, Y. Ran, 2022, Linking Critical Zone With Watershed Science: The Example of the Heihe River Basin, *Earth's Future*, 10, e2022EF002966.
- Kong, L., Q. Yan, Y. Wang, Q. Wang, C.B. Andrews, **C. Zheng***, 2022, Self-supported trimetallic NiZnLa nanosheets on hierarchical porous graphene oxide-polymer composite fibers for enhanced phosphate removal from water, *Journal of Colloid and Interface Science*, 628, 807–818.
- Huang, J., Y. Zhou, S. Deng, Y. Shangguan, R. Wang, Q. Ge, X. Feng, Z. Yang, Y. Ji, T. Fan, B. Chen, B. Li, **C. Zheng**, X. Hu, H. Chen, 2022, Photo-assisted reductive cleavage and catalytic hydrolysis-mediated persulfate activation by mixed redox-couple-involved CuFeS₂ for efficient trichloroethylene oxidation in groundwater, *Water Research*, 222, 118885.
- Fan, L., P. Lehmann, **C. Zheng**, D. Or, 2022, Vegetation-promoted soil structure inhibits hydrologic landslide triggering and alters carbon fluxes, *Geophysical Research Letters*, 49, e2022GL100389.
- Chen, H., W. Qiu*, X. Yang, F. Chen, J. Chen, L. Tang, H. Zhong, J.T. Magnuson, **C. Zheng***, E.G. Xu, 2022, Perfluorooctane Sulfonamide (PFOSA) induces cardiotoxicity via aryl hydrocarbon receptor activation in zebrafish, *Environ. Sci. Technol.*, 56, 8438–8448.
- Lin, S., H. Zhang, C. Wang, X.-L. Su, Y. Song, P. Wu, Z. Yang, M.-H. Wong, Z. Cai*, and **C. Zheng***, 2022, Metabolomics reveal nanoplastic-induced mitochondrial damage in human liver and lung cells, *Environ. Sci. Technol.*, 56(17), 12483–12493, <https://doi.org/10.1021/acs.est.2c03980>.
- Zou, J., A. D. Ziegler, D. Chen, G. McNicol, P. Ciais, X. Jiang, **C. Zheng**, ..., Z. Zeng, 2022, Rewetting global wetlands effectively reduces major greenhouse gas emissions, *Nature Geoscience*, 15, 627–632, <https://doi.org/10.1038/s41561-022-00989-0>.
- Liu, X., S. Liu, W. Qiu*, J.T. Magnuson, Z. Liu, G. Yang, H. Chen, Y. Li, X. Xu, **C. Zheng***, 2022, Cardiotoxicity of PFOA, PFOS, and PFOSA in early life stage zebrafish: Molecular changes to behavioral-level response, *Sustainable Horizons*, 3, 100027.
- Pi, X., Q. Luo, L. Feng, ..., **C. Zheng**, W. Li, B.A. Bryan, 2022, Mapping global lake dynamics reveals the emerging roles of small lakes, *Nature Communications*, 13, 5777, <https://doi.org/10.1038/s41467-022-33239-3>.

- Yang, S., K. Chen*, B. Zhu, Y. Tian, Z. Zeng, M. Liu, **C. Zheng***, 2022, How does irrigation alter the water, carbon, and nitrogen budgets in a large endorheic river basin? *J. Hydrol.*, 613, 128317, <https://doi.org/10.1016/j.jhydrol.2022.128317>.
- Zou, Y., X. Kuang, Y. Feng, J.J. Jiao, C. Wang, ..., **C. Zheng**, 2022, Solid water melt dominates the increase of total groundwater storage in the Tibetan Plateau, *Geophysical Research Letters*, 49, e2022GL100092, <https://doi.org/10.1029/2022GL100092>.
- Wang, X., L. Feng, W. Qi, X. Cai, Y. Zheng, L. Gibson, J. Tang, X. Song, J. Liu, **C. Zheng**, B. A. Bryan, 2022, Continuous loss of global lake ice across two centuries revealed by satellite observations and numerical modeling, *Geophysical Research Letters*, 49, e2022GL099022, <https://doi.org/10.1029/2022GL099022>.
- Feng, Y., Z. Zeng*, T. D. Searchinger, ..., **C. Zheng***, 2022, Doubling of annual forest carbon loss over the tropics during the early twenty-first century, *Nature Sustainability*, 5, 444–451, <https://doi.org/10.1038/s41893-022-00854-3>.
- Zheng, C.**, M. R. Hoffmann, D. L. Mauzerall, J. Gan, L. Song, 2022, Expanding our horizons on the Earth's sustainable future, *Sustainable Horizons*, 1, 100001.
- Hou, X., L. Feng, Y. Dai, C. Hu, L. Gibson, J. Tang, Z. Lee, Y. Wang, X. Cai, J. Liu, Y. Zheng, **C. Zheng**, 2022, Global mapping reveals increase in lacustrine algal blooms over the past decade, *Nature Geoscience*, 15, 130–134, <https://doi.org/10.1038/s41561-021-00887-x>.
- Du, E., Y. Tian, X. Cai, Y. Zheng, F. Han, X. Li, M. Zhao, Y. Yang, **C. Zheng***, 2022, Evaluating distributed policies for conjunctive surface water–groundwater management in large river basins: Water uses versus hydrological impacts, *Water Resour. Res.*, 58(1), e2021WR031352.
- Qiu, W., H. Chen, S. Zhang, Y. Xiong, M. Zheng*, T. Zhu, M. Park, J. T. Magnuson, **C. Zheng***, M. Gamal El-Din, 2022, Remediation of surface water contaminated by pathogenic microorganisms using calcium peroxide: Matrix effect, micro-mechanisms and morphological-physiological changes, *Water Research*, 211, 118074, <https://doi.org/10.1016/j.watres.2022.118074>.
- Zhang, W., Y. Tian, Y. Feng, J. Liu, **C. Zheng**, 2022, Water-saving potential of different agricultural management practices in an arid river basin, *Water*, 14, 2072.
- Zheng, C.** and Z. Guo, 2022, Plans to protect China's depleted groundwater, *Science*, 375 (6583), 827.
- Yin, M., R. Ma, Y. Zhang*, K. Chen, Z. Guo, **C. Zheng***, 2022, A dual heterogeneous domain model for upscaling anomalous transport with multi-peaks in heterogeneous aquifers, *Water Resour. Res.*, 58(4), e2021WR031128.
- Ben, Y., M. Hu, F. Zhong, E. Du, Y. Li, H. Zhang, C.B. Andrews, **C. Zheng***, 2022, Human daily dietary intakes of antibiotic residues: Dominant sources and health risks, *Environmental Research*, 212, 113387.
- Qiu, W., B. Chen, L. Tang, **C. Zheng***, B. Xu, Z. Liu, J. T. Magnuson, S. Zhang, D. Schlenk, E. G. Xu*, B. Xing, 2022, Antibiotic chlortetracycline causes transgenerational immunosuppression via NF- κ B, *Environ. Sci. Technol.*, 56(7), 4251–4261.
- Qiu, W., T. Liu, X. Liu, H. Chen, S. Luo, Q. Chen, J. T. Magnuson, **C. Zheng***, E. G. Xu*, D. Schlenk, 2022, Enrofloxacin induces intestinal microbiota-mediated immunosuppression in Zebrafish, *Environ. Sci. Technol.*, 56(12), 8428–8437, <https://doi.org/10.1021/acs.est.1c08712>.
- Pang, M., E. Du, C. A. Shoemaker, **C. Zheng***, 2022, Efficient, parallelized global optimization of groundwater pumping in a regional aquifer with land subsidence constraints, *Journal of Environmental Management*, 310, 114753.
- Ji, F., L. Fan*, X. Kuang, X. Li, B. Cao, G. Cheng, Y. Yao, **C. Zheng***, 2022, How does soil water content influence permafrost evolution on the Qinghai–Tibet Plateau under climate warming? *Environmental Research Letters*, 17, 064012.
- Qi, W., L. Feng, X. Kuang, **C. Zheng**, J. Liu, D. Chen, Y. Tian, Y. Yao, 2022, Divergent and changing importance of glaciers and snow as natural water reservoirs in the eastern and southern Tibetan Plateau, *Journal of Geophysical Research: Atmospheres*, 127 (7), e2021JD035888.
- Qiu, L., J. Chen*, L. Fan, L. Sun, **C. Zheng***, 2022, High-resolution mapping of wildfire drivers in California based on machine learning, *Sci. Total Environ.*, 833, 155155.
- Jin, M., M. Lancia*, Y. Tian, S. Viaroli, C. Andrews, J. Liu, **C. Zheng***, 2022, The role of aquifers in sustaining the sponge city concept in Chinese high-density housing, *Water*, 14 (6), 929.

- Lin, S., M. U. Ali, **C. Zheng**, Z. Cai, M. H. Wong, 2022, Toxic chemicals from uncontrolled e-waste recycling: Exposure, body burden, health impact, *Journal of Hazardous Materials*, 426, 127792.
- Wang, J., Z. Guo*, Y. Tian, L. Fan, W. Zeng, X. Wang, H. Su, M. Lancia, **C. Zheng**, 2022, Development and application of sea water intrusion models, *Hydrogeology & Engineering Geology*, 49 (2), 184–194.
- Xu, B., W. Qiu, J. Du, Z. Wan, J. L. Zhou, H. Chen, R. Liu, J. T. Magnuson, **C. Zheng**, 2022, Translocation, bioaccumulation and distribution of per- and polyfluoroalkyl substances (PFASs) in plants, *iScience*, 25(4), 104061.
- He, Q., X. Kuang, J. Chen, J. J. Jiao, S. Liang, **C. Zheng**, 2022, Subglacial meltwater recharge in the Dongkemadi River Basin, Yangtze River source region, *Groundwater*, 60(3), 434–450.
- Gao, Y., E. Du, S. Yi, Y. Han, **C. Zheng**, 2022, An improved numerical model for groundwater flow simulation with MPFA method on arbitrary polygon grids, *J. Hydrol.*, 606, 127399.
- Fu, C., X. Xu, **C. Zheng**, X. Liu, D. Zhao, W. Qiu, 2022, Photocatalysis of aqueous PFOA by common catalysts of In₂O₃, Ga₂O₃, TiO₂, CeO₂ and CdS: influence factors and mechanistic insights, *Environmental Geochemistry and Health*, 44, 2943–2953, <https://doi.org/10.1007/s10653-021-01127-2>.
- Song, L., X. Zhan, H. Zhang, M. Xu, J. Liu, **C. Zheng***, 2022, How much is global business sectors contributing to sustainable development goals? *Sustainable Horizons*, 1, 100012.
- Ali, M. U., S. Lin, B. Yousaf, Q. Abbas, M. A. M. Munir, A. Rashid, **C. Zheng**, X. Kuang, M. H. Wong, 2022, Pollution characteristics, mechanism of toxicity and health effects of the ultrafine particles in the indoor environment: Current status and future perspectives, *Critical Reviews in Environmental Science and Technology*, 52 (3), 436–473.
- Kong, L., Y. Wang, C.B. Andrews, **C. Zheng***, 2022, One-step construction of hierarchical porous channels on electrospun MOF/polymer/graphene oxide composite nanofibers for effective arsenate removal from water, *Chemical Engineering Journal*, 435, Part 1, 134830.
- Kong, L., J. Zhang, Y. Wang, Q. Yan, J. Xu, X. Quan, C.B. Andrews, Z. Zhang, **C. Zheng***, 2022, Bowknot-like Zr/La bimetallic organic frameworks for enhanced arsenate and phosphate removal: Combined experimental and DFT studies, *Journal of Colloid and Interface Science*, 614, 47–57.
- Luo, M., Y. Zhang, H. Li, W. Hu, K. Xiao, S. Yu, **C. Zheng**, X. Wang, 2022, Pollution assessment and sources of dissolved heavy metals in coastal water of a highly urbanized coastal area: The role of groundwater discharge, *Sci. Total Environ.*, 807, Part 3, 151070.
- Fu, C., B. Xu, H. Chen, X. Zhao, G. Li, Y. Zheng, W. Qiu*, **C. Zheng***, L. Duan, W. Wang, 2022, Occurrence and distribution of antibiotics in groundwater, surface water, and sediment in Xiong'an New Area, China, and their relationship with antibiotic resistance genes, *Sci. Total Environ.*, 807, Part 2, 151011.

[Published in 2021]

- Fan, L., P. Lehmann, **C. Zheng**, D. Or, 2021, The lasting signatures of past landslides on soil stripping from landscapes, *Water Resour. Res.*, 57(12), e2021WR030375.
- Wang, X., Y. Zhang, **C. Zheng**, M. Luo, S. Yu, M. Lu, H. Li, 2021, Submarine groundwater and river discharges affect carbon cycle in a highly urbanized and river-dominated coastal area, *Frontiers in Marine Science*, 8, 817001.
- Zhu, M., X. Kuang, Y. Feng, Y. Hao, Q. He, H. Zhou, J. Chen, Y. Zou, **C. Zheng**, 2021, Hydrochemistry of the Lhasa River, Tibetan Plateau: Spatiotemporal variations of major ions compositions and controlling factors using multivariate statistical approaches, *Water*, 13, 3660.
- Guo, Z., R. Ma, Y. Zhang, **C. Zheng***, 2021, Contaminant transport in heterogeneous aquifers: A critical review of mechanisms and numerical methods of non-Fickian dispersion, *Science China Earth Sciences*, 64, 1224–1241.
- Chen, J., X. Kuang, M. Lancia, Y. Yao, **C. Zheng**, 2021, Analysis of the groundwater flow system in a high-altitude headwater region under rapid climate warming: Lhasa River Basin, Tibetan Plateau, *Journal of Hydrology: Regional Studies*, 36, 100871.
- Xu, M., G. T. Daigger, C. Xi, J. Liu, J. Qu, P. J. Alvarez, P. Biswas, Y. Chen, D. Dolinoy, Y. Fan, H. O. Gao, J. Hao, H. He, D. M. Kammen, M. C. Lemos, F. Liu, N. G. Love, Y. Lu, D. L. Mauzerall, S. A. Miller, Z. Ouyang, J. T. Overpeck, W. Peng, A. Ramaswami, Z. Ren, A. Wang, B. Wu, Y. Wu, J. Zhang, **C. Zheng**, B. Zhu, T. Zhu, W. Chen, G. Liu, S. Qu, C. Wang, Y. Wang, X. Yu, C. Zhang, H. Zhang, 2021, U.S.–

- China collaboration is vital to global plans for a healthy environment and sustainable development, *Environ. Sci. Technol.*, 55(14), 9622–9626.
- Zhang, Y., X. Yu, J. H. Fleckenstein, H. G. Sun, C. Lu, M. Yin, R. Ma, K. Salsky, W. Wei, **C. Zheng**, 2021, Upscaling heat flow in porous media with periodic surface temperature fluctuation using a one-dimensional subordinated heat transfer equation, *Water Resour. Res.*, 57(7), e2020WR027266.
- Feng, Y., A. D. Ziegler, P. R. Elsen, Y. Liu, X. He, D. V. Spracklen, J. Holden, X. Jiang, **C. Zheng**, Z. Zeng, 2021, Upward expansion and acceleration of forest clearance in the mountains of Southeast Asia, *Nature Sustainability*, 4, 892–899.
- Lancia, M., H. Jing, S. M. Steed, **C. Zheng***, 2021, Analysis of hydraulic conductivity characteristics of alluvial sequence in North China Plain, *Environmental Earth Sciences*, 80, 553.
- Gao, Y., S. Yi, **C. Zheng**, 2021, Efficient simulation of groundwater solute transport using the multipoint flux approximation method with arbitrary polygon grids, *J. Hydrol.*, 601, 126637.
- Wei, W., X. Han, Y. Shao, W. Xie, Y. Zhang, Y. Yao, W. Zhao, R. Han, S. Li, Y. Zhang*, **C. Zheng***, 2021, Comparing the effects of humic acid and oxalic acid on Pb(II) immobilization by a green synthesized nanocrystalline hydroxyapatite, *Chemosphere*, 285, 131411.
- Wang, X., L. Feng, L. Gibson, W. Qi, J. Liu, Y. Zheng, J. Tang, Z. Zeng, **C. Zheng**, 2021, High-resolution mapping of ice cover changes in over 33,000 lakes across the North Temperate Zone, *Geophysical Research Letters*, 48(18), e2021GL095614.
- Feng, Y., X. Kuang, S. Liang, S. Liu, Y. Yao, Y. Xie, **C. Zheng**, 2021, A Simple and Efficient Method for Correction of Basin-Scale Evapotranspiration on the Tibetan Plateau, *Remote Sensing*, 13(19), 3958.
- Yu, J., Y. Tian*, X. Wang, **C. Zheng***, 2021, Using machine learning to reveal spatiotemporal complexity and driving forces of water quality changes in Hong Kong marine water, *J. Hydrol.*, 603, 126841.
- Zhang, W., Y. Tian, Z. Sun, **C. Zheng***, 2021, How does plastic film mulching affect crop water productivity in an arid river basin? *Agricultural Water Management*, 258, 107218.
- Liu, S., Y. Yao, X. Kuang, **C. Zheng**, 2021, A preliminary investigation on the climate-discharge relationship in the upper region of the Yarlung Zangbo River basin, *J. Hydrol.*, 603, 127066.
- Jin, M., M. Lancia*, Y. Tian, S. Viaroli, C. Andrews, J. Liu, **C. Zheng***, 2021, Hydrogeological criteria to improve the sponge city strategy of China, *Frontiers in Environmental Science*, 9, 700463.
- Liu, L., Y. Wang, Y. Yang, D. Wang, S. H. Cheng, **C. Zheng**, T. Zhang, 2021, Charting the complexity of the activated sludge microbiome through a hybrid sequencing strategy, *Microbiome*, 9, 205.
- Yao, Y., **C. Zheng***, C.B. Andrews, B.R. Scanlon, X. Kuang, Z. Zeng, S. Jeong, 2021, Role of Groundwater in Sustaining Northern Himalayan Rivers, *Geophysical Research Letters*, 48, e2020GL092354.
- Du, E., X. Cai, F. Wu, T. Foster, **C. Zheng***, 2021, Exploring the impacts of the inequality of water permit allocation and farmers' behaviors on the performance of an agricultural water market, *J. Hydrol.*, 599, 126303.
- Wang, Q., X. Wang, K. Xiao, Y. Zhang, M. Luo, **C. Zheng**, H. Li, 2021, Submarine groundwater discharge and associated nutrient fluxes in the Greater Bay Area, China revealed by radium and stable isotopes, *Geoscience Frontiers*, 12 (5), 101223.
- Wei, W., J. Li, X. Han, Y. Yao, W. Zhao, R. Han, S. Li, Y. Zhang, **C. Zheng***, 2021, Insights into the adsorption mechanism of tannic acid by a green synthesized nano-hydroxyapatite and its effect on aqueous Cu(II) removal, *Sci. Total Environ.*, 778, 146189.
- Song, L., Z. Huang, H. Zhang, K. Tian, N. Yin, Y. Xu, L. Gan, J. Wang, J. Chen, Y. Shu, **C. Zheng**, 2021, The urgency to address the occupational health of Chinese seafarers for sustainable development, *Marine Policy*, 129, 104518.
- Li, X., L. Zhang, Y. Zheng, D. Yang, F. Wu, Y. Tian, F. Han, B. Gao, H. Li, Y. Zhang, Y. Ge, G. Cheng, B. Fu, J. Xia, C. Song, **C. Zheng**, 2021, Novel hybrid coupling of ecohydrology and socioeconomy at river basin scale: A watershed system model for the Heihe River basin, *Environmental Modelling & Software*, 141, 105058.
- Zhou, D., X. Han, Y. Zhang, W. Wei, C. T. Green, H. G. Sun, **C. Zheng**, 2021, Co-transport of biogenic nano-hydroxyapatite and Pb(II) in saturated sand columns: Controlling factors and stochastic modeling, *Chemosphere*, 275, 130078.

- Ali, M. U., S. Lin, B. Yousaf, Q. Abbas, M. A. M. Munir, M. U. Ali, A. Rashid, **C. Zheng**, 2021, Environmental emission, fate and transformation of microplastics in biotic and abiotic compartments: Global status, recent advances and future perspectives, *Sci. Total Environ.*, 791, 148422.
- Clark, M. P., C. H. Luce, A. AghaKouchak, W. Berghuijs, C. H. David, Q. Duan, S. Ge, I. van Meerveld, **C. Zheng**, M. B. Parlange, S. W. Tyler, 2021, Open science: Open data, open models, and open publications? *Water Resour. Res.*, 57(4), e2020WR029480.
- Feng, L., Y. Dai, X. Hou, J. Liu, **C. Zheng**, 2021, Concerns about phytoplankton bloom trends in global lakes, *Nature*, 590, E35–E47.
- Ali, M. U., Y. Yu, B. Yousaf, M. A. M. Munir, S. Ullah, **C. Zheng**, X. Kuang, 2021, Health impacts of indoor air pollution from household solid fuel on children and women, *Journal of Hazardous Materials*, 416, 126127.
- Sun, Y., K. Clauson, M. Zhou, Z. Sun, **C. Zheng**, Y. Zheng, 2021, Hillslopes in headwaters of Qinghai–Tibetan Plateau as hotspots for subsurface dissolved organic carbon processing during permafrost thaw, *Journal of Geophysical Research: Biogeosciences*, 126 (5), e2020JG006222.
- Hu, Y., Y. Lu, J. Edmonds, C. Liu, Q. Zhang, **C. Zheng**, 2021, Irrigation alters source-composition characteristics of groundwater dissolved organic matter in a large arid river basin, Northwestern China, *Sci. Total Environ.*, 767, 144372.
- Dong, P., W. Qiu*, X. He, Y. Zhang, **C. Zheng***, 2021, Analysis of physicochemical factors regulating transport behaviors of sulfonamide antibiotics in saturated porous media, *J. Hydrol.*, 599, 126381.
- Wang, J., Y. Tong, L. Feng, D. Zhao, **C. Zheng**, J. Tang, 2021, Satellite-observed decreases in water turbidity in the Pearl River estuary: Potential linkage with sea-level rise, *Journal of Geophysical Research: Oceans*, 126 (4), e2020JC016842.
- Han, F., Y. Zheng, Y. Tian, X. Li, **C. Zheng**, X. Li, 2021, Accounting for field-scale heterogeneity in the ecohydrological modeling of large arid river basins: strategies and relevance, *J. Hydrol.*, 595, 126045.
- Yan, Y., S. Jeong*, C. E. Park, N. D. Mueller, S. Piao, H. Park, J. Joo, X. Chen, X. Wang, J. Liu, **C. Zheng***, 2021, Effects of extreme temperature on China's tea production, *Environmental Research Letters*, 16 (4), 044040.
- Samadi, A., M. Xie, J. Li, H. Shon, **C. Zheng**, S. Zhao, 2021, Polyaniline-based adsorbents for aqueous pollutants removal: A review, *Chemical Engineering Journal*, 418, 129425.
- Han, X., Y. Zhang, **C. Zheng**, X. Yu, S. Li, W. Wei, 2021, Enhanced Cr(VI) removal from water using a green synthesized nanocrystalline chlorapatite: Physicochemical interpretations and fixed-bed column mathematical model study, *Chemosphere*, 264, 128421.
- Cho, Y., S. Jeong, D. Lee, S. W. Kim, R. J. Park, L. Gibson, **C. Zheng**, C. R. Park, 2021, Foraging trip duration of honeybee increases during a poor air quality episode and the increase persists thereafter, *Ecology and Evolution*, 11(4), 1492–1500.
- Zhou, D., M. L. Brusseau, Y. Zhang, S. Li, W. Wei, H. G. Sun, **C. Zheng**, 2021, Simulating PFAS adsorption kinetics, adsorption isotherms, and nonideal transport in saturated soil with tempered one-sided stable density (TOSD) based models, *Journal of Hazardous Materials*, 411, 125169.
- Du, E., E. Chen, J. Liu, **C. Zheng***, 2021, How do social media and individual behaviors affect epidemic transmission and control? *Sci. Total Environ.*, 761, 144114.
- Kuang, X., **C. Zheng***, J. J. Jiao, J. A. Cherry, J. Chen, 2021, An empirical specific storage-depth model for the Earth's crust, *J. Hydrol.*, 592, 125784.
- Hu, M., Y. Ben, M. H. Wong, and **C. Zheng**, 2021, Trace analysis of multiclass antibiotics in food products by liquid chromatography-tandem mass spectrometry: Method development, *J. Agric. Food Chem.*, 69(5), 1656–1666.
- Xu, B., S. Liu, J. L. Zhou, **C. Zheng**, W. Jin, B. Chen, T. Zhang, W. Qiu, 2021, PFAS and their substitutes in groundwater: Occurrence, transformation and remediation, *Journal of Hazardous Materials*, 412, 125159.
- Wang, X., Y. Zhang, M. Luo, K. Xiao, Q. Wang, Y. Tian, W. Qiu, Y. Xiong, **C. Zheng**, H. Li, 2021, Radium and nitrogen isotopes tracing fluxes and sources of submarine groundwater discharge driven nitrate in an urbanized coastal area, *Sci. Total Environ.*, 764, 144616.
- Zhao, S., Z. Liao, A. Fane, J. Li, C. Tang, **C. Zheng**, J. Lin, L. Kong, 2021, Engineering antifouling reverse osmosis membranes: A review, *Desalination*, 499, 114857.

Ali, M.U., S. Lin, B. Yousaf, Q. Abbas, R. Hameed, **C. Zheng**, X. Kuang, M.H. Wong, 2021, Emission sources and full spectrum of health impacts of black carbon associated polycyclic aromatic hydrocarbons (PAHs) in urban environment: A review, *Critical Reviews in Environmental Science and Technology*, 51(9), 857–896, <https://doi.org/10.1080/10643389.2020.1738854>.

[Published in 2020]

Lu, C., K. Ji, Y. Zhang, J. H. Fleckenstein, **C. Zheng**, K. Salsky, 2020, Event-driven hyporheic exchange during single and seasonal rainfall in a gaining stream, *Water Resources Management*, 34 (15), 4617–4631.

Zheng, Y., Y. Tian, E. Du, F. Han, Y. Wu, **C. Zheng**, X. Li, 2020, Addressing the water conflict between agriculture and ecosystems under environmental flow regulation: An integrated modeling study, *Environmental Modelling & Software*, 134, 104874.

Zeng, Z., D. Wang, L. Yang, J. Wu, A. D. Ziegler, M. Liu, P. Ciais, T. D. Searchinger, Z. L. Yang, D. Chen, A. Chen, L.Z.X. Li, S. Piao, D. Taylor, X. Cai, M. Pan, L. Peng, P. Lin, D. Gower, Y. Feng, **C. Zheng**, K. Guan, X. Lian, T. Wang, L. Wang, S. Jeong, Z. Wei, J. Sheffield, K. Caylor, E. F. Wood, 2020, Deforestation-induced warming over tropical mountain regions regulated by elevation, *Nature Geoscience*, 14, 23–29.

Zheng, C. and Y. Yao, 2020, *System behaviors and regulation of ecohydrological processes in the middle and lower Heihe River Basin* (in Chinese), Science Press, Beijing, China, 240 pp.

Joo, J., S. Jeong*, **C. Zheng***, C.E. Park, H. Park, H. Kim, 2020, Emergence of significant soil moisture depletion in the near future, *Environmental Research Letters*, 15, 124048.

Liu, L., Y. Wang, Y. Che, Y. Chen, Y. Xia, R. Luo, S. H. Cheng, **C. Zheng***, T. Zhang*, 2020, High-quality bacterial genomes of a partial-nitritation/anammox system by an iterative hybrid assembly method, *Microbiome*, 8, 155.

Lancia, M., M. Petitta, **C. Zheng**, M. Saroli, 2020, Hydrogeological insights and modelling for sustainable use of a stressed carbonate aquifer in the Mediterranean area: From passive withdrawals to active management, *Journal of Hydrology: Regional Studies*, 32, 100749.

Yin, M., R. Ma, Y. Zhang, S. Wei, G. R. Tick, J. Wang, Z. Sun, H. Sun, **C. Zheng**, 2020, A distributed-order time fractional derivative model for simulating bimodal sub-diffusion in heterogeneous media, *J. Hydrol.*, 591, 125504.

Wu, P., Y. Tang, G. Cao, J. Li, S. Wang, X. Chang, M. Dang, H. Jin, **C. Zheng**, Z. Cai, 2020, Determination of environmental micro-(nano-) plastics by Matrix-Assisted Laser Desorption/Ionization-Time of Flight Mass Spectrometry, *Analytical Chemistry*, 92, 14346–14356.

Singh, N., Y. Tang, Z. Zhang, **C. Zheng**, 2020, COVID-19 waste management: Effective and successful measures in Wuhan, China, *Resources, Conservation and Recycling*, 163, 105071.

Du, E., Y. Tian*, X. Cai, Y. Zheng, X. Li, **C. Zheng***, 2020, Exploring spatial heterogeneity and temporal dynamics of human-hydrological interactions in large river basins with intensive agriculture: A tightly coupled, fully integrated modeling approach, *J. Hydrol.*, 591, 125313.

Park, C. E., S. Jeong, L. J. Harrington, M. I. Lee, **C. Zheng**, 2020, Population ageing determines changes in heat vulnerability to future warming, *Environmental Research Letters*, 15 (11), 114043.

Wang, J., R. Ma, Z. Guo, L. Qu, M. Yin, **C. Zheng**, 2020, Experiment and multicomponent model-based analysis on the effect of flow rate and nitrate concentration on denitrification in low-permeability media, *Journal of Contaminant Hydrology*, 235, 103727.

Guo, Z., A. E. Russo, E. L. DiFilippo, Z. Zhang, **C. Zheng**, M. L. Brusseau, 2020, Mathematical modeling of organic liquid dissolution in heterogeneous source zones, *Journal of Contaminant Hydrology*, 235, 103716.

Ji, F., L. Fan*, C.B. Andrews, Y. Yao, **C. Zheng***, 2020, Dynamics of seasonally frozen ground in the Yarlung Zangbo River Basin on the Qinghai–Tibet Plateau: Historical trend and future projection, *Environmental Research Letters*, 15, 104081.

Li, X., Y. Zhang, D. M. Reeves, **C. Zheng**, 2020, Fractional-derivative models for non-Fickian transport in a single fracture and its extension, *J. Hydrol.*, 590, 125396.

Chen, J., X. Kuang, **C. Zheng**, 2020, An empirical porosity–depth model for Earth’s crust, *Hydrogeology Journal*, 28(7), 2331–2339.

- Yao, Y., J. Sun, Y. Tian, **C. Zheng**, J. Liu, 2020, Alleviating water scarcity and poverty in drylands through telecouplings: Vegetable trade and tourism in northwest China, *Sci. Total Environ.*, 741, 140387.
- Qiu, W., S. Liu, H. Chen, S. Luo, Y. Xiong, X. Wang, B. Xu*, **C. Zheng***, K. J. Wang, 2020, The comparative toxicities of BPA, BPB, BPS, BPF, and BPAF on the reproductive neuroendocrine system of zebrafish embryos and its mechanisms, *Journal of Hazardous Materials*, 406, 124303.
- Zhang, Y., D. Zhou, M. Yin, H. G. Sun, W. Wei, S. Li, **C. Zheng**, 2020, Nonlocal transport models for capturing solute transport in one-dimensional sand columns: Model review, applicability, limitations, and improvement, *Hydrological Processes*, 34, 5104–5122.
- Yang, L., **C. Zheng***, C.B. Andrews, C. Wang, 2020, Applying a regional transport modeling framework to manage nitrate contamination of groundwater, *Groundwater*, 59(2), 292–307, <https://doi.org/10.1111/gwat.13047>.
- Xiao, K., A. M. Wilson, H. Li, I. R. Santos, J. Tamborski, E. Smith, S. Q. Lang, **C. Zheng**, X. Luo, M. Lu, R. E. Correa, 2020, Large CO₂ release and tidal flushing in salt marsh crab burrows reduce the potential for blue carbon sequestration, *Limnology and Oceanography*, 66(1), 14–29, <https://doi.org/10.1002/lno.11582>.
- Li, R., S. Liu, W. Qiu*, F. Yang, Y. Zheng, Y. Xiong, G. Li, **C. Zheng***, 2020, Transcriptomic analysis of bisphenol AF on early growth and development of zebrafish (*Danio rerio*) larvae, *Environmental Science and Ecotechnology*, 4, 100054.
- Hou, X., L. Feng, J. Tang, X. P. Song, J. Liu, Y. Zhang, J. Wang, Y. Xu, Y. Dai, Y. Zheng, **C. Zheng**, B. A. Bryan, 2020, Anthropogenic transformation of Yangtze Plain freshwater lakes: Patterns, drivers and impacts, *Remote Sensing of Environment*, 248, 111998.
- Hua, S., H. Jing, Y. Yao, Z. Guo, D. N. Lerner, C.B. Andrews, **C. Zheng***, 2020, Can groundwater be protected from the pressure of China's urban growth? *Environment International*, 143, 105911.
- Chen, X., S. Jeong, Y. Zheng, H. Park, C. E. Park, J. Joo, W. Choi, X. Chen, **C. Zheng**, 2020, Evaluation of different roof materials for the mitigation of urban warming in a subtropical monsoon climate, *Journal of Geophysical Research: Atmospheres*, 125(14), e2019JD031972.
- Wang, X., H. Li, Y. Zhang, **C. Zheng**, M. Gao, 2020, Investigation of submarine groundwater discharge and associated nutrient inputs into Laizhou Bay (China) using radium quartet, *Marine Pollution Bulletin*, 157, 111359.
- Qu, W., C. Wang, M. Luo, **C. Zheng**, H. Li, 2020, Distributions, quality assessments and fluxes of heavy metals carried by submarine groundwater discharge in different types of wetlands in Jiaozhou Bay, China, *Marine Pollution Bulletin*, 157, 111310.
- Qiu, W., M. Fang, J. T. Magnuson, J. B. Greer, Q. Chen, Y. Zheng, Y. Xiong, S. Luo, **C. Zheng***, D. Schlenk*, 2020, Maternal exposure to environmental antibiotic mixture during gravid period predicts gastrointestinal effects in zebrafish offspring, *Journal of Hazardous Materials*, 399, 123009.
- Lancia, M., H. Su, Y. Tian, J. Xu, C. Andrews, D. Lerner, **C. Zheng**, 2020, Hydrogeology of the Pearl River Delta, southern China, *Journal of Maps*, 16(2), 388–395.
- Wang, X., R. Fu, H. Li, Y. Zhang, M. Lu, K. Xiao, X. Zhang, **C. Zheng**, Y. Xiong, 2020, Heavy metal contamination in surface sediments: A comprehensive, large-scale evaluation for the Bohai Sea, China, *Environmental Pollution*, 260, 113986.
- Zhao, T., M. Zheng, C. Fu, G. Li, Y. Xiong, W. Qiu*, T. Zhang, J. Zhang, **C. Zheng***, 2020, Effect of low-level H₂O₂ and Fe(II) on the UV treatment of tetracycline antibiotics and the toxicity of reaction solutions to zebrafish embryos, *Chemical Engineering Journal*, 394, 125021.
- Wang, Y., J. Xu, L. Kong, B. Li, H. Li, W. E. Huang*, **C. Zheng***, 2020, Raman-activated sorting of antibiotic-resistant bacteria in human gut microbiota, *Environmental Microbiology*, 22(7), 2613–2624.
- Wang, Y., X. Chen, A.G.L. Borthwick, T. Li, H. Liu, S. Yang, **C. Zheng**, J. Xu, J. Ni, 2020, Sustainability of global Golden Inland Waterways, *Nature Communications*, 11, 1553.
- Liu, J., X. Zeng, E. Ma, J. Wu, Y.K. Zhang, Y. Sun, X. Liang, **C. Zheng**, 2020, On the nanoparticle transport and release in layered heterogeneous porous media under transient chemical conditions, *J. Hydrol.*, 586, 124889.
- Zhang, Y., H. Li, H. Guo, **C. Zheng**, X. Wang, M. Zhang, K. Xiao, 2020, Improvement of evaluation of water age and submarine groundwater discharge: A case study in Daya Bay, China, *J. Hydrol.*, 586, 124775.

- Wu, P., Y. Tang, M. Dang, S. Wang, H. Jin, Y. Liu, H. Jing, **C. Zheng**, S. Yi, Z. Cai, 2020, Spatial-temporal distribution of microplastics in surface water and sediments of Maozhou River within Guangdong-Hong Kong-Macao Greater Bay Area, *Sci. Total Environ.*, 717, 135187.
- Ben, Y., M. Hu, X. Zhang, S. Wu, M.H. Wong, M. Wang, C.B. Andrews, **C. Zheng***, 2020, Efficient detection and assessment of human exposure to trace antibiotic residues in drinking water, *Water Research*, 175, 115699.
- Qiu, W., X. Liu, F. Yang, R. Li, Y. Xiong, C. Fu, G. Li, S. Liu, **C. Zheng***, 2020, Single and joint toxic effects of four antibiotics on some metabolic pathways of zebrafish (*Danio rerio*) larvae, *Sci. Total Environ.*, 716, 137062.
- Qiu, W.*, J. Hu, J.T. Magnuson, J. Greer, M. Yang, Q. Chen, M. Fang, **C. Zheng***, D. Schlenk, 2020, Evidence linking exposure of fish primary macrophages to antibiotics activates the NF- κ B pathway, *Environment International*, 138, 105624.
- Wei, W., X. Han, M. Zhang, Y. Zhang, Y. Zhang*, **C. Zheng***, 2020, Macromolecular humic acid modified nano-hydroxyapatite for simultaneous removal of Cu(II) and methylene blue from aqueous solution: Experimental design and adsorption study, *International Journal of Biological Macromolecules*, 150, 849–860.
- Lu, B., X. Liu, P. Dong, G.R. Tick, **C. Zheng**, Y. Zhang, M. Mahmood-Ul-Hassan, H. Bai, E. Lamy, 2020, Quantifying fate and transport of nitrate in saturated soil systems using fractional derivative model, *Applied Mathematical Modelling*, 81, 279–295.
- Yang, C., H.Y. Li, Y. Fang, C. Cui, T. Wang, **C. Zheng**, L.R. Leung, R.M. Maxwell, Y.K. Zhang, X. Yang, 2020, Effects of groundwater pumping on ground surface temperature: A regional modeling study in the North China Plain, *Journal of Geophysical Research: Atmospheres*, 125(9), e2019JD031764, <https://doi.org/10.1029/2019JD031764>.
- Zhou, F., Y. Bo, P. Ciais, P. Dumas, Q. Tang, X. Wang, J. Liu, **C. Zheng**, J. Polcher, Z. Yin, M. Guimberteau, S. Peng, C. Ottle, X. Zhao, J. Zhao, Q. Tan, L. Chen, H. Shen, H. Yang, S. Piao, H. Wang, Y. Wada, 2020, Deceleration of China's human water use and its key drivers, *Proceedings of the National Academy of Sciences*, 117 (14), 7702–7711.
- Lancia, M., **C. Zheng***, X. He, D.N. Lerner, C. Andrews, Y. Tian, 2020, Hydrogeological constraints and opportunities for "Sponge City" development: Shenzhen, southern China, *Journal of Hydrology: Regional Studies*, 28, 100679.
- Tonkin, M., M. Hill, R.M. Maxwell, **C. Zheng**, 2020, Groundwater Modeling and Beyond: "MODFLOW and More 2019" Special Issue, *Groundwater*, 58(3), 325–326.
- Qiu, W., B. Chen, J.B. Greer, J.T. Magnuson, Y. Xiong, H. Zhong, N.E. Andrzejczyk, **C. Zheng***, D. Schlenk*, 2020, Transcriptomic responses of bisphenol S predict involvement of immune function in the cardiotoxicity of early life-stage zebrafish (*Danio rerio*), *Environ. Sci. Technol.*, 54(5), 2869–2877.
- Ye, B., X. Zhang, X. Zhang, **C. Zheng**, 2020, Climate change, environmental impact, and human health, *Environmental Geochemistry and Health*, 42(3), 715–717.
- Yin, M., Y. Zhang, R. Ma, G.R. Tick, M. Bianchi, **C. Zheng**, W. Wei, S. Wei, X. Liu, 2020, Super-diffusion affected by hydrofacies mean length and source geometry in alluvial settings, *J. Hydrol.*, 582, 124515.
- Guo, Z., C.V. Henri, G.E. Fogg, Y. Zhang, **C. Zheng**, 2020, Adaptive Multirate mass transfer (aMMT) model: A new approach to upscale regional-scale transport under transient flow conditions, *Water Resour. Res.*, 56(2), e2019WR026000.
- Fan, L., P. Lehmann, **C. Zheng**, D. Or, 2020, Rainfall Intensity Temporal Patterns Affect Shallow Landslide Triggering and Hazard Evolution, *Geophysical Research Letters*, 47(1), e2019GL085994.
- Li, Y., S. He, Z. Zhou, S. Zhou, S. Huang, A.G. Fane, **C. Zheng**, Y. Zhang, S. Zhao, 2020, Carboxylated Nanodiamond-Enhanced Photocatalytic Membranes with Improved Antifouling and Self-Cleaning Properties, *Industrial & Engineering Chemistry Research*, 59(8), 3538–3549.
- Wang, Y., J. Xu, L. Kong, T. Liu, L. Yi, H. Wang, W.E. Huang*, **C. Zheng***, 2020, Raman-deuterium isotope probing to study metabolic activities of single bacterial cells in human intestinal microbiota, *Microbial Biotechnology*, 13(2), 572–583.
- Kuang, X., J.J. Jiao, **C. Zheng**, J.A. Cherry, H. Li, 2020, A review of specific storage in aquifers, *J. Hydrol.*, 581, 124383.

- Hua, S., X. He, **C. Zheng***, 2020, Optimization of management strategies for reducing nitrogen loading in China, *Sci. Total Environ.*, 703, 134620.
- Li, L., J. Ni, F. Chang, Y. Yue, N. Frolova, D. Magritsky, A.G.L. Borthwick, P. Ciais, Y. Wang, **C. Zheng**, D.E. Walling, 2020, Global trends in water and sediment fluxes of the world's large rivers, *Science Bulletin*, 65(1), 62–69.
- Mao, G., J. Liu, F. Han, Y. Meng, Y. Tian, Y. Zheng, **C. Zheng**, 2020, Assessing the interlinkage of green and blue water in an arid catchment in Northwest China, *Environmental Geochemistry and Health*, 42(3), 933–953.
- Qu, W., H. Li, C. Wang, **C. Zheng**, X. Wang, Y. Zhang, 2020, Numerical Simulations of Seasonally Oscillated Groundwater Dynamics in Coastal Confined Aquifers, *Groundwater*, 58 (4), 550–559.
- Lin, S., Y.B. Man, K.L. Chow, **C. Zheng**, M.H. Wong, 2020, Impacts of the influx of e-waste into Hong Kong after China has tightened up entry regulations, *Critical Reviews in Environmental Science and Technology*, 50 (2), 105–134, <https://doi.org/10.1080/10643389.2019.1619377>.
- Zhao, S., M. Golestani, A. Penesyan, B. Deng, **C. Zheng**, V. Strezov, 2020, Antibiotic enhanced dopamine polymerization for engineering antifouling and antimicrobial membranes, *Chinese Chemical Letters*, 31(3), 851–854.

[Published in 2019]

- Gao, Y., S. Pu, **C. Zheng**, S. Yi, 2019, An improved method for the calculation of unsaturated-saturated water flow by coupling the FEM and FDM, *Scientific Reports*, 9, 14995.
- Zhang, Y., H.G. Sun, **C. Zheng**, 2019, Lagrangian solver for vector fractional diffusion in bounded anisotropic aquifers: Development and application, *Fractional Calculus and Applied Analysis*, 22(6), 1607–1640.
- Zhang, T., L. Cai, B. Xu, X. Li, W. Qiu*, C. Fu, **C. Zheng***, 2019, Sulfadiazine biodegradation by *Phanerochaete chrysosporium*: Mechanism and degradation product identification, *Chemosphere*, 237, 124418, <https://doi.org/10.1016/j.chemosphere.2019.124418>.
- Huang, J., S. Yi, **C. Zheng**, I.M.C. Lo, 2019, Persulfate activation by natural zeolite supported nanoscale zero-valent iron for trichloroethylene degradation in groundwater, *Sci. Total Environ.*, 684, 351–359.
- Qin, H., **C. Zheng***, X. He*, J.C. Refsgaard, 2019, Analysis of water management scenarios using coupled hydrological and system dynamics modeling, *Water Resources Management*, 33, 4849–4863.
- Park, C.E., S.J. Jeong, Y. Fan, J. Tjiputra, H. Muri, **C. Zheng***, 2019, Inequal responses of drylands to radiative forcing geoengineering methods, *Geophysical Research Letters*, 46(23), 14011–14020.
- Liu, X., H. Sun, Y. Zhang, **C. Zheng**, Z. Yu, 2019, Simulating multi-dimensional anomalous diffusion in nonstationary media using variable-order vector fractional-derivative models with Kansa solver, *Advances in Water Resources*, 133, 103423.
- Wang, Y., Z. Zhang, X. Xu, C. Chen, J. Xu, L. Kong, P. Xie, **C. Zheng**, N. Ren, D. Lee, 2019, Effective removal of methyl siloxane from water by sewage activated sludge microbes: biodegradation behavior and characteristics of microbial community, *Bioresource Technology Reports*, 7, 100209, <https://doi.org/10.1016/j.biteb.2019.100209>.
- Lancia, M., **C. Zheng***, X. He, D.N. Lerner, C. Andrews, 2019, Groundwater complexity in urban catchments: Shenzhen, southern China, *Groundwater*, 58(3), 470–481, <https://doi.org/10.1111/gwat.12935>.
- Chen, C., Y. Tian, Y.K. Zhang, X. He, X. Yang, X. Liang, Y. Zheng, F. Han, **C. Zheng**, C. Yang, 2019, Effects of agricultural activities on the temporal variations of streamflow: trends and long memory, *Stoch. Environ. Res. Risk Assess.*, 33(8–9), 1553–1564, <https://doi.org/10.1007/s00477-019-01714-x>.
- Puckett, M.H., Y. Zhang, B. Lu, Y.H. Lu, H.G. Sun, **C. Zheng**, W. Wei, 2019, Application of fractional differential equation to interpret the dynamics of dissolved heavy-metal uptake in streams at a wide range of scales, *The European Physical Journal Plus*, 134 (8), 377.
- Jia, X., D. O'Connor, D. Hou, Y. Jin, G. Li, **C. Zheng**, Y.S. Ok, D.C.W. Tsang, J. Luo, 2019, Groundwater depletion and contamination: Spatial distribution of groundwater resources sustainability in China, *Sci. Total Environ.*, 672, 551–562.
- Qiu, W., S. Liu, F. Yang, P. Dong, M. Yang, M. Wong, **C. Zheng***, 2019, Metabolism disruption analysis of zebrafish larvae in response to BPA and BPA analogs based on RNA-Seq technique, *Ecotoxicology and Environmental Safety*, 174, 181–188.

- Tang, L., Z. Lv, Y. Xue, L. Xu, W. Qiu, **C. Zheng**, W. Chen, M. Wu, 2019, MIL-53 (Fe) incorporated in the lamellar BiOBr: promoting the visible-light catalytic capability on the degradation of rhodamine B and carbamazepine, *Chemical Engineering Journal*, 374, 975–982.
- Miraji, M., J. Liu, **C. Zheng**, 2019, The Impacts of water demand and its implications for future surface water resource management: The case of Tanzania's Wami Ruvu Basin (WRB), *Water*, 11 (6), 1280.
- Yao, Y., C. Andrews, Y. Zheng, X. He, V. Babovic, **C. Zheng***, 2019, Development of fresh groundwater lens in coastal reclaimed islands, *J. Hydrol.*, 573, 365–375.
- Zhang, Y., X. Yu, X. Li, J.F. Kelly, H.G. Sun, **C. Zheng**, 2019, Impact of absorbing and reflective boundaries on fractional derivative models: Quantification, evaluation and application, *Advances in Water Resources*, 128, 129–144.
- Qiu, W., H. Zhan, J. Hu, T. Zhang, H. Xu, M. Wong, B. Xu, **C. Zheng***, 2019, The occurrence, potential toxicity, and toxicity mechanism of bisphenol S, a substitute of bisphenol A: A critical review of recent progress, *Ecotoxicology and Environmental Safety*, 173, 192–202.
- Liu, J., X. Li, H. Yang, G. Han, J. Liu, **C. Zheng**, Y. Zheng, 2019, The water–energy nexus of megacities extends beyond geographic boundaries: A case of Beijing, *Environmental Engineering Science*, 36(7), 778–788.
- Qiu, W., M. Fang, J. Liu, C. Fu, **C. Zheng**, B. Chen, K.J. Wang, 2019, In vivo actions of Bisphenol F on the reproductive neuroendocrine system after long-term exposure in zebrafish, *Sci. Total Environ.*, 665, 995–1002.
- Tang, S., N. Shao, **C. Zheng**, F. Yan, Z. Zhang, 2019, Amino-functionalized sewage sludge-derived biochar as sustainable efficient adsorbent for Cu(II) removal, *Waste Management*, 90, 17–28.
- He, X., D. Lucatero, M.E. Ridler, H. Madsen, J. Kidmose, Ø. Hole, C. Petersen, **C. Zheng**, J.C. Refsgaard, 2019, Real-time simulation of surface water and groundwater with data assimilation, *Advances in Water Resources*, 127, 13–25.
- Liang, X., Y.K. Zhang, J. Liu, E. Ma, **C. Zheng**, 2019, Solute transport with linear reactions in porous media with layered structure: A semianalytical model, *Water Resour. Res.*, 55(6), 5102–5118, <https://doi.org/10.1029/2019WR024778>.
- Dawley, S., Y. Zhang, X. Liu, P. Jiang, G.R. Tick, H.G. Sun, **C. Zheng**, L. Chen, 2019, Statistical analysis of extreme events in precipitation, stream discharge, and groundwater head fluctuation: Distribution, memory, and correlation, *Water*, 11 (4), 707.
- Chang, A., H.G. Sun, Y. Zhang, **C. Zheng**, F. Min, 2019, Spatial fractional Darcy's law to quantify fluid flow in natural reservoirs, *Physica A: Statistical Mechanics and its Applications*, 519, 119–126.
- Song, Z., H. Li, Q. Ma, **C. Zheng**, J.J. Jiao, S. Li, 2019, Analytical solution of tidal loading effect in a submarine leaky confined aquifer system, *Geofluids*, 8017164, <https://doi.org/10.1155/2019/8017164>.
- Miraji, M., X. Li, J. Liu, **C. Zheng**, 2019, Evaluation of water and energy nexus in Wami Ruvu River Basin, Tanzania, *Sustainability*, 11 (11), 3109.
- Qiu, W., J. Sun, M. Fang, S. Luo, Y. Tian, P. Dong, B. Xu*, **C. Zheng***, 2019, Occurrence of antibiotics in the main rivers of Shenzhen, China: Association with antibiotic resistance genes and microbial community, *Sci. Total Environ.*, 653, 334–341, <https://doi.org/10.1016/j.scitotenv.2018.10.398>.
- Li, X., P. Gentile, C. Lin, S. Zhou, Z. Sun, Y. Zheng, J. Liu, **C. Zheng**, 2019, A simple and objective method to partition evapotranspiration into transpiration and evaporation at eddy-covariance sites, *Agricultural and Forest Meteorology*, 265, 171–182.
- Qiu, W., M. Zheng, J. Sun, Y. Tian, M. Fang, Y. Zheng, T. Zhang, **C. Zheng***, 2019, Photolysis of enrofloxacin, pefloxacin and sulfaquinolaxine in aqueous solution by UV/H₂O₂, UV/Fe(II), and UV/H₂O₂/Fe(II) and the toxicity of the final reaction solutions on zebrafish embryos, *Sci. Total Environ.*, 651, 1457–1468, <https://doi.org/10.1016/j.scitotenv.2018.09.315>.
- Zhou, W.H., F. Liu, S. Yi, Y. Z. Chen, X. Geng, **C. Zheng**, 2019, Simultaneous stabilization of Pb and improvement of soil strength using nZVI, *Sci. Total Environ.*, 651, 877–884.
- Yao, Y., **C. Zheng***, C. Andrews, X. He, A. Zhang, J. Liu, 2019, Integration of groundwater into China's south-north water transfer strategy, *Sci. Total Environ.*, 658, 550–557.
- Ben, Y., C. Fu, M. Hu, L. Liu, M. H. Wong, **C. Zheng***, 2019, Human health risk assessment of antibiotic resistance associated with antibiotic residues in the environment: A review, *Environmental Research*, 169, 483–493.

[Published in 2018]

- Qiu, W., M. Yang, J. Liu, H. Xu, S. Luo, M. Wong, **C. Zheng***, 2018, Bisphenol S-induced chronic inflammatory stress in liver via peroxisome proliferator-activated receptor γ using fish in vivo and in vitro models, *Environmental Pollution*, 246, 963–971, <https://doi.org/10.1016/j.envpol.2018.11.039>.
- Yang, F., W. Qiu*, R. Li, J. Hu, S. Luo, T. Zhang, X. He, **C. Zheng***, 2018, Genome-wide identification of the interactions between key genes and pathways provide new insights into the toxicity of bisphenol F and S during early development in zebrafish, *Chemosphere*, 213, 559–567.
- Tang, S., Y. Tang, **C. Zheng**, Z. Zhang, 2018, Alkali metal-driven release behaviors of volatiles during sewage sludge pyrolysis, *Journal of Cleaner Production*, 203, 860–872.
- Cudennec, C., J. Liu, J. Qi, H. Yang, **C. Zheng**, A. K. Gain, R. Lawford, L. de Strasser, P. T. Yillia, 2018, Epistemological dimensions of the water–energy–food nexus approach: reply to discussions of “Challenges in operationalizing the water–energy–food nexus”, *Hydrological Sciences Journal*, 63(12), 1868–1871, <https://doi.org/10.1080/02626667.2018.1545097>.
- Joo, J., Y. Tian, **C. Zheng**, Y. Zheng, Z. Sun, A. Zhang, H. Chang, 2018, An integrated modeling approach to study the surface water–groundwater interactions and influence of temporal damping effects on the hydrological cycle in the Miho catchment in South Korea, *Water*, 10 (11), 1529.
- Sun, Z., Y. Zheng, X. Li, Y. Tian, F. Han, Y. Zhong, J. Liu, **C. Zheng**, 2018, The Nexus of water, ecosystems and agriculture in endorheic river basins: A system analysis based on integrated ecohydrological modeling, *Water Resour. Res.*, 54(10), 7534–7556, <https://doi.org/10.1029/2018WR023364>.
- Yu, X., Y. Zhang, H. G. Sun, **C. Zheng**, 2018, Time fractional derivative model with Mittag-Leffler function kernel for describing anomalous diffusion: Analytical solution in bounded-domain and model comparison, *Chaos, Solitons & Fractals*, 115, 306–312.
- Tang, S., **C. Zheng**, Z. Zhang, 2018, Effect of inherent minerals on sewage sludge pyrolysis: Product characteristics, kinetics and thermodynamics, *Waste Management*, 80, 175–185.
- Lancia, M., **C. Zheng***, S. Yi, D. N. Lerner, C. Andrews, 2018, Analysis of groundwater resources in densely populated urban watersheds with a complex tectonic setting: Shenzhen, southern China, *Hydrogeology Journal*, 27, 183–194, <https://doi.org/10.1007/s10040-018-1867-2>.
- Zhang, Y., H. G. Sun, R. M. Neupauer, P. Straka, J. F. Kelly, B. Lu, **C. Zheng**, 2018, Identification of pollutant source for super-diffusion in aquifers and rivers with bounded domains, *Water Resour. Res.*, 54(9), 7092–7108, <https://doi.org/10.1029/2018WR023011>.
- Lu, B., J. Song, S. Li, G. R. Tick, W. Wei, J. Zhu, **C. Zheng**, Y. Zhang, 2018, Quantifying transport of arsenic in both natural soils and relatively homogeneous porous media using stochastic models, *Soil Science Society of America Journal*, 82(5), 1057–1070, <https://doi.org/10.2136/sssaj2017.12.0439>.
- Li, G., H. Li, X. Wang, W. Qu, Y. Zhang, K. Xiao, M. Luo, **C. Zheng**, 2018, Groundwater–surface water exchanges and associated nutrient fluxes in Dan’ao Estuary, Daya Bay, China, *Continental Shelf Research*, 166, 83–91.
- Tian, Y., Y. Zheng, F. Han, **C. Zheng**, X. Li, 2018, A comprehensive graphical modeling platform designed for integrated hydrological simulation, *Environmental Modelling & Software*, 108, 154–173.
- He, X., J. Koch, **C. Zheng**, T. Bøvith, K. H. Jensen, 2018, Comparison of Simulated Spatial Patterns Using Rain Gauge and Polarimetric-Radar-Based Precipitation Data in Catchment Hydrological Modeling, *Journal of Hydrometeorology*, 19(8), 1273–1288.
- Qiu, W., H. Zhan, Y. Tian, T. Zhang, X. He, S. Luo, H. Xu, **C. Zheng***, 2018, The in vivo action of chronic bisphenol F showing potential immune disturbance in juvenile common carp (*Cyprinus carpio*), *Chemosphere*, 205, 506–513.
- Lu, B., Y. Zhang, H. Sun, **C. Zheng**, 2018, Lagrangian simulation of multi-step and rate-limited chemical reactions in multi-dimensional porous media, *Water Science and Engineering*, 11(2), 101–113.
- Jiang, P., S. Dawley, B. Lu, Y. Zhang, G. R. Tick, H.G. Sun, **C. Zheng**, 2018, Precipitation storm property distributions with heavy tails follow tempered stable density relationships, *Journal of Physics: Conference Series*, 1053(1), 012119, <https://doi.org/10.1088/1742-6596/1053/1/012119>.
- Jeong, S. J., A. A. Bloom, D. Schimel, C. Sweeney, N. C. Parazoo, D. Medvigy, G. Schaepman-Strub, **C. Zheng**, C. R. Schwalm, D. N. Huntzinger, A. M. Michalak, C. E. Miller, 2018, Accelerating rates of Arctic carbon cycling revealed by long-term atmospheric CO₂ measurements, *Science Advances*, 4(7), eaao1167, <https://doi.org/10.1126/sciadv.aao1167>.

- Yao, Y., Y. Tian, C. Andrews, X. Li, Y. Zheng, **C. Zheng***, 2018, Role of groundwater in the dryland ecohydrological system: A case study of the Heihe River Basin, *Journal of Geophysical Research: Atmospheres*, 123(13), 6760–6776, <https://doi.org/10.1029/2018JD028432>.
- Tang, S., **C. Zheng**, F. Yan, N. Shao, Y. Tang, Z. Zhang, 2018, Product characteristics and kinetics of sewage sludge pyrolysis driven by alkaline earth metals, *Energy*, 153, 921–932.
- Tang, S., F. Yan, **C. Zheng**, Z. Zhang, 2018, Novel calcium oxide-enhancement phosphorus recycling technique through sewage sludge pyrolysis, *ACS Sustainable Chemistry & Engineering*, 6(7), 9167–9177.
- Zhang, Y., G. S. Weissmann, G.E. Fogg, B. Lu, H. Sun, **C. Zheng**, 2018, Assessment of Groundwater Susceptibility to Non-Point Source Contaminants Using Three-Dimensional Transient Indexes, *International Journal of Environmental Research and Public Health*, 15(6), 1177, <https://doi.org/10.3390/ijerph15061177>.
- Lu, B., Y. Zhang, **C. Zheng**, C. T. Green, C. O'Neill, H. G. Sun, J. Qian, 2018, Comparison of time nonlocal transport models for characterizing non-Fickian transport: From mathematical interpretation to laboratory application, *Water*, 10 (6), 778.
- Lu, B. Q., Y. Zhang, Y. Xia, D.M. Reeves, H. G. Sun, D.B. Zhou, **C. Zheng**, 2018, Identifying non-Darcian flow and non-Fickian pressure propagation in field-scale discrete fracture networks, *Journal of Geoscience and Environment Protection*, 6, 59–69.
- Yang, L., Y. Qi, **C. Zheng**, C.B. Andrews, S. Yue, S. Lin, Y. Li, C. Wang, Y. Xu, H. Li, 2018, A Modified water-table fluctuation method to characterize regional groundwater discharge, *Water*, 10 (4), 503.
- Chang, A., H. G. Sun, **C. Zheng**, B. Lu, C. Lu, R. Ma, Y. Zhang, 2018, A time fractional convection–diffusion equation to model gas transport through heterogeneous soil and gas reservoirs, *Physica A: Statistical Mechanics and its Applications*, 502, 356–369.
- Wang, Y., **C. Zheng**, R. Ma, 2018, Safe and sustainable groundwater supply in China, *Hydrogeology Journal*, 26, 1301–1324.
- Wang, X., H. Li, **C. Zheng**, J. Yang, Y. Zhang, M. Zhang, Z. Qi, K. Xiao, X. Zhang, 2018, Submarine groundwater discharge as an important nutrient source influencing nutrient structure in coastal water of Daya Bay, China, *Geochimica et Cosmochimica Acta*, 225, 52–65.
- Lu, B., Y. Zhang, D. Reeves, H. Sun, **C. Zheng**, 2018, Application of tempered-stable time fractional-derivative model to upscale subdiffusion for pollutant transport in field-scale discrete fracture networks, *Mathematics*, 6(1), 5, <https://doi.org/10.3390/math6010005>.
- Qin, H., C.B. Andrews, F. Tian, G. Cao, Y. Luo, J. Liu, **C. Zheng***, 2018, Groundwater-pumping optimization for land-subsidence control in Beijing plain, China, *Hydrogeology Journal*, 26(4), 1061–1081, <https://doi.org/10.1007/s10040-017-1712-z>.
- Li, X., G. Cheng, Y. Ge, H. Li, F. Han, X. Hu, W. Tian, Y. Tian, X. Pan, Y. Nian, Y. Zhang, Y. Ran, Y. Zheng, B. Gao, D. Yang, **C. Zheng**, X. Wang, S. Liu, X. Cai, 2018, Hydrological cycle in the Heihe River Basin and its implication for water resource management in endorheic basins, *Journal of Geophysical Research: Atmospheres*, 123(2), 890–914, <https://doi.org/10.1002/2017JD027889>.
- Qiu, W., H. Shao, P. Lei, **C. Zheng**, C. Qiu, M. Yang, Y. Zheng, 2018, Immunotoxicity of bisphenol S and F are similar to that of bisphenol A during zebrafish early development, *Chemosphere*, 194, 1–8.
- Wu, Y., L. Xu, S. Wang, Z. Wang, J. Shang, X. Li, **C. Zheng**, 2018, Nitrate attenuation in low-permeability sediments based on isotopic and microbial analyses, *Sci. Total Environ.*, 618, 15–25.
- Liu, J., G. Mao, A. Y. Hoekstra, H. Wang, J. Wang, **C. Zheng**, M. T. H. van Vliet, M. Wu, B. Ruddell, J. Yan, 2018, Managing the energy-water-food nexus for sustainable development, *Applied Energy*, 210, 377–381.
- Qin, H., X. Cai, **C. Zheng***, 2018, Water demand predictions for megacities: system dynamics modeling and implications, *Water Policy*, 20(1), 53–76, <https://doi.org/10.2166/wp.2017.168>.

[Published in 2017]

- Yao, Y., **C. Zheng***, Y. Tian, X. Li, J. Liu, 2017, Eco-hydrological effects associated with environmental flow management: A case study from the arid desert region of China, *Ecohydrology*, 11(1), e1914, <https://doi.org/10.1002/eco.1914>.
- Teng, F., W. Huang, Y. Cai, **C. Zheng**, S. Zou, 2017, Application of hydrological model PRMS to simulate daily rainfall runoff in Zamask-Yingluoxia Subbasin of the Heihe River Basin, *Water*, 9(10), 769.

- Liu, J., H. Yang, C. Cudennec, A. K. Gain, H. Hoff, R. Lawford, J. Qi, L. de Strasser, P. T. Yillia, and C. **Zheng**, 2017, Challenges in operationalizing the water-energy-food nexus, *Hydrological Sciences Journal*, 62(11), 1714–1720.
- Tang, S., S. Tian, C. **Zheng**, Z. Zhang, 2017, Effect of Calcium Hydroxide on the Pyrolysis Behavior of Sewage Sludge: Reaction Characteristics and Kinetics, *Energy & Fuels*, 31(5), 5079–5087.
- Scanlon, B.R., B.L. Ruddell, P.M. Reed, R.I. Hook, C. **Zheng**, V.C. Tidwell, and S. Siebert, 2017, The food–energy–water nexus: Transforming science for society, *Water Resour. Res.*, 53(5), 3550–3556.
- Joo, J., A. Zhang, X. Li, and C. **Zheng**, 2017, Hydrological responses to climate shifts for a minimally disturbed mountainous watershed in northwestern China, *Hydrological Sciences Journal*, 62(9), 1440–1455.
- Zhang, Y., H. Li, K. Xiao, X. Wang, X. Lu, M. Zhang, A. An, W. Qu, L. Wan, C. **Zheng**, X. Wang, and X. Jiang, 2017, Improving Estimation of Submarine Groundwater Discharge Using Radium and Radon Tracers: Application in Jiaozhou Bay, China, *Journal of Geophysical Research: Oceans*, 122(10), 8263–8277.
- Li, X., Y. Zheng, Z. Sun, Y. Tian, C. **Zheng**, J. Liu, S. Liu, and Z. Xu, 2017, An integrated ecohydrological modeling approach to exploring the dynamic interaction between groundwater and phreatophytes, *Ecological Modelling*, 356, 127–140.
- Wu, Q., C. **Zheng**, J. Zhang, and F. Zhang, 2017, Nitrate removal by a permeable reactive barrier of Fe⁰: A model-based evaluation, *Journal of Earth Science*, 28(3), 447–456.
- Wang, X., H. Li, J. Yang, C. **Zheng**, Y. Zhang, A. An, M. Zhang, and K. Xiao, 2017, Nutrient inputs through submarine groundwater discharge in an embayment: A radon investigation in Daya Bay, China, *J. Hydrol.*, 551, 784–792.
- Hyndman, D. W., T. Xu, J. M. Deines, G. Cao, R. Nagelkirk, A. Viña, W. McConnell, B. Basso, A. D. Kendall, S. Li, L. Luo, F. Lupi, D. Ma, J. A. Winkler, W. Yang, C. **Zheng**, and J. Liu, 2017, Quantifying changes in water use and groundwater availability in a megacity using novel integrated systems modeling, *Geophysical Research Letters*, 44(16), 8359–8368.
- Qu, W. J., H. Li, H. Huang, C. **Zheng**, C. Y. Wang, X. J. Wang, and Y. Zhang, 2017, Seawater–groundwater exchange and nutrients carried by submarine groundwater discharge in different types of wetlands at Jiaozhou Bay, China, *J. Hydrol.*, 555, 185–197.
- Hu, Y., Y. Lu, C. Liu, P. Shang, J. Liu, and C. **Zheng**, 2017, Sources and dynamics of dissolved inorganic carbon, nitrogen, and phosphorus in a large agricultural river basin in arid northwestern China, *Water*, 9(6), 415.
- Xiao, K., H. Li, A. M. Wilson, Y. Q. Xia, L. Wan, C. **Zheng**, Q. Ma, C. Y. Wang, X. S. Wang, and X. W. Jiang, 2017, Tidal groundwater flow and its ecological effects in a brackish marsh at the mouth of a large sub-tropical river, *J. Hydrol.*, 555, 198–212.
- Liu, J., H. Yang, S. N. Gosling, M. Kummu, M. Floerke, S. Pfister, N. Hanasaki, Y. Wada, X. Zhang, C. **Zheng**, J. Alcamo, and T. Oki, 2017, Water scarcity assessments in the past, present, and future, *Earth's Future*, 5(6), 545–559.
- Yao, Y., C. **Zheng***, C. Andrews, Y. Zheng, A. Zhang, and J. Liu, 2017, What controls the partitioning between baseflow and mountain block recharge in the Qinghai–Tibet Plateau? *Geophysical Research Letters*, 44(16), 8352–8358.
- Li, X., D. Yang, C. **Zheng**, X. Li, W. Zhao, M. Huang, Y. Chen, P. Yu, 2017, Ecohydrology, in S. Leng et al., eds., *The Geographical Sciences During 1986–2015*, pp. 407–417, Springer.

[Published in 2016]

- Huang, X., C.B. Andrews, J. Liu, Y. Yao, C. Liu, S.W. Tyler, J.S. Selker, C. **Zheng***, 2016, Assimilation of temperature and hydraulic gradients for quantifying the spatial variability of streambed hydraulics, *Water Resour. Res.*, 52, 6419–6439, <https://doi.org/10.1002/2015WR018408>.
- Zhang, A., W. Liu, Z. Yin, G. Fu, C. **Zheng***, 2016, How will climate change affect the water availability in the Heihe River Basin, northwest China? *J. Hydrometeor.*, 17, 1517–1542, <https://doi.org/10.1175/JHM-D-15-0058.1>.

- Cao, G., **C. Zheng***, and C.T. Simmons, 2016, Groundwater recharge and mixing in arid and semiarid regions: Heihe River Basin, northwest China. *Acta Geologica Sinica* (English Edition), 90(3), 971–987. <https://doi.org/10.1111/1755-6724.12738>.
- Liu, J., **C. Zheng***, 2016, Towards integrated groundwater management in China, in A.J. Jakeman et al., eds., *Integrated Groundwater Management*, pp. 455–476, Springer.
- Cao, G., D. Han, M. J. Currell, **C. Zheng**, 2016, Revised conceptualization of the North China Basin groundwater flow system: Groundwater age, heat and flow simulations, *Journal of Asian Earth Sciences*, 127, 119–136, <https://doi.org/10.1016/j.jseaes.2016.05.025>.
- Yang, W., D. W. Hyndman, J. A. Winkler, A. Viña, J. Deines, F. Lupi, L. Luo, Y. Li, B. Basso, **C. Zheng**, D. Ma, S. Li, X. Liu, H. Zheng, G. Cao, Q. Meng, Z. Ouyang, and J. Liu, 2016, Urban water sustainability: framework and application, *Ecology and Society*, 21(4), 4, <https://doi.org/10.5751/ES-08685-210404>.
- Hou, L., H. Li, **C. Zheng**, Q. Ma, C. Wang, X. Wang, W. Qu, 2016, Seawater-groundwater exchange in a silty tidal flat in the south coast of Laizhou Bay, China, *Journal of Coastal Research: Special Issue 74*, 136–148. <https://doi.org/10.2112/SI74-013.1>.
- Cao, G., B.R. Scanlon, D. Han, **C. Zheng**, 2016, Impacts of thickening unsaturated zone on groundwater recharge in the North China Plain, *J. Hydrol.*, 537, 260–270.
- Xie, Y., P.G. Cook, M. Shanafield, C.T. Simmons, **C. Zheng**, 2016, Uncertainty of natural tracer methods for quantifying river–aquifer interaction in a large river, *J. Hydrol.*, 535, 135–147, <https://doi.org/10.1016/j.jhydrol.2016.01.071>.
- Li, X., J. Liu, **C. Zheng***, G. Han, H. Hoff, 2016, Energy for water utilization in China and policy implications for integrated planning, *Int. J. of Water Resources Development*, 32(3), 477–494.
- Lu, X., G. Cao, X. Huang, T.P. Clement, **C. Zheng**, 2016, Performance evaluation of inertial pumps used for sampling groundwater from small-diameter wells, *Environmental Earth Sciences*, 75(3), 203, <https://doi.org/10.1007/s12665-015-4912-7>.
- Huang, X., H. Deng, **C. Zheng**, G. Cao, 2016, Hydrogeochemical signatures and evolution of groundwater impacted by the Bayan Obo tailing pond in northwest China, *Sci. Total Environ.*, 543, 357–372, <https://doi.org/10.1016/j.scitotenv.2015.10.150>.
- Tian, Y., Y. Zheng, **C. Zheng**, 2016, Development of a visualization tool for integrated surface water–groundwater modeling, *Computers & Geosciences*, 86, 1–14.
- Hu, Y., Y. Lu, J.W. Edmonds, C. Liu, S. Wang, O. Das, J. Liu, **C. Zheng**, 2016, Hydrological and land use control of watershed exports of dissolved organic matter in a large arid river basin in northwestern China, *Journal of Geophysical Research: Biogeosciences*, 121(2), 466–478, <https://doi.org/10.1002/2015JG003082>.
- Bianchi, M., **C. Zheng**, 2016, A lithofacies approach for modeling non-Fickian solute transport in a heterogeneous alluvial aquifer, *Water Resour. Res.*, 52(1), 552–565, <https://doi.org/10.1002/2015WR018186>.
- Gao, S., P. Xu, F. Zhou, H. Yang, **C. Zheng**, W. Cao, S. Tao, S. Piao, Y. Zhao, X. Ji, Z. Shang, M. Chen, 2016, Quantifying nitrogen leaching response to fertilizer additions in China's cropland, *Environmental Pollution*, 211, 241–251.
- Zhang, Y., H. Li, X. Wang, **C. Zheng**, C. Wang, K. Xiao, L. Wan, X. Wang, X. Jiang, H. Guo, 2016, Estimation of submarine groundwater discharge and associated nutrient fluxes in eastern Laizhou Bay, China using ^{222}Rn , *J. Hydrol.*, 533, 103–113.
- Cai, Y., W. Huang, F. Teng, B. Wang, K. Ni, **C. Zheng**, 2016, Spatial variations of river–groundwater interactions from upstream mountain to midstream oasis and downstream desert in Heihe River basin, China, *Hydrology Research*, 47 (2), 501–520, <https://doi.org/10.2166/nh.2015.072>.
- Liu, C., J. Liu, X. Wang, **C. Zheng**, 2016, Analysis of groundwater–lake interaction by distributed temperature sensing in Badain Jaran Desert, Northwest China, *Hydrological Processes*, 30, 1330–1341, <https://doi.org/10.1002/hyp.10705>.
- Wu, X., Y. Zheng, B. Wu, Y. Tian, F. Han, **C. Zheng**, 2016, Optimizing conjunctive use of surface water and groundwater for irrigation to address human-nature water conflicts: A surrogate modeling approach, *Agricultural Water Management*, 163, 380–392.
- Liu, C., J. Liu, Y. Hu, H. Wang, **C. Zheng**, 2016, Airborne thermal remote sensing for estimation of groundwater discharge to a river, *Groundwater*, 54 (3), 363–373, <https://doi.org/10.1111/gwat.12362>.

[Published in 2015]

- Xie, Y., P.G. Cook, C.T. Simmons, **C. Zheng**, 2015, On the limits of heat as a tracer to estimate reach-scale river-aquifer exchange flux, *Water Resour. Res.*, 51(9), 7401–7416.
- Wu, M., J. Wu, J. Liu, J. Wu, **C. Zheng**, 2015, Effect of groundwater quality on sustainability of groundwater resource: A case study in the North China Plain, *Journal of Contaminant Hydrology*, 179, 132–147, <https://doi.org/10.1016/j.jconhyd.2015.06.001>.
- Cao, G., **C. Zheng**, 2015, Signals of short-term climatic periodicities detected in the groundwater of North China Plain, *Hydrological Processes*, 30(4), 515–533.
- Yao, Y., X. Huang, J. Liu, **C. Zheng**, X. He, C. Liu, 2015, Spatiotemporal variation of river temperature as a predictor of groundwater/surface-water interactions in an arid watershed in China, *Hydrogeology Journal*, 23(5), 999–1007.
- Wu, B., Y. Zheng, X. Wu, Y. Tian, F. Han, J. Liu, **C. Zheng**, 2015, Optimizing water resources management in large river basins with integrated surface water–groundwater modeling: A surrogate-based approach, *Water Resour. Res.*, 51(4), 2153–2173.
- Tian, Y., Y. Zheng, **C. Zheng**, H. Xiao, W. Fan, S. Zou, B. Wu, Y. Yao, A. Zhang, J. Liu, 2015, Exploring scale-dependent ecohydrological responses in a large endorheic river basin through integrated surface water–groundwater modeling, *Water Resour. Res.*, 51(6), 4065–4085.
- Anid, N.M., M. Panero, **C. Zheng**, J. Liu, 2015, EcoPartnership on water quality management and conservation in the U.S. and China, *Journal of Renewable and Sustainable Energy*, 7(4), 041516.
- Zhang, A., **C. Zheng***, S. Wang, Y. Yao, 2015, Analysis of streamflow variations in the Heihe River Basin, northwest China: Trends, abrupt changes, driving factors and ecological influences, *Journal of Hydrology: Regional Studies*, 3, 106–124.
- Tian, Y., Y. Zheng, B. Wu, X. Wu, J. Liu, **C. Zheng**, 2015, Modeling surface water–groundwater interaction in arid and semi-arid regions with intensive agriculture, *Environmental Modelling & Software*, 63, 170–184.
- Yao, Y., **C. Zheng***, Y. Tian, J. Liu, Y. Zheng, 2015, Numerical modeling of regional groundwater flow in the Heihe River Basin, China: Advances and new insights, *Science China Earth Sciences*, 58(1), 3–15.
- Lu, Z., S. Zou, H. Xiao, **C. Zheng**, Z. Yin, W. Wang, 2015, Comprehensive hydrologic calibration of SWAT and water balance analysis in mountainous watersheds in northwest China, *Physics and Chemistry of the Earth*, Parts A/B/C, 79, 76–85.
- Gorelick, S.M., **C. Zheng**, 2015, Global change and the groundwater management challenge, *Water Resour. Res.* (50th anniversary edition), 51, 3031–3051, <https://doi.org/10.1002/2014WR016825>.
- Liu, J. and **C. Zheng***, 2015, Using distributed temperature sensing for hydrogeological studies in China, *Groundwater*, 53(1), 17–18.
- Yao, Y., **C. Zheng***, J. Liu, G. Cao, H. Xiao, H. Li, W. Li, 2015, Conceptual and numerical models for groundwater flow in an arid inland river basin. *Hydrological Processes*, 29, 1480–1492, <https://doi.org/10.1002/hyp.10276>.
- Yu, C., Y. Yao, G. Cao, **C. Zheng**, 2015, A field demonstration of groundwater vulnerability assessment using transport modeling and groundwater age modeling, Beijing Plain, China. *Environ. Earth Sciences*, 73(9), 5245–5253, <https://doi.org/10.1007/s12665-014-3769-5>.

[Published in 2014]

- Ma, R., **C. Zheng**, C. Liu, J. Greskowiak, H. Prommer, and J. M. Zachara, 2014, Assessment of controlling processes for field-scale uranium reactive transport under highly transient flow conditions, *Water Resour. Res.*, 50, 1006–1024, <https://doi.org/10.1002/2013WR013835>.
- Wu, B., Y. Zheng, Y. Tian, X. Wu, Y. Yao, F. Han, J. Liu, **C. Zheng**, 2014, Systematic assessment of the uncertainty in integrated surface water–groundwater modeling based on the probabilistic collocation method, *Water Resour. Res.*, 50(7), 5848–5865.
- Yao, Y., J. Liu, A. Zhang, X. Li, Y. Tian, **C. Zheng**, 2014, Impact of stream runoff change and human activities on the groundwater regime in the Heihe River Basin, northwest China, *Quaternary Sciences*, 34(5), 973–981.

- Zhang, G., Y. Yao, **C. Zheng**, 2014, HPC environment on Azure cloud for hydrological parameter estimation, in *2014 IEEE 17th International Conference on Computational Science and Engineering (CSE)*, Chengdu, pp. 299–304, <https://doi.org/10.1109/CSE.2014.83>.
- Hu, Y., C. Liu, Y. Lu, J. Liu, **C. Zheng***, 2014, Application of environmental isotopes in understanding hydrological processes of the Heihe River Basin, *Advances in Earth Science*, 29(10), 1158–1166.
- Yu, L., G. Cao, M. Xu, J. Liu, **C. Zheng**, 2014, Application of centrifuges in experimental studies of contaminant transport, *Advances in Earth Science*, 29(2), 227–237.
- Rayne, T., K. Bradbury, **C. Zheng**, 2014, Correct delineation of capture zones using particle tracking under transient conditions. *Groundwater*, 52 (3), 332–334, <https://doi.org/10.1111/gwat.12141>.
- Yi, S., H. Ma, **C. Zheng**, G. Ren, X. Hu, 2014, A field-scale long-term study on radionuclide transport through weathered granites at a site in southern China. *Environ. Earth Sciences*, 72(11), 4427–4439, <https://doi.org/10.1007/s12665-014-3343-1>.
- Ma, R., C. Liu, J. Greskowiak, H. Prommer, J. Zachara, **C. Zheng***, 2014, Influence of calcite on uranium(VI) reactive transport in the groundwater–river mixing zone, *J. Contam. Hydrol.*, 156, 27–37, <https://doi.org/10.1016/j.jconhyd.2013.10.002>.
- Huang, X., G. Cao, J. Liu, H. Prommer, **C. Zheng***, 2014, Reactive transport modeling of thorium in a cloud computing environment, *J. Geochem. Explor.*, 144, 63–73, <https://doi.org/10.1016/j.gexplo.2014.03.006>.

[Published in 2013]

- Zheng**, C., J. Liu, 2013, China’s “Love Canal” moment? *Science*, 340(6134), 810, <https://doi.org/10.1126/science.340.6134.810-a>.
- Qin, H., G. Cao, M. Kristensen, J. C. Refsgaard, M. O. Rasmussen, X. He, J. Liu, Y. Shu, and **C. Zheng***, 2013, Integrated hydrological modeling of the North China Plain and implications for sustainable water management, *Hydrol. Earth Syst. Sci.*, 17, 3759–3778.
- Cao, G., **C. Zheng***, B.R. Scanlon, J. Liu, and W. Li, 2013, Use of flow modeling to assess sustainability of groundwater resources in the North China Plain, *Water Resour. Res.*, 49, 159–175, <https://doi.org/10.1029/2012WR011899>.
- Yang, Y., J. Wu, X. Sun, J. Wu, **C. Zheng**, 2013, A niched Pareto tabu search for multi-objective optimal design of groundwater remediation systems, *J. Hydrol.*, 490, 56–73, <https://doi.org/10.1016/j.jhydrol.2013.03.022>.
- Yang, Y., J. Wu, X. Sun, J. Wu, **C. Zheng**, 2013, Development and application of a master-slave parallel hybrid multi-objective evolutionary algorithm for groundwater remediation design, *Environ. Earth Sci.*, 70 (6), 2481–2494, <https://doi.org/10.1007/s12665-013-2291-5>.

[Published in 2012]

- Ma, R., **C. Zheng***, C. Liu, 2012, Groundwater Impacts of Radioactive Wastes and Associated Environmental Modeling Assessment. In: R. A. Meyers, ed. *Encyclopedia of Sustainability Science and Technology*, 4774–4784, Springer.
- National Research Council, 2012, *Challenges and Opportunities in the Hydrologic Sciences*, National Academies Press, Washington, D.C. (**C. Zheng** was a member of the committee that authored the report).
- Song, X., J. Liu, **C. Zheng**, 2012, Image analysis of concentration distribution in two-dimensional sandbox tracer experiment. *Acta Scientiae Circumstantiae*, 32(10), 2470–2475.
- Zheng**, C., M.C. Hill, G. Cao, R. Ma, 2012, MT3DMS: Model use, calibration, and validation, *Transactions of the ASABE*, 55(4), 1549–1559.
- Ma, R., **C. Zheng***, J.M. Zachara, M. Tonkin, 2012, Utility of bromide and heat tracers for aquifer characterization affected by highly transient flow conditions, *Water Resour. Res.*, 48, W08523, <https://doi.org/10.1029/2011WR011281>.
- Hunt, R.J., **C. Zheng**, 2012, The current state of modeling, *Ground Water*, 50(3), 330–333, <https://doi.org/10.1111/j.1745-6584.2012.00936.x>.
- Qin, H., A. Sun, J. Liu, **C. Zheng***, 2012, System dynamics analysis of water supply and demand in the North China Plain, *Water Policy*, 14, 214–231.

- Yi, S., H. Ma, **C. Zheng**, X. Zhu, H. Wang, X. Li, X. Hu, J. Qin, 2012, Assessment of site conditions for disposal of low- and intermediate-level radioactive wastes: A case study in southern China, *Sci. Total Environ.*, 414, 624–631.
- Yu, C., B. Zhang, Y. Yao, F. Meng, **C. Zheng***, 2012, A field demonstration of the entropy-weighted fuzzy DRASTIC method for groundwater vulnerability assessment, *Hydrological Sciences Journal*, 57(7), 1420–1432, <https://doi.org/10.1080/02626667.2012.715746>.
- Huang, L., **C. Zheng***, J. Liu, H. Xiao, 2012, Application of distributed temperature sensing to study groundwater–surface water interactions in the Heihe River Basin, *Hydrogeology and Engineering Geology (China)*, 39(2), 1–6.
- Wang, X., **C. Zheng***, G. Liu, W. Li, S. Knobbe, E. Reboulet, J. J. Butler Jr., 2012, A review of recent developments in using direct-push technologies for rapid, high-resolution hydraulic conductivity measurements, *Hydrogeology and Engineering Geology (China)*, 39(1), 8–12.

[Published in 2011]

- Yi, S., H. Ma, **C. Zheng**, 2011, Advances in research on disposal of radioactive waste, *Acta Geoscientica Sinica*, 32(5), 592–600.
- Zheng**, C., M. Bianchi, S.M. Gorelick, 2011, Lessons learned from 25 years of research at the MADE site, *Ground Water*, 49(5), 649–662, <https://doi.org/10.1111/j.1745-6584.2010.00753.x>.
- Lerner, D.N. and **C. Zheng**, 2011, Integrated catchment management: path to enlightenment, *Hydrol. Process.*, 25(16), 2635–2640, <https://doi.org/10.1002/hyp.8064>.
- Zheng**, C., 2011, Reflections: 2002–2010, *Ground Water*, 49(2), 129–132, <https://doi.org/10.1111/j.1745-6584.2010.00787.x>.
- Greskowiak, J., M. Hay, H. Prommer, C. Liu, V. Post, R. Ma, J. A. Davis, **C. Zheng**, J. Zachara, 2011, Simulating adsorption of U(VI) under transient groundwater flow and hydrochemistry: Physical versus chemical nonequilibrium model, *Water Resour. Res.*, 47, W08501, <https://doi.org/10.1029/2010WR010118>.
- Liu, J., G. Cao, **C. Zheng***, 2011, Sustainability of groundwater resources in the North China Plain, in *Sustaining Groundwater Resources*, J.A.A. Jones, ed., Springer, New York, pp. 69–87, https://doi.org/10.1007/978-90-481-3426-7_5.
- Ma, R., **C. Zheng***, M. Tonkin, J.M. Zachara, 2011, Importance of considering intraborehole flow in solute transport modeling under highly dynamic flow conditions, *Journal of Contaminant Hydrology*, 123, 11–19, <https://doi.org/10.1016/j.jconhyd.2010.12.001>.
- Ma, R., **C. Zheng***, 2011, Not all mass transfer rate coefficients are created equal, *Ground Water*, 49(6), 772–774, <https://doi.org/10.1111/j.1745-6584.2011.00822.x>.
- Ma, R., Y. Wang, Z. Sun, **C. Zheng**, T. Ma, H. Prommer, 2011, Geochemical evolution of groundwater in carbonate aquifers in Taiyuan, northern China, *Applied Geochemistry*, 26, 884–897, <https://doi.org/10.1016/j.apgeochem.2011.02.008>.
- Bianchi, M., **C. Zheng***, C. Wilson, G. Tick, G. Liu, S.M. Gorelick, 2011, Spatial connectivity in a highly heterogeneous aquifer: From cores to preferential flow paths, *Water Resour. Res.*, 47, W05524, <https://doi.org/10.1029/2009WR008966>.
- Bianchi, M., **C. Zheng***, G. R. Tick, S. M. Gorelick, 2011, Investigation of small-scale preferential flow with a forced-gradient tracer test, *Ground Water*, 49(4), 503–514, <https://doi.org/10.1111/j.1745-6584.2010.00746.x>.
- Ma, R., **C. Zheng***, H. Prommer, J. Greskowiak, 2011, Modeling field-scale uranium mass transfer at the Hanford IFRC site. In Wang, Y., S. Ge, M.C. Hill, and C. Zheng (eds.), *Calibration and Reliability in Groundwater Modeling: Managing Groundwater and the Environment*, IAHS Publication 341, 141–146, International Association of Hydrological Sciences.
- Cao, G., **C. Zheng***, J. Zhao, M. Wu, 2011, Simulation of land subsidence caused by groundwater exploitation in the Hangzhou-Jiaxing-Huzhou Plain, south China. In Wang, Y., S. Ge, M.C. Hill, and C. Zheng (eds.), *Calibration and Reliability in Groundwater Modeling: Managing Groundwater and the Environment*, IAHS Publication 341, 245–251, International Association of Hydrological Sciences.

Wu, J., W. Peng, J. Qian, J. Wu, **C. Zheng**, 2011, INPGA-based multi-objective management model for optimal design of groundwater remediation system: II. Application to the MMR site, *Geological Review*, 57(3), 437–443.

[Published in 2006–2010]

Hill, M.C., E. Poeter, **C. Zheng**, 2010, Foreword: Groundwater modeling and public policy, *Ground Water*, 48(5), 625–626, <https://doi.org/10.1111/j.1745-6584.2010.00734.x>.

Lu, Z., A. V. Wolfsberg, Z. Dai, **C. Zheng**, 2010, Characteristics and controlling factors of dispersion in bounded heterogeneous porous media, *Water Resour. Res.*, 46, W12508, <https://doi.org/10.1029/2009WR008392>.

Yu, C. and **C. Zheng***, 2010, HYDRUS: Software for flow and transport modeling in variably saturated media, *Ground Water*, 48(6), 787–791, <https://doi.org/10.1111/j.1745-6584.2010.00751.x>.

Ronayne, M. J., S. M. Gorelick, **C. Zheng**, 2010, Geological modeling of sub-meter scale heterogeneity and its influence on tracer transport in a fluvial aquifer, *Water Resour. Res.*, 46, W10519, <https://doi.org/10.1029/2010WR009348>.

Wu, Q., B.X. Hu, L. Wan, **C. Zheng***, 2010, Coal mine water management: optimization models and field application in North China, *Hydrological Sciences Journal*, 55(4), 609–623, <https://doi.org/10.1080/02626661003798310>.

Zheng, C., J. Liu, G. Cao, E. Kendy, H. Wang, Y. Jia, 2010, Can China cope with its water crisis?—Perspectives from the North China Plain, *Ground Water*, 48(3), 350–354, https://doi.org/10.1111/j.1745-6584.2010.00695_3.x.

Ma, R., **C. Zheng***, H. Prommer, J. Greskowiak, C. Liu, J. Zachara, M. Rockhold, 2010, A field-scale reactive transport model for U(VI) migration influenced by coupled multi-rate mass transfer and surface complexation reactions, *Water Resour. Res.*, 46, W05509, <https://doi.org/10.1029/2009WR008168>.

Greskowiak, J., H. Prommer, C. Liu, V.E.A. Post, R. Ma, **C. Zheng**, J.M. Zachara, 2010, Comparison of parameter sensitivities between a laboratory and field scale model of uranium transport in a dual-domain, distributed-rate reactive system, *Water Resour. Res.*, 46, W09509, <https://doi.org/10.1029/2009WR008781>.

Yu, C., Y. Yao, G. Hayes, B. Zhang and **C. Zheng**, 2010, Quantitative assessment of groundwater vulnerability using index system and transport simulation, Huangshuihe catchment, China, *Sci. Total Environ.*, 408(24), 6108–6116.

Ma, R. and **C. Zheng***, 2010, Effects of density and viscosity in modeling heat as a groundwater tracer, *Ground Water*, 48(3), 380–389, <https://doi.org/10.1111/j.1745-6584.2009.00660.x>.

Liu, G., **C. Zheng***, G.R. Tick, J.J. Butler, Jr., and S.M. Gorelick, 2010, Relative importance of dispersion and rate-limited mass transfer in highly heterogeneous porous media: Analysis of a new tracer test at the Macrodispersion Experiment (MADE) site, *Water Resour. Res.*, 46, W03524, <https://doi.org/10.1029/2009WR008430>.

Zheng, C. and R. Ma, 2010, IGW/DL: A Digital Library for teaching and learning hydrogeology and groundwater modeling, *Ground Water*, 48(3), 339–342, <https://doi.org/10.1111/j.1745-6584.2010.00693.x>.

Liu, J., M. Zhang, and **C. Zheng***, 2010, Role of ethics in groundwater management, *Ground Water*, 48(1), 1, <https://doi.org/10.1111/j.1745-6584.2009.00611.x>.

Zheng, C. and G.D. Bennett, 2009, *Applied Contaminant Transport Modeling*, Chinese Edition, Higher Education Press, Beijing, China, in collaboration with John Wiley & Sons, New York, 417 pp.

Zheng, C. and others (Committee on Chinese Groundwater Science), 2009, *Challenges and Opportunities in Chinese Groundwater Science*, Science Press, Beijing, China, 200 pp. (Chunmiao Zheng was chair of the committee that authored this report.)

Zheng, C., 2009, Recent developments and future directions for MT3DMS and related transport codes, *Ground Water*, 47(5), 620–625, <https://doi.org/10.1111/j.1745-6584.2009.00602.x>.

Bianchi, M. and **C. Zheng***, 2009, SGeMS: a free and versatile tool for three-dimensional geostatistical applications, *Ground Water*, 47(1), 8–12, <https://doi.org/10.1111/j.1745-6584.2008.00522.x>.

Lin, J., J.B. Snodsmith, **C. Zheng***, J. Wu, 2009, A modeling study of seawater intrusion in Alabama Gulf Coast, USA, *Environmental Geology*, 57(1), 119–130, <https://doi.org/10.1007/s00254-008-1288-y>.

- Zheng, C.** and X. Feng, eds., 2008, *Environmental Geosciences*, Higher Education Press, Beijing, China, 254 pp.
- Wu, J. and **C. Zheng**, 2008, Advances in optimal design of contaminant monitoring networks, in *Environmental Geosciences*, C. Zheng and X. Feng, eds., pp. 189–222, Higher Education Press, Beijing, China.
- Liu, J., **C. Zheng***, L. Zheng, and Y. Lei, 2008, Ground water sustainability: Methodology and application to the North China Plain, *Ground Water*, 46(6), 897–909, <https://doi.org/10.1111/j.1745-6584.2008.00486.x>.
- Zheng, C.**, 2008, Zhang Hongren and the introduction of transient flow theory to China, *Ground Water*, 46(2), 341–343.
- Bianchi, M., **C. Zheng***, G. Tick, S.M. Gorelick, 2008, Evaluation of Fickian and non-Fickian models for solute transport in porous media containing decimeter-scale preferential flow paths, in *Calibration and Reliability in Groundwater Modelling: Credibility of Modelling*, IAHS Publ. 320, 9–14, International Association of Hydrological Sciences.
- Guan, J., F.J. Molz, Q. Zhou, H.H. Liu and **C. Zheng**, 2008, Behavior of the mass transfer coefficient during the MADE-2 experiment: New insights, *Water Resour. Res.*, 44, W02423, <https://doi.org/10.1029/2007WR006120>.
- Liu, J., K. Rich, and **C. Zheng***, 2008, Sustainability analysis of groundwater resources in a coastal aquifer, Alabama, *Environmental Geology*, 54(1), 43–52.
- Liu, G., **C. Zheng***, and S.M. Gorelick, 2007, Evaluation of the applicability of the dual-domain mass transfer model in porous media containing connected high-conductivity channels, *Water Resour. Res.*, 43, W12407, <https://doi.org/10.1029/2007WR005965>.
- Spiessl, S.M., H. Prommer, T. Licha, M. Sauter, and **C. Zheng**, 2007, A process-based reactive hybrid transport model for coupled discrete conduit-continuum systems, *J. Hydrol.*, 347, 23–34.
- Bowling, J.C., A.B. Rodriguez, D.L. Harry, and **C. Zheng**, 2007, Integrated geophysical and geological investigation of a heterogeneous fluvial aquifer in Columbus, Mississippi, *Journal of Applied Geophysics*, 62, 58–73.
- He, K., L. Zheng, S. Dong, L. Tang, J. Wu, and **C. Zheng**, 2007, PGO: a parallel computing platform for global optimization based on genetic algorithm, *Computers & Geosciences*, 33, 357–366.
- Kendy, E., J. Wang, D. J. Molden, **C. Zheng**, C. Liu, and T.S. Steenhuis, 2007, Can urbanization solve inter-sector water conflicts? Insight from a case study in Hebei Province, North China Plain, *Water Policy*, vol. 9, Supplement 1, 75–93.
- Promma, K., **C. Zheng**, and P. Asnachinda, 2007, Groundwater and surface-water interactions in a confined alluvial aquifer between two rivers: effects of groundwater flow dynamics on high iron anomaly, *Hydrogeology Journal*, 15, 495–513, <https://doi.org/10.1007/s10040-006-0110-8>.
- Lin, J., J. Wu and **C. Zheng***, 2007, MF2K-GWM: A groundwater management modeling tool based on MODFLOW-2000, *Ground Water*, 45(2), 122–124.
- Lin, J., **C. Zheng***, J. Wu, and C.C. Chien, 2007, Groundwater simulation–optimization model based on genetic algorithm under variable density conditions, *Journal of Hydraulic Engineering* (in Chinese), 38(10), 1236–1244.
- Zheng, C.**, E. Poeter, M.C. Hill, and J. Doherty, 2006, Foreword: Understanding through modeling, *Ground Water*, 44, 769–770, <https://doi.org/10.1111/j.1745-6584.2006.00270.x>.
- Zheng, C.**, E. Poeter, M.C. Hill, and J. Doherty, eds., 2006, Understanding through Modeling: A special theme issue, *Ground Water*, 44(6), 769–879.
- Zheng, C.**, 2006, Accounting for aquifer heterogeneity in solute transport modeling: a case study from the macrodispersion experiment (MADE) site in Columbus, Mississippi, in *Handbook of Groundwater Engineering*, 2nd edition, Delleur, J.W., ed., CRC Press.
- Becker, D., B. Minsker, R. Greenwald, Y. Zhang, K. Harre, K. Yager, **C. Zheng**, and R. Peralta, 2006, Reducing long-term remedial costs by transport modeling optimization, *Ground Water*, 44(6), 864–875.
- Molz, F.J., **C. Zheng***, S.M. Gorelick, and C. Harvey, 2006, Comment on “Investigating the Macrodispersion Experiment (MADE) site in Columbus, Mississippi, using a three-dimensional inverse flow and transport model” by H.C. Barlebo, M.C. Hill, and D. Rosbjerg, *Water Resour. Res.*, 42, W06603, <https://doi.org/10.1029/2005WR004265>.

- Bowling, J.C., **C. Zheng***, A.B. Rodriguez, and D.L. Harry, 2006, Geophysical constraints on contaminant transport modeling in a heterogeneous fluvial aquifer, *J. Contam. Hydrol.*, 85, 72–88, <https://doi.org/10.1016/j.jconhyd.2006.01.006>.
- Zheng, C.**, J. Lin, and D.R. Maidment, 2006, Internet data sources for groundwater modeling, *Ground Water*, 44(2), 136–138, <https://doi.org/10.1111/j.1745-6584.2006.00196.x>.
- Wu, J., **C. Zheng***, C.C. Chien, and L. Zheng, 2006, A comparative study of Monte Carlo simple genetic algorithm and noisy genetic algorithm for cost-effective sampling network design under uncertainty, *Advances in Water Resources*, 29, 899–911, <https://doi.org/10.1016/j.advwatres.2005.08.005>.
- [Published in 2001–2005]**
- Gorelick, S. M., G. Liu, and **C. Zheng**, 2005, Quantifying mass transfer in permeable media containing conductive dendritic networks, *Geophysical Research Letters*, 32, L18402, <https://doi.org/10.1029/2005GL023512>.
- Bowling, J.C., A.B. Rodriguez, D.L. Harry, and **C. Zheng**, 2005, Delineating alluvial aquifer heterogeneity using resistivity and GPR data, *Ground Water*, 43(6), 890–903.
- Wang, P.P., **C. Zheng***, and S. M. Gorelick, 2005, A general approach to advective–dispersive transport with multirate mass transfer, *Advances in Water Resources*, 28, 33–42.
- Wang, P.P., and **C. Zheng***, 2005, Contaminant transport models under random sources, *Ground Water*, 43(3), 423–433.
- Wu, J., **C. Zheng***, and C. C. Chien, 2005, Cost-effective sampling network design for contaminant plume monitoring under general hydrogeological conditions, *J. Contaminant Hydrology*, 77, 41–65.
- Lu, G., **C. Zheng***, and A. Wolfsberg, 2005, Effect of uncertain hydraulic conductivity on the simulated fate and transport of BTEX compounds at a field site, *J. Environmental Engineering*, 131(5), 767–776.
- Zheng, C.**, 2004, Model Viewer: a three-dimensional visualization tool for ground water modelers, *Ground Water*, 42(2), 164–166.
- Liu, G., **C. Zheng***, and S. M. Gorelick, 2004, Limits of applicability of the advection-dispersion model in aquifers containing connected high-conductivity channels, *Water Resour. Res.*, 40, W08308.
- Wu, J. and **C. Zheng***, 2004, Contaminant monitoring network design: recent advances and future directions, *Advances in Earth Science* (in Chinese), 19(3), 429–436.
- Lu, G. and **C. Zheng***, 2004, Natural attenuation of fuel hydrocarbon contaminants: Correlation of biodegradation with hydraulic conductivity in a field case study, *Advances in Earth Science* (in Chinese), 19(3), 403–408.
- Wu, J. and **C. Zheng***, 2004, A general simulation–optimization approach for groundwater sampling network design, in *Proc. International Symposium on Water Resources and the Urban Environment*, China University of Geosciences (Wuhan), China.
- Poeter, E., **C. Zheng**, M. C. Hill, and J. Doherty, eds., 2003, *Proceedings of MODFLOW and More 2003: Understanding through Modeling (Volumes I and II)*, Colorado School of Mines, Golden, Colorado.
- Zheng, C.** and S.M. Gorelick, 2003, Analysis of solute transport in flow fields influenced by preferential flowpaths at the decimeter scale, *Ground Water*, 41(2), 142–155.
- Prommer, H., D.A. Barry, and **C. Zheng**, 2003, A MODFLOW/MT3DMS-based reactive multicomponent transport model, *Ground Water*, 41(2), 247–257.
- Huang, W.E., S. Oswald, D.N. Lerner, C.C. Smith, and **C. Zheng**, 2003, Dissolved oxygen imaging in a porous medium to investigate biodegradation in a plume with limited electron acceptor supply, *Environ. Sci. Technol.*, 37(9), 1905–1911.
- Xie, X., J.J. Jiao, Z. Tang, and **C. Zheng**, 2003, Evolution of abnormally low pressure and its implications for the hydrocarbon system in the southeast uplift zone of Songliao basin, China, *AAPG Bulletin*, 87(1), 99–119.
- Chien, C.C., M.A. Medina, Jr., G.F. Pinder, D.R. Reible, B.E. Sleep, **C. Zheng**, eds., 2003, *Contaminated Ground Water and Sediment: Modeling for Management and Remediation*, Lewis Publishers, FL, 288 pp.
- Hill, M.C., E. Poeter, **C. Zheng**, J. Doherty, 2003, MODFLOW 2001 and other modeling odysseys, *Ground Water*, 41(2), 113.
- Hill, M.C., E. Poeter, **C. Zheng**, and J. Doherty, eds., 2003, MODFLOW 2001 and Other Modeling Odysseys: A special theme issue, *Ground Water*, 41(2), 113–288.

- Zheng, C.** and G.D. Bennett, 2002, *Applied Contaminant Transport Modeling, 2nd edition*, John Wiley & Sons, New York, 621 pp.
- Barry, D.A., H. Prommer, C.T. Miller, P. Engesgaard, A. Brun, and **C. Zheng**, 2002, Modelling the fate of oxidisable organic contaminants in groundwater, *Advances in Water Resources* (25th anniversary edition), 25(8–12), 945–983.
- Zheng, C.** and P.P. Wang, 2002, A field demonstration of the simulation-optimization approach for remediation system design, *Ground Water*, 40(3), 258–265.
- Zheng, C.**, 2002, TopoDrive and ParticleFlow: Simple tools for learning ground water modeling (software review), *Ground Water*, 40(3), 222–223.
- Spiessl, S. M., M. Sauter, **C. Zheng**, and G. Liu, 2002, Comparison of two numerical methods for advection in a pipe network coupled to a continuum transport model, in *Calibration and Reliability in Groundwater Modelling: A Few Steps Closer to Reality*, IAHS Publ. 277, 60–68, International Association of Hydrological Sciences.
- Spiessl, S.M., H. Prommer, M. Sauter, and **C. Zheng**, 2002, Numerical simulation of uranium transport in flooded underground mines. In *Uranium in the Aquatic Environment*, Merkel, B.J., B. Planer-Friedrich, and C. Wolkersdorfer, eds., Springer Berlin, 273–282.
- Spiessl, S.M., M. Sauter, H.S. Viswanathan, and **C. Zheng**, 2002, Simulation of dissolved uranium release from flooded underground mines under equilibrium conditions, in *Uranium Deposits: From Their Genesis to Their Environmental Aspects*, Kribek, B. and J. Zeman, eds., 167–170.
- Julian, H.E., J.M. Boggs, **C. Zheng**, and C.E. Feehley, 2001, Numerical simulation of a natural gradient tracer experiment for the Natural Attenuation Study: flow and physical transport, *Ground Water*, 39(4), 534–545.
- Zheng, C.**, and P.P. Wang, 2001, Application of evolutionary algorithms for remediation system design optimization on the Massachusetts Military Reservation, In *Proc. 2001 World Environmental and Water Resources Congress*, Orlando, FL.
- Seo, H.S., E.P. Poeter, **C. Zheng**, and O. Poeter, eds., 2001, *Proceedings of MODFLOW 2001 and Other Modeling Odysseys (Volumes I and II)*, Colorado School of Mines, Golden, Colorado.
- Wang, P.P., **C. Zheng**, D.T. Feinstein, 2001, A positivity preserving scheme for modeling advection-dominated solute transport, In *Proc. MODFLOW 2001 and Other Modeling Odysseys*, Colorado School of Mines, Golden, Colorado.
- Liu, G., P.P. Wang, and **C. Zheng**, 2001, An explicit mass-conservative TVD scheme for solute transport modeling, In *Proc. MODFLOW 2001 and Other Modeling Odysseys*, Colorado School of Mines, Golden, Colorado.
- Zheng, C.**, and S.M. Gorelick, 2001, Effect of decimeter-scale preferential flow paths on solute transport: implications for groundwater remediation, In *Groundwater Quality: Natural and Enhanced Restoration of Groundwater Pollution*, Thornton, S.F. and S. Oswald, eds., IAHS Publ. 275, 463–469, International Association of Hydrological Sciences.

[Published in 1996–2000]

- Sun, M. and **C. Zheng**, 2000, Calibration of 3-D groundwater model using hydrogeological parameter zones, In *Computational Methods in Water Resources, Proc. XIII International Conference on Computational Methods in Water Resources*, Alberta, Canada.
- Feehley, C.E., **C. Zheng***, and F.J. Molz, 2000, A dual-domain mass transfer approach for modeling solute transport in heterogeneous porous media: Application to the Macrodispersion Experiment (MADE) site, *Water Resour. Res.*, 36(9), 2501–2515.
- Ouyang, Y. and **C. Zheng**, 2000, Surficial processes and CO₂ flux in soil ecosystem, *J. Hydrol.*, 234, 54–70.
- Lu, G., **C. Zheng***, R.J. Donahoe and W.B. Lyons, 2000, Controlling processes in a CaCO₃ precipitating stream in Huanglong Natural Scenic District, Sichuan, China, *J. Hydrol.*, 230(1–2), 34–54.
- Wang, P.P. and **C. Zheng**, 1999, Contaminant transport modeling under random sources, in *Calibration and Reliability in Groundwater Modeling, Coping with Uncertainty*, Stauffer, F., W. Kinzelbach, K. Kovar, and E. Hoehn, eds., IAHS Publ. 265, 317–323, International Association of Hydrological Sciences.
- Ouyang, Y. and **C. Zheng**, 1999, Density-driven transport of dissolved chemicals through unsaturated soil, *Soil Science*, 164(6), 376–390.

- Zheng, C.** and P.P. Wang, 1999, An integrated global and local optimization approach for remediation system design, *Water Resour. Res.*, 35(1), 137–146.
- Lu, G., T.P. Clement, **C. Zheng***, and T.H. Wiedemeier, 1999, Natural attenuation of BTEX compounds: Model development and field-scale application, *Ground Water*, 37(5), 707–717.
- Sun, M. and **C. Zheng**, 1999, Long-term groundwater management by a MODFLOW based dynamic optimization tool, *Journal of the American Water Resources Association*, 35(1), 99–111.
- Hunt, R. and **C. Zheng**, 1999, Debating complexity in modeling, *EOS, Transactions, American Geophysical Union*, 80(3), 29.
- Poeter, E.P., **C. Zheng**, and M.C. Hill, eds., 1998, *Proceedings of MODFLOW'98 International Conference on Groundwater Modeling*, Colorado School of Mines, Golden, Colorado.
- Zheng, C.**, P.P. Wang, C.C. Chien, and K.P. Garon, 1998, New advances in combining simulation and optimization for solving groundwater management problems, in *Proc. MODFLOW'98 International Conference*, Colorado School of Mines, Golden, CO.
- Guerin, M. and **C. Zheng**, 1998, GMT3D-Coupling multicomponent, three-dimensional transport with geochemistry, in *Proc. MODFLOW'98 International Conference*, Colorado School of Mines, Golden, CO.
- Clement, T.P., Y. Sun, and **C. Zheng**, 1998, RT3D (v2.0): A MODFLOW-family reactive transport simulator, in *Proc. MODFLOW'98 International Conference*, Colorado School of Mines, Golden, CO.
- Neville, C.J., M.J. Riley, and **C. Zheng**, 1998, Implicit modeling of low permeability features: an appraisal for solute transport, in *Proc. MODFLOW'98 International Conference*, Colorado School of Mines, Golden, CO.
- Wang, M. and **C. Zheng**, 1998, Application of genetic algorithms and simulated annealing in groundwater management: formulation and comparison, *JAWRA*, 34(3), 519–530.
- Jiao, J.J. and **C. Zheng***, 1998, Abnormal fluid pressures caused by erosion and subsidence of sedimentary basins, *J. Hydrol.*, 204, 124–137.
- Zheng, C.** and J.J. Jiao, 1998, Numerical simulation of tracer tests in a heterogeneous aquifer, *Journal of Environmental Engineering*, 124(6), 510–516.
- Wang, P.P. and **C. Zheng***, 1998, An efficient approach for successively perturbed groundwater models, *Advances in Water Resources*, 21, 499–508.
- Wang, M. and **C. Zheng***, 1997, Optimal remediation policy selection under general conditions, *Ground Water*, 35(5), 757–764.
- Jiao, J.J., **C. Zheng***, and R. J.-C. Henne, 1997, Analysis of underpressured geological formations for disposal of hazardous wastes, *Hydrogeology Journal*, 5(3), 19–31.
- Jiao, J.J. and **C. Zheng***, 1997, The different characteristics of aquifer parameters and their implications on pumping-test analysis, *Ground Water*, 35(1), 25–29.
- Zheng, C.** and P.P. Wang, 1996, Parameter structure identification using tabu search and simulated annealing, *Advances in Water Resources*, 19(4), 215–224.
- Wang, M. and **C. Zheng**, 1996, Parameter estimation for transient and steady-state flow models using genetic algorithms, in *ModelCARE 96: Calibration and Reliability in Groundwater Modeling*, K. Kovar and P. van de Heijde, eds., IAHS Publ. 237, 21–30, International Association of Hydrological Sciences.

[Published in 1995 and before]

- Zheng, C.** and G.D. Bennett, 1995, More on the role of simulation in hydrogeology, *Ground Water*, 33(6), 1040–1041.
- Zheng, C.** and G.D. Bennett, 1995, *Applied Contaminant Transport Modeling: Theory and Practice*, Van Nostrand Reinhold (now John Wiley & Sons), New York, 440 pp.
- Hill, M.C. and **C. Zheng**, 1995, Progress made in groundwater flow and transport modeling, *EOS, Trans., AGU*, 76(40), 393–394.
- Zheng, C.**, 1994, Analysis of particle tracking errors associated with spatial discretization, *Ground Water*, 32(5), 821–828.
- Sun, M., and **C. Zheng**, 1994, An accurate and efficient local grid refinement approach for finite difference groundwater models, In *Proc. 2nd Int. Conf. on Groundwater Ecology*, Atlanta, Georgia.
- Sun, M., **C. Zheng**, and D. Tian, 1994, A backward random walk particle tracking method for predicting groundwater flow and contaminant levels at observation sites. In *Proc. 1994 Groundwater Modeling Conference*, Colorado State University, Fort Collins, 163–172.

- Zhou, W. and C. Zheng, 1994, Numerical modeling of unsaturated seepage near a cavity in fractured rock. In *Proc. 1994 Groundwater Modeling Conference*, Colorado State University, Fort Collins, 395–403.
- Zheng, C., 1993, Extension of the method of characteristics for simulation of solute transport in three dimensions, *Ground Water*, 31(3), 456–465.
- Zheng, C., G.D. Bennett, and C.B. Andrews, 1992, Reply to discussion of “Analysis of ground water remedial alternatives at a Superfund site”, *Ground Water*, 30(3), 440–442.
- Zheng, C., K.R. Bradbury, and M.P. Anderson, 1992, *A Computer Model for Calculation of Groundwater Paths and Travel Times in Transient Three-Dimensional Flows*, Wisconsin Geological and Natural History Survey Information Circular 70, 21 pp.
- Zheng, C., G.D. Bennett, and C.B. Andrews, 1991, Analysis of ground water remedial alternatives at a Superfund site. *Ground Water*, 29(6), 838–848.
- Zheng, C., M. P. Anderson, and K. R. Bradbury, 1989, Effectiveness of hydraulic methods for controlling groundwater pollution. In *Groundwater Contamination*, L.M. Abriola, ed., IAHS Publication 185, 173–179, International Association of Hydrological Sciences.
- Zheng, C., H.F. Wang, M. P. Anderson, and K. R. Bradbury, 1988, Analysis of interceptor ditches for control of ground-water pollution, *J. Hydrol.*, 98, 67–81.
- Zheng, C., K.R. Bradbury, and M.P. Anderson, 1988, Role of interceptor ditches in limiting the spread of contaminants in ground water, *Ground Water*, 26(6), 734–742.
- Zheng, C. and M.P. Anderson, 1986, A review of application of stream functions to ground-water flows, *J. Chengdu College of Geology (China)*, 13(3), 109–118.

Computer Software

- Tian, Y., C. Zheng, Y. Zheng, F. Han, X. Li, 2018, Visual HEIFLOW (VHF), a comprehensive graphical modeling environment for integrated hydrological–ecological systems, <https://github.com/DeepHydro/Visual-HEIFLOW>.
- Zheng, C., 2010, *MT3DMS v5.3 Supplemental User's Guide*, Report to the U.S. Army Engineer Research and Development Center, Department of Geological Sciences, University of Alabama, <https://web.archive.org/web/20170129200934/http://hydro.geo.ua.edu/mt3d/>.
- Zheng, C. and P.P. Wang, 2003, *MGO: A Modular Groundwater Optimizer incorporating MODFLOW and MT3DMS; Documentation and User's Guide*, The University of Alabama and Groundwater Systems Research Ltd., https://www.frtr.gov/estcp/source_codes.htm.
- Zheng, C., M.C. Hill, and P.A. Hsieh, 2001, *MODFLOW-2000, The U.S. Geological Survey Modular Ground-Water Model—User Guide to the LMT6 Package, the Linkage with MT3DMS for Multi-Species Mass Transport Modeling*, U.S. Geological Survey Open-File Report 01-82, Reston, Virginia, 43 pp., <https://pubs.usgs.gov/of/2001/0082/report.pdf>.
- Zheng, C. and P.P. Wang, 1999, *MT3DMS: A Modular Three-Dimensional Multispecies Transport Model for Simulation of Advection, Dispersion, and Chemical Reactions of Contaminants in Groundwater Systems; Documentation and User's Guide*, Contract Report SERDP-99-1, U.S. Army Engineer Research and Development Center, Vicksburg, MS, 221 pp., <https://web.archive.org/web/20170129200934/http://hydro.geo.ua.edu/mt3d/>.
- Zheng, C., 1999, *MT3D⁹⁹: A Multispecies Mass Transport Simulator, User's Guide*, S.S. Papadopoulos & Associates, Inc., Bethesda, MD.
- Zheng, C., 1997, *ModGA: A Genetic Algorithm Based Groundwater Flow and Transport Optimization Model for MODFLOW and MT3D*, Report to DuPont Company, University of Alabama, 95 pp.
- Zheng, C., 1997, *ModGA_P: Parameter Estimation Using Genetic Algorithms*, Report to DuPont Company, University of Alabama, 35 pp.
- Zheng, C., 1990, *MT3D: A Modular Three-Dimensional Transport Model for Simulation of Advection, Dispersion and Chemical Reactions of Contaminants in Groundwater Systems*, Report to the United States Environmental Protection Agency, 170 pp.
- Zheng, C., 1990, *MT3D Documentation and User's Guide*, S.S. Papadopoulos & Associates, Inc., 180 pp.
- Zheng, C., 1989, *PATH3D: A Ground-Water Path and Travel-Time Simulator, User's Manual*. S.S. Papadopoulos & Associates, Inc., 50 pp.

Funded Research Projects

[Summary] Professor Zheng has secured funding for 58 projects, including 50 as Principal Investigator (PI) and 8 as Co-PI. His portfolio includes approximately RMB 200 million in funding as PI while at Peking University, SUSTech, and the Eastern Institute of Technology, Ningbo (EIT), as well as approximately USD 19 million as PI or Co-PI during his tenure at the University of Alabama. These projects have been supported by major funding agencies in China and the United States, including the National Natural Science Foundation of China (NSFC), the Ministry of Science and Technology of China (MOST), the China Geological Survey (CGS), the U.S. National Science Foundation (NSF), and the U.S. Environmental Protection Agency (EPA).

1. Multiscale transport mechanisms and predictive modeling of PFAS in heterogeneous aquifers, National Natural Science Foundation of China, 2026–2030, PI (through Eastern Institute of Technology, Ningbo).
2. Occurrence and transport of agriculture-related microplastics in soil and groundwater, National Key R&D Program of China – Intergovernmental Collaborative Project, 2023–2025, PI (through Southern University of Science and Technology/Eastern Institute of Technology, Ningbo).
3. Novel technologies for green environmental remediation and nature-based carbon sequestration, Office of Research Innovation, Zhejiang Province, 2023–2028, PI (through Eastern Institute of Technology, Ningbo).
4. Funding to establish a research institute for low-carbon technologies, City of Ningbo, 2023–2028, PI (through Eastern Institute of Technology, Ningbo).
5. 3D simulation and early warning system for urban water bodies with joint consideration of soil and groundwater quality control, City of Ningbo, 2023–2025, PI (through Eastern Institute of Technology, Ningbo).
6. Guangdong-Hong Kong Joint Laboratory of Soil and Groundwater Pollution Control, Government of Guangdong Province, 2023–2025, PI (through Southern University of Science and Technology).
7. Pollution risk assessment, early warning, and emergency management associated with drinking water source areas, City of Shenzhen, 2021–2024, PI (through Southern University of Science and Technology).
8. Surface water–groundwater interactions and their ecological and environmental effects, University Discipline Innovation Plan, Ministry of Education and Ministry of Science and Technology, 2020–2024, PI (through Southern University of Science and Technology).
9. Roles of anomalous diffusion in groundwater contaminant source identification, in situ remediation and risk assessment: A theoretical and experimental study, National Natural Science Foundation of China, 2020–2024, PI (through Southern University of Science and Technology).
10. Migration and transformation of nutrients across the land–sea interface in the Guangdong–Hong Kong–Macao Greater Bay Area, National Natural Science Foundation of China, 2019–2023, PI (through Southern University of Science and Technology).
11. INFEWS (U.S.–China): Sustainability in the Food–Energy–Water nexus; integrated hydrologic modeling of tradeoffs between food and hydropower in large-scale Chinese and U.S. basins, a joint program of the National Natural Science Foundation of China and U.S. National Science Foundation, 2018–2022, PI (through Southern University of Science and Technology).
12. Guangdong Provincial Key Laboratory of Soil and Groundwater Pollution Control and Remediation, Government of Guangdong Province, 2017–2020, PI (through Southern University of Science and Technology).
13. Development and application of integrated technologies for groundwater remediation, Leading Talents Program of Guangdong Province, Government of Guangdong Province, 2017–2021, PI (through Southern University of Science and Technology).
14. Seawater intrusion along the eastern coastlines of China and associated environmental impacts, National Key R&D Program of China, 2016–2020, PI (through Southern University of Science and Technology).

15. Building excellence in the field of environmental protection and efficient resource utilization, University Academic Program Enhancement Scheme, Development and Reform Commission of Shenzhen Municipal Government, 2016–2019, PI (through Southern University of Science and Technology).
16. A comprehensive approach to pollution control and management of urban watersheds, Shenzhen Municipal Government, 2016–2020, PI (through Southern University of Science and Technology).
17. Key Laboratory for Soil and Groundwater Pollution Control of Shenzhen City, Shenzhen Municipal Government, 2015–2017, PI (through Southern University of Science and Technology).
18. Integrated modeling and prediction of the water–ecosystem–economy system in the Heihe River Basin, National Natural Science Foundation of China, 2015–2018, Co-PI (through Peking University).
19. Effects of small-scale preferential flow paths on contaminant transport and remediation, National Natural Science Foundation of China, 2014–2018, PI (through Peking University).
20. System behaviors and regulation of ecohydrological processes in the middle and lower Heihe River Basin, National Natural Science Foundation of China, 2013–2016, PI (through Peking University).
21. Risk assessment of groundwater contamination from an REE mining site in Baotou, Inner Mongolia, China, Ministry of Environmental Protection of China, 2013–2016, PI (through Peking University).
22. Development of technical guidelines for comprehensive assessment of groundwater contamination, Ministry of Environmental Protection of China, 2011–2016, PI (through Peking University).
23. Field study of contaminant transport processes and numerical model development, China Geological Survey, 2011–2013, PI (through Peking University).
24. Accurate determination of groundwater recharge on the North China Plain through environmental tracers and 3D numerical modeling, Sino-German International Collaborative Research Program, National Natural Science Foundation of China, 2010–2012, PI (through Peking University).
25. Collaborative Research: High-resolution dynamic characterization of transport pathways: providing new insights into subsurface processes, National Science Foundation, 2008–2012, PI (through the University of Alabama).
26. Optimal management of coastal aquifers against seawater intrusion, Baldwin County, Alabama, NOAA through the state of Alabama, 2008–2009, PI (through the University of Alabama).
27. With John Zachara (PI) and 17 Co-PIs, Multi-scale mass transfer processes controlling natural attenuation and engineered remediation: An Integrated Field Challenge (IFC) focused on Hanford’s 300 Area uranium plume, Department of Energy, 2007–2012, Co-PI (through the University of Alabama).
28. A coupled surface water–groundwater model for understanding hydrologic processes and water quality evolution in the North China Plain (NCP), Ministry of Science and Technology of China, 2007–2011, PI (through Peking University).
29. Spatial distribution of groundwater ages in a large sedimentary basin: Numerical simulation and application, National Natural Science Foundation of China, 2007–2009, PI (through Peking University).
30. Collaborative Research: Solute transport in aquifers containing connected high-conductivity networks: theory founded on laboratory and field data, National Science Foundation, 2006–2009, PI (through the University of Alabama).
31. Development of modeling methods and tools for predicting coupled reactive transport processes in porous media at multiple scales, Department of Energy, 2006–2009, PI of a subaward to the University of Alabama.
32. Discrete fracture network models for risk assessment of carbon sequestration in coal, Department of Energy, 2005–2008, PI of a subaward to the University of Alabama.
33. Sustainable groundwater management of coastal aquifers in Baldwin County, Alabama, NOAA through the state of Alabama, 2005–2007, PI (through the University of Alabama).
34. Reliability considerations in groundwater remediation system and monitoring network design, DuPont Company, 2005–2006, PI (through the University of Alabama).

35. Development of information infrastructure for hydrologic sciences, National Science Foundation, 2004–2005, PI of a subaward to the University of Alabama.
36. Groundwater study of Ft. Morgan Peninsula, Baldwin County, NOAA through the state of Alabama, 2004–2005, PI (through the University of Alabama).
37. Further development of the MT3DMS contaminant transport model for linkage with the Army Risk Assessment Modeling System, U.S. Army Engineer Research and Development Center, 2003–2004, PI (through the University of Alabama).
38. Further development of the ModGA code for contaminant source identification, DuPont Company, 2003–2004, PI (through the University of Alabama).
39. Acquisition of geophysical field equipment for earth science research and teaching at the University of Alabama, NSF, 2002–2004, Co-PI.
40. With Jimmy Jiao (University of Hong Kong), Modification of regional groundwater regimes by large-scale land reclamation, Research Grants Council of Hong Kong, 2002–2005, Co-PI (through the University of Alabama).
41. Further development of the ModGA code for monitoring network design optimization, DuPont Company, 2002–2003, PI (through the University of Alabama).
42. Collaborative Research: A systematic study of solute transport influenced by preferential flow paths at the decimeter and smaller scales, NSF, 2001–2005, PI (through the University of Alabama).
43. Field demonstration of transport optimization modeling for reducing the costs of groundwater pump-and-treat systems, Department of Defense Environmental Security Technology Certification Program (ESTCP), 2000–2003, PI (through the University of Alabama).
44. With Amy Ward (Project Director, University of Alabama) and 17 others at the University of Alabama and the University of New Mexico, Integrative Graduate Education and Research Traineeship (IGERT) Program in Freshwater Sciences, NSF, 1999–2004, Co-PI and leader of the solute transport research theme (through the University of Alabama).
45. With Jimmy Jiao (University of Hong Kong), Origin and evolution of abnormal fluid pressures in the Shiwu area in northeastern China, Research Grants Council of Hong Kong, 1999–2002, Co-PI (through the University of Alabama).
46. Subsurface site characterization via a computer-aided tool, Gulf Coast Hazardous Substance Research Center, U.S. EPA, 1998–2000, Co-PI (through the University of Alabama).
47. Incorporation of variably saturated flow and contaminant transport in the groundwater flow and transport optimization model ModGA, DuPont Chemical, 1998–1999, PI (through the University of Alabama).
48. Multi-fractal scaling of hydraulic conductivity distributions and the effect on plume-scale contaminant transport, National Science Foundation, 1997–2000, PI of a subaward to the University of Alabama.
49. Modeling biologically reactive contaminant transport and natural attenuation, Pacific Northwest National Laboratory, Department of Energy, 1997–1998, PI (through the University of Alabama).
50. Development and application of a multicomponent solute transport simulator for the Department of Defense Groundwater Modeling System (GMS), U.S. Army Engineer Research and Development Center, 1996–2000, PI (through the University of Alabama).
51. A global optimization approach for parameter identification in contaminant transport modeling, U.S. Environmental Protection Agency, 1995–1997, PI (through the University of Alabama).
52. Development of a simulation–optimization model for groundwater management and remediation designs, DuPont Company, 1995–1998, PI (through the University of Alabama).
53. Parameter identification using genetic algorithms, DuPont Company, 1995–1996, PI.
54. Simulation of reactive tracer transport in a strongly heterogeneous aquifer, Cray Research, Inc., 1995–1996, PI (through the University of Alabama).

55. Augmentation of optimal policy selections to groundwater contaminant transport model MT3D (Phases I and II), USGS through Alabama Water Resources Research Institute, 1994–1995, Co-PI (through the University of Alabama).
56. Development of an advanced contaminant fate and transport simulator for Cray supercomputers, Cray Research, Inc., 1994–1995, PI (through the University of Alabama).
57. An investigation of underpressured geological formations for disposal of hazardous wastes, State of Alabama through UA School of Mines and Energy Development, 1994–1995, PI (through the University of Alabama).
58. A graduate fellowship to support Ph.D. research in hydrogeology, S.S. Papadopoulos & Associates, Inc., 1994–1995, PI (through the University of Alabama).