Prof. Dr. Michael Hupfer

Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB) in Berlin, Department of Ecohydrology und Biogeochemistry

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Main Resaerch Interests: Biogeochemical proceesses in freshwater systems, Lake internal nutrient cycles, Lake management, Impact of climate and land use changes on lakes, Urban and disturbed aquatic ecosystems.

Education

1988-1993	PhD study at the TU Dresden (Germany) and Innsbruck/Mondsee (Austria)
1985-1988	Diploma study in the field of Hydrobiology/Limnology, TU Dresden (Germany)
1983-1985	Study in Marine Ecology University Rostock (Germany)

Academic positions

since 2022	Honorary professor for Aquatic Biochemistry at the BTU Cottbus-Senftenberg
2018-2021	Head (a.i.) of the Department Chemical Analytics and Biogeochemistry at IGB
1996-2018	Senior scientist at IGB, Berlin, Research group leader “Biogeochemical processes in sediments and lake management”. Speaker of the IGB Research Domain "Aquatic boundaries and linkages" (2008- 2018), Deputy head of the Department Chemical Analytics and Biogeochemistry (2015-2018)
1994-1995	Scientist at UFZ Centre of Environmental Research Leipzig-Halle Ltd., Germany Mining lake group
1992-1994	Postdoc at Eawag, Swiss Federal Institute for Environmental Science and Technology, Department of Biogeochemistry, Kastanienbaum, Switzerland Research topic: Lake restoration and P cycling in lakes
1988-1992	Research Assistant at the Institute of Hydrobiology, TU Dresden, Germany

Academic Awards, Honors and Recognitions

2024	Elected as member of the Leibniz-Sozietät der Wissenschaften zu Berlin e.V.
2005	Award of the Berlin Brandenburg Academy of sciences
2001	Award of the German Water Chemistry Society

Professional activities and memberships

2026- present	President of the German Limnological Society (DGL)
2024-present	Scientific and Technical Advisory Board “Water Management Measures” of Lausitzer und Mitteldeutsche Bergbau- und Verwaltungsgesellschaft (LMBV).
2019- 2025	Elected member of the executive board of the German Limnological Society (DGL)
2019- present	Editor-in-chief Limnologica (2014-2019: member of the advisory board)
2005- present	Editor-in-chief Handbuch Angewandte Limnologie
2018- 2024	Appointed member of the DWA working group "Seenrestaurierung”
2010- present	Referee e.g. for Swiss National Science Foundation, Deutsche Bundesstiftung Umwelt (DBU), National Science Foundation (USA)
1995- present	Reviewer for more than 20 journals, including Limnology and Oceanography, Scientific Reports, Water Research, Biogeochemistry, Environmental Pollution

2015- 2024	Advisory Board of the Master's Programme for Soil, Water, Contaminated Sites at the Osnabrück University of Applied Sciences and the University of Osnabrück
2006-2016	Member of the Scientific Advisory Board of CLEAR (Center of Lake Restoration), University of Southern Denmark, Odense
2005- 2017	Ombudsman at the IGB for Good Scientific Practice

Selected research projects (last 10 years)

DFG research Training group *Urban Water interfaces* (IGB, TU Berlin), 2015-2024 (SP Hupfer, 3x1 PhD)

RecaP: Capture, recycling and societal management of phosphorus in the environment (EU ITN 2021-2024), ESR: Phosphorus cycling in lakes: Role of microorganismen (PI M. Hupfer, 1 PhD student), Leader WP 6 M. Hupfer, Coordination, K. Reitzel SDU, Denmark

Graduate Research School (GRS) Microcluster “Signatures of severely disturbed landscapes – case study mining landscapes” (BTUC, IGB), 2018-2021 (SP Hupfer, 1 PhD student)

Länderarbeitsgemeinschaft Wasser (LAWA- AK): Long term development in lake under climate change, 2020-2022 (1 Postdoc)

Leibniz-Joint Initiative for Research and Innovation: The Baltic Sea and its Southern Lowlands: Proxy-Environment interaction in times of rapid changes (2017-2021), Koordination: IOW (SP Hupfer, 1 PhD student)

DFG: RedoxPhos: How do physical and biogeochemical conditions in pelagic boundaries control vertical transport and generation of phosphorus species? 2011-2016 (HU 740/5-1) (2 PhD students)

Leibniz-Joint Initiative for Research and Innovation: Coordinator (together with G. Nützmann) of the “International Leibniz Graduate School AQUALINK” Aquatic boundaries and linkages in a changing environment, 2012-2016 (SP Hupfer, 1 PhD student)

Publications

108 publications in peer-review Journals (WebofScience), ORCID ID: 0000-0002-8878-1045

Selected publications

Gonsiorczyk, T.*, Hupfer, M.*, Hilt, S., Gessner, M.O. (2024): Rapid eutrophication of a clearwater lake: Trends and potential causes inferred form phosphorus balance analyses. Global Change Biology 30, 11, e17575 (*first authors). https://doi.org/10.1111/gcb.17575

Scholtysik, G., Goldhammer, T., Arz, H.W., Moros, M., Littke, R., Hupfer, M. (2022). Geochemical focusing and burial of sedimentary iron, manganese, and phosphorus during lake eutrophication. Limnol**.** Oceanogr. 67, 4: 768-783. https://doi.org/10.1002/lno.12019

Heinrich, L, Dietel, J. Hupfer, M. (2021): Sulphate reduction determines the long-term effect of iron amendments on phosphorus retention – Management implications based on contrasting field-scale evidence at two urban lakes. Journal of Soils and Sediments 22:316-333. https://doi.org/10.1007/s11368-021-03099-3

Lau, M., Valerio, G., Pilotti, M., Hupfer, M.[1,3,4] (2020). Intermittent meromixis controls the trophic state of warming deep lakes. Nature Scientific reports 10 art 12928. https://doi.org/10.1038/s41598-020-69721-5

Friedland, G., Grüneberg, B., Hupfer, M. (2021): Impact of open-cast lignite mining products on the spatial patterns of geochemical signatures in sediments downstream in a Lusatian fluvial–lacustrine system (Spree, NE Germany). Stoten 760: 143942. https://doi.org/10.1016/j.scitotenv.2020.143942

Heinrich, L., Rothe, M., Braun, B., Hupfer, M.(2021). Transformation of redox-sensitive to redox-stable iron-bound phosphorus in anoxic lake sediments under laboratory conditions. Wat. Res. 189:116609. https://doi.org/10.1016/j.watres.2020.116609

Scholtysik, G.*, Dellwig, O., Casper, P., Herzog, C., Goldhammer, T., Hupfer, M. (2020). Geochemical focusing and formation of authigenic manganese carbonate upon eutrophication in Lake Stechlin (NE Germany). Biogeochemistry 151: 313-334. https://doi.org/10.1007/s10533-020-00729-9

Hupfer, M., Jordan, S., Herzog, C., Ebeling, C., Ladwig, R.*, Rothe, M., Lewandowski, J. (2019). Chironomid larvae enhance phosphorus burial in lake sediments: insights from long-term and short-term experiments. Science of the Total Environment. 663: 254-264. https://doi.org/10.1016/j.scitotenv.2019.01.274

Rothe, M., Kleeberg, A., Hupfer, M. (2016): The occurrence, identification and environmental relevance of vivianite in waterlogged soils and aquatic sediments Earth-Science Reviews. 158: 51-64. https://doi.org/10.1016/j.earscirev.2016.04.008

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