Linda.K. Weavers, Ph.D., P.E., BCEE

Education

Ph.D., Env. Eng. Science	California Institute of Technology	June 1998
M.S., Env. Eng. Science	California Institute of Technology	June 1994
B.S., Civil Engineering	University of Minnesota	June 1992

Academic Appointments

10/2008 – present	Professor and John C. Geupel Endowed Chair, Department of Civil, Environmental & Geodetic Engineering, The Ohio State University,
1/2019-present	Co-lead Healthy Land, Water and Air Program Area, Sustainability Institute, The Ohio State University
8/2012 – present	Co-Director Ohio Water Resources Center, The Ohio State University
7/2006 – 08/2011	
10/2003 – 9/2008	Associate Professor and John C. Geupel Chair, The Ohio State University
1/1998 – 9/2003	Assistant Professor, The Ohio State University
9/2013 – 8/2016	Visiting Professor, Department of Chemical Engineering, University of Bath
9/2013 – 6/2014	Visiting Professor, Department of Chemistry, Physics, And Environment, University of Udine
8/2005 – 6/2006	J.S. Braun/Braun Intertec Visiting Professor, University of Minnesota

Courtesy Appointments

Environmental Sciences Graduate Program
School of Earth Sciences
College of Public Health

Research Expertise and Applications

Dr. Weavers' research is multi-pronged with expertise in developing water and hazardous waste treatment technologies, promoting innovation in the water industry and determining fate of emerging contaminants in water systems. Current research projects investigate ultrasound for treatment of contaminants of emerging concern, ultrasonic defouling of membranes, ultrasonic and ozone nanobubbles for control of harmful algal blooms, fate of poly- and per-fluoro alkyl substances, and developing design standards for emerging water technologies.

Certifications or professional registrations

Professional Engineer, State of Ohio (65547)
Board Certified Environmental Engineer (Water & Wastewater specialty)

Courses Taught

Environmental Engineering Capstone Design (EnvE 4090)
Environmental Engineering Unit Operations Lab (EnvE 4200)
Sustainable and Resilient Infrastructure in Italy (Engr 5797.20)
Hazardous Waste Management and Remediation (EnvE 5410)
Physical/Chemical Treatment Processes I (CE 810)

Principles of Risk Assessment (Public Health EHS 831/EnvE 720)
Treatment Plant Design (EnvE 520)

Honors and awards

AEESP Fellow, 2021
OSU Distinguished Scholar Award, 2021
AEESP Distinguished Service Award, 2012, 2018
College of Engineering Faculty Diversity Excellence Award, 2013
Water Management Association of Ohio (WMAO), Presidents Service Award, Awarded to Ohio Water Resources Center, 2013
TechColumbus Innovation Awards, Outstanding Woman in Technology, Semi-Finalist 2010.
President and Provost Leadership Institute, 2007-2009
College of Engineering Stanley E. Harrison Faculty Award, 2007
J.S. Braun/Braun Intertec Visiting Professor, University of Minnesota, 2005-2006
College of Engineering Lumley Interdisciplinary Research Award, 2005
John C. Geupel Endowed Chair in Engineering, 2003-present
AAUW Recognition Award for Emerging Scholars, 2003
Presidential Early Career Award for Scientists and Engineers (PECASE), 2002
National Science Foundation CAREER Award, 2001
College of Engineering Lumley Research Award, 2001, 2006, 2011
Highest score on Environmental PE exam, State of Ohio, Autumn 2000

Journal Publications (bold indicates advisee)

1. L. K. Weavers, I. Hua, and M. R. Hoffmann. "Degradation of Triethanolamine and Chemical Oxygen Demand Reduction in Wastewater by Photoactivated Periodate," *Water Environment Research*, **1997,** 69(6), 1112-1119.
2. A. J. Colussi, L. K. Weavers, and M. R. Hoffmann. "Chemical Bubble Dynamics and Quantitative Sonochemistry," *Journal of Physical Chemistry A***, 1998,** 102(35), 6927-6934.
3. L. K. Weavers, F. H. Ling, and M. R. Hoffmann. "Aromatic Compound Degradation in Water Using a Combination of Sonolysis and Ozonolysis," *Environmental Science and Technology*, **1998,** 32(18), 2727-2733.
4. L. K. Weavers and M. R. Hoffmann. "Sonolytic Decomposition of Ozone in Aqueous Solution: Mass Transfer Effects," *Environmental Science and Technology*, **1998**, 32(24), 3941-3947.
5. L. K. Weavers, N. Malmstadt, and M. R. Hoffmann. "Kinetics and Mechanism of Pentachlorophenol Degradation by Sonication, Ozonation, and Sonolytic Ozonation," *Environmental Science and Technology*, **2000**, 34(7), 1280-1285.
6. **Y. Lu** and L. K. Weavers. "Sonochemical Desorption and Destruction of 4-Chlorobiphenyl from Synthetic Sediments," *Environmental Science and Technology*, **2002,** 36(2), 232-237.
7. **Y. Lu**, **N. Riyanto**, and L. K. Weavers. "Sonolysis of Synthetic Sediment Particles: Particle Characteristics Affecting Particle Dissolution and Size Reduction" *Ultrasonics Sonochemistry*, **2002,** 9(4), 181-188.

8. **J. A. Frim**, J. F. Rathman, and L. K. Weavers. "Sonochemical Destruction of Free and Metal-Binding Ethylenediaminetetraacetic Acid," *Water Research,* **2003,** 37(13), 3155-3163.
9. *Y. Qi*, L. K. Weavers, and J. L. Zakin. "Enhancing Heat-Transfer Ability of Drag Reducing Surfactant Solutions with Ultrasonic Energy," *Journal of Non-Newtonian Fluid Mechanics*, **2003,** 116(1), 71-93.
10. **M. O. Lamminen**, H. W. Walker, and L. K. Weavers. "Mechanisms and Factors Influencing the Ultrasonic Cleaning of Particle-Fouled Ceramic Membranes" *Journal of Membrane Science,* **2004,** 237, 213-223.
11. **G. Y. Pee**, J. F. Rathman, and L. K. Weavers. "Effects of Surface Active Properties on the Cavitational Degradation of Surfactant Contaminants," *Industrial & Engineering Chemistry Research,* **2004,** 43(17), 5049-5056.
12. **D. Chen**, **Z. He**, L. K. Weavers, Y. P. Chin, H. W. Walker, and P. G. Hatcher, "Sonochemical Reactions of Dissolved Organic Matter," *Research on Chemical Intermediates,* **2004,** 30(7-8), 735-753. **Invited**
13. Y. –P. Chin, P. L. Miller, L. Zeng, K. Cawley, and L. K. Weavers. "Photosensitized Degradation of Bisphenol A by Dissolved Organic Matter," *Environmental Science and Technology*, **2004,** 38(22), 5888-5894.
14. **L. –H. Chia, X. Tang**, and L. K. Weavers. "Kinetics and Mechanism of Photoactivated Periodate Reaction with 4-Chlorophenol in Acidic Solution," *Environmental Science and Technology,* **2004,** 38(24), 6875-6880.
15. **Z. He**, S. J. Traina, J. J. Bigham, and L. K. Weavers. "Sonolytic Desorption of Mercury from Aluminum Oxide," *Environmental Science and Technology*, **2005**, 39(4), 1037-1044.
16. L. K. Weavers, **G. Y. Pee, J. A. Frim, L. Yang**, and J. F. Rathman. "Ultrasonic Destruction of Surfactants: Application to Industrial Wastewaters," *Water Environment Research,* **2005,** 77(3), 259-265.
17. P. Taerakul, **P. Sun**, H. Walker, L. Weavers, D. Golightly, and T. Butalia. "Variability of Inorganic and Organic Constituents in Lime Spray dryer Ash," *Fuel,* **2005,** 84(14-15), 1820-1829.
18. **D. W. Golightly**, **P. Sun**, C. M. Cheng, P. Taerakul, H. W. Walker, L. K. Weavers, and D. M. Golden. "Gaseous Mercury from Curing Concretes that Contain Fly Ash: Laboratory Measurements," *Environmental Science and Technology,* **2005,** 39(15), 5689-5693.
19. **L. Yang**, J. F. Rathman, and L. K. Weavers. "Degradation of Alkylbenzene Sulfonate Surfactants by Pulsed Ultrasound," *Journal of Physical Chemistry B,* **2005,** 109(33), 16203-16209.
20. **P. Sun**, *P. Taerakul*, L. K. Weavers, and H. W. Walker. "Distribution of Polycyclic Aromatic Hydrocarbons in Lime Spray Dryer Ash," *Energy & Fuels,* **2005,** 19(5), 1911-1918.
21. **P. Sun**, L. K. Weavers, *P. Taerakul*, and H. W. Walker. "Characterization of Polycyclic Aromatic Hydrocarbons (PAHs) on Lime Spray Dryer (LSD) Ash Using Different Extraction Methods," *Chemosphere,* **2006,** 62(2), 265-274.
22. **D. Chen**, L. K. Weavers, and H. W. Walker. "Ultrasonic Control of Ceramic Membrane Fouling: Effect of Particle Characteristics," *Water Research,* **2006,** 40, 840-850.

23. **D. Chen**, L. K. Weavers, H. W. Walker, and J. J. Lenhart. "Ultrasonic Control of Ceramic Membrane Fouling Caused by Dissolved Organic Matter and Silica Particles," *Journal of Membrane Science*, **2006,** 276(1-2), 135-144.
24. **D. Chen**, L. K. Weavers, and H. W. Walker. "Ultrasonic Control of Ceramic Membrane Fouling by Particles: Effects of Ultrasonic Factors," *Ultrasonics Sonochemistry,* **2006,** 13(5), 379-387.
25. *J. Z. Sostaric*, R. P. Pandian, L. K. Weavers, and P. Kuppusamy. "Formation of Lithium Phthalocynanine Nanotubes by Size Reduction Using Low- and High-Frequency Ultrasound," *Chemistry of Materials,* **2006**, 18, 4183-4189.
26. **M. O. Lamminen**, H. W. Walker, and L. K. Weavers. "Cleaning of Particle-Fouled Membranes During Cross-flow Filtration Using an Embedded Ultrasonic Transducer System," *Journal of Membrane Science*, **2006,** 283(1-2), 225-232.
27. P. Taerakul, **P. Sun**, D. W. Golightly, H. W. Walker, and L. K. Weavers. "Distribution of Arsenic and Mercury in Lime Spray Dryer Ash," *Energy & Fuel,* **2006,** 20(4), 1521-1527.
28. **L. Yang**, J. F. Rathman, and L. K. Weavers. "Sonochemical Degradation of Alkylbenzene Sulfonate Surfactants in Aqueous Mixtures," *Journal of Physical Chemistry B,* **2006,** 110(37), 18385-18391.
29. **P. Sun** and L. K. Weavers. "Sonolytic Reactions of Phenanthrene in Organic Extraction Solutions," *Chemosphere*, **2006,** 65(11), 2268-2274.
30. **M. O. Lamminen**, H. W. Walker, and L. K. Weavers. "Effect of Fouling Conditions and Cake Layer Structure on the Ultrasonic Cleaning of Ceramic Membranes," *Separation Science and Technology*, **2006,** 41(16), 3569-3584.
31. P. Taerakul, **P. Sun**, D.W. Golightly, H. W. Walker, L. K. Weavers, B. Zand, T. Butalia, T. J. Thomas, H. Gupta, and L.-S. Fan. "Characterization and Re-Use Potential of By-Products Generated from the Ohio State Carbonation and Ash Reactivation (OSCAR) Process," *Fuel*, **2007,** 86, 541-553.
32. **Z. Q. He**, S. J. Traina, and L. K. Weavers. "Sonochemical Dissolution of Cinnabar (α-HgS)," *Environmental Science and Technology*, **2007,** 41(3), 773-778.
33. **Z. Q. He**, S. J. Traina, and L. K. Weavers. "Sonolytic Desorption of Mercury from Aluminum Oxide: Effects of pH, Chloride and Organic Matter," *Environmental Science and Technology*, **2007,** 41(3), 779-784.
34. **L. Yang**, **J. Z. Sostaric**, J. F. Rathman, P. Kuppusamy, and L. K. Weavers.* "Effects of Pulsed Ultrasound on the Adsorption of n-alkyl Anionic Surfactants at the Gas/Solution Interface of Cavitation Bubbles," *Journal of Physical Chemistry B,* **2007,** 111, 1361-1367.
35. **X. M. Tang** and L. K. Weavers. "Decomposition of Hydrolysates of Chemical Warfare Agents Using Photoactivated Periodate," *Journal of Photochemistry and Photobiology A: Chemistry*, **2007,** 187, 311-318.
36. *H. Gupta*, T. J. Thomas, *A.-H. A. Park, M. V. Iyer, P. Gupta, R. Agnihotri, R. A. Jadhav*, H. W. Walker, L. K. Weavers, T. Butalia, and L.-S. Fan*. "Pilot-Scale Demonstration of the OSCAR Process for High-Temperature Multi-Pollutant Control of Coal Combustion Flue Gas by Carbonated Fly Ash and Mesoporous Calcium Carbonate," *Industrial & Engineering Chemistry Research*, **2007,** 46(14), 5051-5060.

37. **X. M. Tang** and L. K. Weavers. "Using Photoactivated Periodate to Decompose TOC from Hydrolysates of Chemical Warfare Agents," *Journal of Photochemistry and Photobiology A: Chemistry,* **2008,** 194, 212-219.
38. **L. Yang**, **J. Z. Sostaric**, J. F. Rathman and L. K. Weavers, "Effect of ultrasound frequency on pulsed sonolytic degradation of octylbenzene sulfonic acid," *Journal of Physical Chemistry B,* **2008,** 112(3), 852-858.
39. **L. E. Jacobs,** L. K. Weavers, and Y. –P. Chin. "Direct and Indirect Photolysis of Polycyclic Aromatic Hydrocarbons (PAHs) in Nitrate-rich Surface Waters," *Environmental Toxicology and Chemistry*, **2008**, 27(8), 64-69.
40. **D. W. Golightly**, *C.-M. Cheng*, **P. Sun**, L. K. Weavers, H. W. Walker, *P. Taerakul*, and W. E. Wolfe. "Gaseous Mercury Release from Steam-Curing Cellular Concretes that Contain Fly Ash and Activated Carbon Sorbent," *Energy and Fuels,* **2008,** 22(5), 3089-3095.
41. **D. W. Golightly**, C.-M. Cheng, L. K. Weavers, H. W. Walker, and W. E. Wolfe, "Fly Ash Properties and Mercury Sorbent Affect Mercury Release from Curing Concrete," *Energy and Fuels*, **2009**, 23, 2035-2040.
42. **J. Z. Sostaric** and L. K. Weavers, "Advancement of high power ultrasound technology for the destruction of surface active waterborne contaminants," *Ultrasonics Sonochemistry,* **2010,** 17, 1021-1026.
43. **S. Na**, J. Khim, M, Cui, Y. Ahn, L.K. Weavers, "The Effect of Different Particle Size from PAHs Contaminated Sediment by Ultrasonic Irradiation," *J. Environ. Sci.* (in Korean), **2010,** 19(3), 379-387.
44. **D. M. Deojay, J. Z. Sostaric**, L. K. Weavers, "Exploring the Effects of Pulsed Ultrasound at 205 kHz and 616 kHz on the Sonochemical Degradation of Octylbenzene Sulfonate," *Ultrasonics Sonochemistry,* **2011,** 18(3), 801-809.
45. Z. He, S. Siripornadulsil, R. T. Sayre, S. J. Traina, L. K. Weavers, "Removal of Mercury from Sediment by Ultrasound Combined with Biomass (transgenic Chlamydomonas reinhardtii)," Chemosphere, **2011**, 83, 1249-1254.
46. L. K. Weavers, *D. T. Bautista*, **M. E. Williams**, M. D. Moses, **C. A. Marron**, G. P. La Rue, "Assessing an engineering day camp for middle-school girls," ASCE *Journal of Professional Issues in Engineering Education and Practice,* **2011,** 127-134.
47. M. Cai, M. Jin, L.K. Weavers, "Analysis of sonolytic degradation products of azo dye Orange G using liquid chromatography-diode array detection-mass spectrometry," *Ultrasonics Sonochemistry,* **2011,** 18(5), 1068-1076.
48. **L. E. Jacobs**, R. L. Fimmen, Y-. P. Chin, H. E. Mash, L. K. Weavers, "Fulvic Acid Mediated Photolysis of Ibuprofen in Water," *Water Research,* **2011,** 45, 4449-4458.
49. **L. E. Jacobs**, L. K. Weavers, **E. Houtz**; Y.-P. Chin, "Photosensitized Degradation of Caffeine: Role of Fulvic Acids and Nitrate," *Chemosphere,* **2012**, 86(2), 124-129.
50. **Y. Gao**, D. Chen, L.K. Weavers, H.W. Walker, "Ultrasonic Control of UF Membrane Fouling by Natural Waters: Effects of Calcium, pH, and Fractionated Natural Organic Matter," *Journal of Membrane Science,* **2012**, 401-402, 232-240.
51. **R. Xiao, D. Diaz-Rivera, Z. He**, L. K. Weavers, "Using Pulsed Wave Ultrasound to Evaluate the Suitability of Hydroxyl Radical Scavengers in Sonochemical Systems," *Ultrasonics Sonochemistry,* **2013,** 20(3), 990-996.

52. **R. Xiao, D. Diaz-Rivera**, L.K. Weavers, "Degradation of Pharmaceuticals and Personal Care Products (PPCPs) in Aqueous Solution Using Pulsed Wave Ultrasound," *Industrial and Engineering Chemistry Research*, **2013**, 52(8), 2824-2831.
53. **P. Bottega**, L. K. Weavers, C. Comuzzi, D. Goi, "Nuove tecnologie per la bonifica di sedimenti contaminati da metalli pesanti: valutazione sperimentale di due applicazioni per il desorbimento di mercurio da sedimenti contaminate," *Ecoera- ambiente, rifiuti, demolizioni*, **2014,** 26 (Marzo), 52-55.
54. **R. Xiao, Z. He, D. Diaz-Rivera, G-. Y. Pee**, and L. K. Weavers, "Sonochemical Degradation of Ciprofloxacin and Ibuprofen in the Presence of Matrix Organic Compounds," *Ultrasonics Sonochemistry*, **2014**, 21(1), 428-435.
55. **M. Langlois**, L. K. Weavers, Y.-P. Chin, "Contaminant-Mediated Photobleaching of Wetland Colored Dissolved Organic Matter During Solar Irradiation," *Environmental Sciences: Impacts and Processes*, **2014**, 16, 2098-2107.
56. **R. Xiao**, **Z. Wei**, D. Chen, and L. K. Weavers, "Kinetics and mechanism of sonochemical degradation of pharmaceuticals in municipal wastewater," *Environmental Science and Technology*, **2014,** 48(16), 9675-9683.
57. **G-. Y. Pee, Z. Wei, S. Na** and L. K. Weavers, "Increasing the Bioaccessibility of Polycyclic Aromatic Hydrocarbons in Sediment using Ultrasound," *Chemosphere*, **2015**, 122, 265-272.
58. **Z. Wei**, J. A. Kosterman, R. Xiao, G.-Y. Pee, M. Cai, and L. K. Weavers, "Designing and Characterizing a Multi-Stepped Ultrasonic Horn for Enhanced Sonochemical Performance," *Ultrasonics Sonochemistry*, **2015**, 27, 325-333.
59. **J. K. Krinks**, M. Qiu, I. A. Mergos, L. K. Weavers, P. J. Mouser, and H. Verweij, "Piezoceramic Membrane with Built-in Ultrasonic Defouling," *Journal of Membrane Science*, **2015,** 494. 130-135.
60. **Z. Wei** and L. K. Weavers, "Combining COMSOL modeling with acoustic pressure maps to design sono-reactors," *Ultrasonics Sonochemistry*, **2016,** 31, 490-498.
61. X. He, Y.-L. Liu, A. Conklin, J. Westrick, L. K. Weavers, D. D. Dionysiou, J. J. Lenhart, P. J. Mouser, D. Szlag, and H. W. Walker, "Toxic cyanobacteria and drinking water: Impacts, detection and treatment," *Harmful Algae*, **2016**, 54, 174-193.
62. **C. Yuan**, M. Chakraborty, S. Canonica, L. K. Weavers, C. M. Hadad, Y.-P. Chin, "Isoproturon Reappearance after Photosensitized Degradation in the Presence of Triplet Ketones or Fulvic Acids," *Environmental Science and Technology*, **2016**, 50(22), 12250-12257.
63. **Z. Wei**, F. A. Villamena, and L. K. Weavers, "Kinetics and Mechanism of Ultrasonic Activation of Persulfate: An *In-Situ* EPR Spin Trapping Study," *Environmental Science and Technology*, **2017**, 51,3410-3417. http://dx.doi.org/10.1021/acs.est.6b05392
64. **C. Yuan**, Y.-P. Chin, L.K. Weavers, "Photochemical acetochlor degradation induced by hydroxyl radical in Fe-amended wetland waters: Impact of pH and dissolved organic matter," *Water Research*, **2018**, 132, 52-60.
65. L.K. Weavers, M. Trotz, "The AEESP-EES Relationship After Five Years with EES as the Official Journal of AEESP," *Environmental Engineering Science*, **2019**, 36(1), 1-1.
66. **C. Yuan**, R.L. Sleighter, L.K. Weavers, P.G. Hatcher, Y.-P. Chin, "Fast Photomineralization of Dissolved Organic Matter in Acid Mine Drainage Impacted Waters," *Environmental Science and Technology*, **2019**, 53, 6273-6281.

67. **M. E. Patterson**; L. K. Weavers; Z. Bohrerova; T. A. Wolfe. "Creating Ohio Low-Pressure Membrane Filtration Design Criteria for Ohio," *Ohio Section American Water Works Association Newsletter*, Spring **2020**, 36-38.
68. **J. E. Galloway**, A. V. P. Moreno, A. B. Lindstrom, M. J. Strynar, S. Newton, A. A. May, and L. K. Weavers, "Evidence of Air Dispersion: HFPO-DA and PFOA in Ohio and West Virginia Surface Water and Soil Near a Fluoropolymer Production Facility," *Environmental Science and Technology*, **2020**, *54*, 7175-7184. https://dx.doi.org/10.1021/acs.est.9b07384
69. **W. P. Fagan**, **J. Zhao**, F. A. Villamena, J. L. Zweier, L. K. Weavers, "Synergistic, aqueous PAH degradation by ultrasonically-activated persulfate depends on bulk temperature and physicochemical parameters," *Ultrasonics Sonochemistry*, **2020**, 67, 10572. https://doi.org/10.1016/j.ultsonch.2020.105172
70. **S. Na, Z. Wei, G. Y. Pee**, Y. S. Hwang and L. K. Weavers, "Effect of Sediment Particle Size on Polycyclic Aromatic Hydrocarbon Bioaccessibility and Degradation by Ultrasound," *Ultrasonics Sonochemistry*, **2020**, 68, 105203. https://doi.org/10.1016/j.ultsonch.2020.105203
71. G. Rossi, M. Mainardis, E. Aneggi, L.K. Weavers, D. Goi, "Combined ultrasound-ozone treatment for reutilization of primary effluent—a preliminary study," *Environmental Science and Pollution Research*, **2021**, 28, 700-710.
72. **W.V. Anderson**, C.-M. Cheng, T.S. Butalia, L.K Weavers, "A Forward Osmosis – Membrane Distillation Process for Zero Liquid Discharge of Flue Gas Desulfurization Wastewater," *Energy & Fuels*, **2021**, 35, 6, 5130–5140. https://doi.org/10.1021/acs.energyfuels.0c03415
73. **M.E. Patterson**, Z. Bohrerova, T.A. Wolfe, L.K. Weavers, "Developing Design Criteria for Emerging Treatment Technologies in Ohio," *Journal AWWA*, **2021**, 113(7), 24-34. https://doi.org/10.1002/awwa.1765.
74. **W.P. Fagan**, F.A. Villamena, J.L. Zweier, L.K. Weavers, "*In situ* EPR spin trapping and competition kinetics demonstrate temperature-dependent mechanisms of synergistic radical production by ultrasonically-activated persulfate," *Environmental Science and Technology*, submitted.

Patents

75. U. S. patent (issued: 3/7/06, #7008540), "Ultrasonically Cleaned Membrane Filtration System," L. K. Weavers, H. W. Walker, D. Chen and M. O. Lamminen.

Book Chapters

76. L. K. Weavers and G.B. Wickramanayake. "Chapter 5: Kinetics of the Inactivation of Microorganisms," In *Disinfection, Sterilization, and Preservation, 5th Edition,* S. Block (Ed.), Lippincott, Williams, and Wilkins, Baltimore, MD, 2000, pp. 65-78.
77. L. K. Weavers and G. B. Wickramanayake. "Chapter 10: Disinfection and Sterilization Using Ozone," In *Disinfection, Sterilization, and Preservation, 5th Edition,* S. Block (Ed.), Lippincott, Williams, and Wilkins, Baltimore, MD, 2000, pp. 205-214.
78. L. K. Weavers. "Chapter 10: Sonolytic Ozonation for the Remediation of Hazardous Pollutants," In *Advances in Sonochemistry, Volume 6,* Timothy J. Mason (Ed.), JAI Press Ltd., Stamford, CT, 2001, pp. 111-139.

79. L. K. Weavers. "Type II Sedimentation—Flocculent Settling," In *AEESP Environmental Engineering Processes Laboratory Manual, 5th Edition*, S. Powers, *et al.* (Eds.), Association of Environmental Engineering and Science Professors, Champaign, IL, 2001.
80. R. M. Sykes, L. K. Weavers, and H. W. Walker. "Chapter 9: Chemical Water Treatment Processes," In *Civil Engineering Handbook, 2nd Edition*, Chen and Liew Eds., CRC Press LLC, Boca Raton, FL, 2003, pp. **10**-1-**10**-56.
81. **W.P. Fagan** and L.K. Weavers. "Sonochemical Remediation of Pollutants in Soils and Sediments," In *Encyclopedia of Water*, P. A. Maurice Ed., Wiley, New York, NY, 2019

Proceedings Publications

82. L. K. Weavers, I. Hua, and M. R. Hoffmann, "A New Advanced Oxidation Process: Photoassisted Oxidation of Periodate for the Degradation of Triethanolamine and for COD Reduction." *Proceedings of the Second International Symposium on Environmental Applications of Advanced Oxidation Technologies*, San Francisco, CA, February 28 - March 1, 1996, p. 4-63-4-75
83. K. Ford, W. Hunter, R. Bruening, T. Lloyd, G. Levcun, L. Weavers, and H. Destaillats, "Development, Demonstration and Validation of Zero Discharge Industrial Wastewater Treatment Plant (IWTP)At Puget Sound Naval Shipyard (PSNS), Bremerton, WA." OCEANS '99, Seattle, WA.
84. **G. Y. Pee**, L. K. Weavers, and J. F. Rathman, "Sonochemical Destruction of Surfactants." 220th National Meeting of the American Chemical Society, Division of Environmental Chemistry, August 20-25, 2000, vol. 40(2), p. 645-648.
85. **Y. Lu** and L. K. Weavers, "Sonochemical Remediation of PCB Contaminated Sediments." 220th National Meeting of the American Chemical Society, Division of Environmental Chemistry, Washington, DC, August 20-25, 2000, vol. 40(2), p. 678-681.
86. L. S. Fan, R. Agnihotri, T. S. Butalia, H. W. Walker, L. K. Weavers, and T. Thomas, "Tailored Calcium Oxide Sorbent Reactivation Process and Its Effects on Solid Byproduct Properties." *Proceedings of the 14th International Symposium on Management and Use of Coal Combustion Products*, San Antonio, Texas, January 22-26, 2001.
87. L. K. Weavers, **G. Y. Pee**, and J. F. Rathman, "Kinetics of Surfactant Degradation by Sonolysis." 221st National Meeting of the American Chemical Society, Division of Environmental Chemistry, San Diego, CA, April 1-5, 2001, vol. 41(1), p. 968-972.
88. **S-. K. Chang** and L. K. Weavers, "Sonochemical Remediation of Mercury on Synthetic Sediments" 222nd National Meeting of the American Chemical Society, Division of Environmental Chemistry, Chicago, IL, August 26-30, 2001, vol. 41(2), p. 44-48.
89. *P. Taerakul*, **P. Sun**, *J. Lee*, **D.W. Golightly**, L.K. Weavers, H.W. Walker, T. Butalia, "Short and Long Term Variability of Flue Gas Desulfurization By-Product."2001 International Ash Utilization Symposium, Lexington, KY, October, 2001.
90. **D. Chen**, L. K. Weavers, and H. W. Walker, "Using Ultrasound to Reduce Ceramic Membrane Fouling by Silica Particles." 223nd National Meeting of the American Chemical Society, Division of Environmental Chemistry, Orlando, FL, April 7-11, 2002, vol. 42(1), p. 166-169.
91. L. K. Weavers, **J. A. Frim**, **G. Y. Pee**, and J. F. Rathman, "Ultrasonic Destruction of Surfactants: Application to Industrial Wastewaters." *Proceedings of WEFTEC 2002*, Chicago, IL, September 28-October 2, 2002. (Non-peer reviewed paper)

92. **P. Sun** and L. K. Weavers, "Investigation of Polycyclic Aromatic Hydrocarbon Compounds (PAHs) on Flue Gas Desulfurization (FGD) By-Products." 225th National Meeting of the American Chemical Society, Division of Fuel Chemistry, New Orleans, LA, March 23-27, 2003.
93. P. Taerakul, **P. Sun**, **D.W. Golightly**, T. Butalia, H.W. Walker, L.K. Weavers, "Characterization of Hg, As, and Se in Lime Spray Dryer Byproduct." 2003 International Ash Utilization Symposium, Lexington, KY, September, 2003.
94. **Z. He**, L. K. Weavers, S. J. Traina, P. G. Hatcher, "Mechanism of Sonochemical Desorption of Mercury from Synthetic Sediments." 226th National Meeting of the American Chemical Society, Division of Environmental Chemistry, New York, NY, September 7-11, 2003.
95. C.-M. Cheng, **D. Golightly**, **P. Sun**, P. Taerakul, H. Walker, L. Weavers, and W. Wolfe, "Release of Mercury During Curing of Concrete Containing Fly Ash and Mercury Sorbent Material." International Conference on Air Quality IV: Mercury, Trace Elements, and Particulate Matter, Arlington, VA, September 22-24, 2003.
96. L. K. Weavers, H. W. Walker, W. Wolfe, **D. Golightly**, **P. Sun**, C-. M. Cheng, P. Taerakul, D. M. Golden, "Mercury Controls on Power Plants: Potential Impacts on Fly Ash Use in Concrete." Proceedings of the 8th CANMET/ACI International Conference on Fly Ash, Silica Fume, Slag, and Natural Pozzolans in Concrete, ACI Publication SP-221, Las Vegas, NV, May 23-29, 2004, p. 837-858.
97. **Z. He**, L. K. Weavers, J. J. Bigham, S. J. Traina, "Sonolytic Desorption of Mercury from Synthetic Al_2O_3 Sediments." 228th National Meeting of the American Chemical Society, Division of Environmental Chemistry, Philadelphia, PA, August 22-26, 2004.
98. **P. Sun**, L. K. Weavers, "Sonolytic Reactions of Polycyclic Aromatic Hydrocarbons (PAHs) during Extractions." 228th National Meeting of the American Chemical Society, Division of Environmental Chemistry, Philadelphia, PA, August 22-26, 2004.
99. **X. Tang**, L. K. Weavers, "Photoactivated Periodate as a technology to degrade hydrolysates of chemical warfare agents." 228th National Meeting of the American Chemical Society, Division of Environmental Chemistry, Philadelphia, PA, August 22-26, 2004.
100. **L. Yang**, L. K. Weavers, J. F. Rathman, "Effects of Pulsing on the Sonolytic Degradation of Surfactants." 228th National Meeting of the American Chemical Society, Division of Environmental Chemistry, Philadelphia, PA, August 22-26, 2004.
101. **D. Chen**, **Z. He**, L. K. Weavers, Y. P. Chin, H. W. Walker, "Sonochemical Reactions of Dissolved Organic Matter." 228th National Meeting of the American Chemical Society, Division of Environmental Chemistry, Philadelphia, PA, August 22-26, 2004.
102. **P. Sun**, P. Taerakul, L. K. Weavers, H. W. Walker, "Distribution of Polycyclic Aromatic Hydrocarbons (PAHs) an Inorganic Trace Elements in Lime Spray Dryer (LSD) Ash." 228th National Meeting of the American Chemical Society, Division of Fuel Chemistry, Philadelphia, PA, August 22-26, 2004.
103. P. Taerakul, **P. Sun**, H. W. Walker, L. K. Weavers, and **D. W. Golightly**, "Chemical Composition and Leaching Characteristics of Ash collected from the Ohio State Coal Ash Regeneration (OSCAR) Process." World of Coal Ash, Lexington, KY, April 11-15, 2005.
104. **D. W. Golightly**, **P. Sun**, C.-M. Cheng, P. Taerakul, H. W. Walker, L. K. Weavers, W. E. Wolfe and D. Golden, "Mercury Emissions from Concrete Containing Fly Ash and

Mercury-Loaded Powdered Activated Carbon." World of Coal Ash, Lexington, KY, April 11-15, 2005.

105. **L. Jacobs**, L. K. Weavers, and Y.-P. Chin, "Nitrate and Dissolved Organic Matter's Effect on the Photofate of PAHs in Natural Waters." 230th National Meeting of the American Chemical Society, Division of Environmental Chemistry, Washington, DC, August 28-September 1, 2005.
106. L. K. Weavers, C.-M. Cheng, **D. Golightly**, H. W. Walker, W. Wolfe, and K. Ladwig, "Mercury Emissions from Curing Concretes that Contain Fly Ashes and Activated Carbon Sorbents from Three Coal-Fired Power Plants." World of Coal Ash, Cincinnati, OH, May 7-10, 2007.
107. H. W. Walker, C.-M. Cheng, **D. Golightly**, **P. Sun**, *P. Taerakul*, L. K. Weavers, W. Wolfe, and K. Ladwig, "Mercury Emissions During Steam-Curing of Cellular Concretes That Contain Fly Ash and Mercury-Loaded Powdered Activated Carbon." World of Coal Ash, Cincinnati, OH, May 7-10, 2007.
108. **L. E. Jacobs**, R. L. Fimmen, H. E. Mash, L. K. Weavers, Y.-P. Chin, "Ibuprofen Photolysis: Reaction kinetics, chemical mechanism, byproduct analysis." 236th National Meeting of the American Chemical Society, Division of Environmental Chemistry, Philadelphia, PA, August 17-21, 2008.
109. **Z. He, C. A. Marron**, Y.-P. Chin, L. K. Weavers, "Sunlight Induced Degradation of Ciprofloxacin and Metolachlor in Natural and Constructed Wetlands." 236th National Meeting of the American Chemical Society, Division of Environmental Chemistry, Philadelphia, PA, August 17-21, 2008.
110. **G.-Y. Pee**, and L. K. Weavers, "Sonochemical Remediation of PAHs Contaminated Sediment ." 236th National Meeting of the American Chemical Society, Division of Environmental Chemistry, Philadelphia, PA, August 17-21, 2008.
111. **Z. He, G. Y. Pee**, and L. K. Weavers, "Sonochemical degradation of pharmaceuticals exemplified by ibuprofen and ciprofloxacin." 236th National Meeting of the American Chemical Society, Division of Environmental Chemistry, Philadelphia, PA, August 17-21, 2008.
112. L. K. Weavers, G. P. LaRue, R. E. Friedman, "What Can an Engineering Outreach Program Offer Young Women That They Can't Find in an Engineering Curriculum at School? Fun!" 2009 American Society of Engineering Education Annual Conference, Austin, TX, June 14-17, 2009.
113. **S. Na** and L. K. Weavers, "Influence of particle size on PAH degradation in contaminated sediment using ultrasonic treatment." 2010 Symposium on Ultrasonics Electronics of Japan, Tokyo, Japan, December 2010.
114. **R. Xiao, Z. Wei**, D. Chen, and L. K. Weavers, "Influence of Wastewater Effluent Components on the Degradation of a Series of Pharmaceuticals Using Continuous and Pulsed Wave Ultrasound." 14th European Society of Sonochemistry Meeting, Avignon, France, June 2-6, 2014.
115. **W.P. Fagan, J. Zhou**, L.K. Weavers, "Aqueous PAH degradation by ultrasonically activated persulfate: Synergisms and effects of bulk water temperature." 16th European Society of Sonochemistry Meeting, Besancon, France, April 15-19, 2018.
116. L.K. Weavers, **M. Patterson**, Z. Boherova, T.A. Wolfe, Engineering Sustainability 2019, Pittsburgh, PA, April 7-9, 2019, "Development of Design Criteria to Supplement Ten State Standards in Ohio."

117. L.K. Weavers, **M. Patterson**, Z. Boherova, T.A. Wolfe, 16th Annual EPA Drinking Water Workshop: Small Systems Challenges and Solutions, 2019, Cincinnati, Ohio, September 24-26, 2019, "Development of Design Criteria to Supplement Ten State Standards in Ohio."

Invited Presentations

Over 40 invited presentations have been given at a range of venues including universities (*e.g.*, Rice U, Carnegie Mellon U, U Michigan, UC Santa Cruz, UC Davis, U Cincinnati, U Minnesota, U Wisconsin, Wash U St. Louis, Hunan Agricultural University, Zhejiang University, Stockholm U, U Pitt, Purdue, New Jersey IT and others), keynotes at conferences (*e.g.*, Engineering Sustainability 2019, AOTs-18), and industry (*e.g.*, 3M, EPRI, Braun Intertec).

Sponsored Projects ($35M, cost-share and internal grants not included)

Current Projects ($2,900,000)

PI, Building a Water@OhioState Web Platform, Ohio Sea Grant College Program, 2021-2022, $9933

Co-PI, Efficacy of algaecides and novel ozone nanobubble technology on prevention and management of harmful algal blooms (HABs), US Army Corps of Engineers, 2021-2024, $1,545,234

PI, Ultrasound as a source water reservoir management strategy to control cyanobacteria blooms, US Army Corps of Engineers, 2021-2024, $720,881

PI, Developing Second Design Standard to Enable the Use of Innovative Technology in Ohio Public Water Systems, Ohio Water Development Authority, 2020-2022, $192,561

PI, Ceramic Water Filtration Membranes with Built-In Fouling Mitigation, Ohio Water Development Authority, 2019-2021, $200,000

Co-PI, Investigating the extent of drinking water source contamination in southeastern Ohio by air emissions of HFPO-DA from the Chemours Washington Works facility, USGS WRRI, 2019-2021, $31,827

PI, Assessing Ultrasound as a Source Water Reservoir Management Strategy to Control Cyanobacteria Blooms, Ohio Water Development Authority, 2017-2021, $199,911

Completed Projects ($14,537,000)

Co-PI, Developing Design Standards to Enable the Use of Innovative Technology in Ohio Public Water Systems, Ohio Water Development Authority, 2018-2020, $144,762

PI, Fabricating and Testing Second Generation Self-Cleaning Membranes for Defouling Potential, Ohio Water Development Authority, 2016-2018, $200,000

PI, An Integrated Forward Osmosis Membrane Distillation Process for Flue Gas Desulfurization Wastewater Treatment, Ohio Coal Research Consortium/American Electric Power, 2015-2017, $174,915

PI, Delivery of sediment amendments using far-field ultrasound, NOAA/Ohio Sea Grant, 2014-2016, $119,350

PI, Self-Cleaning Membranes: Fabrication, Characterization and Application to Biofouling Mitigation, Ohio Water Development Authority, 2014-2015, $200,000

Co-PI, Characterizing biological fouling of ceramic membranes in water treatment: effect of material composition and ultrasonication defouling control, USGS WRRI, 2013-2014, $29,920

PI, Bench-Scale Evaluation of In Situ Ultrasonic Remediation of Contaminated Sediments, NOAA/Ohio Sea Grant, 2011-2013, $113,760

PI, Enhanced Photolysis of Agrichemicals in Constructed Wetlands using Iron Amendments, Ohio Water Development Authority, 2009-2014, $199,554

PI, Optimization of Ultrasonic-Assisted Solvent Extraction for Algal Lipids, Phycal, 2008-2009, $25,000

PI, Sonochemical Degradation of Pharmaceuticals and Personal Care Products in Municipal Wastewater Effluents, NOAA/Ohio Sea Grant, 2008-2010, $113,308

PI, Sylvan Source Phase 1: Feasibility of Ultrasound in home water treatment, Sylvan Source, 2007-2008, $13,500

Co-PI, Ultrasonic Defouling of Membranes During Drinking Water Treatment: Phase II Pilot-Scale Testing, Ohio Water Development Authority, 2006-2010, $167,174

PI, Sonochemical Release of PAHs from Contaminated Sediment, Office of Naval Research, 2006-2007, $47,500

PI, Release from Concrete Containing Different Fly Ash during Leaching, Electric Power Research Institute, 2006, $8000

Co-PI, Optimizing the Design of Constructed Wetlands for the Photodegradation of Organic Contaminants, National Science Foundation, 2005-2008, $400,728

PI, Sonochemical Sequestration of PAHs in Sediments, NOAA/Ohio Sea Grant, 2006-2009, $110,773

PI, Release of Mercury During Curing of Concrete Containing Fly Ash and Mercury Sorbent Material III, Electric Power Research Institute, 2005-2006, $65,963

PI, Sonochemical Release of PAHs from Contaminated Sediment, Office of Naval Research, 2005-2006, $56,110

Co-PI, Symposium Support—Free Radical Chemistry in the Environment, National Science Foundation, 2005, $23,000

PI, Future Engineers' Summer Camp, American Society of Civil Engineers, 2004, $1000

PI, Ultrasonic Defouling of Membranes During Drinking Water Treatment: Laboratory and Pilot-Scale Testing, Ohio Water Development Authority, 2004-2006, $200,000

Co-PI, Evaluation of Dewatering Strategies for PCB-contaminated Sediments in the Great Lakes Region, NOAA/Ohio Sea Grant, 2004-2006, $203,387

PI, Sani-T Bag Testing, Avantec Technologies, 2003-2004, $9000

PI, Release of Mercury During Curing of Concrete Containing Fly Ash and Mercury Sorbent Material II, 2003-2004, $213,557

PI, Sonochemical Desorption and Destruction of Contaminant Mixtures in Sediment, NOAA/Ohio Sea Grant, 2003-2006, $92,828

Co-PI, Ohio State Carbonation Ash Reactivation, Ohio Coal Development Office, 2003-2004, $203,387

PI, Release of Mercury During Curing of Concrete Containing Fly Ash and Mercury Sorbent Material, Electric Power Research Institute, 2002, $67,714

PI, Sonochemical Treatment of Surfactants in Complex Mixtures, Office of Naval Research, 2001-2003, $165,846

PI, PECASE: Elucidation of Reaction Mechanisms and Evaluation of Photoactivated Periodate as an Advanced Oxidation Technology, and REU/RET supplements, National Science Foundation, 2001-2008, $375,000 (+>$50,000 supplements)

Senior Personnel, Role of Environmental Molecular Interfaces on the Chemical and Biological Reactivity of Pollutants, National Science Foundation, 2000-2005, $5,800,000
Co-PI, Demonstration of Ohio State Carbonation Ash Reactivation (OSCAR) Process & Environmental Characterization, Ohio Coal Development Office, $4,259,549
PI, Sonochemical Desorption of Mercury Laden Sediments, NOAA/Ohio Sea Grant, 2000-2003, $148,371
PI, Ultrasonic Cleaning of Fouled Membranes during Drinking Water Treatment: Application to Small Treatment Systems, Ohio Water Development Authority, 2000-2002, $210,922
PI, Ultrasonic Destruction of Surfactants: Application to Industrial Wastewaters, Water Environment Research Foundation, 2000-2001, $74,779
Co-PI, Ultrasonic Cleaning of Fouled Membranes During Drinking Water Treatment, USGS/WRRI, 1999-2001, $50,000
PI, Sonochemical Treatment of Surfactant Laden Industrial Wastewaters, Naval Facilities Engineering Service Center, 1999-2000, $25,000
PI, Sonochemical Treatment of Surfactant Laden Industrial Wastewaters, Naval Facilities Engineering Service Center, 1999, $24,689
PI, Sonochemical Remediation of PCB Contaminated Sediments, USGS WRRI, 1998-2000, $66,431
Co-PI, NSF Gateway Coalition: Development of Case Study Curriculum in Environmental Engineering, NSF/Drexel U, 1998-1999, $39,950
Co-PI, Environmental Engineering Curriculum Development and Module Adaptation, NSF/Drexel U, 1997-1998, $42,053

Associated with the Ohio Water Resources Center ($17,554,000)

Coordination and management of statewide and campus SARS-CoV-2 wastewater monitoring, Ohio Department of Health, 2021-2022, $8,141,388
Dormitory wastewater monitoring of SARS-CoV-2 at universities and colleges in the State of Ohio, Ohio Department of Health, 2020-2021, $3,973,304
State of Ohio wastewater SARS-CoV-2 surveillance, Ohio EPA (CARES Act funds), 2020-2021, $2,843,451
The Ohio Water Resources Center: Amendment of Cooperative Agreement, Ohio Water Development Authority, 2021-2022, $200,000
Ohio Water Resources Center Research Program, WRRA104b Grants Competition, USGS, 2020-2021, $125,000
The Ohio Water Resources Center: Amendment of Cooperative Agreement, Ohio Water Development Authority, 2019-2020, $200,000
Ohio Water Resources Center Research Program, WRRA104b Grants Competition, USGS, 2019-2020, $92,335
Ohio Water Resources Center Research Program, WRRA104b Grants Competition, USGS, 2018-2019, $92,335
Ohio Water Resources Center Research Program, WRRA104b Grants Competition, USGS, 2017-2018, $92,335
Ohio Water Resources Center Research Program, WRRA104b Grants Competition, USGS, 2016-2017, $92,335
Ohio Water Resources Center Research Program, WRRA104b Grants Competition, USGS, 2015-2016, $92,335

Ohio Water Resources Center Research Program, WRRA104b Grants Competition, USGS, 2014-2015, $92,335
Ohio Water Resources Center Research Program, WRRA104b Grants Competition, USGS, 2013-2014, $55,335
The Ohio Water Resources Center: Amendment of Cooperative Agreement, Ohio Water Development Authority, 2013-2018, $500,000
Ohio Water Resources Center Research Program, WRRA104b Grants Competition, USGS, 2012-2013, $92,335
Ohio Water Resources Center Research Program, WRRA104b Grants Competition, USGS, 2010-2011, $92,335
Ohio Water Resources Center Research Program, WRRA104b Grants Competition, USGS, 2009-2010, $92,335
Ohio Water Resources Center Research Program, WRRA104b Grants Competition, USGS, 2008-2009, $92,335
The Ohio Water Resources Center: Amendment of Cooperative Agreement, Ohio Water Development Authority, 2007-2011, $500,000
Ohio Water Resources Center Research Program, WRRA104b Grants Competition, USGS, 2007-2008, $92,335

Advisees Mentored

Advisee	*Number Completed*	*Number Current*
PhD	12	3
M.S. Thesis	16	5
M.S. non-Thesis	9	
Visiting Scholar	4	
Visiting Professor	3	
Post-Doc	3	1
Researcher	2	
Undergrad Honors	11	
Undergrad Research	20+	2

Service Activities (outside of the institution)

Editorial Activities

- *Ultrasonics Sonochemistry*, Editorial Board Member, 2017-present.
- *ASCE Journal of Environmental Engineering*, Associate Editor, 2006-2008

Committee Activities

- *Association of Environmental Engineering and Science Professors (AEESP)*
  Nominating Committee, Chair 2018-2019, Member 2019-2021
  Board Member 2014-2018, VP 2015-16; pres-elect 2016-17, pres 2017-18, past pres 2018-19
  Accomplishments as president: started plan to fully endow AEESP Awards; worked with Board to rename award and facilitated donations from membership of nearly $40,000 to rename award to be Walter J. Weber, Jr. Frontier in Research Award; created focus on advocacy including *ad hoc* committee to develop advocacy toolkit for membership and

formed committee to respond to EPA Science Advisory Board outcomes; worked with AEESP's official journal, Environmental Engineering Science, on survey and plan for how to better integrate journal with AEESP; tasked Student Services Committee to find ways to connect environmental engineering student groups at different universities.

Awards Committee, Chair 2010-2012, Assoc. Chair 2010
Publications Committee, Member 1999-2002

- *National Institutes for Water Resources (NIWR)*
  USGS/WRRA National Competitive Grants 104G proposal review panel (35 proposals and 10 panelists to select 3-4 proposals), August 2020, Co-Chair of 3-day virtual panel
  Committee to Simplify WRRI Annual Report Template, Co-Chair 2019
  Board Member and Regional Representative, 2012-2013
  USGS-NIWR Partnership Committee, 2013

Selected Conference, Symposia, Workshop Organization

- 11th International Symposium on Environmental Engineering (SIDISA 2020), Scientific Committee, Turin, Italy, June 2020
- Environmental Professionals Network/Water Management Association of Ohio/Ohio Water Resources Center co-organized and co-sponsored event, March 2019, March 2020.
- National Institutes for Water Resources, Annual Meeting 2020, organized session on NIWR Mission and Governance Structure.
- Community Engagement Conference: Partnering for a Resilient and Sustainable Future, co-chair of conference, Columbus, OH, January, 2019.
- 16th Meeting of the European Society of Sonochemistry, Scientific Committee, Besacon, France. April, 2018.
- AEESP 2017 Conference, Workshop organizer: I've Got Tenure, So Now What?: Managing the Triad of Teaching, Research, and Service Post-Tenure, Ann Arbor, MI, June 20, 2017.
- Gordon Research Conference, Environmental Science: Water, organizer of *Power Hour*, 2016.
- Chemical Congress of the Pacific Rim (PACIFICHEM 2005), December, 2005 Honolulu, HI. Symposium co-organizer *Free Radicals in the Environment*. (5 half-day sessions).
- 228th National Meeting of the American Chemical Society, Philadelphia, PA, August, 2004. Division of Environmental Chemistry and AEESP symposium co-organizer *Oxidation and Reduction Technologies for Water Treatment*

State-Level Service

- State of Ohio Attorney General Environmental Council of Advisors, invited inaugural member, 2020-present
- Ohio American Water Works Association (AWWA) Technology Committee, 2015-present
- Provided review of Ohio EPA Harbor Profiling Project related to Senate Bill 2, 2018

Service Activities (internal to OSU)

University-wide Service

- *Ohio Water Resources Center*, co-director, 2006-2011; 2012-present
  Pursuant to the Water Resources Research Act (WRRA) of 1964, the Ohio Water Resources Center (WRC) is the federally-authorized and state-designated Water Resources Research Institute (WRRI) for the state of Ohio. The Ohio WRC promotes innovative, water-related research in Ohio through research grant competitions, coordination of interdisciplinary research proposals, and educational outreach activities.

Key Activities: Solicit and manage >$500,000/yr in active research; visit Ohio delegation in Congress to advocate for WRRA authorization and appropriations; connect researchers to water stakeholders in Ohio.
Accomplishments: Grew staff from 0 to 4; developed strategic plan; reduced required cost-share for researchers; developed first Water@OhioState brochure; partner with WMAO/EPN for annual ½ day workshop on water; survey of analytical needs at OSU; for FY 2011-2015 evaluation received "outstanding" evaluation from USGS review panel.

- *Sustainability Institute*, Healthy Air, Land and Water (HALW) program area, co-lead and Faculty Advisory Committee, 2019-present
  Key Activities: Develop mechanisms and plan to better connect HALW researchers across campus, Seed Grant program.
  Accomplishments: Developed strategic plan for HALW program area; Seed Grant RFP Development, Organized AAAS Communicating Science workshop, Organized Ohio as a Living Lab water research group.
- *Cores and Facilities Committee*, member, 2020-present
- *Global Water Institute*, Faculty Advisory Board, member, 2015-present
- *Sustainable and Resilient Economy Discovery Theme*, Leadership Team member, 2014-2019. Sustainable and Resilient Economy (SRE) Discovery Theme (DT) is a cross-campus initiative for hiring ~20 faculty in SRE area across campus. SRE DT grew into a new Sustainability Institute on campus.
- *Dept. of History, Environmental History Search Committee,* SRE DT representative, 2015-2016
- *President and Provost Council on Sustainability, Outreach and Engagement Subcommittee,* member, 2015
- *Faculty Advisory Board for the Energy and Environment Discovery Theme,* 2013
- *Environmental Science Scientific Advisory Committee,* chair, 2010-2011
- *Dean of College of Engineering Search Committee*, member, 2009-2011
- *One Ohio State Framework Plan Team,* member, 2009-2010
- *Task Force on Environmental Sciences at Ohio State,* member, 2008-2009
- *Graduate School Council on Research and Graduate Students: Policy and Standards Subcommittee,* member, 2006-2008
- *Biofilm Engineer Search Committee,* member, *2003-2005*
- *Environmental Toxicologist Search Committee,* member, 2000-2001
- *Environmental Science Graduate Program Seminar,* chair 1999-2000, member 1998-1999

Collegiate Service

- *Research Committee*, member, 2018-2019
- *Research Strategic Planning Committee*, member, 2017-2018
- *Faculty Professional Leave Committee,* member, 2015
- *College Honors and Awards Committee,* member, 2012-2013
- *College of Engineering Faculty Search Task Force*, member, 2012
- *Performance Plan Acceleration Task Force*, member, 2008-2009
- *Associate Dean for Undergraduate Education & Student Services Search Committee,* member, 2008
- *CEEGS Department Chair Search Committee,* member, 2005
- *College Honors and Awards Committee,* member, 2002-2004
- *Associate Director of the Engineering Experiment Station Search Committee,* member, 2003
- *Engineering Experiment Station Advisory Council,* member, 2001-2007

- *CEEGS Department Chair Search Committee,* member, 2000-2001

Departmental Service

- *Graduate Curriculum Renewal Working Group,* member, 2018-present
- *Visioning Committee,* member, 2019-present
- *Promotion and Tenure Committee* Chair, 2011-2013, 2014-2018, member 2008-2011.
- *Department Executive Committee,* member, 2004-2005; 2015-2016
- *Mentoring Committee*, member, 2015-2016
- *SRE DT Environmental Microbiology Search Committee*, Chair, 2017-2018
- *SRE DT Resilient Infrastructure Search Committee*, Chair, 2016-2017
- *Structural Engineering Search Committee,* member, 2016-2017
- *SRE DT Environmental Health Search Committee (2 positions in 2 depts),* Co-Chair , 2015-2016
- *Structural Engineering Search Committee*, member, 2015-2016
- *Diversity Hire Initiative,* 2012-2013
- *Strategic Planning Committee,* member, 2012
- *Infrastructure Engineering Search Committee,* chair, 2011-2012
- *Hydrology and Hydrodynamics Search Committee,* chair, 2010-2011
- *Bioenvironmental Processes Search Committee,* chair, 2009-2010
- *Renewable and Sustainable Energy Search Committee,* chair, 2008-2009
- *Bundled Hire Search Committee (3 positions),* member, 2006-2007
- *Awards Committee,* Chair, 2004-2005; 2007-2008
- *Chemical Hygiene Officer,* 2001-2005; 2006-2011
- *Space and Laboratory Committee*, member, 2001-2004
- *Environmental Engineer Search Committee*, member, 2000-2001
- *Graduate Studies Committee,* member, 1999-2003, 2004-2005
- *Environmental Engineering Curriculum/Undergrad Studies Committee,* member, 1999-2005; 2006-2013
- *Ecological Engineering Search Committee (3 positions in 3 depts),* member, 1999
- *Environmental Fluid Mechanics Search Committee,* member, 1998

Mentoring

- Mentor to 6 faculty (3 in CEGE, 1 in FABE/CEGE, 1 in Landscape Architecture, 1 in History)

Selected Outreach Activities

- *Future City Competition*, VIP judge for Ohio competition. Jan. 2020
- *Stockholm Jr. Water Prize*. Participated in hosting U.S. competition at OSU, June 2019
- *Central Ohio Water Festival*. Conducted buoyancy activity to groups of 20 fifth graders. 2013-present
- *Future Engineers' Summer Camp,* Director. Founded, secured funds, planned, and directed week-long full-day summer workshop for 30 8th grade girls to explore engineering. 2002-2008