

Mark Alexander Lever – *Curriculum Vitae*

Associate Professor of Microbial Biogeochemistry and Geobiology

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Research Interests

My research is driven by my interest in the role of microorganisms in Earth's carbon cycle. I pursue research questions of broad significance concerning the mechanistic (*how?*) and quantitative (*how much?*) influence of microorganisms on the short- and long-term fate of organic carbon in aquatic sediments and the Earth's crust. This includes the effects of anthropogenic activity on short- and long-term carbon-cycling processes.

Education

Dec 2008 PhD in Marine Sciences, Univ. of North Carolina at Chapel Hill, USA.
 Aug 2002 Master of Arts in Marine Biology, Boston Univ. Marine Program, Woods Hole, USA.
 Aug 1999 Bachelor of Arts in Biology with Minor in Music, Boston Univ., Boston, USA.

Institutional appointments

Aug 2022 – present Associate Professor, University of Texas at Austin.
 Aug 2014 – July 2022 Assistant Professor of Environmental Microbiology, ETH Zurich.
 Aug 2014 – present Adjunct Professor, Center for Geomicrobiology, Aarhus Univ., Denmark.
 Jan 2013 – July 2014 Scientist, Center for Geomicrobiology, Aarhus Univ., Denmark.
 Jan 2011 – Dec 2012 Marie-Curie Intra-European Postdoctoral Fellow, Center for Geomicrobiology, Aarhus Univ., Denmark.
 Jan 2009 – Dec 2010 Postdoctoral Scientist, Center for Geomicrobiology, Aarhus Univ., Denmark.
 Aug 2002 – Dec 2008 Research Asst, Marine Sci Dep. Univ. of N. Carolina at Chapel Hill, USA.

Professional Societies

Memberships in American Society of Microbiology, European Association of Geochemistry, American Geophysical Union, Japan Society to Promote Science, & American Society of Limnology & Oceanography.

Honors and awards

2021 Outstanding Associate Editor, *Frontiers in Microbiology*
 July-Aug 2018 Whiteley Fellow, Friday Harbor Laboratories, Univ. of Washington, USA.
 2016 – 2017 Distinguished Lecturer, European Consortium for Ocean Research Drilling.
 2015 'Outstanding Reviewer' at *Estuarine, Coastal and Shelf Sciences*.
 2011 – 2012 Marie Curie Intra-European Postdoctoral Fellowship.
 Aug 2007 – May 2008 Univ. of N. Carolina at Chapel Hill – Dissertation Completion Fellowship.
 June-August 2007 NSF-East Asia and Pacific Summer Institute fellowship.
 2006-2007 Schlanger Ocean Drilling Fellowship, IODP, U.S. Science Support Program.

Non-academic professional activities

Since Aug 2021 Environmental advisor to consultancy Horizon2030 (horizon2030.net).
 Since Nov 2021 Science consultant to organization WoMen+Sea (womensea.org).

Selected publications (10 from last decade; asterisks indicate corresponding authorships)

1. Deng L, Meile C, Fiskal A, Bölsterli D, Han X, Gajendra N, Dubois N, Bernasconi S, **Lever MA*** (2022) Deposit-feeding worms control subsurface ecosystem functioning in intertidal sediment with strong physical forcing, *PNAS Nexus* 1:pgac146.
2. Han X, Tolu J, Deng L, Fiskal A, Schubert CJ, Winkel LHE, **Lever MA*** (2022) Physical shielding promotes long-term preservation of biomolecules in lake sediments, *PNAS Nexus* 1:1-15.
3. van Grinsven S, Meier D, Michel A, Han X, Schubert CJ, **Lever MA*** (2022) Role of redox zone and trophic history as drivers of methanotrophic bacterial abundance and community structure in lake sediments. *Frontiers Environ Sci* 10:857358.
4. Lagostina L, Frandsen S, MacGregor BJ, Glombitza C, Deng L, Fiskal A, Li J, Doll M, Geilert S, Schmidt M, Scholz F, Bernasconi SM, Jørgensen BB, Hensen C, Teske A, **Lever MA*** (2021) Interactions of temperature and energy supply as drivers of microbial communities in hydrothermal sediment. *Communications Biology* 4:1006.
5. Han X, Schubert CJ, Fiskal A, Dubois N, **Lever MA*** (2020) Eutrophication as a driver of microbial community structure in lake sediments. *Environ Microbiol* 22:3446-3462.
6. Deng L, Bölsterli D, Kristensen E, Meile C, Su C-C, Bernasconi SM, Seidenkrantz M-S, Lagostina L, Han X, Glombitza C, Jørgensen BB, Røy H, **Lever MA*** (2020) Macrofaunal control of microbial community structure in continental margin sediments. *Proc Natl Acad Sci USA* 117:15911-15922.
7. Fiskal A, Deng L, Michel A, Eickenbusch P, Han X, Lagostina L, Zhu R, Sander M, Schroth MH, Bernasconi SM, Dubois N, **Lever MA*** (2019) Effects of eutrophication on sedimentary organic carbon cycling in five temperate lakes. *Biogeosciences* 16:3725-3746.
8. Eickenbusch P, Takai K, Sissmann O, Suzuki S, Menzies C, Sakai S, Sansjofre P, Tasumi E, Bernasconi SM, Glombitza C, Jørgensen BB, Morono Y, **Lever MA*** (2019) Origin of short-chain organic acids in serpentinite mud volcanoes of the Mariana Convergent Margin. *Frontiers Microbiol* 10:1729.
9. **Lever MA***, Rogers K, Lloyd KG, Overmann JO, Schink B, Thauer RK, Hoehler TM, Jørgensen BB. 2015. Microbial life under extreme energy limitation: a synthesis of laboratory- and field-based investigations. *FEMS Microbiol Rev* 39:688-728.
10. **Lever MA***, Rouxel OJ, Alt J, Shimizu N, Ono S, Coggon RM, Shanks WC, Lapham L, Elvert M, Prieto-Mollar X, Hinrichs KU, Inagaki F, Teske AP. 2013. Evidence for microbial carbon and sulfur cycling in deeply buried ridge flank basalt. *Science* 339:1305308.

Selected Service Activities

Co-Convener, “International Workshop on microbial life under extreme energy limitation” with Bo Barker Jørgensen, Tori Hoehler, Victoria Orphan, and Jan Amend, Sandbjerg Castle, Denmark, September 7-11, 2020.

Scientific Advisory Committee member, International Center for Deep Life Investigation (icdli.sjtu.edu.cn), Shanghai Jiao Tong University, China (since 2020).

Steering Committee Member of Deep Life initiative, and Core Science Member of Synthesis group, Deep Carbon Observatory (<https://deepcarbon.net/content/deep-life>), 2017-2019.

Vice Chair, “Impact of Fluid Circulation in old oceanic Lithosphere on the seismicity of transform-type plate boundaries: new solutions for early seismic monitoring of major European Seismogenic zones”, European Cooperation in Science and Technology (COST), 2014-18 (Chair: Christian Hensen).