THE OHIO STATE UNIVERSITY

# Brian H. Lower, Ph.D.

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**The Ohio State University**
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## Education

| Date | Degree | Subject | Institution |
|---|---|---|---|
| 1997-2001 | Ph.D. | Biochemistry | Virginia Tech, Blacksburg, Virginia, United States<br>Advisor: Peter J. Kennelly |
| 1990-1995 | B.S. | Zoology | Kent State University, Kent, Ohio, United States |

## Academic Appointments

| Date | Title | Institution |
|---|---|---|
| 2023-Present | Professor | School of Environment & Natural Resources, The Ohio State University, Columbus, Ohio, United States, 70/30 Teaching/Research |
| 2014-2023 | Associate Professor | School of Environment & Natural Resources, The Ohio State University, Columbus, Ohio, United States, 70/30 Teaching/Research |
| 2008-2014 | Assistant Professor | School of Environment & Natural Resources, The Ohio State University, Columbus, Ohio, United States, 50/50 Teaching/Research |

## Other Appointments

| Date | Title | Institution |
|---|---|---|
| 2004-2008 | Senior Scientist | Environmental Molecular Sciences Laboratory, Pacific Northwest National Laboratory, Richland, Washington, United States |
| 2002-2004 | Post-Doctoral Associate | Department of Geosciences, Virginia Tech, Blacksburg, Virginia, United States<br>Advisor: Michael F. Hochella Jr. |
| 2001-2002 | Post-Doctoral Associate | Department of Biochemistry, Virginia Tech, Blacksburg, Virginia, United States<br>Advisor: Peter J. Kennelly |

## Grants

| | |
|---|---|
| 2020-2024 | U.S. National Science Foundation (NSF), EAGER: The Bacterial Magnetosome may be a Potential Energy-Harvesting Pseudo-organelle for Magnetotrophy. Steven Lower, Brian Lower (Co-PI), R. Sooryakumar. Award Type: Research Grant. Total Award: $282,000. |

| | |
|---|---|
| 2017-2020 | U.S. National Science Foundation (NSF), Hydrodynamics and Actuation of Magnetic Bacteria in Confined Geometries: Single Cells to Swarms. R. Sooryakumar, Steven Lower, Brian Lower (Co-PI). Award Type: Research Grant. Total Award: $344,000. |
| 2017-2018 | U.S. National Science Foundation (NSF), Biomaterial synthesis of nanomagnets from Magnetotactic Bacteria. Brian Lower (Lead-PI), Steven Lower. Award Type: Research Supplemental Grant. Total Award: $54,000. |
| 2015-2016 | The Ohio State University, Materials Research Seed Grant Program. Fabrication of patterned protein molecules using living magnetic microbes. R. Sooryakumar, Brian Lower (Co-PI), Steven Lower. Award Type: Research Supplemental Grant. Total Award: $50,000. |
| 2014-2020 | U.S. National Science Foundation (NSF), Collaborative Research: Protein mediated magnetite biomineralization. Brian H. Lower (Lead-PI), Steven K. Lower, Dennis A. Bazylinski. Award Type: Research Grant. Total Award: $392,000. |
| 2014-2015 | The Ohio State University, Office of Distance Education & eLearning Impact Grant Program. Develop a Poster-Review Application Technology for Mobile Devices. Brian H. Lower (Lead-PI). Award Type: Research Grant. Total Award: $25,000. |
| 2009-2014 | U.S. National Science Foundation (NSF), Using single molecule force and fluorescence microscopy to elucidate the molecular mechanism of bioinspired magnetite synthesis in magnetotactic bacteria. Brian Lower (Lead-PI), Dennis A. Bazylinski. Award Type: Research Grant. Total Award: $258,000. |
| 2006-2007 | U.S. Department of Energy (DOE), Development of a Bio-AFM capability at EMSL. Brian H. Lower (Lead-PI). Award Type: Research Grant. Total Award: $175,000. |
| 2006-2008 | U.S. Department of Energy (DOE), Biogeochemistry Grand Challenge. Jim K. Fredrickson, John M. Zachara, multiple Co-PIs including Brian H. Lower (Co-PI). Award Type: Research Grant. Total Award: $175,000. |
| 2006-2009 | U.S. Department of Energy (DOE), Basis of microbial membrane attachment to mineral surfaces and ionic contaminants uptake. Tjerk P. Straatsma, Roberto Lins, and Brian H. Lower (Co-PI). Award Type: Research Grant. Total Award: $275,000. |

## Publications

| **Publication Summary** | | | | | |
|---|---|---|---|---|---|
| | **Google Scholar** | **Scopus** | **Web of Science** | **Publication Type** | **Number** |
| *h*-index | 23 | 20 | 20 | Journal Articles | 37 |
| *i*10-index | 30 | 27 | 26 | Authored Books | 1 |
| Total times cited | 2,106 | 1,534 | 1,404 | Edited Books | 2 |
| Without self-citations | 1,970 | 1,451 | 1,328 | Book Chapters | 4 |
| Self-citations | 136 | 83 | 76 | Bulletins, Abstracts | 19 |
| Average citations per item | 27.71 | 38.35 | 33.43 | Presentations | 89 |
| Total publications | 76 | 40 | 42 | Total | 152 |

## Peer-Reviewed Journal Articles

1. Ella M. Weaver, Kylienne A. Shaul, Brian H. Lower (2022). Implementation of an online poster symposium for a large-enrollment, natural science, general education, asynchronous course. *Frontiers in Education*, 7, 906995.
2. Zachery Oestreicher[3], Lumarie Pérez-Guzmán[2], Nadia N. Casillas-Ituarte[3], Michaela R. Hostetler[1], Eric Mumper[2], Dennis A. Bazylinski, Steven K. Lower, and Brian H. Lower (2022). Thermophilic Magnetotactic Bacteria from Mickey Hot Springs, an Arsenic-Rich Hydrothermal System in Oregon. *ACS Earth and Space Chemistry*, 6, 530-540.
3. Nadia N. Casillas-Ituarte[3], Amelia M. Staats, Brian H. Lower, Paul Stoodley, Steven K. Lower (2021). Host blood proteins as bridging ligand in bacterial aggregation as well as anchor point for adhesion in the molecular pathogenesis of *Staphylococcus aureus* infections. *Micron,* 150, 103137.
4. Zachery Oestreicher[3], Carmen Valverde-Tercedor[2], Eric Mumper[2], Lumarie Pérez-Guzmán[2], Nadia N. Casillas-Ituarte[3], Concepcion Jimenez-Lopez, Dennis A Bazylinski, Steven K. Lower, and Brian H. Lower (2021). Localization of Native Mms13 to the Magnetosome Chain of *Magnetospirillum magneticum* AMB-1 Using Immunogold Electron Microscopy, Immunofluorescence Microscopy and Biochemical Analysis. *Crystals,* 11, 874.
5. Christopher J Pierce[2], Hiran Wijesinghe[2], Emily Osborne[1], Eric Mumper[2], Brian Lower, Steven Lower, and Ratnasingham Sooryakumar (2020). Tunable self-assembly of magnetotactic bacteria: Role of hydrodynamics and magnetism. *AIP Advances,* 10(1): 015335.
6. Lumarie Pérez-Guzmán[2], Brian H. Lower, Richard P. Dick (2020). Corn and hardwood biochars affected soil microbial community and enzyme activities. *Agrosystems, Geosciences and Environment,* 3, e20082.
7. Christopher J Pierce[2], Emily Osborne[1], Eric Mumper[2], Brian H Lower, Steven K Lower, and Ratnasingham Sooryakumar (2019). Thrust and Power Output of the Bacterial Flagellar Motor: A Micromagnetic Tweezers Approach. *Biophysical Journal,* 117, 1250-1257.
8. Nadia N. Casillas-Ituarte[3], Alex C. DiBartola[1], Megan J. Broughton[1], Lumarie Pérez-Guzmán[2], Robert M. Wheeler[2], B. Alexis Lower, [1] James A. Dunn[2], Brian H. Lower, Vance G. Fowler Jr., Magnus Höök, Lauren M. McIntyre, Steven K. Lower, Batu K. Sharma-Kuinkel (2019). Fibrinogen binding is affected by amino acid substitutions in C-terminal repeat region of fibronectin binding protein A. *Scientific Reports,* 9, 11619.
9. C. J. Pierce[2], H. Wijesinghe[2], E. Mumper[2], B. H. Lower, S. K. Lower, and R. Sooryakumar (2018). Hydrodynamic Interactions, Hidden Order, and Emergent Collective Behavior in an Active Bacterial Suspension. *Physical Review Letters*, 121, 188001.
10. C. J. Pierce[2]; E. Mumper[2], E. E. Brown[1], J. T. Brangham, B. H. Lower, S. K. Lower, F. Y. Yang, and R. Sooryakumar (2017). Tuning bacterial hydrodynamics with magnetic fields. *Physical Review E,* 95, 062612.
11. Zachery Oestreicher[2], Eric Mumper[2], Carol Gassman, Dennis A. Bazylinski, Steven K. Lower, Brian H. Lower (2016). Spatial localization of Mms6 during biomineralization of $Fe_3O_4$ nanocrystals in *Magnetospirillum magneticum* AMB-1. *Journal of Materials Research,* 31, 527-535.
12. C. Valverde-Tercedor[2], F. Abada-Molina, M. Martinez-Bueno, Estela Pineda-Molina, Lijun Chen[2], Zachery Oestreicher[2], Brian H. Lower, Steven K. Lower, Dennis A. Bazylinski, C. Jimenez-Lopez (2014). Subcellular localization of the magnetosome protein MamC in the marine magnetotactic bacterium *Magnetococcus marinus* strain MC-1 using immunoelectron microscopy. *Archives of Microbiology,* 196, 481-488.

13. Zachery Oestreicher[2], Steven K. Lower, Eric Rees, Dennis A. Bazylinski and Brian H. Lower (2013). Magnetotactic bacteria from Pavilion Lake, British Columbia. *Frontiers in Microbiology,* 4, 406.

14. Brian H. Lower and Dennis A. Bazylinski (2013). The Bacterial Magnetosome, a Unique Prokaryotic Organelle. *Journal of Molecular Microbiology and Biotechnology, 23*, 63-80.

15. Zachery Oestreicher[2], Carmen Valverde-Tercedor[2], Lijun Chen[2], Concepcion Jimenez-Lopez, Dennis A. Bazylinski, Nadia N. Casillas-Ituarte[3], Steven K. Lower and Brian H. Lower (2012). Magnetosomes and magnetite crystals produced by magnetotactic bacteria as resolved by atomic force microscopy and transmission electron microscopy. *Micron,* 43 (12), 1331-1335.

16. Zachery Oestreicher[2], Steven K. Lower, Wei Lin and Brian H. Lower (2012). Collection, isolation and enrichment of naturally occurring magnetotactic bacteria from the environment. *Journal of Visualized Experiments,* 69, e50123.

17. Nadia N. Casillas-Ituarte[3], Brian H. Lower, Supaporn Lamlertthon, Vance G. Fowler and Steven K. Lower (2012). Dissociation rate constants of human fibronectin binding to fibronectin-binding proteins on living Staphylococcus aureus isolated from clinical patients. *Journal of Biological Chemistry,* 287, 6693-6701.

18. Steven K. Lower, Nadia Casillas-Ituarte[3], Supaporn Lamlertthon, Roberto Lins, Ruchirej Yongsunthon[3], Eric Taylor[2], Alex DiBartola[1], Catherine Edmonson, Lauren McIntyre, Brian H. Lower, and Vance Fowler (2011). Polymorphisms in fibronectin binding protein A of Staphylococcus aureus are associated with infection of cardiovascular devices. *Proceedings of the National Academy of Sciences, USA,* 108, 18372-18377.

19. Lijun Chen[2], Dennis A. Bazylinski and Brian H. Lower (2010). Bacteria that Synthesize Nano-sized Compasses to Navigate using Earth's Geomagnetic Field. *Nature Education Knowledge,* 1 (10), 14.

20. Lumarie Perez-Guzman[2], Kyle R. Bogner[1] and Brian H. Lower (2010). Earth's Ferrous Wheel. *Nature Education Knowledge,* 1 (10), 8.

21. Steven K. Lower, Ruchirej Yongsunthon[3], Alex C. DiBartola[1], Brian H. Lower, Andrew W. Buck and Vance G. Fowler (2010). A Tactile Response in Staphylococcus aureus. *Biophysical Journal,* 99 (9), 2803-2811.

22. Brian H. Lower, Ruchirej Yongsunthon[3], Liang Shi, Linda Wildling, Hermann J. Gruber, Nicholas S. Wigginton[2], Catherine L. Reardon, Grigoriy E. Pinchuk, Timothy C. Droubay, Jean-François Boily, and Steven K. Lower (2009). Antibody-Recognition Force Microscopy shows that Outer Membrane Cytochromes OmcA and MtrC are Expressed on the Exterior Surface of *Shewanella oneidensis* MR-1. *Applied and Environmental Microbiology, 75*, 2931-2935.

23. Saumyaditya Bose[2], Michael F. Hochella Jr., Yuri A. Gorby, David W. Kennedy, Dave E. McCready, Andrew Madden[2], and Brian H. Lower (2009). Bioreduction of Hematite Nanoparticles by the Dissimilatory Iron Reducing Bacterium *Shewanella oneidensis* MR-1. *Geochimica et Cosmochimica Acta,* 73, 962-976.

24. Brian H. Lower, Roberto D. Lins, Zachery Oestreicher[2], Tjerk Straatsma, Michael F. Hochella Jr., Liang Shi, and Steven K. Lower (2008). In vitro Evolution of a Peptide with a Hematite Binding Motif that may Constitute a Natural Metal-Oxide Binding Archetype. *Environmental Science and Technology,* 42, 3821-3827.

25. Carrick M. Eggleston, Janos Vörös, Liang Shi, Brian H. Lower, Timothy C. Droubay, Patricia J.S. Colberg (2008). Binding and direct electrochemistry of OmcA, an outer-membrane cytochrome from iron reducing bacteria, with oxide electrodes: A candidate microbial fuel cell system. *Inorganic Chimica Acta,* 361, 769-777.

26. Brian H. Lower, Liang Shi, Ruchi Yongsunthon[3], Timothy C. Droubay, David E. McCready, and Steven K. Lower (2007). Specific bonds between an iron oxide surface and outer membrane cytochromes MtrC and OmcA from *Shewanella oneidensis* MR-1. *Journal of Bacteriology, 189*, 4944-4952.

27. Nicholas S. Wigginton[2], Kevin M. Rosso, Brian H. Lower, Liang Shi, and Michael F. Hochella, Jr. (2007). Electron Tunneling Properties of Outer-Membrane Decaheme Cytochromes from *Shewanella oneidensis. Geochimica et Cosmochimica Acta,* 71, 543-555.

28. Ruchirej Yongsunthon[3], Vance Fowler, Jr., Brian H. Lower, F. Paul Vellano III, Emily Alexander, L. Barth Reller, G. Ralph Corey, Steven K. Lower (2007). Correlation between fundamental binding forces and clinical prognosis of Staphylococcus aureus infections of medical implants. *Langmuir,* 23, 2289-2292.

29. Liang Shi, Baowei Chen, Zheming Wang, Dwayne A. Elias, Uljana Mayer, Yuri A. Gorby, Shuisong Ni, Brian H. Lower, David W. Kennedy, David S. Wunschel, Heather M. Mottaz, Matthew J. Marshall, Eric A. Hill, Alexander S. Beliaev, John M. Zachara, James K. Fredrickson, and Thomas Squier (2006). Isolation of High-Affinity Functional Protein Complex between OmcA and MtrC: Two Outer Membrane Decaheme c-type Cytochromes of *Shewanella oneidensis* MR-1. *Journal of Bacteriology,* 188, 4705-4714.

30. Yijia Xiong, Liang Shi, Baowei Chen, M. Uljana Mayer, Brian H. Lower, Yuri Londer, [2]Saumyaditya Bose, Michael F. Hochella Jr., James K. Fredrickson, and Thomas C. Squier (2006). High-affinity binding and direct electron transfer to solid metals by the *Shewanella oneidensis* MR-1 outer membrane c-type cytochrome OmcA. *Journal of the American Chemical Society,* 128, 13978-13979.

31. Brian H. Lower, Michael F. Hochella Jr., and Steven K. Lower (2005). Putative Mineral-Specific Proteins Synthesized by a Metal Reducing Bacterium. *American Journal of Science,* 305, 687-710.

32. Brian H. Lower, Ruchirej Yongsunthon[3], F. Paul Vellano[2], and Steven K. Lower (2005). Simultaneous Force and Fluorescence Measurements of a Protein that Forms a Bond Between a Living Bacterium and a Solid Surface. *Journal of Bacteriology,* 187, 2127-2137.

33. Brian H. Lower, M. Ben Potters, and Peter J. Kennelly (2004). A Phosphoprotein from the Archaeon *Sulfolobus solfataricus* with Protein-Serine/Threonine Kinase Activity. *Journal of Bacteriology,* 186, 463-472.

34. Ben M. Potters, Barbara T. Solow, Kenneth M. Bischoff, David Graham, Brian H. Lower, Richard Helm, and Peter J. Kennelly (2003). Phosphoprotein with Phosphoglycerate Mutase Activity from the Archaeon *Sulfolobus solfataricus*. *Journal of Bacteriology,* 185, 2112-2121.

35. Brian H. Lower and Peter J. Kennelly (2003). Open Reading Frame sso2387 from the Archaeon *Sulfolobus solfataricus* Encodes a Polypeptide with Protein-Serine Kinase Activity. *Journal of Bacteriology,* 185, 3436-3445.

36. Brian H. Lower and Peter J. Kennelly (2002). The Membrane-Associated Protein-Serine/Threonine Kinase from *Sulfolobus solfataricus* is a Glycoprotein. *Journal of Bacteriology,* 184, 2614-2619.

37. Brian H. Lower, Kenneth M. Bischoff, and Peter J. Kennelly (2000). The Archaeon *Sulfolobus solfataricus* Contains a Membrane-Associated Protein Kinase Activity that Preferentially Phosphorylates Threonine Residues In Vitro. *Journal of Bacteriology,* 182, 3452-3459.

[1]Undergraduate student, [2]Graduate student, [3]Post-doctoral scholar.

## Books

38. Ella M. Weaver, Kylienne A. Shaul, Henry Griffy, and Brian H. Lower (2020). *Scientific Posters: A*

*Learner's Guide.* Pressbooks, Book Oven Inc., Montréal, Canada.

## Edited Books

39. Claire M. Beck[1], Delia A. Randolph[1], Lindsey A. Krusling[1], et al.[1] (2018). *Environmental ScienceBites* (Vol. 2). Brian H. Lower, Travis R. Shaul, Kylienne A.C. Shaul[2], and Ella M. Weaver (Eds.). Pressbooks, Book Oven Inc. Montréal, Canada.
40. Sydney R. Morrison[1], Jaymes T. St.Clair[1], Levi J. Cramer[1], et al.[1] (2015). *Environmental ScienceBites* (Vol. 1). Kylienne A. Clark[2], Travis R. Shaul and Brian H. Lower (Eds.) Cupertino, California: Apple.

[1]Undergraduate student, [2]Graduate student, [3]Post-doctoral scholar.

## Chapters in Edited Books

41. Zachery Oestreicher[2], Steven K. Lower, Dennis A. Bazylinski and Brian H. Lower (2015). Collection and Enrichment of Magnetotactic Bacteria from the Environment, in Daad Saffarini (Ed.), *Bacteria-Metal Interactions* (pp. 41-55). Springer, New York.
42. Dennis A. Bazylinski, Christopher T. Lefevre, and Brian H. Lower (2014). Magnetotactic Bacteria, Magnetosomes and Nanotechnology. In Larry Barton, Dennis Bazylinski, Huifang Xu (Eds.), *Nanomicrobiology, Physiological and Environmental Characteristics* (pp. 39-74). Springer, New York.
43. Brian H. Lower and Steven K. Lower (2011). Force Spectroscopy of Mineral-Microbe Bonds. In Life at the Nanoscale: Atomic Force Microscopy of Live Cells. Edited by: Yves Dufrene. Singapore: Pan Stanford Publishing Pte Ltd. 301-316. 2011.
44. Brian H. Lower (2010). Antibody recognition force microscopy (Ig-RFM) to identify and map the nanoscale distribution of protein molecules on the surface of live microorganisms. In Microscopy: Science, Technology, Applications and Education. Edited by: A. Mendez-Vilas and J. Diaz. Badajoz: Formatex Research Center. 507-514.

[1]Undergraduate student, [2]Graduate student, [3]Post-doctoral scholar.

## Bulletins and Technical Reports

45. S. Lauback[1], E. Brown[1], C Pierce[2]. B.H. Lower, S.K. Lower, R. Sooryakumar (2015). Magnetically-Actuated Escherichia coli System for Micro Lithography. Bulletin of the American Physical Society, American Physical Society, Vol. 60.
46. Emily Osborne[1], Brian Lower, Steven Lower, Eric Mumper[2], Ratnasingham Sooryakumar, Christopher Pierce[2] (2018). Measurement of Bacterial Flagella Force using Micromagnetic Tweezers. Bulletin of the American Physical Society, American Physical Society, Vol. 63.
47. Rhea Mehta[1], Christopher Pierce[2], Eric Mumper[2], Brian Lower, Steven Lower, Ratnasingham Sooryakumar (2018). Variations in the Hydrodynamic Motility of Magnetotactic Bacteria. Bulletin of the American Physical Society, American Physical Society, Vol. 63.
48. Jeremy Rummer, Sam Speaks[4], Kaitlyn Flanigan[4], Nya Feinstein[4], Christopher Pierce[2], Eric Mumper[2], Brian Lower, Steven Lower, Ratnasingham Sooryakumar (2019). Bridging biology, physics and research through high school--university outreach. Bulletin of the American Physical Society, American Physical Society, Vol. 64.
49. Hiran Wijesinghe[2], Christopher Pierce[2], Eric Mumper[2], Brian Lower, Steven Lower, Ratnasingham Sooryakumar (2020). Tunable self-organization of swimming magnetic bacterial suspension. Bulletin of the American Physical Society, American Physical Society, Vol. 65.

50. Mike Amstutz, Carol Anelli, Rhonda Billman, Dave Dietrich, Francis Fluharty, Carri Gerber, Frances Grum, Greg Hitzhusen, Kim Hostetler, Cassy Hoy, Thomas Janini, Terry Lanker, Brian Lower, Casey Meek, Jim Metzger, Tom Mitchell, Steve Neal, Jill Pfister, Matt Roberts, Kim Sayers, Scott Shearer, Brent Stammen, Gary Stammen, Gary Straquadine, Jessica Suagee, Jill Tyson, Susie Whittington, Henry Zerby (2014). Ohio State ATI Re-envisioning Report.

51. Brian H. Lower (2010). Breathing, Bacterium's Role in Remediation. Published by the U.S. Department of Energy. Richland, Washington. Published. http://www.pnl.gov/science/highlights/highlight.asp?id=616.

52. Brian H. Lower (2009). Tips for nanomapping: Atomic force microscopy technique maps proteins on *Shewanella* surface. Published by the U.S. Department of Energy. Richland, Washington. Published. http://www.emsl.pnl.gov/news/highlights/lower20090601.pdf

[1]Undergraduate student, [2]Graduate student, [3]Post-doctoral scholar.

## Abstracts

53. Lauback[1], S; Brown[1], E; Pérez-Guzman[2], L; Peace[2], C; Lower, BH; Lower, SK; Sooryakumar, R (2015). Magnetically-Actuated Escherichia coli System for Micro Lithography. American Physical Society Annual March Meeting Abstract, pp. Q47.014.

54. Pierce[2], Christopher; Mumper[2], Eric; Brangham, Jack; Wijesinghe[2], Hiran; Lower, Steven; Lower, Brian; Yang, Fengyuan; Sooryakumar, Ratnasingham (2017). Tuning Bacterial Hydrodynamics with Magnetic Fields: A Path to Bacterial Robotics. American Physical Society Annual March Meeting Abstract, pp. X12.005.

55. Wijesinghe[2], Hiran; Mumper[2], Eric; Oestreicher[3], Zachery; Song, Zhixin; Pierce[2], Christopher; Lower, Steven; Lower, Brian; Sooryakumar, Ratnasingham (2018). A Self-Assembled Flagellated Bacterial Micropump. American Physical Society Annual March Meeting Abstract, pp. X51.010.

56. Pierce[2], Christopher; Wijesinghe[2], Hiran; Mumper[2], Eric; Yu, Sisheng; Oestreicher[3], Zachery; Lower, Brian; Lower, Steven; Yang, Fengyuan; Sooryakumar, Ratnasingham (2018) Hydrodynamic Clustering of Oriented Magnetotactic Bacteria at Solid-Liquid Interfaces. American Physical Society Annual March Meeting Abstract, pp. X51.007.

57. Dunn[2], James; Ituarte, Nadia Casillas[3]; Lower, Steven; Lower, Brian (2018). Exploring the influence of amino acid structure on interactions between peptides and hematite surfaces. Abstracts of Papers of the American Chemical Society, Vol. 255.

58. Wijesinghe[2], Hiran; Mumper[2], Eric; Oestreicher[3], Zachery; Lower, Steven; Lower, Brian; Sooryakumar, Ratnasingham (2019). Controlling Morphology of Aerotactic Bacterial Bands. American Physical Society Annual March Meeting Abstract, pp. P61.011.

59. Pierce[2], Christopher; Wijesinghe[2], Hiran; Mumper[2], Eric; Lower, Brian; Lower, Steven; Sooryakumar, R (2019). Kinetics and Order-Disorder Transitions in Hydrodynamically Self-Assembled Magnetotactic Bacteria. American Physical Society Annual March Meeting Abstract, pp. C61.013.

60. Mumper[2], Eric; Pierce[2], Christopher J; Mehta[1], Rhea H; Lee[2], Nathan; Barton, Michael; Wilkins, Michael J; Sooryakumar, Ratnasingham; Lower, Brian H; Bazylinski, Dennis A; Lower, Steven K (2018). Magnetotactic bacterium *Magnetospirillum magneticum* AMB-1 displays magnetic field dependent growth. American Geophysical Union Fall Meeting Abstracts, American Geophysical Union, pp. GP42A-06.

61. Zachery Oestreicher[2], Brian H. Lower, Steven K. Lower, Dennis A. Bazylinski (2011). Analysis of magnetite crystals and inclusion bodies inside magnetotactic bacteria from different environmental

locations. American Geophysical Union, AGU Fall Meeting Abstract, pp. B51l-0530.

62. Zachery Oestreicher[2], Steven K. Lower, Brian H. Lower (2011). Magnetotactic bacteria containing phosphorus-rich inclusion bodies. Abstracts of the Microscopy and Microanalysis Meeting, Nashville, Tennessee. 2011. Cambridge University Press, pp. 140-141.
63. Zachery Oestreicher[2], Brian H. Lower, Roberto D. Lins and Steven K. Lower (2009). Peptides as Templates for Biomineralization. Abstracts of the General Meeting of the American Society for Microbiology. 109th General Meeting of the American Society for Microbiology ed. Vol. 109, Philadelphia: American Society for Microbiology.

[1]Undergraduate student, [2]Graduate student, [3]Post-doctoral scholar.

## Scholarly Presentations

64. Kylienne Shaul, Ella Weaver, Brian Lower (2023). Devised, designed, delivered: Creating a meaningful learning experience in an online STEM lab. The Academy of Teaching 2023 Spring Conference Challenges and Opportunities: Anticipating the Future of Pedagogy in Columbus, Ohio, United States. May 10, 2023.
65. Michaela Hostetler[2], Maria Scaccia[1], Steven K. Lower, Brian H. Lower (2023). Protein catalyzed biomineralization of magnetite as the key to magnetofossil identification. Goldschmidt 2023 in Lyon, France. July 11, 2023.
66. Michaela Hostetler[2], Maria Scaccia[1], Brian H. Lower, Steven K. Lower (2022). Proxies of ancient life through magnetotactic bacteria. Goldschmidt 2022 in Honolulu, Hawaii, United States. July 13, 2022.
67. Michaela Hostetler[2], Steven K. Lower, Brian H. Lower (2022). Discovery of a moderately thermophilic magnetotactic bacteria at Mickey Hot Springs, Oregon (USA). Goldschmidt 2022 in Honolulu, Hawaii, United States. July 12, 2022.
68. Hiran Wijesinghe[2], Christopher Pierce[2], Eric Mumper[2], Brian Lower, Steven Lower, Ratnasingham Sooryakumar (2020).Tunable self-organization of swimming magnetic bacterial suspensions. American Physical Society Spring Meeting. Denver, Colorado, United States. March 3, 2020.
69. Christopher Pierce[2], Hiran Wijesinghe[2], Eric Mumper[2], Brian Lower, Steven Lower, R Sooryakumar (2019). Kinetics and Order-Disorder Transitions in Hydrodynamically Self-Assembled Magnetotactic Bacteria. APS March 2019 Annual Meeting in Boston, Massachusetts, United States, March 4, 2019.
70. Hiran Wijesinghe[2], Eric Mumper[2], Zachery Oestreicher[3], Steven Lower, Brian Lower, Ratnasingham Sooryakumar Controlling morphology of aerotactic bacterial bands (2019). APS March 2019 Annual Meeting in Boston, Massachusetts, United States, March 4, 2019.
71. Hiran Wijesinghe[2], Eric Mumper[2], Zachery Oestreicher[3], Zhixin Song, Christopher Pierce[2], Steven Lower, Brian Lower, Ratnasingham Sooryakumar (2018). A Self-Assembled Flagellated Bacterial Micropump. American Physical Society (APS) Spring Meeting, March 5-9, 2018, Los Angeles, California, United States.
72. Christopher Pierce[2], Hiran Wijesinghe[2], Eric Mumper[2], Sisheng Yu, Zachery Oestreicher[3], Brian Lower, Steven Lower, Fengyuan Yang, Ratnasingham Sooryakumar (2018). Hydrodynamic Clustering of Oriented Magnetotactic Bacteria at Solid-Liquid Interfaces. American Physical Society (APS) Spring Meeting, March 5-9, 2018, Los Angeles, California, United States.
73. James Dunn[2], Roberto D. Lins and Brian H. Lower (2018). Exploring the Influence of Amino Acid Structure on Interactions between Peptides and Mineral Surfaces. 255$^{th}$ American Chemical Society

Meeting & Exposition in New Orleans, Louisiana, United States, March 18-22, 2018.

74. Christopher Pierce[2], Eric Mumper[2], Jack Brangham[1], Hiran Wijesinghe[2], Steven Lower, Brian Lower, Fengyuan Yang, Ratnasingham Sooryakumar (2017). Tuning Bacterial Hydrodynamics with Magnetic Fields: A Path to Bacterial Robotics. American Physical Society (APS) Spring Meeting, March 13-17, 2017, New Orleans, Louisiana, United States.
75. Eric Mumper[2], Steven K. Lower and Brian H. Lower (2015). *Pushed, Poked, and Prodded: Documenting Changes in Magnetotactic Bacteria from Wetland to Pure Culture.* 25th Annual Goldschmidt Conference. Lecture conducted from Prague, Czech Republic, August 2015.
76. Eric Mumper[2], Zachary Oestreicher[2], Brian Lower, Dennis Bazylinski, Steven Lower (2014). *Biologically Controlled Mineralization of Magnetite Nanocrystals.* Goldschmidt Conference, Sacramento, California, United States.
77. Zachery Oestreicher[2], Steven K. Lower, Dennis A. Bazylinski and Brian H. Lower (2014). *Mms6 Is Localized to the Magnetosome Chain of Magnetospirillum magneticum AMB-1.* American Society for Microbiology 114th General Meeting. Lecture conducted from Denver, United States.
78. Brian H. Lower (2011). Using Atomic Force Microscopy to Study Mineral-Microbe Interactions. Materials Research Society Spring Meeting. San Francisco, California.
79. Lijun Chen[2] and Brian H. Lower (2010). Using Single-Molecule Atomic Force Microscopy to Study Magnetite Biosynthesis in Magnetotactic Bacteria. Presented at The Second International Symposium on Magnetotactic Bacteria and Biomineralization. Beijing, China. .
80. Zachery Oestreicher[2], Steven K. Lower, Dennis A. Bazylinski and Brian H. Lower (2013). Mms6 Is Localized to the Magnetosome Chain of *Magnetospirillum magneticum* AMB-1. Presented at American Society for Microbiology 113th General Meeting. Denver, United States. .
81. Zachery Oestreicher[2], Steven K. Lower and Brian H. Lower (2011). Magnetotactic Bacteria Containing Phosphorus-Rich Inclusion Bodies. Presented at Microscopy Society of America Microscopy and Microanalysis 2011 Annual Meeting. Nashville, Tennessee, United States. .
82. Zachery W. Oestreicher[2], Brian H. Lower, Roberto D. Lins, and Steven K. Lower, (2009). Peptides as Templates for Biomineralization. Presented at American Society for Microbiology 109th General Meeting. Philadelphia, Pennsylvania, United States.
83. Brian H. Lower (2018). Keynote Speaker. *Creating the greatest opportunity for success for the greatest number of students*. Conference on Teaching Large Classes, Virginia Tech, Blacksburg, Virginia, United States, February 16-17, 2018.
84. Brian H. Lower (2015). *Magnetotactic Bacteria, Bugs with Backbones.* Central Michigan University. Lecture conducted from Mt. Pleasant, Michigan, United States, April 10, 2015.
85. Brian H. Lower (2015). Student Poster Symposium for a Large Enrollment Class. Presented at The Center for Instructional Development and Educational Research (CIDER) Virginia Tech, Blacksburg, Virginia, United States, October 2015.
86. Brian H. Lower (2012). Bugs with Backbones, Magnetotactic Bacteria. Presented at University of Akron. Akron, Ohio, United States.
87. Brian H. Lower (2010). Biogeochemistry on a Molecular Scale. Presented at School of Life Sciences, UNLV. Las Vegas, Nevada, United States.
88. Brian H. Lower. Magnetotactic Bacteria, Bugs with Backbones. Otterbein University, Department of Biology & Earth Science, Westerville, Ohio. November 8, 2019.
89. Zachery Oestreicher[2] and Brian H. Lower (2019). Magnetotactic Bacteria. Ohio Branch of the

American Society for Microbiology 2019 Annual Meeting. Lorain County Community College, Lorain, Ohio. April 13, 2019. .

90. Jeremy Rummer, Sam Speaks[4], Kaitlyn Flanigan[4], Nya Feinstein[4], Christopher Pierce[2], Eric Mumper[2], Brian Lower, Steven Lower, Ratnasingham Sooryakumar. Bridging biology, physics and research through high school-university outreach. 2019 Annual Spring Meeting of the APS Ohio-Region Section at the College of Wooster, Wooster, Ohio, March 29, 2019.
91. James Dunn[2] and Brian H. Lower (2018). Protein mediated biomineralization. Ohio Branch of the American Society for Microbiology 2018 Annual Meeting, Ohio University, Athens, Ohio, March 2018.
92. Lower, B.H (2018). *Careers in Environmental Science.* Dublin Coffman High School AP Environmental Science Class. The Ohio State University, Columbus, Ohio, United States.
93. Brian H. Lower (2017). Sustainable Living. Parents and Family Weekend. The Ohio State University, Columbus, Ohio, November 2017.
94. Brian H. Lower and Laura Justice (2017). Academic Mission Exemplars. Board of Trustees Academic Affairs and Student Life Committee Meeting, The Ohio State University, Columbus, Ohio, June 8, 2017.
95. Brian H. Lower and Ella M. Weaver[2] (2017). Virtual Poster Symposium in CarmenCanvas, Ohio State IT, Office of Distance Education and eLearning. Published on December 11, 2017. Columbus, Ohio, United States. Link: https://youtu.be/49GDNepo4uI. .
96. Ella M. Weaver[2] and Brian H. Lower (2017). CarmenCanvas Poster Symposium Tutorial, Ohio State IT, OSU Office of Distance Education and eLearning. Published on December 14, 2017. Columbus, Ohio, United States. Link: https://youtu.be/Jl_PPoP4LYI, .
97. Kylienne Shaul, Henry Griffy, Ella Weaver[2] and Brian H. Lower (2017). ODEE DELTA Webinar, Teaching Large Courses Online Well. Ohio State Office of Distance Education and eLearning, Columbus, Ohio, United States. July 25, 2017. .
98. Lower, B.H (2017). *Sustainable Living.* Ohio State University Parent and Family Weekend. Columbus, Ohio, United States, April 2017.
99. Lower, B.H (2017). *Research in Environmental Sciences.* Recruitment Event for High School Students from New Philadelphia High School, Science Leadership Club. The Ohio State University, Columbus, Ohio, United States.
100. Brian H. Lower and Joe Cornely (Producer), (2016). *Town Hall Ohio* Radio broadcast/recording. Distributed By United States, 610 WTVN, Columbus, Flagship Station. Columbus, Ohio, United States. Available from: https://ofbf.org/2016/02/15/environmental-issues-on-town-hall-ohio/
101. Brian H. Lower (2016). Distance Ed Courses for International Students. Technology Transformations in East African Higher Education. Office of Distance Education and eLearning Workshop, The Ohio State University, Columbus, Ohio November 7, 2016.
102. Brian H. Lower (2016). Publishing a Free Student-Authored iBook for a GE Class. Innovate365, The Ohio State University, Columbus, Ohio, March 2, 2016.
103. Kylienne A. Clark[2] and Brian H. Lower (2015). Online Peer Feedback in a Student Conference. Innovate Conference, The Ohio State University, Columbus, Ohio. May 2015. .
104. Brian H. Lower (2014). Paths to P&T. Innovate Conference, The Ohio State University, Columbus, Ohio. October 2014.
105. Brian H. Lower (2014). *Growing an Apple iTunes Course - Introduction to Environmental Science.*

The Ohio State University. Lecture conducted from Columbus, Ohio. May 2014.

106. Brian H. Lower and Kylienne A. Clark[2], (2014). *Introduction to Environmental Science*. The Ohio State University, Columbus, Ohio, United States. Available from: https://go.osu.edu/enr2100. .

107. Brian H. Lower (2013). *Bugs with backbones, magnetotactic bacteria*. Ohio State Academic Summit, Columbus, Ohio, United States.

108. Brian H. Lower (2013). Growing an Apple iTunes Course. Ohio State University, Office of Distance Education and eLearning, Columbus, Ohio, United States.

109. Zachery Oestreicher, Steven K. Lower, Dennis A. Bazylinski and Brian H. Lower, (2013). Mms6 Is Localized to the Magnetosome Chain of Magnetospirillum magneticum AMB-1. American Society for Microbiology 113th General Meeting. Denver, United States.

110. Brian H. Lower (2013). Magnetotactic bacteria are interesting microorganisms that have backbones. Buck Ideas, Columbus, Ohio, United States.

111. Brian H. Lower (2012). Bugs with Backbones, Magnetotactic Bacteria. University of Akron, Akron, Ohio, United States.

112. Brian H. Lower (2011). Prokaryotes with magnetosomes. Ohio State University, Department of Evolution, Ecology and Organismal Biology, Columbus, Ohio, United States.

113. Zachery Oestreicher, Steven K. Lower and Brian H. Lower (2011). Magnetotactic Bacteria Containing Phosphorus-Rich Inclusion Bodies. Society of America Microscopy and Microanalysis 2011 Annual Meeting. Nashville, Tennessee, United States.

114. Brian H. Lower (2011). Using Atomic Force Microscopy to Study Mineral-Microbe Interactions. 2011 Materials Research Society Spring Meeting. San Francisco, California, United States.

115. Brian H. Lower (2010). Biogeochemistry on a Molecular Scale. School of Life Sciences, UNLV, Las Vegas, Nevada, United States.

116. Lijun Chen and Brian H. Lower (2010). Using Single-Molecule Atomic Force Microscopy to Study Magnetite Biosynthesis in Magnetotactic Bacteria. The Second International Symposium on Magnetotactic Bacteria and Biomineralization. Beijing, China.

117. Zachery W. Oestreicher, Brian H. Lower, Roberto D. Lins, and Steven K. Lower (2009). Peptides as Templates for Biomineralization. American Society for Microbiology 109th General Meeting. Philadelphia, Pennsylvania, United States.

118. Brian H. Lower (2007). Molecular-Scale Environmental Biochemistry, Examples Exhibited by Extremophiles and Metal Reducing Bacteria. School of Environment and Natural Resources, The Ohio State University. Columbus, Ohio, United States.

119. Brian H. Lower (2007). Biogeochemical Interactions at the Mineral-Microbe Interface. School of Chemical Engineering and Bioengineering, Washington State University. Pullman, Washington, United States.

120. Nicholas S. Wigginton, Kevin M. Rosso, Liang Shi, Brian H. Lower, and Michael F. Hochella, Jr. (2007). Insights into enzymatic reduction of metal-oxides from single-molecule tunneling studies of multiheme cytochromes. Goldschmidt 2007 Conference. Cologne, Germany.

121. Yuri Gorby, Liang Shi and Brian H. Lower (2007). MtrC and OmcA: Their Metal Reductase Activity to Hematite and GspD-regulated Secretion to Extracellular Space under $O_2$-limited Conditions. 107th American Society for Microbiology General Meeting. Toronto, Canada.

122. Brian H. Lower (2007). Scanning probe microscopy in life science research. Annual meeting of the

Pacific Northwest Microscopy Society. Richland, Washington, United States.

123. Brian H. Lower (2007). Specific bonds between an iron oxide surface and outer membrane cytochromes MtrC and OmcA from Shewanella oneidensis MR-1. 62nd Annual Meeting of the Northwest Region of the American Chemical Society. Boise, Idaho, United States.

124. Nicholas S. Wigginton, Kevin M. Rosso, Brian H. Lower, Liang Shi, and Michael F. Hochella, Jr. (2007). Single- molecule STM investigations into the enzymatic reduction of metal-oxides by Shewanella oneidensis. 62nd Annual Meeting of the Northwest Region of the American Chemical Society. Boise, Idaho, United States.

125. Steven K. Lower, Ruchirej Yongsunthon, Vance Fowler Jr., Emily Alexander, and Brian H. Lower (2007). A bacterium's sense of touch. Gordon Research Conference on Applied and Environmental Microbiology. South Hadley, Massachusetts, United States.

126. Steven K. Lower, Brian H. Lower, Ruchi Yongsunthon, Emily Alexander, Vance Fowler Jr., Presenter (2006). A bacterium's sense of touch: Staphylococcus biofilms on surfaces. American Society for Microbiology 106th General Meeting. Orlando, Florida, United States.

127. Brian H. Lower (2006). Bioreduction kinetics of hematite nanoparticles by *Shewanella oneidensis* MR-1: effect of size, shape and mineralogy. Biogeochemistry Grand Challenge Meeting. Richland, Washington, United States.

128. Liang Shi and Brian H. Lower (2006). Outer Membrane Proteins OmcA and MtrC of *Shewanella oneidensis* MR-1 Possess a Broad Spectrum of Metal-reducing Capabilities. American Society for Microbiology 106th General Meeting. Orlando, Florida, United States.

129. Brian H. Lower (2006). Kinetic Properties of Metal-Reducing Outer Membrane Cytochromes OmcA and MtrC of Shewanella oneidensis MR-1: Reactions with Metal Oxides. Biogeochemistry Grand Challenge Meeting. Richland, Washington, United States.

130. Brian H. Lower (2006). OmcA: Adsorption to Al2O3 by OWLS, XANES/EXAFS, Hematite Electrodes, and Comparison to Voltammetry of *Shewanella oneidensis* MR-1 cells. Presented at Biogeochemistry Grand Challenge Meeting. Richland, Washington, United States.

131. Nicholas S. Wigginton, Michael F. Hochella Jr., Kevin M. Rosso, Brian H. Lower, and Liang Shi (2006). Thin-film and single-molecule characterization of OmcA and MtrC. Biogeochemistry Grand Challenge Meeting. Richland, Washington, United States.

132. Brian H. Lower (2006). AFM Based Analysis of *Shewanella* Fe(III) Interactions. Presented at Biogeochemistry Grand Challenge Meeting. Richland, Washington, United States.

133. Brian H. Lower (2006). Cytochromes: Conformational Nanodevices for Redox Interactions with Oxides. Nanoscale Processes in the Earth and Planetary Sciences Workshop. Albuquerque, New Mexico, United States.

134. Brian H. Lower, Michael F. Hochella, Jr., Steven K. Lower (2006). Bioreduction kinetics of hematite nanoparticles by Shewanella oneidensis MR-1: Effect of size and mineralogy. Presented at American Chemical Society 232nd National Meeting. San Francisco, California, United States.

135. Steven K. Lower, Brian H. Lower, Ruchi Yongsunthon, Emily Alexander, Vance Fowler Jr., (2006). A bacterium's sense of touch: Staphylococcus biofilms on surfaces. Presented at American Chemical Society 232nd National Meeting. San Francisco, California, United States.

136. Brian H. Lower (2005). Simultaneous Force and Fluorescence Measurements to Detect Individual Protein Molecules Expressed on the Surface of a Living Bacterium. Conference on Single-Molecule Techniques in Biophysics and Drug Discovery, Johannes Kepler University. Linz, Austria.

137. Kevin M. Rosso, Svetlana V. Yanina, Brian H. Lower, Alfred M. Spormann, and Gordon E. Brown, Jr. (2005). Electrical Properties of Bacterial Outer Membranes. American Chemical Society 230th National Meeting. Washington D.C., United States.

138. Nicholas S. Wigginton, Kevin M. Rosso, Brian H. Lower, Liang Shi, and Michael F. Hochella, Jr. (2005). Examining the Electron Transfer Properties of an Outer Membrane Cytochrome from *Shewanella oneidensis* Using Scanning Tunneling Microscopy. American Chemical Society 230th National Meeting. Washington D.C., United States.

139. Brian H. Lower (2005). Exploring Biogeochemical Phenomena at the Mineral-Microbe Interface. Presented at Department of Geological Sciences, University of Michigan. Ann Arbor, Michigan, United States.

140. Brian H. Lower (2005). Examining Microbial Surface Attachment and Electron Transfer to Mineral Surfaces Using Scanning Probe and Fluorescence Microscopy. American Chemical Society 60th NORM-SCHB Regional Meeting. Fairbanks, Alaska, United States.

141. Brian H. Lower (2004). Specific Interactions Between Outer Membrane Proteins and Mineral Surfaces. Pacific Northwest National Laboratory. Richland, Washington, United States.

142. Brian H. Lower (2004). Biogeosciences: The Interface Between Biosciences and Geosciences. Department of Geological Sciences, University of Missouri. Columbia, Missouri, United States.

143. Brian H. Lower (2004). Nanoscale Interactions Between Minerals and Microbes. Department of Geology and Geophysics, University of Wisconsin. Madison, Wisconsin, United States.

144. Brian H. Lower, Michael F. Hochella, Jr., and Steven K. Lower, Presenter (2003). Putative Mineral-Specific Proteins Synthesized by a Metal-Reducing Bacterium. Presented at American Geophysical Union Conference. San Francisco, California, United States.

145. Michael F. Hochella, Steven K. Lower and Brian H. Lower (2003). Mineral-Fluid Interfaces and Interactions: From Molecular to Local, Regional, and Global-Scale Processes. Thirteenth Annual V. M. Goldschmidt Conference. Kurashiki, Japan.

146. Steven K. Lower, Ruchi Yongsunthon, and Brian H. Lower (2003). Mineral-Specific Proteins Synthesized by Bacteria. Presented at National Science and Technology Council Workshop on Nanotechnology and the Environment: Applications and Implications. Arlington, Virginia, United States.

147. Brian H. Lower, Michael F. Hochella Jr., and Steven K. Lower (2003). Mineral-Microbe Interactions. Presented at Department of Energy Shewanella Federation Workshop, Pacific Northwest National Laboratory. Richland, Washington, United States.

148. Steven K. Lower, Treavor A. Kendall, Brian H. Lower, and Michael F. Hochella Jr. (2003). Mineral Specific Biological Interactions: Nanoscale Force-Distance Measurements Between Iron Oxyhydroxides and Shewanella or Siderophores. Presented at Department of Energy Principal Investigators Symposium, Argonne National Laboratory. Chicago, Illinois, United States.

149. Peter J. Kennelly and Brian H. Lower (2002). ORF Sso2387 from the Archaeon *Sulfolobus solfataricus* Encodes a Polypeptide with Protein-Serine Kinase Activity. Keystone Symposia, Protein Phosphorylation and Mechanisms of Cellular Regulation. Taos, New Mexico, United States.

150. Brian H. Lower and Peter J. Kennelly (2002). The Membrane Associated Protein Serine/Threonine Kinase from the Archaeon *Sulfolobus solfataricus* is a Glycoprotein. Presented at Keystone Symposia, Protein Phosphorylation and Mechanisms of Cellular Regulation. Taos, New Mexico, United States.

151. Brian H. Lower and Peter J. Kennelly (2001). Identification of an ORF Encoding a Protein

Serine/Threonine Kinase from the Archaeon *Sulfolobus solfataricus*. Gordon Summer Research Conference on the Archaea. Meriden, New Hampshire, United States.

152. Brian H. Lower, Kenneth M. Bischoff, and Peter J. Kennelly (2000). Protein Phosphorylation in the Archaea. Gordon Summer Research Conference on Second Messengers and Protein Phosphorylation. Meriden, New Hampshire, United States.

[1]Undergraduate student, [2]Graduate student, [3]Post-doctoral scholar, [4]High-school student.

## Teaching

| Teaching Summary at Ohio State (2009-2023) | | | |
|---|---|---|---|
| Total Students | 18,749 | Total Courses | 98 |
| Undergraduate Students | 18,307 | Undergraduate Courses | 76 |
| Graduate Students | 442 | Graduate Courses | 22 |
| Total Credit Hours Generated | 55,889 | Average Student Evaluation (out of 5.00) | 4.52 |
| Courses per Year | 6.5 | Distant Education Courses | 33 |
| Students per Year | 1,250 | In-Person Courses | 65 |

| Courses Taught at Ohio State (2009-2023) | | | | | |
|---|---|---|---|---|---|
| **Semester Offered** | **Course Number Title (Credit Hours)** | **Enrollment (Undergraduate or Graduate)** | **Student Evaluation (out of 5.00)** | **Campus** | **In-Person or Distant Ed** |
| Autumn 2023 | ENR 2100 Introduction to Environmental Science (3 credits) | 383 (UG) | 4.34 | Columbus | Distant Ed |
| Autumn 2023 | ENR 2100 Introduction to Environmental Science (3 credits) | 43 (UG) | 4.07 | Marion | Distant Ed |
| Autumn 2023 | ENR 2101 Introduction to Environmental Science Lab (1 credit) | 28 (UG) | 4.19 | Marion | Distant Ed |
| Autumn 2023 | ENR 6000 Research in Environment and Natural Resources (2 credits) | 23 (G) | 4.58 | Columbus | In-Person |
| Summer 2023 | ENR 2100 Introduction to Environmental Science (3 credits) | 104 (UG) | 4.41 | Columbus | Distant Ed |
| Summer 2023 | ENR 2100 Introduction to Environmental Science (3 credits) | 17 (UG) | 4.38 | Marion | Distant Ed |
| Summer 2023 | ENR 2101 Introduction to Environmental Science Lab (1 credit) | 10 (UG) | 4.29 | Marion | Distant Ed |
| Spring 2023 | ENR 2101 Introduction to Environmental Science Lab (1 credit) | 27 (UG) | 4.47 | Marion | Distant Ed |
| Spring | ENR 2100 Introduction | 46 | 4.31 | Columbus | Distant Ed |

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|---|---|---|---|---|---|
| 2023 | to Environmental Science (3 credits) | (UG) | | | |
| Spring 2023 | ENR 2100 Introduction to Environmental Science (3 credits) | 546 (UG) | 4.39 | Columbus | Distant Ed |
| Spring 2023 | ENR 2100 Introduction to Environmental Science (3 credits) | 132 (UG) | 4.66 | Columbus | In-Person |
| Autumn 2022 | ENR 2100 Introduction to Environmental Science (3 credits) | 616 (UG) | 4.08 | Columbus | Distant Ed |
| Autumn 2022 | ENR 6000 Research in Environment and Natural Resources (2 credits) | 26 (G) | 4.51 | Columbus | In-Person |
| Autumn 2022 | ENR 2100 Introduction to Environmental Science (3 credits) | 10 (UG) | 4.63 | Marion | In-Person |
| Autumn 2022 | ENR 2101 Introduction to Environmental Science Lab (1 credit) | 19 (UG) | 4.11 | Marion | Distant Ed |
| Autumn 2022 | ENR 2100 Introduction to Environmental Science (3 credits) | 39 (UG) | 4.32 | Marion | In-Person |
| Summer 2022 | ENR 2100 Introduction to Environmental Science (3 credits) | 186 (UG) | 4.61 | Columbus | Distant Ed |
| Spring 2022 | ENR 2100 Introduction to Environmental Science (3 credits) | 772 (UG) | 4.27 | Columbus | Distant Ed |
| Spring 2022 | ENR 2100 Introduction to Environmental Science (3 credits) | 181 (UG) | 4.57 | Columbus | In-Person |
| Spring 2022 | ENR 2100 Introduction to Environmental Science (3 credits) | 12 (UG) | 4.14 | Marion | In-Person |
| Spring 2022 | ENR 2100 Introduction to Environmental Science (3 credits) | 41 (UG) | 4.25 | Marion | Distant Ed |
| Autumn 2021 | ENR 6000 Research in Environment and Natural Resources (2 credits) | 26 (G) | 4.10 | Columbus | In-Person |
| Autumn 2021 | ENR 2100 Introduction to Environmental Science (3) | 668 (UG) | 4.34 | Columbus | Distant Ed |
| Autumn 2021 | ENR 2100 Introduction to Environmental Science (3 credits) | 17 (UG) | 4.56 | Marion | In-Person |

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|---|---|---|---|---|---|
| Autumn 2021 | ENR 2100 Introduction to Environmental Science (3 credits) | 39 (UG) | 4.58 | Marion | Distant Ed |
| Summer 2021 | ENR 2100 Introduction to Environmental Science (3 credits) | 186 (UG) | 4.67 | Columbus | Distant Ed |
| Spring 2021 | ENR 2100 Introduction to Environmental Science (3 credits) | 685 (UG) | 4.45 | Columbus | Distant Ed |
| Spring 2021 | ENR 2100 Introduction to Environmental Science (3 credits) | 16 (UG) | 4.22 | Marion | In-Person |
| Spring 2021 | ENR 2100 Introduction to Environmental Science (3 credits) | 39 (UG) | 4.23 | Marion | Distant Ed |
| Autumn 2020 | ENR 6000 Research in Environment and Natural Resources (2 credits) | 19 (G) | 4.44 | Columbus | In-Person |
| Autumn 2020 | ENR 2100 Introduction to Environmental Science (3 credits) | 836 (UG) | 4.34 | Columbus | Distant Ed |
| Autumn 2020 | ENR 2100 Introduction to Environmental Science (3 credits) | 37 (UG) | 4.31 | Marion | Distant Ed |
| Autumn 2020 | ENR 2100 Introduction to Environmental Science (3 credits) | 17 (UG) | 4.80 | Marion | In-Person |
| Summer 2020 | ENR 2100 Introduction to Environmental Science (3 credits) | 270 (UG) | 4.43 | Columbus | Distant Ed |
| Spring 2020 | ENR 2100 Introduction to Environmental Science (3 credits) | 742 (UG) | 4.24 | Columbus | Distant Ed |
| Spring 2020 | ENR 2100 Introduction to Environmental Science (3 credits) | 413 (UG) | 4.56 | Columbus | In-Person |
| Spring 2020 | ENR 2100 Introduction to Environmental Science (3 credits) | 36 (UG) | 4.54 | Marion | In-Person |
| Spring 2020 | ENR 2100 Introduction to Environmental Science (3 credits) | 33 (UG) | 4.20 | Marion | Distant Ed |
| Autumn 2019 | ENR 6000 Research in Environment and Natural Resources (2 credits) | 27 (G) | 4.47 | Columbus | In-Person |
| Autumn 2019 | ENR 2100 Introduction to Environmental Science (3 credits) | 694 (UG) | 4.72 | Columbus | In-Person |

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|---|---|---|---|---|---|
| Autumn 2019 | ENR 2100 Introduction to Environmental Science (3 credits) | 26 (UG) | 4.81 | Marion | In-Person |
| Autumn 2019 | ENR 2100 Introduction to Environmental Science (3 credits) | 36 (UG) | 4.50 | Marion | In-Person |
| Summer 2019 | ENR 2100 Introduction to Environmental Science (3 credits) | 282 (UG) | 4.59 | Columbus | Distant Ed |
| Spring 2019 | ENR 2100 Introduction to Environmental Science (3 credits) | 360 (UG) | 4.64 | Columbus | In-Person |
| Spring 2019 | ENR 2100 Introduction to Environmental Science (3 credits) | 556 (UG) | 4.24 | Columbus | Distant Ed |
| Spring 2019 | ENR 2100 Introduction to Environmental Science (3 credits) | 40 (UG) | 4.59 | Marion | In Person |
| Autumn 2018 | ENR 6000 Research in Environment and Natural Resources (2 credits) | 27 (G) | 4.53 | Columbus | In-Person |
| Autumn 2018 | ENR 2100 Introduction to Environmental Science (3 credits) | 651 (UG) | 4.65 | Columbus | In-Person |
| Autumn 2018 | ENR 2100 Introduction to Environmental Science (3 credits) | 18 (UG) | 5.00 | Marion | In Person |
| Summer 2018 | ENR 2100 Introduction to Environmental Science (3 credits) | 163 (UG) | 4.50 | Columbus | Distant Ed |
| Spring 2018 | ENR 2100 Introduction to Environmental Science (3 credits) | 358 (UG) | 4.60 | Columbus | In-Person |
| Spring 2018 | ENR 2100 Introduction to Environmental Science (3 credits) | 534 (UG) | 4.20 | Columbus | Distant Ed |
| Spring 2018 | ENR 2100 Introduction to Environmental Science (3 credits) | 28 (UG) | 4.60 | Marion | In-Person |
| Autumn 2017 | ENR 6000 Research in Environment and Natural Resources (2 credits) | 14 (G) | 4.20 | Columbus | In-Person |
| Autumn 2017 | ENR 2100 Introduction to Environmental Science (3 credits) | 537 (UG) | 4.80 | Columbus | In-Person |
| Autumn 2017 | ENR 2100 Introduction to Environmental Science (3 credits) | 22 (UG) | 4.70 | Marion | In-Person |

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|---|---|---|---|---|---|
| Summer 2017 | ENR 2100 Introduction to Environmental Science (3 credits) | 190 (UG) | 4.30 | Columbus | In-Person |
| Spring 2017 | ENR 2100 Introduction to Environmental Science (3 credits) | 546 (UG) | 4.20 | Columbus | Distant Ed |
| Spring 2017 | ENR 2100 Introduction to Environmental Science (3 credits) | 410 (UG) | 4.80 | Columbus | In-Person |
| Spring 2017 | ENR 2100 Introduction to Environmental Science (3 credits) | 30 (UG) | 4.80 | Marion | In-Person |
| Spring 2017 | ENR 2100 Introduction to Environmental Science (3 credits) | 55 (UG) | 4.10 | Mansfield | Distant Ed |
| Autumn 2016 | ENR 6000 Research in Environment and Natural Resources (2 credits) | 23 (G) | 4.40 | Columbus | In-Person |
| Autumn 2016 | ENR 2100 Introduction to Environmental Science (3 credits) | 489 (UG) | 4.80 | Columbus | In-Person |
| Autumn 2016 | ENR 2100 Introduction to Environmental Science (3 credits) | 27 (UG) | 4.90 | Marion | In-Person |
| Summer 2016 | ENR 2100 Introduction to Environmental Science (3 credits) | 143 (UG) | 4.50 | Columbus | Distant Ed |
| Spring 2016 | ENR 2100 Introduction to Environmental Science (3 credits) | 520 (UG) | 4.70 | Columbus | In-Person |
| Spring 2016 | ENR 2100 Introduction to Environmental Science (3 credits) | 302 (UG) | 4.50 | Columbus | Distant Ed |
| Spring 2016 | ENR 2100 Introduction to Environmental Science (3 credits) | 29 (UG) | 4.70 | Marion | In-Person |
| Autumn 2015 | ENR 6000 Research in Environment and Natural Resources (2 credits) | 19 (G) | 4.30 | Columbus | In-Person |
| Autumn 2015 | ENR 2100 Introduction to Environmental Science (3 credits) | 593 (UG) | 4.70 | Columbus | In-Person |
| Autumn 2015 | ENR 2100 Introduction to Environmental Science (3 credits) | 25 (UG) | 4.80 | Marion | In-Person |
| Summer 2015 | ENR 2100 Introduction to Environmental Science (3) | 152 (UG) | 4.80 | Columbus | Distant Ed |

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| Spring 2015 | ENR 2100 Introduction to Environmental Science (3 credits) | 565 (UG) | 4.50 | Columbus | In-Person |
| Spring 2015 | ENR 2100 Introduction to Environmental Science (3 credits) | 33 (UG) | 4.60 | Marion | In-Person |
| Autumn 2014 | ENR 6193 Individual Studies in Environment and Natural Resources (1) | 6 (G) | Yes | Columbus | In-Person |
| Autumn 2014 | ENR 6000 Research in Environment and Natural Resources (2 credits) | 19 (G) | 4.20 | Columbus | In-Person |
| Autumn 2014 | ENR 2100 Introduction to Environmental Science (3 credits) | 572 (UG) | 4.60 | Columbus | In-Person |
| Autumn 2014 | ENR 2100 Introduction to Environmental Science (3 credits) | 20 (UG) | 4.70 | Marion | In-Person |
| Fall 2013 | ENR 2100 Introduction to Environmental Science (3.00) | 492 (UG) | 4.7 | Columbus | In-Person |
| Fall 2013 | ENR 2100 Introduction to Environmental Science (3.00) | 10 (UG) | 4.5 | Marion | In-Person |
| Fall 2013 | ENR 6000 Research in Environment and Natural Resources (2.00) | 13 (G) | 4.2 | Columbus | In-Person |
| Spring 2013 | ENR 6193 Individual Studies in Environment and Natural Resources (3.00) | 6 (G) | No | Columbus | In-Person |
| Spring 2013 | ENR2100 Introduction to Environmental Science (3.00) | 575 (UG) | 4.5 | Columbus | In-Person |
| Spring 2013 | ENR 6610 Soil and Environmental Biochemistry (2.00) | 5 (G) | No | Columbus | In-Person |
| Fall 2012 | ENR 6193 Individual Studies in Environment and Natural Resources (3.00) | 5 (G) | No | Columbus | In-Person |
| Fall 2012 | ENR2100 Introduction to Environmental Science (3.00) | 298 (UG) | 4.3 | Columbus | In-Person |
| Fall 2012 | ENR 6000 Research in Environment and Natural Resources (2.00) | 24 (G) | 4.5 | Columbus | In-Person |

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| Spring 2012 | ENR201 Introduction to Environmental Sciences (5.00) | 246 (UG) | 4.6 | Columbus | In-Person |
| Summer 2011 | ENR 880 Natural Resources Seminar (1.00) | 50 (G) | 4.5 | Columbus | In-Person |
| Summer 2011 | ENR 800 Research in Environment and Natural Resources (3.00) | 13 (G) | 4.5 | Columbus | In-Person |
| Spring 2011 | ENR894 Environmental Molecular Sciences (3.00) | 6 (G) | 5.0 | Columbus | In-Person |
| Spring 2011 | 201 Introduction to Environmental Science (5.00) | 141 (UG) | 4.5 | Columbus | In-Person |
| Fall 2010 | 800 Research in Environment and Natural Resources (3.00) | 18 (G) | 4.1 | Columbus | In-Person |
| Summer 2010 | 880 Natural Resources Seminar (1.00) | 55 (G) | 4.1 | Columbus | In-Person |
| Spring 2010 | 201 Introduction to Environmental Sciences (5.00) | 165 (UG) | 4.6 | Columbus | In-Person |
| Fall 2009 | ENR 880 Natural Resources Seminar (1.00) | 53 (UG) | 4.2 | Columbus | In-Person |
| Summer 2009 | ENR 800 Research in Environment and Natural Resources (3.00) | 18 (G) | 3.8 | Columbus | In-Person |
| Spring 2009 | 201 Introduction to Environmental Sciences (5.00) | 75 (UG) | 4.6 | Columbus | In-Person |

## Free Open Online Courses

| Date | Open Online Course |
|---|---|
| 2014-Present | Brian H. Lower, Steven K. Lower, Kylienne A. Shaul, Ella M. Weaver. *Introduction to Environmental Science eClass* . Retrieved from https://go.osu.edu/enr2100. Publisher: The Ohio State University, Columbus, Ohio, United States. |
| 2017-2021 | Brian H. Lower. *Earth's Environment: Soil, Water, and Air* . Retrieved from https://www.canvas.net/browse/osu/global-one-health/courses/earths-environment-soil-water-air. Publisher: Canvas, Instructure Inc., Salt Lake City, Utah, United States. |
| 2017-2021 | Brian H. Lower, Kylienne A, Shaul, Ella M. Weaver. *Energy and Earth: Fossil Fuels, Alternative, and Renewable Energy* . Retrieved from https://www.canvas.net/browse/osu/global-one-health/courses/energy-earth. Publisher: Canvas, Instructure Inc., Salt Lake City, Utah, United States. |

| | |
|---|---|
| 2017-2021 | Brian H. Lower, Kylienne A, Shaul, Ella M. Weaver. *Energy*. *Life on Earth: Biomes, Climates, Ecology, and Evolution*. Retrieved from https://www.canvas.net/browse/osu/global-one-health/courses/life-on-earth. Publisher: Canvas, Instructure Inc., Salt Lake City, Utah, United States. |
| 2014-2020 | Brian H. Lower, Kylienne A. Clark and Steven K. Lower (2014-2020). *Environmental Science Student Symposium Poster Day* . Retrieved from https://go.osu.edu/posterday. Publisher: The Ohio State University, Columbus, Ohio, United States. |
| 2012-2018 | Brian H. Lower (2013-2018). *Environmental Science*. Retrieved from https://itunes.apple.com/us/course/intro-environmental-science/id601450178. Publisher: Apple iTunesU, Cupertino, California, United States. |

## Free Online Educational Videos

| Date | Title and YouTube Link |
|---|---|
| 2023 | Title: Protecting Earth's Food (4 Videos): https://youtu.be/pkRUezzHhQU?si=hdXgmuC9ulPAsXON |
| 2023 | Title: Protecting Earth's Air (4 Videos): https://youtu.be/6rBOBiZ17Bk?si=w7czioufu3MT5y1U |
| 2022 | Title: Biomes and Biodiversity (4 Videos): https://youtu.be/V03RWpEXvpQ?si=iqOrD_tJpo39PaoU |
| 2022 | Title: Persistent Pollutants (4 Videos): https://youtu.be/nzam3wFjS-c?si=f9-HqXo4TL9szNKJ |
| 2021 | Title: Environment and Sustainability (4 Videos): https://www.youtube.com/watch?v=YPqqDZlZjPg&list=PLH8Xgy8jbpAizXIfY4cqKPBpQypyleDDt |
| 2021 | Title: Scientific Process and Scientific Literacy (4 Videos): https://www.youtube.com/watch?v=9NenWsTmMZE&list=PLH8Xgy8jbpAjXss0C_p56c4EI3Wf3zaIK |
| 2021 | Title: Population Ecology (4 Videos): https://www.youtube.com/watch?v=c0YDhYSEj6M&list=PLH8Xgy8jbpAhYdQkQ0ISIvajhuL-1I7o8 |
| 2021 | Title: Community Ecology (4 Videos): https://www.youtube.com/watch?v=P0Lg3jZOY1Y&list=PLH8Xgy8jbpAiCsogaVx3R_iBu8O7oF_2E |
| 2021 | Title: Freshwater Resources (4 Videos): https://www.youtube.com/watch?v=neeXFUZdLHE&list=PLH8Xgy8jbpAhipdknplgerBXffj0Bpuj5 |
| 2021 | Title: Protecting Earth's Water (4 Videos) https://www.youtube.com/watch?v=RuNjKqWgPsk&list=PLH8Xgy8jbpAiBMubRW7jgpiUt12RfUNsq |

2020 Title: Human Populations (4 Videos):
https://www.youtube.com/watch?v=hjbxhCeQEhw&list=PLH8Xgy8jbpAiH5QkLxyQjT5VA0A5leDf6

2020 Title: Biomes and Biodiversity (4 Videos):
https://www.youtube.com/watch?v=V03RWpEXvpQ&list=PLH8Xgy8jbpAj_tVXNfCpkmI0USusw-f1X

2019 Title: Introduction to Scientific Posters (1 Video)
https://youtu.be/n9gHa4jSgGs

2019 Title: Creating an Original Figure for a Poster or Article (1 Video)
https://youtu.be/EqEVHN67s4A

2019 Title: Tips for Reading a Journal Article (1 Video)
https://youtu.be/Bn023GXHwug

2017 Title: Giving an Excellent Poster Presentation (1 Video)
https://youtu.be/zlt7PwEyjMA

2015 Title: Protecting Earth's Atmosphere (9 Videos)
https://www.youtube.com/watch?v=rZz5WmQ9NU&list=PLH8Xgy8jbpAh6zSxYrsTCcghcCdM4hzdl

2015 Title: Environmental Cost of Coal (10 Videos)
https://www.youtube.com/watch?v=ilIf_o6HmqI&list=PLH8Xgy8jbpAjvB1Hk3Sd8isaE-qM1PuT-

2015 Title: Basic Math, Metric System, Elements, Scientific Notation (1 Video):
https://youtu.be/bdK5Q6phppw

2015 Title: Environmental Cost of Petroleum (7 Videos)
https://www.youtube.com/watch?v=_6xlNyWPpB8&list=PLH8Xgy8jbpAiLqvM7Ky0tkPnYJUZ_kV9j

2015 Title: Persistent Pollutants (6 Videos):
https://www.youtube.com/watch?v=JIgXMquXt2s&list=PLH8Xgy8jbpAhFRxBPcYjQDwVFSu01PUXU

2015 Title: Introduction to Environmental Science (1 Video):
https://www.youtube.com/watch?v=O99f11y-Dks&t=3s

2015 Title: Alternative and Renewable Energy (11 Videos)
https://www.youtube.com/watch?v=SRJh_FNEGg8&list=PLH8Xgy8jbpAiLxLzzs38DmcNONNV8bOAN

2015 Title: ODEE Impact Grant: ENR Science Symposium (1 Video)
https://youtu.be/mKS_a1FFz2M

2014 Title: Scientific Process (3 Videos):
https://www.youtube.com/watch?v=z2bZU3t0l1U&t=1s

## Student Advising

| | Advisor | Committee |
|---|---|---|
| **Post-Doctoral** | | |
| Scientists | 2 | 0 |

| | | |
|---|---|---|
| **Graduate** | | |
| Ph.D. | 2 | 5 |
| M.S. | 3 | 3 |
| Visiting Ph.D. | 0 | 3 |
| **Undergraduate** | | |
| Honors/Research | 9 | 0 |
| Teaching | 100 | 0 |
| STEP | 42 | 0 |

**Postdoctoral Scientists (Research Advisor)**

2019-2022 Nadia Casillas-Iturate, postdoctoral researcher on NSF grants to study magnetotactic bacteria and microbial biofilms.

2014-2016 Zachery Oestreicher, postdoctoral researcher on NSF grants to study magnetotactic bacteria.

**Doctoral Students (Dissertation Advisor)**

2021-Present Michaela Hostetler, Dissertation Co-Advisor with Prof. Steven K. Lower. Title: Protein controlled mineralization of magnetite nanocrystals. The Ohio State University. Graduation: 2024.

2013-17 Lumarie Pérez-Guzmán. Dissertation Advisor. Title: Microbial activity, abundance and diversity in organic and conventional agricultural soils amended with biochars. The Ohio State University. Graduated: 2017.

**Doctoral Students (Dissertation Committee Member)**

2022-Present Loryssa Lake. Dissertation Committee Member. Title: Novel in-situ heavy metal and toxic organic soil remediation to reduce human-health exposure and promote soil health. The Ohio State University. Graduation: 2024.

2014-2019 Eric Mumper. Dissertation Committee Member. Title: Mixotrophic magnetosome-dependent magnetoautotrophic metabolism of model magnetotactic bacterium *Magnetospirillum magneticum* AMB-1. The Ohio State University. Graduated: 2019.

2011-2015 Aditi Sengupta. Dissertation Committee Member. Title: Studying methanotrophic bacterial diversity in Ohio soils using high-throughput sequence analysis. The Ohio State University. Graduated: 2015.

2009-2012 Taniya Chowdhury. Dissertation Committee Member. Title: Tracking carbon flow during methane oxidation into methanotrophs using $^{13}$C-PLFA labeling in pulsing freshwater wetlands. The Ohio State University. Graduated: 2012.

2008-2012 Zachery Oestreicher. Dissertation Committee Member. Title: Magnetotactic bacteria: isolation, imaging, and biomineralization. The Ohio State University. Graduated: 2012.

**Master's Students (Thesis Advisor)**

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|---|---|
| 2015-2017 | James Dunn, Thesis Advisor. Title: Single molecule characterization of peptide-hematite binding. The Ohio State University. Graduated: 2017. |
| 2012-2014 | Kylienne Clark, Thesis Advisor. Title: Diverse applications of magnetotactic bacteria. The Ohio State University. Graduated: 2014. |
| 2010-2012 | Lumarie Pérez-Guzmán, Thesis Advisor. Title: Nanostructural studies of protein Mms6 using atomic force microscopy. The Ohio State University. Graduated: 2012. |

**Master's Students (Thesis Committee Member)**

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|---|---|
| 2016-18 | Nathan Lee, Thesis Committee Member. Title: Long term glyphosate effects on Roundup ready soybean rhizosphere microorganisms. The Ohio State University. Graduated: 2018. |
| 2013-15 | Stephen Gougherty, Thesis Committee Member. Title: Exudation rates and delta-$^{13}$C-signatures of bottomland tree root soluble organic carbon: relationships to plant and environment characteristics. Graduated: 2015. |
| 2012-14 | Emma Snyder, Thesis Committee Member. Title: Baseline assessment of dynamic properties and soil resilience at Lawrence Woods State Nature Preserve. The Ohio State University. Graduated: 2014. |

**Undergraduate Students (Research Advisor)**

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|---|---|
| Emma Brown (BS) | Graduated 2017. Research title: Bacterial hydrodynamics with magnetic fields. Co-author on 1 journal article, 1 conference poster at American Physical Society Annual Meeting, EPA internship, Lee Johnston Leadership Award, post-graduate scientist at EPA. |
| Kylienne Clark (BS) | Graduated in 2014. Research title: Isolation and enrichment of magnetotactic bacteria from freshwater lakes. |
| Megan Gonos (BS) | Graduate in 2023. Research title: Phosphorus inclusions in magnetotactic bacteria. Honors thesis. |
| Michaela Hostetler (BS) | Graduated 2020. Research title: Cloning of *mms* genes from *Magnetospirillum*. Poster at Ohio State Denman Research Forum. |
| Rhea Mehta (BS) | Graduated 2020. Research title: Hydrodynamic Motility of Magnetotactic Bacteria. Co-author on 1 journal article, 2 conference abstracts at American Physical Society, 1 abstract at the American Geophysical Union Fall Meeting, post-graduate medical school. |
| Emily Osborn (BS) | Graduated in 2021. Research title: Hydrodynamics and magnetism of magnetotactic bacteria. Co-author on 2 journal articles, 1 conference abstract American Physical Society. |

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|---|---|
| Lauren Trapani (BS) | Graduated in 2020. CFAES 2020 Distinguished Senior Award, Newcomb Scholar, Office of International Affairs Travel Grant, Undergraduate Student Government Enrichment Grant, 2019 L.L. Bean Summer Internship Program |
| Maria Scaccia (BS) | Graduate in 2023. Research title: Water quality and magnetotactic bacteria of the Olentangy River, Ohio. Friends of Orton Hall Research Scholarship, 1 conference presentation Goldschmidt 2022. |
| Kaley Taylor (BS) | Graduate in 2023. Research title: Heavy metal remediation by magnetotactic bacteria. Honors thesis. |

**Visiting Students (Research Advisor)**

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|---|---|
| Carmen Valverde-Tercedor (PhD) | Graduated 2017. Visiting PhD student from Universidad de Granada, Spain, who worked in my laboratory for 4 months to study magnetotactic bacteria. |
| Christopher Pierce (PhD) | Graduated 2019. PhD student from Department of Physics at Ohio State who worked in my laboratory with magnetotactic bacteria over a period of 3 years. |
| Hiran Wijesinghe (PhD) | Graduate 2023. PhD student from Department of Physics at Ohio State who worked in my laboratory with magnetotactic bacteria over a period of 3 years. |

**Undergraduate Teaching Assistants (TA Advisor)**

1. Lucia Adams (2022-24)
2. Tiana Ahmed (2014-16)
3. Shanvanth Armipalli (2019-21)
4. Madison Anderson (2020-21)
5. Michelle Auvil (2020-2023)
6. Beatrice Bachleda (2015-16)
7. Brianna Bajakian (2018-20)
8. Levon Bajakian (2016-18)
9. Schuyler Butze (2019-22)
10. Elizabeth Blackford (2023-24)
11. Emma Brown (2014-16)
12. Molly Bukky (2015-16)
13. Taylor Chaffin (2017-18)
14. Hwiseo Choi (2020-24)
15. Patrick Cullinan (2016-18)
16. Bella Curtis (2022-24)
17. Kylienne Clark (2012-14)
18. Allsion DiRossi (2019-22)
19. Tarshangi Dixit (2018-20)
20. Megan Dudte (2013-15)
21. Aaron Ebbert (2018-20)
22. Jordan Emans (2016-18)
23. Ashley Evans (2023-24)
24. Katie Fineran (2018-19)
25. William Fiorentino (2023-24)
26. Kevin Fisher (2020-21)
27. Madeline French (2022-24)
28. Eric Fulton (2013-15)
29. Jessica Gantz (2022-24)
30. Isabelle Gaglione (2019-23)
31. Valerie Gaulke (2018-23)
32. Griffin Gillespie (2019-23)
33. Kellon Hamsher (2015-16)
34. Benjamin Haut (2017-20)
35. Hannah Hancock (2019-20)
36. Katherine Harris (2014-16)
37. Sara Hearn (2017-20)
38. Lyndy Heign (2023-24)
39. Annie HersIer (2014-16)
40. Emily Henderson (2021-23)
41. Eryn Henderson (2021-23)
42. Emily Heneghan (2019-20)
43. Liz Heneghan (2020-23)
44. Kaitlyn Higginbotham (2023-24)
45. Ashlyn Hu (2020-23)
46. Leah Hunt (2020-21)

47. Kylie Karagiozis (2023-24)
48. Abby Kalucki (2016-18)
49. Meagan Kellis (2020-23)
50. Kyle Kopechek (2015-17)
51. Aubrey Lang (2023-24)
52. Maggie Long (2017-19)
53. Kelly Luebbering (2018-20)
54. Alexandra Majors (2021-23)
55. Becky Maly (2021-23)
56. Airianna McGuire (2018-19)
57. Mary MacLeod (2019-20)
58. Anderson Madison (2020-23)
59. Steven Matses (2015-17)
60. Casimir Martina (2015-16)
61. Sabrina Mazyck (2016-18)
62. Samantha Meyer (2015-17)
63. Treavor Miller (2019-21)
64. Carson Murphy 2019-21)
65. Chelsea Mishan (2019-23)
66. Shelby Muntz (2023-24)
67. Jessie Novotny (2018-20)
68. Bridget O'Banion (2015-17)
69. Rachel Obler (2023-24)
70. Cari Palmer (2015-17)
71. James Papadimos (2017-19)
72. Alex Paulsen (2016-18)
73. Alana Paixao Becker (2023-24)
74. Ben Phillips (2020-22)
75. Isabella Pinardi (2021-23)
76. Sawyer Perry (2023-24)
77. Lauren Pierce (2023-24)
78. Robert Reed (2016-18)
79. Mary Kate Rinderle (2021-23)
80. Emma Robinson (2023-24)
81. Anna Rowe (2017-20)
82. Jordan Rowland (2016-18)
83. Julia Slabe (2023-24)
84. Taylor Sollars (2018-19)
85. Nicole Schmauch (2019-20)
86. Cara Sheets (2021-2023)
87. Andrea Spurck (2019-22)
88. Shea Stephens (2023-24)
89. William Stevens (2023-24)
90. Madeleine Taylor (2017-19)
91. Marissa Thomas (2016-19)
92. Kristen Towne (2015-16)
93. Lauren Trapani (2018-20)
94. Tori Willmer (2023-24)
95. Zoe Tyrity (2016-18)
96. Evan Utterback (2021-23)
97. Kylie Wadkowski (2021-23)
98. Claire Whilans (2021-23)
99. Blair Willse (2023-24)
100. Nathan Watson (2018-20)

**Second-Year Transformational Experience Program (STEP Project Advisor)**

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|---|---|
| Kelley Ahlers | Graduated 2019. Education Abroad Trip to the Czech Republic to study sustainability and agricultural policy at the Czech Life Sciences University in Prague. |
| Emily Akkari | Graduated 2020. Leadership project with U.S. National Parks in the eastern USA, included Shenandoah, Great Smoky Mountains, Mammoth Cave, and Congaree National Parks. |
| Jonathan Baetz | Graduated 2019. Undergraduate Research OSU Ohio Biomod Team within the Department of Mechanical and Aerospace Engineering, Summer 2017. Conduct research at OSU then compete in the National Biomod Competition in San Francisco, CA. |
| Sydney Base-Smith | Graduated 2018. Internship Cincinnati Zoo, Visitor Engagement Initiative, working with reptiles, turtles, birds, arachnids and insects. |
| Matthew Bell | Graduated 2018. Education Abroad to Costa Rica, Environmental Sustainability, School of Earth Sciences, Cano Negro Wildlife Refuge, Santa Elena Cloud Forest. |

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| Megan Broughton | Graduated 2019. Undergraduate Research with *Staphylococcus* biofilms in the laboratory of Dr. Steven Lower to examine how pathogenic bacteria. |
| Chelsea Cancino | Graduated 2019. Study Abroad Scientific Roots in Europe, London, England, Paris, France. |
| Clare Coons | Graduated 2019. Pacific Coast and High Sierra Backpacking Leadership Expedition, Summer 2017. |
| Emma Dalan | Graduated 2018. Undergraduate research in molecular genetics, identify mechanism by which cells sense changes in intracellular zinc levels. |
| Danielle Darling | Graduated 2020. Community building project with students at the Alexander D. Henderson University School in Boca Raton, Florida on pet care training and education for K-6 students. |
| Tarshangi Dixit | Graduated 2019. Undergraduate Research Behavior of Pigs, in the laboratory of Dr. Pairis-Garcia to examine piglet behavior and feeding. |
| Jessica Doleh | Graduated 2020. Internship at the Indianapolis Zoo working in the Department of Africa Plains to work in the zoo's education programs, conservation programs and general operations and management practices. |
| Alex Ent | Graduated 2018. Internship program at the Columbus Zoo and Aquarium, animal enrichment project to keep animals mentally and physically healthy and happy and provide high quality of life. |
| Victoria Evankovich | Graduated 2018. Internship in chemical engineering internship, pharmaceutical development and manufacturing, Merck Inc., Danville, Pennsylvania, USA. |
| Luke Fiest | Graduated 2018. Animal Science Education Abroad to New Zealand, Human-Animal Interactions, Orana Wildlife Park, |
| Jacqueline Green | Graduated 2020. Artistic creative endeavor, studied dance at the Marshall Ellis Dance School in Orlando, Florida to develop a theater and dance production for students at Ohio State. |
| Mitchel Green | Graduated 2020. Leadership project with U.S. National Parks in the eastern USA. The national parks included Shenandoah, Great Smoky Mountains, Mammoth Cave, and Congaree National Parks. |
| Meredith Guggenheim | Graduated 2019. Historical Study Abroad in Greece to historical sites in Athens and Corfu Island. |
| Brian Hood | Graduated 2018. Education abroad to Australia through School of Environment and Natural Resources, May 2016. |
| Ursula Hussey | Graduated 2020. Fellow with the Washington Academic Internship Program working with the U.S. Congress in Washington, D.C. and the U.S. Environmental Protection Agency. |
| Haley Jenkins | Graduated 2019. Study Abroad in Valencia, Spain, enrolled in classes at University of Valencia, Spain. |
| Leah Kessler | Graduated 2020. Environmental Sustainability in Costa Rica, focused on natural resource conservation and management, balancing economic needs with environmental concerns. |

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| Helen Krondorfer | Graduated 2018. Internship engineering, development and enhancement of PET/CT scanners for medical applications, Philips Inc., Highland Heights, Ohio. |
| Johnathan Kubesch | Graduated 2018. Undergraduate research, grassland plant communities in relation to patch burn grazing on native tallgrass prairies, Missouri Department of Conservation, Dr. Elizabeth Middleton laboratory, Missouri, Kansas. |
| Heather Luken | Graduated 2018. Education abroad, economic, environmental, and social aspects of sustainability, learning to apply sustainability principles, Environment Sustainability in Costa Rica. |
| Samantha Meyer | Graduated 2020. Internship at Glacier National Park, worked with different agencies within the National Park Service. Samantha worded with park rangers, conservation professionals, hospitality services, and education specialists at the park. |
| Katie Minnelli | Graduated 2018. Service-learning program, Construa Casa Inc., build housing and improve living conditions of underprivileged families living in Antigua, Guatemala. |
| Charles Parise | Graduated 2018. Education abroad to Australia through School of Environment and Natural Resources. |
| Leah Pastor | Graduated 2019. Undergraduate Research in Protein Biochemistry in the laboratory of Dr. Sotomayor to study cadherin proteins and how they function in neural development. |
| Olivia Petryszyn | Graduated 2020. Internship with Community Sustainable Agriculture Food Dispersal Programs for urban communities, urban agriculture practices, training and education for low-income communities. |
| Claire Rosenbaum | Graduated 2019. Study Abroad of Exotic Animal Behavior and Welfare in South Africa to work with veterinarians who specialize large exotic mammals. |
| Kaitlyn Santinoceto | Graduated 2018. Animal Science Education Abroad to New Zealand, roles of animals in our society in the field of animal and human interactions, Orana Wildlife Park, Agrodome Sheep Show. |
| Jake Shaw | Graduated 2018. Internship and creative endeavors, Outdoor Adventure Center, Everglades National Park and 10,000 Islands National Wildlife Refuge, Florida. |
| Zachary Smotzer | Graduated 2019. Undergraduate Research in Biological Chemistry and Pharmacology in the laboratories of Drs Prabakaran and Parthun to study DNA assembly. |
| Nicole Stephan | Graduated 2020. Engineering Sustainability and Resilient Tanzanian Community in Marwa Village community to instill freshwater wells to provide clean drinking water for villages and health clinics. |
| Zoe Tyrity | Graduated 2018. Internship Smithsonian National Museum of Natural History, Division of Mammals, Washington DC. Summer 2016. |
| Maria Ulatowski | Graduated 2020. Leadership Program focused on rock climbing and backcountry hiking at six national parks located in the western USA. |

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| Kyle Wang | Graduated 2020. Internship with Delta Airlines, ground-based airline operations at John Glenn Columbus International Airport. |
| Meghanne White | Graduated 2019. Undergraduate Research Pharmaceutical Sciences, Loyola University Chicago and Ohio State. |
| Mallory Wiles | Graduated 2019. Columbus, Ohio Community Leadership Training Program. |
| Thomas Wilson | Graduated 2019. U.S. National Parks Expedition, Grand Canyon, Zion, Sequoia, Yosemite, Crater Lake, Glacier, Yellowstone National Parks. |
| Allison Wise | Graduated 2018. Animal science study abroad program, Human and Animal Interactions, New Zealand, Spring Semester, 2016. |

## Awards and Honors

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|---|---|
| 2019 | Ohio State Teaching Enhancement Program (OSTEP) for Mid-Career and Senior Faculty. |
| 2018 | Keynote Speaker, Center for Instructional Development and Educational Research, Conference on Teaching Large Classes, Virginia Tech, Blacksburg, Virginia. |
| 2017-2022 | Elected to Executive Council of The Academy of Teaching, Ohio State. |
| 2017-Present | Member of The Academy of Teaching, Ohio State. |
| 2017 | Award Winner of Alumni Award for Distinguished Teaching, Alumni Association, Ohio State's Highest Award for Teaching, Ohio State. |
| 2016 | Award Winner of Association Public and Land-Grant Universities (APLU) Excellence in Teaching Award for North Central Region of the United States, APLU and USDA, United States. |
| 2015 | Award Winner of Apple iTunesU Best Course of 2015, Apple, Cupertino, California, United States. |
| 2015 | Impact Award from Ohio State Office of Distance Education and eLearning to create a science poster review App for mobile devices. |
| 2014 | Academic Coursework Affordability Award from Ohio State Undergraduate Student Government for creating affordable course materials for students. |
| 2014 | Award winner of Rodney F. Plimpton Outstanding Teacher Award, College of Food Agriculture and Environmental Science, The Ohio State University. |
| 2014 | Gateway Interactive Course Seed Award ($5,000) from Ohio State Office of International Affairs to co-teach distant education course with Universidade Federal de Pernambuco, Recife, Brazil. |
| 2009 | Virginia Tech College of Agriculture and Life Sciences Most Outstanding Recent Alumnus from the Biochemistry, Virginia Tech, Blacksburg, Virginia, United States. |
| 2008 | Directorate Level Outstanding Performance Award, Pacific Northwest National Laboratory, Richland, Washington, United States. |

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|---|---|
| 2007 | Outstanding Biochemistry Symposium, American Chemical Society, Northwest Region, Boise, Idaho, United States. |
| 2003 | Most Outstanding Contribution to Basic Research in Geosciences, U.S. Department of Energy (DOE), Office of Basic Energy Science, Argonne National Laboratory, Chicago, Illinois, United States. |
| 2001 | Most Outstanding Graduate Student in field of Molecular Biology, John Johnson Memorial Scholarship, Virginia Tech, Blacksburg, Virginia, United States. |
| 2000 | James H. Eheart Scholarship, Virginia Tech, Blacksburg, Virginia, United States. |
| 2000 | Kendall W. King Memorial Scholarship for Outstanding Senior Graduate Student, Department of Biochemistry, Virginia Tech, Blacksburg, Virginia, United States. |

## Administrative Service

### Professional Service (2010-Present)

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|---|---|
| 2020 | Advisory Panel Member, Reverse Site Review, U.S. National Science Foundation (NSF), National Nanotechnology Coordinated Infrastructure (NNCI), Alexandra, Virginia, United States. |
| 2019-2021 | Grant Reviewer, Israel National Science Foundation, Israel. |
| 2017 | Advisory Panel Member, Reverse Site Review, U.S. National Science Foundation (NSF), National Nanotechnology Coordinated Infrastructure (NNCI), Alexandra, Virginia, United States. |
| 2015-Present | Grant Review Panel, U.S. National Science Foundation (NSF) Instrumentation and Facilities Program and Major Research Instrumentation, Alexandra, Virginia, United States. |
| 2015-2022 | Grant Panel Member, U.S. National Science Foundation (NSF), National Nanotechnology Coordinated Infrastructure (NNCI), Alexandra, Virginia, United States. |
| 2015-2016 | Course Director and Judge. Ohio Science Olympiad, State Tournament, Columbus, Ohio, United States. |
| 2015-2016 | Fellowship Reviewer, National Aeronautics and Space Administration (NASA), Postdoctoral Fellowship Program, Washington D.C., United States. |
| 2015 | Grant Review Panel Member, U.S. Department of Energy (DOE), Pacific Northwest National Laboratory, Terrestrial and Subsurface Ecosystem Program, Richland, Washington, United States. |
| 2015 | Advisory Panel Member, Reverse Site Review, U.S. National Science Foundation (NSF), National Nanotechnology Coordinated Infrastructure (NNCI), Alexandra, Virginia, United States. |
| 2010-Present | Grant Review Panel Member, U.S. National Science Foundation (NSF), Division of Earth Sciences, Alexandra, Virginia, United States. |
| 2010-2014 | User Advisory Committee Member, U.S. Department of Energy (DOE), Pacific Northwest National Laboratory, Environmental Molecular Sciences Laboratory (EMSL), Richland, Washington, United States. |

## College and University Level Service (2010-Present)

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|---|---|
| 2023-2026 | Faculty Member, College Promotion and Tenure Committee, Agricultural and Environmental Sciences, The Ohio State University, Columbus, Ohio, United States. |
| 2023-2024 | Faculty Member, College of Food, Agricultural and Environmental Sciences, Online Learning Working Group, The Ohio State University, Columbus, Ohio, United States. |
| 2022-2025 | Faculty Member, College of Food, Agricultural and Environmental Sciences, Faculty and Staff Awards Committee, The Ohio State University, Columbus, Ohio, United States. |
| 2021 | Conference Chair, 15th Annual Conference on Excellence in Teaching and Learning, The Ohio State University, Columbus, Ohio, United States. |
| 2020-2021 | Faculty Member, Distance Education Course Assurance Committee, Office of Academic Affairs (OAA), The Ohio State University, Columbus, Ohio, United States. |
| 2020 | Conference Chair, 14th Annual Conference on Excellence in Teaching and Learning, The Ohio State University, Columbus, Ohio, United States. |
| 2019-2022 | Selection Committee Member. Provost's Award for Teaching by a Lecturer, The Ohio State University, Columbus, Ohio, United States. |
| 2019-2021 | Advisory Faculty Member, University-Level Advisory Committee for the Revision of the General Education Program (ULAC-GE Committee), The Ohio State University, Columbus, Ohio, United States. |
| 2019-2020 | Member Subcommittee on High-Impact Practices Guidelines for the General Education Program, The Ohio State University, Columbus, Ohio, United States. |
| 2019 | Conference Chair, 13th Annual Conference on Excellence in Teaching and Learning, The Ohio State University, Columbus, Ohio, United States. |
| 2018-2020 | Member, Digital Flagship Advisory Group, The Ohio State University, Columbus, Ohio, United States. |
| 2018 | Conference Chair, 12th Annual Conference on Excellence in Teaching and Learning, The Ohio State University, Columbus, Ohio, United States. |
| 2017-2022 | Committee Member, Academy of Teaching Executive Council, The Ohio State University, Columbus, Ohio, United States. |
| 2017-2018 | Faculty Member, Search Committee CFAES Associate Dean and Director of Academic Affairs, Columbus, Ohio, United States. |
| 2017-2018 | Faculty Member, Rodney F. Plimpton Outstanding Teaching Award Selection Committee, The Ohio State University, Columbus, Ohio, United States. |
| 2016-2017 | Faculty Member, Search Committee. The Ohio State University, Agricultural Technical Institute (ATI) Director Search Committee, The Ohio State University at Wooster, Wooster, Ohio, United States. |
| 2016-2017 | Faculty Member. Research Security Working Group (RSWG), The Ohio State University, Columbus, Ohio, United States. . |

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| 2014-2015 | Faculty Member. Distance Education Steering Committee, Office of Distance Education and eLearning (ODEE), The Ohio State University, Columbus, Ohio, United States. |
| 2013-2014 | Committee Member, The Ohio State University, Agricultural Technical Institute (ATI) Re-envisioning Committee, The Ohio State University, Columbus, Ohio, United States. |
| 2012-2014 | Committee Member, Enhancement of Undergraduate Research Committee, The Ohio State University, Columbus, Ohio, United States. |
| 2011-2012 | Faculty Search Committee Member, Assistant/Associate Professor of Biogeochemistry Search Committee, Department of Civil, Environmental and Geodetic Engineering, Ohio State, The Ohio State University, Columbus, Ohio, United States. |
| 2010-Present | Selection Committee Member, Alumni Grants for Graduate Research and Scholarship (AGGRS) Award Committee, Graduate School, The Ohio State University, Columbus, Ohio, United States. |
| 2010-Present | Selection Committee Member, Graduate Associate Teaching Award (GATA) Committee, Graduate School, The Ohio State University, Columbus, Ohio, United States. |

**School Level Service (2010-Present)**

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| 2023 | Faculty Member, Undergraduate Curriculum Revision Focus Group. School of Environment and Natural Resources, The Ohio State University, Columbus, Ohio, United States. |
| 2022 | Faculty Search Committee Member, Professor of Soil Health, The Ohio State University, Columbus, Ohio, United States. |
| 2021-2022 | Faculty Search Committee Member, Assistant/Associate Professor of Environment and Natural Resources Education, The Ohio State University, Columbus, Ohio, United States. |
| 2017-2018 | Faculty Search Committee Member, Professor of Soil Science and Rhizosphere Processes, School of Environment & Natural Resources, The Ohio State University, Columbus, Ohio, United States. |
| 2014-2024 | Faculty Member, Promotion and Tenure (P&T) Committee, School of Environment and Natural Resources, The Ohio State University, Columbus, Ohio, United States. |
| 2012-2013 | Faculty Search Committee Member, Assistant/Associate Professor of Soil Fertility, School of Environment & Natural Resources, The Ohio State University, Columbus, Ohio, United States. |
| 2012-Present | Faculty Advisor, Environmental Science Major, Environmental Molecular Sciences Specialization, School of Environment and Natural Resources, The Ohio State University, Columbus, Ohio, United States. |
| 2012-2019 | Chair, Annual Environmental Science Student Symposium, The Ohio State University, Columbus, Ohio |

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| 2012-2015 | Selection Committee, Graduate Student Fellowship Nomination Committee, School of Environment and Natural Resources, The Ohio State University, Columbus, Ohio, United States. |
| 2011-2014 | Faculty Member, Graduate Studies Committee. Ecosystem Science and Ecological Restoration Representative, The Ohio State University, Columbus, Ohio. |

## Journal Editorial Boards and Review

### Editorial Boards

- 2020-2023. Review Editor. Frontiers in Medical Technology, Pharmaceutical Innovation, Lausanne, Switzerland.
- 2020-2023. Editorial Board Member. Magnetochemistry, MDPI, Basel, Switzerland.

### Manuscript Reviewer

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|---|---|
| 2022-Present | Frontiers in Medical Technology<br>Nature Communications<br>Sustainability |
| 2021-Present | Journal of Oceanology and Limnology<br>Advanced Biology |
| 2020-Present | ACS Sustainable Chemistry & Engineering<br>BCM Microbiology<br>International Biodeterioration & Biodegradation<br>Microorganisms<br>ACS Omega<br>The Journal of Physical Chemistry<br>Scientific Reports |
| 2019-Present | ACS Nano<br>National Science Review<br>Frontiers in Bioengineering and Biotechnology<br>Journal of Marine Biology & Oceanography |
| 2018-Present | Science China Technological Sciences<br>Science China Life Sciences |
| 2017-Present | Journal of Vacuum Science and Technology<br>PLOS ONE<br>ACS Applied Materials & Interfaces |
| 2016-Present | Crystal Growth and Design.<br>Industrial & Engineering Chemistry Research<br>Materials<br>Microbiological Research<br>Molecular Microbiology<br>World Journal of Microbiology and Biotechnology |
| 2014-Present | Microbial Cell Factories<br>Marine Drugs<br>Applied Microbiology and Biotechnology<br>Environmental Microbiology |

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| 2013-Present | Annales Societatis Geologorum Poloniae<br>Minerals<br>Environmental Monitoring and Assessment<br>Biophysical Journal<br>Journal of Hazardous Materials<br>Science |
| 2012-Present | Microscopy and Microanalysis<br>Journal of the Royal Society Interface<br>Journal of Colloid and Interface Science<br>Ground Water |
| 2011-Present | Micron<br>Acta Biomaterial<br>Geobiology<br>Materials Letters |
| 2010-Present | Chemical Geology<br>Water Resources Research<br>Soft Matter<br>Ultramicroscopy |
| 2009-Present | Applied and Environmental Microbiology<br>Geochimica et Cosmochimica Acta<br>Chemosphere<br>Environmental Science & Technology |
| 2007-Present | Journal of the Brazilian Chemical Society<br>Langmuir<br>Journal of Bacteriology<br>FEMS Microbiology Letters |
| 2005-Present | American Journal of Science |