CURRICULUM VITAE

Zhi (George) Zhou

Ph.D., P.E., BCEE, ENV SP, F. ASCE
Lyles School of Civil and Construction Engineering (CCE) and
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EDUCATION

2007	**Ph.D.**	Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, IL
2002	**M.S.**	Department of Environmental Science, Nanjing University, China
1999	**B.S.**	Department of Environmental Science, Nanjing University, China

LICENSURE and CERTIFICATION

2018–present	**Envision Sustainability Professional** (ENV SP)	Institute for Sustainable Infrastructure
2017–present	**Board Certified Environmental Engineer** (BCEE)	American Academy of Environmental Engineers & Scientists (AAEES)
2010–present	**Professional Engineer** (PE, Civil: Water Resources and Environmental)	California Board for Professional Engineers, Land Surveyors, and Geologists
2010	**Certificate** on "Developing Sustainable Program Assessment Processes" workshop	Accreditation Board for Engineering and Technology (ABET), Inc.
2003–2006	**Certified Livestock Manager**	Illinois Department of Agriculture, IL

PROFESSIONAL EXPERIENCE

08/2020–present	**Associate Professor**	Lyles School of Civil and Construction Engineering (CCE) and School of Sustainability Engineering and Environmental Engineering (SEE), Purdue University, West Lafayette, IN
06/2014–07/2020	**Assistant Professor**	Civil Engineering (CE) and Environmental and Ecological Engineering (EEE), Purdue University
06/2022–present	**Affiliated Faculty**	Institute for a Sustainable Future, Purdue University
04/2017–06/2022	**Affiliated Faculty**	Center for the Environment, Purdue University
02/2017–present	**Affiliated Faculty**	Purdue Policy Research Institute, Purdue University
06/2014–present	**Affiliated Faculty**	Interdisciplinary Graduate Program of Ecological Sciences & Engineering (ESE), Purdue University
02/2010–05/2014	**Assistant Professor**	Department of Civil and Environmental Engineering, National University of Singapore (NUS), Singapore
06/2013–07/2013	**Visiting Professor**	School of Engineering and Applied Sciences, Harvard University, Cambridge, MA
07/2007–01/2010	**Consulting Engineer**	Carollo Engineers, Inc., Walnut Creek, CA
08/2002–06/2007	**Research Assistant**	University of Illinois at Urbana-Champaign (UIUC), Urbana, IL

10/2004–11/2004	**Visiting Student**	The French National Centre for Scientific Research, National Chemical Engineering Science Laboratory (CNRS, ENSIC), Nancy, France
09/2000–06/2002	**Research Assistant**	Nanjing University, Jiangsu, China
06/1998–06/1999	**Undergraduate Research Assistant**	Nanjing University, Jiangsu, China
02/1998–06/1998	**Intern**	National Environmental Protection Bureau, Nanjing, Jiangsu, China

HONORS AND AWARDS

04/2026 Robert G. Wetzel Award for Water Quality, American Institute of Hydrology
04/2026 ASCE fellow
03/2026 Excellence in Environmental Engineering and Science (E3S) Award for University Research on "AI-driven Machine Learning Frameworks for Optimizing Biomimetic Algal Biofuel Production", AAEES
08/2025 Outstanding Engineering Teachers, College of Engineering, Purdue University
07/2025 Outstanding Achievement Award from the Indiana Water Resources Association for Indiana Statewide PFAS Assessment
06/2025 Top 0.5% of all scholars worldwide recognized by ScholarGPS
12/2024 Outstanding Engineering Teachers, College of Engineering, Purdue University
12/2023 Outstanding Engineering Teachers, College of Engineering, Purdue University
12/2023 Most Impactful Faculty Inventors, Purdue University
11/2023 Seed for Success Acorn Award, Purdue University
03/2023 Long Service Award, PLOS ONE editorial board
06/2021 Outstanding Engineering Teachers, College of Engineering, Purdue University
04/2019 Outstanding Faculty Mentor of Environmental and Ecological Engineering Graduate Students, Purdue University
11/2018 Certificate of Outstanding Contribution in Reviewing of the Journal *Renewable Energy*
10/2018 Certificate of Outstanding Contribution in Reviewing of the Journal *Environmental International*
05/2018 Top 1% highly cited paper (Electro-Fenton process for water and wastewater treatment) in engineering in 2017
04/2018 Certificate of Outstanding Contribution in Reviewing of the Journal *Bioresource Technology*
02/2018 Certificate of Outstanding Contribution in Reviewing of the Journal *Science of the Total Environment*
07/2017 Certificate of Outstanding Contribution in Reviewing of the Journal *Chemical Engineering Journal*
01/2010 Certificate of Appreciation, Chinese American Environmental Professionals Association, Oakland, CA
05/2007 Graduate College Conference Travel Award, UIUC
05/2007 Racheff Graduate Student Travel Award, UIUC
05/2006 Racheff Graduate Student Travel Award, UIUC
06/2005 Natural Science Progress Award (second prize), Nanjing, China
05/2005 Racheff Graduate Student Travel Fund Award, UIUC
05/2004 American Society for Microbiology Travel Grant
08/2002 University Fellowship, UIUC
08/2002 John W. Page Fellowship, UIUC
06/2001 Excellence Fellowship, Nanjing University

HONORS AND AWARDS OF ADVISED STUDENTS

08/2024 Second place poster presentation prize for Hongji Su (Ph.D. student) at the annual meeting of the United States Department of Agriculture (USDA) When Blue is Green (BiG) project

08/2024 Third-place poster presentation prize for Wanyue Hui (Ph.D. student) at the annual meeting of the USDA BiG project

03/2024 National finalist of the EnergyTechUp Competition held by the United States Department of Energy (DOE) for Team Carbonbusters for Sharon Hughes (Ph.D. alumna), Amanda Lopez (Ph.D. student), Nathaniel Bone (M.S. student), and Neha Shakelly, Purdue University

04/2023 New Venture Challenge Audience Choice Award for Sharon Hughes (Ph.D. alumna) and Amanda Lopez (Ph.D. student) in the Purdue Innovates Startup Expo

04/2023 Champion in the Great Lakes region and Technology Bonus Prize semifinalist for the category of Fossil Energy and Carbon Management for the EnergyTechUp competition held by DOE for Team Carbonbusters for Sharon Hughes (Ph.D. student), Amanda Lopez (Ph.D. student), and Neha Shakelly, Purdue University

02/2022 Technology Bonus Prize semifinalist for the category of Fossil Energy and Carbon Management in the Great Lakes region for the EnergyTech University Prize competition held by DOE for Team Carbonbusters led by Sharon Hughes (Ph.D. student), Purdue University

05/2018 Best poster award in the 39th Annual Indiana Water Resources Association Symposium for Zhe Sun (Ph.D. student), Purdue University

06/2012 Excellence Award of Environmental Science and Engineering Poster Symposium for Yuanyan Du (senior undergraduate student), NUS

06/2012 Merit Award of Environmental Science and Engineering Poster Symposium for Chenghui Lin (senior undergraduate student), NUS

08/2011 President's Graduate Fellowship for Xinzhu Yi (Ph.D. student), NUS

GRANTS

2026-2027	**PI**	Data-driven predictive machine learning for real-time adaptive control of biological wastewater treatment	Purdue University
2024-2027	**PI**	Bioaccumulation and biotransformation of PFAS and their precursors in the environment	United States Geological Survey (USGS)
2023-2028	**Co-PI**	When blue is green: sustainable blue food systems driven by integrated aquaponics	USDA
2023-2025	**PI**	Retention of PFAS on Spent Filters	Water Quality Research Foundation (WQRF)
2023-2024	**Co-PI**	Surveillance and mitigation of airborne pathogens in learning environments	Purdue University
2022-2024	**PI**	A biomimicry-based carbon-negative shot that generates revenue	National Science Foundation (NSF)
2022-2023	**PI**	Fungal wastewater treatment	Higher Education Commission of Pakistan
2022-2025	**Co-PI**	Advancing remote sensing of the biogeochemical state of midwestern inland waters	National Aeronautics and Space Administration (NASA)
2021–2023	**Co-PI**	Agile Reform of EEE Curriculum	Agile Reform of Curriculum Innovation Grants, Purdue

2021–2022	**Co-PI**	Cost-effective and affordable defluoridation treatment	Shah Family Global Innovation Lab
2019–2020	**PI**	Southport advanced wastewater treatment plant – phosphorus control	Citizen's Energy Group
2018–2020	**PI**	Emerging contaminant removal and microbial growth in membrane filtration and activated carbon point-of-use (POU) systems	WQRF
2018–2019	**PI**	Evaluation of our current and other available anti-icing/de-icing products under controlled environmental conditions to test effectiveness	Indiana Department of Transportation (INDOT)
2018	**PI**	Nature-inspired cost-effective production of biofuels with algal viruses	Purdue Research Foundation (PRF)
2017–2019	**PI**	Effects of viruses on the development of harmful algal blooms	USGS
2017	**PI**	Anti-fouling electrochemical graphene/carbon nanotube ceramic membrane for wastewater treatment	PRF
2016	**PI**	Development of electrochemical membranes to reduce biofouling for water purification	Purdue EEE Support for Exploratory Research
2015–2016	**PI**	Microbial source tracking for Gunpowder Creek Watershed in Kentucky	Sanitation District No. 1 of Northern Kentucky and Boone County Conservation District
2015–2016	**PI**	Artificial photosynthesis for efficient biofuel production with bioeletrocatalyzed reduction of CO_2	PRF
2015	**Co-PI**	Recovery of nutrients from animal and human wastes	Bio Town AG Inc.
2014–2016	**Co-PI**	Development of ceramic-based electrochemical graphene filter for oil & gas wastewater treatment	General Electric (GE)-NUS Environmental Research Institute
2013–2016	**PI**	Rapid and accurate quantification of antibiotic resistant bacteria and quantitative risk assessment for water security	Singapore Environment & Water Industry
2013–2015	**Co-PI**	Guidelines for engineered storage for direct potable reuse systems	U.S. WateReuse Research Foundation
2013–2015	**PI**	Development of electrochemical carbon nanotube filters to remove off-flavor compounds	Singapore Environment & Water Industry
2012–2014	**Co-PI**	Interaction of microbial consortia in anaerobic MBR treating high organic strength waste	GE
2012–2014	**PI**	A new type of photosynthesis through electrode-driven anaerobic respiration	Singapore Ministry of Education (MoE)
2012–2014	**PI**	Photoelectrochemical water splitting for the production of value-added chemicals	Singapore, Peking, and Oxford Research Enterprise
2011–2014	**Co-PI**	Development of microbial fuel cell sensor for detection of used water toxicity	Singapore Public Utilities Board (PUB)
2010–2013	**PI**	Evaluation of MLS_B antimicrobial resistance at environmental samples	Singapore MoE

JOURNAL PUBLICATIONS

1. Wang, C., M. Wang, M.X. Xie, L. Qi, M. Chen, X.S. Song, **Z. Zhou**, X. Shi, J. Yin, Y.a. Wei, M.X. Xu, L.P. Pan, A.-J.M. Miao, and L. Yang (2026). "Climate extremes intensify global lake eutrophication by increasing the stress resistance of harmful bloom-forming algae." *Nature Communications*(17): 2859.
2. Lopez, A.M., S. Savage, and **Z. Zhou** (2026). "Artificial intelligence-enabled real-time monitoring of intracellular lipid dynamics in microalgae via optical sensors and kinetic early-warning differentiation " *Bioresource Technology* 458: 135143.
3. Lopez, A.M., S. Savage, and **Z. Zhou** (2026). "Novel machine learning unlocks high lipid productivity and resolves trade-offs in algal biofuel production." *Renewable Energy* 256: 123901.
4. Li, R., W. Hui, and **Z. Zhou** (2026). "Contrasting effects of biofilm on arsenic removal between activated carbon and reverse osmosis point-of-use water filtration systems." *Journal of Hazardous Materials*: 141924.
5. Lavelli, V.A. and **Z. Zhou** (2026). "Kinetic modelling of Chlorella spp. wastewater treatment and resource recovery in the food industry " *Bioresources and Bioprocessing*.
6. Hughes, S., N. Shakelly, J.W. Sutherland, and **Z. Zhou** (2026). "Advancing biofuel economics through piggyback integration and earned profit sharing." *Renewable Energy* 261: 12533.
7. Doctolero, J.S., J. Saha, T.A. Rice, A.S. Hussain, **Z. Zhou**, H. Simsek, J.-Y. Huang, and P.B. Brown (2026). "Integration of a revolving algal biofilm in coupled aquaponics: comparison of algal biomass productivity and nutritional composition with decoupled suspended cultivation." *Aquaculture*: 744729.
8. Brown, L., S.L. Capozzi, S.C. Cullom, J.E. Dick, D.J. Foti, R.H. Franjul, N.L. Franklin, J.L. Freeman, C. Gonzalez-Canas, W. Hui, Y. Jiang, G.A. Lamberti, L.Q. Larson, E.C. Malek, C.J. Martinez, M. Masdari, A. Meils, D. de A. Miranda, A.K. Moline, A. Nieva, M. Venier, D.C. Wagner, E.M. Wells, K.M. Witkowiak, C. Xia, J.P. Youngblood, H. Zheng, **Z. Zhou**, and T.D. Hoskins (2026). "Multi-media occurrence, bioaccumulation, and exposure assessment of PFAS across a Midwestern U.S. State." *Environmental Research* 301: 124489.
9. **Zhou, Z.** (2025). "Antimicrobial resistance and mass gathering." *Nature Water* 3(6): 642–643.
10. Wang, T., X. Yi, T.H. Le, V. Sivachidambaram, and **Z. Zhou** (2025). "Selective pressure of various levels of erythromycin on the development of antibiotic resistance." *Environmental Pollution* 368: 125757.
11. Lopez, A.M., Y. Choi, and **Z. Zhou** (2025). "Dataset for investigating triacylglycerol accumulation in PBCV-1 infected Chlorella." *Data in Brief* 63: 112220.
12. Lopez, A.M., Y. Choi, and **Z. Zhou** (2025). "Enhanced biomimetic algal lipid enrichment for improved biofuel production driven by non-stress viral lysis." *Bioresource Technology*: 133128.
13. Yu, H.-Y., S. Gupta, and **Z. Zhou** (2024). "Removal of metals and assimilable organic carbon by activated carbon and reverse osmosis point-of-use water filtration systems." *Chemosphere* 365: 143251.
14. Bhatt, P., B.A. Engel, K.B. Shivaram, R.F. Turco, **Z. Zhou**, and H. Simsek (2024). "Treatment and optimization of high-strength egg-wash wastewater effluent using electrocoagulation and electrooxidation methods." *Chemosphere* 347: 140632.
15. Li, G., B. Li, M. Yu, J. Wang, L. Jiang, Y. Yu, X. Sha, X. He, and Z. Zhou (2023). "Assessing the efficiency of ozone-based advanced drinking water treatment processes in removing antibiotics and antibiotic-resistant genes: Pilot-scale research." *Journal of Water Process Engineering* 55: 104146.

16. Jiang, L., W. Zhai, J. Wang, G. Li, **Z. Zhou**, B. Li, and H. Zhuo (2023). "Antibiotics and antibiotic resistance genes in the water sources of the Wuhan stretch of the Yangtze River: Occurrence, distribution, and ecological risks." *Environmental Research* 239: 117295.
17. Chen, P., H.-J. Kim, L.R. Thatcher, J.M. Hamilton, M.L. Alva, **Z. Zhou**, and P.B. Brown (2023). "Maximizing nutrient recovery from aquaponics wastewater with autotrophic or heterotrophic management strategies." *Bioresource Technology Reports* 21: 101360.
18. Wang, J., X. Sha, X. Chen, H. Zhuo, W. Xie, **Z. Zhou**, X. He, L. Wu, and B. Li (2022). "Removal and distribution of antibiotics and resistance genes in conventional and advanced drinking water treatment processes." *Journal of Water Process Engineering* 50: 103217.
19. Lin, S., **Z. Zhou**, H. Wu, S. Yin, and Y. Wang (2022). "Electrochemical oxidation of aniline using a high-flux CNT filter." *Journal of Water Process Engineering* 46: 102536.
20. Tian, M., H. Wang, X. Li, D. Li, **Z. Zhou**, and B. Li (2021). "Efficiency of hybrid systems enhanced with different sludge ratios in improving resistance to short-term low temperatures." *Journal of Environmental Management* 297: 113398.
21. Chen, L., S. Gao, L. Lou, and **Z. Zhou** (2021). "Removal of intracellular and extracellular antibiotic resistance genes from swine wastewater by sequential electrocoagulation and electro-Fenton processes." *Environmental Engineering Science* 38(2): 74–80.
22. Sun, Z., E.R. Blatchley III, and **Z. Zhou** (2020). "Using algal virus *Paramecium bursaria* chlorella virus as a human adenovirus surrogate for validation of UV treatment systems." *Environmental Science & Technology*.
23. Chen, L., **Z. Zhou**, C. Shen, and Y. Xu (2020). "Inactivation of antibiotic-resistant bacteria and antibiotic resistance genes by electrochemical oxidation/electro-Fenton process." *Water Science and Technology* 81(10): 2221–2231.
24. Zhang, Y., C. Li, Y. Wu, Y. Zhang, **Z. Zhou**, and B. Cao (2019). "A microfluidic gradient mixer-flow chamber as a new tool to study biofilm development under defined solute gradients." *Biotechnology and Bioengineering* 116(1): 54–64.
25. Yi, X., M. Wang, and **Z. Zhou** (2019). "The potential impact of naturally produced antibiotics, environmental factors, and anthropogenic pressure on the occurrence of erm genes in urban soils." *Environmental Pollution* 245: 282–289.
26. Yi, X., C. Lin, E.J.L. Ong, M. Wang, and **Z. Zhou** (2019). "Occurrence and distribution of trace levels of antibiotics in surface waters and soils driven by non-point source pollution and anthropogenic pressure." *Chemosphere* 216: 213–223.
27. Yi, X., C. Lin, E.J.L. Ong, M. Wang, B. Li, and **Z. Zhou** (2019). "Expression of resistance genes instead of gene abundance are correlated with trace levels of antibiotics in urban surface waters." *Environmental Pollution* 250: 437–446.
28. Sun, Z. and **Z. Zhou** (2019). "Nature-inspired virus-assisted algal cell disruption for cost-effective biofuel production." *Applied Energy* 251: 113330.
29. Li, B., W. Yan, Y. Wang, H. Wang, **Z. Zhou**, Y. Li, and W. Zhang (2019). "Effects of key enzyme activities and microbial communities in a flocculent-granular hybrid complete autotrophic nitrogen removal over nitrite reactor under mainstream conditions." *Bioresource Technology* 280: 136–142.
30. Li, B., Y. Wang, J. Li, L. Yang, X. Li, **Z. Zhou**, Y. Li, X. Chen, and L. Wu (2019). "The symbiosis of anaerobic ammonium oxidation bacteria and heterotrophic denitrification bacteria in a size-fractioned single-stage partial nitrification/anammox reactor." *Biochemical Engineering Journal*.
31. Salehi, M., M. Abouali, M. Wang, **Z. Zhou**, A.P. Nejadhashemi, J. Mitchell, S. Caskey, and A.J. Whelton (2018). "Case study: Fixture water use and drinking water quality in a new residential green building." *Chemosphere* 195: 80–89.

32. Pruden, A., R.E. Alcalde, P.J.J. Alvarez, N. Ashbolt, H. Bischel, N.L. Capiro, E. Crossette, D. Frigon, K. Grimes, C.N. Haas, K. Ikuma, A. Kappell, T. LaPara, L. Kimbell, M. Li, X. Li, P. McNamara, Y. Seo, M.D. Sobsey, E. Sozzi, T. Navab-Daneshmand, L. Raskin, M.V. Riquelme, P. Vikesland, K. Wigginton, and **Z. Zhou** (2018). "An Environmental Science and Engineering Framework for Combating Antimicrobial Resistance." *Environmental Engineering Science* 35(10): 1005–1011.
33. Liu, C., Y. Sun, D. Wang, Z. Sun, M. Chen, **Z. Zhou**, and W. Chen (2017). "Performance and mechanism of low-frequency ultrasound to regenerate the biological activated carbon." *Ultrasonics Sonochemistry* 34: 142–153.
34. He, H. and **Z. Zhou** (2017). "Electro-Fenton process for water and wastewater treatment." *Critical Reviews in Environmental Science and Technology* 47(21): 2100–2131.
35. Le, T.-H., C. Ng, H. Chen, X.Z. Yi, T.H. Koh, T.M.S. Barkham, **Z. Zhou**, and K.Y.-H. Gin (2016). "Occurrences and characterization of antibiotic resistant bacteria and genetic determinants of hospital wastewaters in a tropical country." *Antimicrobial Agents and Chemotherapy* 60(12): 7449–7456.
36. Jing, H., S. Cheung, **Z. Zhou**, C. Wu, S. Nagarajan, and H. Liu (2016). "Spatial variations of the methanogenic communities in the sediments of tropical mangroves." *PLOS One* 11(9): e0161065.
37. Jame, S.A. and **Z. Zhou** (2016). "Electrochemical carbon nanotube filters for water and wastewater treatment." *Nanotechnology Reviews* 5(1): 41–50.
38. Goyal, N., **Z. Zhou**, and I.A. Karimi (2016). "Metabolic processes of Methanococcus maripaludis and potential applications." *Microbial Cell Factories* 15(1): 107.
39. Yi, X., S. Bayen, B.C. Kelly, X. Li, and **Z. Zhou** (2015). "Improved detection of multiple environmental antibiotics through an optimized sample extraction strategy in liquid chromatography-mass spectrometry analysis." *Analytical and Bioanalytical Chemistry* 407(30): 9071–83.
40. Liu, Y., J. Xie, C.N. Ong, C.D. Vecitis, and **Z. Zhou** (2015). "Electrochemical wastewater treatment with carbon nanotube filters coupled with in situ generated H_2O_2." *Environmental Science: Water Research & Technology* 1(6): 769–778.
41. Liu, Y., H. Liu, **Z. Zhou**, T. Wang, C.N. Ong, and C.D. Vecitis (2015). "Degradation of the common aqueous antibiotic tetracycline using a carbon nanotube electrochemical filter." *Environmental Science & Technology* 49(13): 7974–7980.
42. Jing, H., X. Xia, H. Liu, **Z. Zhou**, C. Wu, and S. Nagarajan (2015). "Anthropogenic impact on diazotrophic diversity in the mangrove rhizosphere revealed by nifH pyrosequencing." *Frontiers in Microbiology* 6: 1172.
43. Goyal, N., M. Padhiary, I.A. Karimi, and **Z. Zhou** (2015). "Flux measurements and maintenance energy for carbon dioxide utilization by *Methanococcus maripaludis*." *Microbial Cell Factories* 14: 146.
44. Liu, Y., J.H.D. Lee, Q. Xia, Y. Ma, Y. Yu, L.Y.L. Yung, J. Xie, C.N. Ong, C.D. Vecitis, and **Z. Zhou** (2014). "A graphene-based electrochemical filter for water purification." *Journal of Materials Chemistry A* 2(39): 16554–16562.
45. Le, T.-H., V. Sivachidambaram, X. Yi, X. Li, and **Z. Zhou** (2014). "Quantification of polyketide synthase genes in tropical urban soils using real-time PCR." *Journal of Microbiological Methods* 106(0): 135–142.
46. Goyal, N., H. Widiastuti, I.A. Karimi, and **Z. Zhou** (2014). "A genome-scale metabolic model of *Methanococcus maripaludis* S2 for CO_2 capture and conversion to methane." *Molecular BioSystems* 10(5): 1043–54.

47. Bayen, S., X. Yi, E. Segovia, **Z. Zhou**, and B.C. Kelly (2014). "Analysis of selected antibiotics in surface freshwater and seawater using direct injection in liquid chromatography electrospray ionization tandem mass spectrometry." *Journal of Chromatography A* 1338: 38–43.
48. Zhang, Y., C. Zhang, D.B. Parker, D.D. Snow, **Z. Zhou**, and X. Li (2013). "Occurrence of antimicrobials and antimicrobial resistance genes in beef cattle storage ponds and swine treatment lagoons." *Science of the Total Environment* 463-464: 631–8.
49. Zhang, Y., D.D. Snow, D. Parker, **Z. Zhou**, and X. Li (2013). "Intracellular and extracellular antimicrobial resistance genes in the sludge of livestock waste management structures." *Environmental Science & Technology* 47(18): 10206–13.
50. Nagarajan, S., S.K. Chou, S. Cao, C. Wu, and **Z. Zhou** (2013). "An updated comprehensive techno-economic analysis of algae biodiesel." *Bioresource Technology* 145: 150–6.
51. **Zhou, Z.** (2012). "Enhancing engineering students' learning in an environmental microbiology course." *Journal of Microbiology & Biology Education* 13(2): 191–192.
52. **Zhou, Z.**, L. Raskin, and J.L. Zilles (2010). "Effects of swine manure on macrolide, lincosamide, and streptogramin B antimicrobial resistance in soils." *Applied & Environmental Microbiology* 76(7): 2218–2224.
53. **Zhou, Z.**, L. Raskin, and J.L. Zilles (2009). "Macrolide resistance in microorganisms at antimicrobial-free swine farms." *Applied & Environmental Microbiology* 75(18): 5814–5820.
54. Vadiveloo, E., R. Cisterna, H. Breitenkam, J. Lopez, R. Harris, T. Greiner, P. Pitt, K. Alexander, R. Latimer, P. Vinci, **Z. Zhou**, and A. Salveson (2009). "Identifying the feasibility of canal recharge for indirect potable reuse: the Plantation experience." *Florida Water Resources Journal*(8): 38–43.
55. Finney, B., R. Gearheart, A. Salveson, **Z. Zhou**, M. Burke, and J.C. Ly (2009). "Water and wastewater treatment technologies appropriate (WAWTTAR), a planning tool for selecting wastewater treatment technologies." *Water Environment & Technology*(10): 51–54.
56. **Zhou, Z.**, M.N. Pons, L. Raskin, and J.L. Zilles (2007). "Automated image analysis for quantitative fluorescence *in situ* hybridization with environmental samples." *Applied & Environmental Microbiology* 73(9): 2956–2962.
57. Yang, L., L. Xiao, **Z. Zhou**, D. Pei, and X. Wang (2004). "Effect of pH on adsorption of phenol to organic montmorillonite." *Environmental Chemistry* 23(2): 183–187.
58. Yang, L., **Z. Zhou**, L. Xiao, and X. Wang (2003). "Chemical and biological regeneration of HDTMA-modified montmorillonite after sorption with phenol." *Environmental Science & Technology* 37(21): 5057–5061.
59. Yang, L., **Z. Zhou**, and L. Xiao (2003). "Study on adsorption of phenol to HDTMA-modified montmorillonite and its mechanism." *Shanghai Environmental Sciences* 22(7): 456–458.
60. Shi, X., F. Wang, L. Jiang, **Z. Zhou**, L. Yang, Z. Kong, G. Gao, and B. Qin (2003). "Effect of temperature on the transformation of exogenous ^{32}P in water column, *Microcystis aeruginosa* and sediments." *Chinese Journal of Applied Ecology* 14(11): 1967–1970.
61. Yang, L., L. Jiang, **Z. Zhou**, Y. Chen, and X. Wang (2002). "The sedimentation capabilities of hexadecyltrimethylammonium-modified montmorillonites." *Chemosphere* 48(4): 461–466.
62. Yang, L., Q. Fu, L. Jiang, **Z. Zhou**, D. Pei, and X. Wang (2002). "The stability of organic matters adsorbed on organoclay." *China Environmental Science* 22(1): 52–55.
63. **Zhou, Z.** and L. Yang (2001). "Screening of phenol degrading yeast and its characteristics." *Journal of Nanjing University* 37(6): 724–729.

BOOK AND BOOK CHAPTERS

1. Montalvo, F. and **Z. Zhou**, "Enhancing water access and health with point-of-use water treatment intervention." 2026, Leeds, England: Emerald Publishing.

2. Goyal, N., I.A. Karimi, and **Z. Zhou**, "Experimental validation of *in silico* flux predictions from a genome-scale model (iMM518) for carbon dioxide utilization by *M. maripaludis*." in *Computer Aided Chemical Engineering*, K.V. Gernaey, J.K. Huusom, and R. Gani, Editors. 2015, Elsevier. p. 2153–2158.
3. Kashinath, S. and **Z. Zhou**, "Utilization of landfill gas as a renewable source of energy in India." in *Sustainability Matters*. 2014. p. 193–229.
4. Goyal, N., H. Widiastuti, I.A. Karimi, and **Z. Zhou**, "Genome-scale metabolic network reconstruction and in silico analysis of Methanococcus maripaludis S2." in *Computer Aided Chemical Engineering*, A. Kraslawski and I. Turunen, Editors. 2013, Elsevier. p. 181–186.
5. **Zhou, Z.** and L. Yang, "Bioremediation technology of polluted environment." in *Environmental Microbiological Techniques*. 2003, Science Press: Beijing.

CONFERENCE PROCEEDINGS, POSTERS, AND PRESENTATIONS

1. Yewle, N., I. Bradford, N.H.V. Pham, S. Tan, C. Troy, M. Crawford, **Z. Zhou**, and K. Cherkauer (2026). "Assessing spatial and temporal dynamics of harmful algal blooms using integrated monitoring approaches in Mississinewa Lake, Indiana." *Sixth Annual Harmful Algal Bloom Virtual Symposium*, Online.
2. Su, H. and **Z. Zhou** (2026). "Real-time nonlinear model predictive control for energy-efficient aeration in activated sludge treatment systems." *Indiana Water Environment Association 26th Annual Conference*, Indianapolis, IN.
3. Rizzardo, A.S., H. Zheng, and **Z. Zhou** (2026). "Development of Electrochemical PFAS Sensors." *Purdue Spring Undergraduate Research Conference*, West Lafayette, IN.
4. Phuong, G.P. and **Z. Zhou** (2026). "Development of Molecularly Imprinted Electrochemical Sensors for PFAS Detection in Environmental Samples." *Purdue Spring Undergraduate Research Conference*, West Lafayette, IN.
5. Kim, Y.J. and **Z. Zhou** (2026). "Characterizing microbial growth as a time-delayed physiological state function through an integrated data-driven modeling framework to address Monod equation limitations." *ASM Microbe*, Washington, DC.
6. Kim, Y.J. and **Z. Zhou** (2026). "A multi-scale modeling framework for predicting microbial transitions using dynamic Bayesian networks and machine learning." *7th Annual CEGSAC Research Symposium*, West Lafayette, IN.
7. Kim, Y.J. and **Z. Zhou** (2026). "A physiology-informed modeling framework for advanced wastewater process control to address the limitations of the Monod equation." *27th Triennial Borchardt Conference*, Ann Arbor, MI.
8. Kim, Y.J. and **Z. Zhou** (2026). "A multi-scale modeling framework for predicting microbial transitions using dynamic Bayesian networks and machine learning." *Association of Environmental Engineering and Science Professors Research and Education Distinguished Lecture Conference*, Notre Dame, IN.
9. Kim, Y. and **Z. Zhou** (2026). "A physiology-informed modeling framework for advanced wastewater process control to address the limitations of the Monod equation." *Indiana Water Environment Association 26th Annual Conference*, Indianapolis, IN.
10. Jiang, Y., A. Walters, and **Z. Zhou** (2026). "Spatial trends and watershed-scale environmental drivers of PFAS bioaccumulation in Indiana fish tissue." *Indiana Water Environment Association 26th Annual Conference*, Indianapolis, IN.
11. Hui, W. and **Z. Zhou** (2026). "Exploring PFAS leaching from spent activated carbon filters using machine learning." *27th Triennial Borchardt Conference*, Ann Arbor, MI.

12. Hu, X., **Z. Zhou**, B. Arnold, and M. Wang (2026). "Phytoremediation of critical materials from acid mine drainage impacted-soils by pokeweed and common dandelion." *Indiana Water Environment Association 26th Annual Conference*, Indianapolis, IN.
13. Hu, X. and **Z. Zhou** (2026). "A GIS-based open database for phytoremediation potential assessment." *Indiana Water Environment Association 26th Annual Conference*, Indianapolis, IN.
14. Doctolero, J.S., J. Saha, T.A. Rice, A.S. Hussain, **Z. Zhou**, H. Simsek, J.Y. Huang, and P.B. Brown (2026). "Application of a revolving algal biofilm in coupled aquaponics enhances Chlorella vulgaris biomass productivity and nutritional quality." *Annual Poster Competition, Department of Forestry and Natural Resources, Purdue University*, West Lafayette, IN.
15. Kim, Y.J. and **Z. Zhou** (2025). "Integrating metabolic and gene expression data with machine learning for microbial growth prediction." *Annual Meeting of USDA When Big is Green Project*, West Lafayette, IN.
16. Kim, Y.J. and **Z. Zhou** (2025). "Integration on metabolic and respiratory indicators to improve microbial growth dynamics." *6th Annual CEGSAC Research Symposium*, West Lafayette, IN.
17. Hui, W., L.S. Lee, Y.J. Choi, and **Z. Zhou** (2025). "Retention and desorption of per- and polyfluoroalkyl substances (PFAS) in spent point-of-use (POU) filtration systems." *Association of Environmental Engineering and Science Professors (AEESP) 2025 Biennial Research and Education Conference*, Durham, NC.
18. Choi, S., A.M. Lopez, and **Z. Zhou** (2025). "Investigating PBCV-1 virus-induced lipid production enhancement and its molecular mechanism for renewable energy." *Fall 2025 Institute of Sustainable Future Research Expo*, West Lafayette, IN.
19. Bradford, I., N. Yewle, N.H.V. Pham, S. Tan, C. Troy, M. Crawford, **Z. Zhou**, and K. Cherkauer (2025). "Estimating water quality in inland lakes using remote sensing and machine learning." *UCOWR/NIWR Annual Water Resources Conference*, Minneapolis, MN.
20. Bradford, I., N. Yewle, N.H.V. Pham, S. Tan, C. Troy, M. Crawford, **Z. Zhou**, and K. Cherkauer (2025). "Estimating biogeochemical state of inland water bodies with remote sensed parameters and machine learning methods." *44th Annual Indiana Water Resources Association (IWRA) Conference*, Nashville, IN.
21. Bradford, I., N. Yewle, N.H.V. Pham, S. Tan, C. Troy, M. Crawford, **Z. Zhou**, and K. Cherkauer (2025). "Assessing harmful algal blooms in Mississinewa Lake: a current progress report with 2025 bloom conditions." *Fall 2025 Institute of Sustainable Future Research Expo*, West Lafayette, IN.
22. Yewle, N., I. Bradford, A. Slotke, N.H.V. Pham, S. Tan, C. Troy, M. Crawford, **Z. Zhou**, and K. Cherkauer (2024). "Enhancing remote sensing techniques for monitoring and mitigating harmful algae blooms in North-Central United States inland waters." *AWRA, UCOWR, NIWR Joint Water Resources Conference*, St. Louis, MO.
23. Yewle, N., I. Bradford, A. Slotke, N.H.V. Pham, S. Tan, C. Troy, M. Crawford, **Z. Zhou**, and K. Cherkauer (2024). "Enhancing remote sensing techniques for monitoring and mitigating harmful algae blooms in North-Central United States inland waters." *43rd Annual Indiana Water Resources Association Symposium*, Plainfield, IN.
24. Su, H. and **Z. Zhou** (2024). "Development of an automated monitoring system for aquaponic wastewater treatment." *Annual Meeting of USDA When Big is Green Project*, West Lafayette, IN.
25. Pham, N.H.V., I. Bradford, C. Troy, K. Cherkauer, M. Crawford, N. Yewle, and **Z. Zhou** (2024). "Characterizing weak thermal stratification of river-driven and dam-influenced U.S. Midwestern reservoirs." *2024 American Geophysical Union Annual Meeting*, Washington, D.C.

26. Pettenati, G., E. Ken-Opurum, and **Z. Zhou** (2024). "Microbial growth in point-of-use water filtration systems." *Purdue Undergraduate Research Conference*, West Lafayette, IN.
27. Montalvo, F., E. Ken-Opurum, G.W. Singer, L.S. Lahari Lingam, and **Z. Zhou** (2024). "Enhancing water access and health in drought-affected regions: A preliminary study on point-of-use water filter intervention." *Association of Environmental Engineering and Science Professors Research and Education Distinguished Lecture Conference*, Urbana, IL.
28. López-Patiño, A.M., A. Cárdenas-Orrego, A.F. Torres, D. Navarrete, P. Champagne, V. Ochoa-Herrera, and **Z. Zhou** (2024). "Cost-effective water treatment and energy production with microalgae." *Association of Environmental Engineering and Science Professors Research and Education Distinguished Lecture Conference*, Urbana, IL.
29. Ken-Opurum, E., G. Pettenati, and **Z. Zhou** (2024). "Effects of different concentrations of phosphorus on horizontal gene transfer." *Association of Environmental Engineering and Science Professors Research and Education Distinguished Lecture Conference*, Urbana, IL.
30. Hui, W., Y. Tan, Z. Chen, and **Z. Zhou** (2024). "Development of ceramic electrochemical filtration for emerging contaminant removal." *Annual Meeting of USDA When Big is Green Project*, West Lafayette, IN.
31. Hui, W., Y. Tan, Z. Chen, and **Z. Zhou** (2024). "Electrochemical filtration for emerging contaminant removal." *Association of Environmental Engineering and Science Professors Research and Education Distinguished Lecture Conference*, Urbana, IL.
32. Britto, A., K. Osen, K. Cherkauer, and **Z. Zhou** (2024). "Remote sensing of water quality." *Purdue Undergraduate Research Conference*, West Lafayette, IN.
33. Bradford, I., N. Yewle, N.H.V. Pham, S. Tan, C. Troy, M. Crawford, **Z. Zhou**, and K. Cherkauer (2024). "Enhancing remote sensing techniques for monitoring and mitigating harmful algae blooms in North-Central United States inland waters." *Fall 2024 Institute of Sustainable Future Research Expo*, West Lafayette, IN.
34. Bradford, I., N. Yewle, N.H.V. Pham, S. Tan, C. Troy, M. Crawford, **Z. Zhou**, and K. Cherkauer (2024). "Assessing harmful algal blooms in Mississinewa Lake: Integrating water quality parameters, remote sensing, and predictive modeling." *2024 American Geophysical Union Annual Meeting*, Washington, D.C.
35. Slotke, A., N.H.V. Pham, S. Tan, C. Troy, M. Crawford, **Z. Zhou**, and K. Cherkauer (2023). "Improving the remote sensing of the biogeochemical state of Midwestern in-land waters." *Fall 2023 Institute of Sustainable Future Research Expo*, West Lafayette, IN.
36. Slotke, A., S. Chen, N.H.V. Pham, S. Tan, C. Troy, M. Crawford, **Z. Zhou**, and K. Cherkauer (2023). "Remote sensing of water quality of Midwestern in-land waters." *42nd Annual Indiana Water Resources Association Symposium*, West Lafayette, IN.
37. Montalvo, F., E. Ken-Opurum, and **Z. Zhou** (2023). "Point-of-use systems for the removal of pathogens and heavy metals in drinking water in South America." *Association of Environmental Engineering and Science Professors Research and Education Distinguished Lecture Conference*, South Bend, IN.
38. Malott, M., J.-Y. Huang, A. Liceaga, H. Simsek, J. Ni, **Z. Zhou**, K. Quagrainie, L. Payne, A. Engleberth, N. Carroll, B. Feng, P. Brown, and N. Wright (2023). "When Blue is Green." *Fall 2023 Institute of Sustainable Future Research Expo*, West Lafayette, IN.
39. Hui, W., R. Li, and **Z. Zhou** (2023). "Effects of pH on metal leaching from activated carbon block filters." *Association of Environmental Engineering and Science Professors Research and Education Distinguished Lecture Conference*, South Bend, IN.
40. Fan, Q. and **Z. Zhou** (2023). "Groundwater defluoridation with electrocoagulation." *Association of Environmental Engineering and Science Professors Research and Education Distinguished Lecture Conference*, South Bend, IN.

41. Chen, S., K. Cherkauer, M. Crawford, **Z. Zhou**, C. Troy, A. Slotke, N.H.V. Pham, and S. Tan (2023). "Remote sensing of Midwestern U.S. water quality." *3rd Annual Harmful Algal Bloom Symposium*, online.
42. Montalvo, F., E. Ken-Opurum, and **Z. Zhou** (2022). "Removal of Legionella in drinking water with point-of-use water filters." *Association of Environmental Engineering and Science Professors Research and Education Conference*, Washington, D.C.
43. Ken-Opurum, E., F. Montalvo, H.-Y. Yu, S. Gupta, C. Graham, and **Z. Zhou** (2022). "Fouling development and microbial growth in point-of-use water filtration systems." *Association of Environmental Engineering and Science Professors Research and Education Conference*, St. Louis, MO.
44. Gupta, S., H.-Y. Yu, C. Graham, and **Z. Zhou** (2022). "Assessment of chemical and biological factors for the removal of emerging contaminants in activated carbon and membrane filtration point-of-use water filters." *Association of Environmental Engineering and Science Professors Research and Education Conference*, St. Louis, MO.
45. Yu, H.-Y., S. Gupta, S. Hong, H. Congleton, B. Jolkovsky, S. Mendelson, and **Z. Zhou** (2021). "Removal of assimilable organic carbon in activated carbon and reverse osmosis water filtration systems." *26th Annual Environmental Engineering and Science Symposium*.
46. Ken-Opurum, E., C. Graham, L. Peng, A.L.S. Gonzalez, H.-y. Yu, S. Gupta, N. Zyaykina, and **Z. Zhou** (2021). "Microbial growth and PFAS removal in point-of-use water filtration systems." *IWA Biofilm Reactors Conference*, Notre Dame, IN.
47. Graham, C., S. Gupta, H.-Y. Yu, and **Z. Zhou** (2021). "Removal of per- and polyfluoroalkyl substances (PFAS) in point-of-use (POU) activated carbon and membrane filtration systems." *26th Annual Environmental Engineering and Science Symposium*.
48. Bi, Y., S. Gupta, H.-Y. Yu, and **Z. Zhou** (2021). "Removal of manganese and uranium in tap water with point-of-use filtration systems." *26th Annual Environmental Engineering and Science Symposium*.
49. Sun, Z., **Z. Zhou**, and E.R. Blatchley III (2020). "Using algal virus *Paramecium bursaria* chlorella virus (PBCV-1) as a human adenovirus surrogate for the validation of UV treatment systems." *International UV Association*, Orlando, FL.
50. Graham, C., S. Gupta, and **Z. Zhou** (2020). "Impacting factors onremoval efficiency of per- and polyfluoroalkyl substances (PFAS) in activated carbon and membrane filtration systems." *Purdue University Fall Undergraduate Research Exposition*, West Lafayette, IN.
51. Bi, Y., H.-Y. Yu, and **Z. Zhou** (2020). "Metal removal in tap water with point-of-use water filtration systems." *Purdue University Fall Undergraduate Research Exposition*, West Lafayette, IN.
52. **Zhou, Z.** (2019). "Drivers and barriers of antibiotic resistance in urban and natural environments." *Association of Environmental Engineering and Science Professors Research and Education Conference*, Tempe, AZ.
53. **Zhou, Z.** (2019). "Smart and resilient storm water management system." *Indiana Department of Transportation Research Program Innovation Fair*, Indianapolis, IN.
54. **Zhou, Z.** (2019). "Evaluation of emerging contaminants to support cost-effective storm water quality management." *Indiana Department of Transportation Research Program Innovation Fair*, Indianapolis, IN.
55. Wang, M. and **Z. Zhou** (2019). "Selective pressure of trace level antibiotics on the development of antibiotic resistance and horizontal gene transfer." *Association of Environmental Engineering and Science Professors Research and Education Conference*, Tempe, AZ.
56. Sun, Z. and **Z. Zhou** (2019). "UV radiation as a water treatment strategy for algal cultivation - Inactivation of algal virus measured by plaque assay and qPCR." *Association of Environmental Engineering and Science Professors Research and Education Conference*, Tempe, AZ.

57. Sun, Z., E.R. Blatchley III, and Z. Zhou (2019). "Application of UV irradiation to inactivate parasites in algal cultivation." *AlgalBBB 2019: The 9th International Conference on Algal Biomass, Biofuels and Bioproducts*, Boulder, CO.
58. Ji, Y., B. McCullouch, and **Z. Zhou** (2019). "Life cycle assessment of environmental impacts of conventional and alternative anti-icing and de-icing chemicals." *Indiana Department of Transportation Research Program Innovation Fair*, Indianapolis, IN.
59. Ji, Y., B. McCullouch, and **Z. Zhou** (2019). "Sustainability of commercially available anti-icing and de-icing chemicals." *Association of Environmental Engineering and Science Professors Research and Education Conference*, Tempe, AZ.
60. **Zhou, Z.** (2018). "Evaluation of biodegradable de-icing agents for sustainable ice and snow control." *Indiana Department of Transportation Research Program Innovation Fair*, Indianapolis, IN.
61. Wang, M. and **Z. Zhou** (2018). "Selective pressure of trace level antibiotics on the development of antibiotic resistance and horizontal gene transfer." *Association of Environmental Engineering and Science Professors Research and Education Distinguished Lecture Conference*, West Lafayette, IN.
62. Sun, Z. and **Z. Zhou** (2018). "Effects of viruses on the development and decay of harmful algal blooms." *39th Indiana Water Resources Association Symposium*, Bloomington, IN.
63. Sun, Z., S. Wu, and **Z. Zhou** (2018). "Nature-inspired virus-assisted lipid extraction for efficient biofuel production with microalgae *Chlorella* sp." *Association of Environmental Engineering and Science Professors Research and Education Distinguished Lecture Conference*, West Lafayette, IN.
64. Li, B., J.T. Li, **Z. Zhou**, R. Huang, and Y.N. Liang (2018). "The possible role of different aggregates in nitrogen removal in single-stage Autotrophic nitrogen removal process." *Association of Environmental Engineering and Science Professors Research and Education Distinguished Lecture Conference*, West Lafayette, IN.
65. Chen, R., M. Wang, and **Z. Zhou** (2018). "Effect of carbon nanotube on horizontal gene transfer in microbes." *Association of Environmental Engineering and Science Professors Research and Education Distinguished Lecture Conference*, West Lafayette, IN.
66. Blatchley III, E.R., J.V. Sinfield, W.T. Horton, L. Lu, Z. Nyssa, C. Mitchell, G. Burniske, **Z. Zhou**, J. Sullivan, D. Schuster, and E. Cronin (2018). "Potential for recovery and reuse of heat from municipal wastewater treatment facilities in urban areas." *International Water Association Specialized International Conferences on Ecotechnologies for Wastewater Treatment*, London, Ontario, Canada.
67. Yi, X., M. Wang, and **Z. Zhou** (2017). "Selective pressure of trace levels of antibiotics on phenotypic antibiotic resistance in urban surface waters and soils." *American Society for Microbiology 117th General Meeting*, New Orleans, LA.
68. Yi, X., M. Wang, Q. Wei, and **Z. Zhou** (2017). "Occurrence and distribution of erythromycin resistance methylase (*erm*) genes in urban surface waters without impact of treated wastewater." *Association of Environmental Engineering and Science Professors Research and Education Conference*, Ann Arbor, MI.
69. Wu, S., Z. Sun, and **Z. Zhou** (2017). "Improvement of lipid extraction in algal biodiesel production with sonication." *Purdue University Undergraduate Research and Poster Symposium*, West Lafayette, IN.
70. Wang, M., M.S. Esfandarani, A. Whelton, and **Z. Zhou** (2017). "Chemical leaching and microbial growth in drinking water pipes in a newly commissioned residential building." *23rd Annual Environmental Engineering & Science Symposium at University of Illinois*, Champaign, IL.
71. Sun, Z., P. Mrutyunjay, and **Z. Zhou** (2017). "Microbial eletrosynthesis of biofuels with *Blautia* strains." *American Society for Microbiology 117th General Meeting*, New Orleans, LA.

72. Sun, T., N.-A. Nguyen, Z. Sun, and **Z. Zhou** (2017). "Acetate production through microbial electrosynthesis as an intermediate for biofuels production." *Purdue University Undergraduate Research and Poster Symposium*, West Lafayette, IN.
73. Stryker, B.M., S. Park, and **Z. Zhou** (2017). "Removal of lead with electrochemical multi-walled carbon nanotube filters." *23rd Annual Environmental Engineering & Science Symposium at University of Illinois*, Champaign, IL.
74. Park, S. and **Z. Zhou** (2017). "Performance and mechanisms of electrochemical carbon nanotube filtration to remove antibiotic resistant bacteria and antibiotic resistance genes." *Association of Environmental Engineering and Science Professors Research and Education Conference*, Ann Arbor, MI.
75. Park, S., X. Jin, and **Z. Zhou** (2017). "Removal of bacteria and DNA from wastewater using electrochemical multi-walled carbon nanotube filters." *23rd Annual Environmental Engineering & Science Symposium at University of Illinois*, Champaign, IL.
76. Padhiary, M., K. Walczak, N. Goyal, Z. Sun, and **Z. Zhou** (2017). "Efficient biofuel production through microbial electrosynthesis." *23rd Annual Environmental Engineering & Science Symposium at University of Illinois*, Champaign, IL.
77. Padhiary, M., Z. Sun, and **Z. Zhou** (2017). "Microbial electrosynthesis of biofuels using mixture culture in activated sludge." *Association of Environmental Engineering and Science Professors Research and Education Conference*, Ann Arbor, MI.
78. Nguyen, N.-A., T. Sun, Z. Sun, and **Z. Zhou** (2017). "Acetate production through microbial electrosynthesis as an intermediate for biofuel production." *23rd Annual Environmental Engineering & Science Symposium at University of Illinois*, Champaign, IL.
79. He, H. and **Z. Zhou** (2017). "Removal of recalcitrant compounds with a flow through electro-Fenton carbon nanotube filters." *23rd Annual Environmental Engineering & Science Symposium at University of Illinois*, Champaign, IL.
80. He, H. and **Z. Zhou** (2017). "Efficient wastewater treatment in a carbon nanotube-based electro-Fenton system." *Association of Environmental Engineering and Science Professors Research and Education Conference*, Ann Arbor, MI.
81. Chen, R., M. Wang, Z. Sun, P. Sol, and **Z. Zhou** (2017). "Electrochemical treatment to remove chemical contaminants in landfill leachate." *Association of Environmental Engineering and Science Professors Research and Education Conference*, Ann Arbor, MI.
82. Wang, M., M. Scott, M. Jacobs, and **Z. Zhou** (2016). "Microbial source tracking of fecal bacteria in surface waters in Gunpower Creek watershed in Kentucky." *American Society for Microbiology 116th General Meeting*, Boston, MA.
83. Wang, M., M.S. Esfandarani, A. Whelton, and **Z. Zhou** (2016). "Effects of water temperature and TOC leached from PEX pipes on the occurrence of bacteria in household water distribution systems." *American Society for Microbiology 116th General Meeting*, Boston, MA.
84. Nguyen, N.-A., Z. Sun, and **Z. Zhou** (2016). "Efficient biofuel production through microbial electrosynthesis." *Purdue University Undergraduate Research and Poster Symposium*, West Lafayette, IN.
85. Yi, X., Q. Wei, and **Z. Zhou** (2015). "Occurrence of erythromycin resistance methylase (*erm*) genes driven by environmental antibiotics in urban soils." *Critical Zone Science, Sustainability and Services in a Changing World*, West Lafayette, IN.
86. Yi, X., C. Lim, J.L.E. Ong, M. Wang, and **Z. Zhou** (2015). "Correlation between trace levels of antibiotics and phenotypic antibiotic resistance in urban environmental samples." *Association of Environmental Engineering and Science Professors Research and Education Conference*, New Haven, CT.

87. Wang, T. and **Z. Zhou** (2015). "Effects of selective pressure of erythromycin on the development of antibiotic resistance in *E. coli*." *American Society for Microbiology 115th General Meeting*, New Orleans, LA.
88. Padhiary, M., K. Walczak, N. Goyal, Z. Sun, and **Z. Zhou** (2015). "Bioeletrocatalyzed reduction of CO_2 to higher alcohols and acids using mixed cultures of acetogens and acetate-utilizing *Clostridium* strains." *Association of Environmental Engineering and Science Professors Research and Education Conference*, New Haven, CT.
89. Liu, Y., J. Xie, **Z. Zhou**, and C.N. Ong (2015). "Electrochemical filter technology in water treatment." *8th International Conference on Materials for Advanced Technologies*, Singapore.
90. Liu, Y., Q. Xia, Y. Kong, J. Xie, C.N. Ong, C. Vecitis, S.A. Jame, T. Wu, and **Z. Zhou** (2015). "Improvement of electrochemical wastewater treatment with carbon nanotube filters coupled with *in situ* generated H_2O_2." *Association of Environmental Engineering and Science Professors Research and Education Conference*, New Haven, CT.
91. Goyal, N., I.A. Karimi, and **Z. Zhou** (2015). "Influence of nitrogen limitation on methanogenesis and growth in *M. maripaludis*." *13th International Conference on Carbon Dioxide Utilization*, Singapore.
92. E. Kallmyer, N., Z. Sun, K. Harris, Z. Zhou, and E.R. Blatchley III (2015). "Recovery of nutrients from animal and human wastes." *Purdue University Summer Fellowship Research Fellowship Symposium*, West Lafayette, IN.
93. Delgadillo Ordoñez, N., L. Nies, R. Turco, and Z. Zhou (2015). "Effects of Lithium on anaerobic microbial communities of sludge, an exploratory study." *Undergraduate Research Experience Purdue-Colombia Research Symposium*, West Lafayette.
94. Goyal, N., I.A. Karimi, and **Z. Zhou** (2014). "Genome based metabolic flux analysis (MFA) of *Methanococcus maripaludis* for improved methane productivity." *American Institute of Chemical Engineers Annual Meeting*, Atlanta, GA.
95. Zhang, Y., X. Li, D. Snow, D. Parker, and **Z. Zhou** (2013). "Intracellular and extracellular antimicrobial resistance genes in livestock manure management structures." *American Society for Microbiology 113th General Meeting*, Denver, CO.
96. Yi, X., W. Cheng, Q. Wei, and **Z. Zhou** (2013). "Correlation of metal concentrations and *erm* genes in urban soils." *American Society for Microbiology 113th General Meeting*, Denver, CO.
97. Yi, X., W. Cheng, Q. Wei, and **Z. Zhou** (2013). "Evaluation of antimicrobial resistance in urban environments in Singapore." *Microbial Ecology and Water Engineering Conference*, Ann Arbor, MI.
98. Wu, C., S. Nagarajan, H. Jing, and **Z. Zhou** (2013). "Correlations of methanogenic activities and environmental parameters in tropical mangrove sediments." *American Society for Microbiology 113th General Meeting*, Denver, CO.
99. Wei, Q., X. Yi, W. Cheng, and **Z. Zhou** (2013). "Occurrence and diversity of erythromycin resistance genes (*erm*) in urban soils." *American Society for Microbiology 113th General Meeting*, Denver, CO.
100. Wang, T., T.M. Lim, X. Yi, and **Z. Zhou** (2013). "Microbial regrowth in soils under selective pressure of various levels of erythromycin." *American Society for Microbiology 113th General Meeting*, Denver, CO.
101. Padhiary, M., S. Nagarajan, and **Z. Zhou** (2013). "Evaluation of efficiencies of microbial electrochemical systems (MXCs)." *American Society for Microbiology 113th General Meeting*, Denver, CO.
102. Nagarajan, S., C. Wu, H. Jing, S.K. Chou, and **Z. Zhou** (2013). "Diversity and abundance of ammonia-oxidizing Archaea in Singapore mangrove sediments." *American Society for Microbiology 113th General Meeting*, Denver, CO.

103. Liu, Y. and **Z. Zhou** (2013). "Development of a highly efficient photocatalytic fuel cell for simultaneous wastewater treatment and energy recovery of emerging contaminants." *International Water Association Water Reuse Conference*, Windhoek, Namibia.
104. Jing, H., X. Kong, and **Z. Zhou** (2013). "Diversity and antibiotic resistance of *Streptomyces* in tropical soils." *American Society for Microbiology 113th General Meeting*, Denver, CO.
105. Goyal, N., H. Widiastuti, I.A. Karimi, and **Z. Zhou** (2013). "Genome-scale metabolic network reconstruction and in silico analysis of Methanococcus maripaludis." *23rd European Symposium on Computer Aided Process Engineering*, Lappeenranta, Finland.
106. Chua, S.L., S. Nagarajan, S.K. Chou, M. Padhiary, and **Z. Zhou** (2013). "Evaluation of hydrogen production rates and uptake rates for microbial electrosynthesis of methane." *American Society for Microbiology 113th General Meeting*, Denver, CO.
107. Cheng, W., X. Yi, Q. Wei, and **Z. Zhou** (2013). "Correlation of antibiotic resistance and heavy metals in urban environmental soil samples." *American Society for Microbiology 113th General Meeting*, Denver, CO.
108. Yi, X., C. Lin, J.L.E. Ong, and **Z. Zhou** (2012). "Comparison of MLS_B antibiotic resistance among Gram-positive and Gram-negative bacteria in urban environments." *American Society for Microbiology 112th General Meeting*, San Francisco, CA.
109. Yi, X., C. Lin, J.L.E. Ong, and **Z. Zhou** (2012). "Environmental risk assessment of antimicrobial resistance in an urban environment." *21st Korea Advanced Institute of Science & Technology-Kyoto University-Nanyang Technological University-National University of Singapore Symposium*, Kuala Lumpur, Malaysia.
110. Nagarajan, S., S.K. Chou, C. Wu, S. Cao, and **Z. Zhou** (2012). "Biomethane production potentials by methanogens for microbial electrosynthesis." *American Society for Microbiology 112th General Meeting*, San Francisco, CA.
111. Nagarajan, S., S.K. Chou, S. Cao, C. Wu, and **Z. Zhou** (2012). "An updated comprehensive techno-economic analysis of algae biodiesel." *5th International Conference on Industrial Bioprocesses*, Taipei, Taiwan.
112. Lin, C., X. Yi, X. Kong, J.L.E. Ong, X.Y.C. Chew, T. Wang, and **Z. Zhou** (2012). "Effects of human population densities on antimicrobial resistance in an urban environment." *Singapore International Water Weeks*, Singapore.
113. Lin, C., X. Kong, X. Yi, J.L.E. Ong, X.Y.C. Chew, T. Wang, and **Z. Zhou** (2012). "Correlation of anthropogenic pressure and antimicrobial resistance in urban environments." *American Society for Microbiology 112th General Meeting*, San Francisco, CA.
114. Kong, X., C. Lin, X. Yi, X.Y.C. Chew, and **Z. Zhou** (2012). "Quantification of minimum inhibition concentration and resistance levels of antimicrobials among *Streptomyces* in environmental samples." *American Society for Microbiology 112th General Meeting*, San Francisco, CA.
115. Auw, J.Q.M., X. Yi, and **Z. Zhou** (2012). "Comparison of double-labeled and single-labeled oligonucleotide probes for *in situ* quantification of *Streptomyces*." *American Society for Microbiology 112th General Meeting*, San Francisco, CA.
116. Amir, M.S.B., C. Wu, S. Nagarajan, S. Cao, X. Yi, and **Z. Zhou** (2012). "Development of novel 16S rRNA oligonucleotide probes to quantify methanogens." *American Society for Microbiology 112th General Meeting*, San Francisco, CA.
117. Amir, M.S.B., J.Q.M. Auw, S. Nagarajan, X. Yi, C. Wu, S. Cao, and **Z. Zhou** (2012). "Development of fluorescence *in situ* hybridization probes for the quantification of Archaea." *Singapore International Water Weeks*, Singapore.
118. **Zhou, Z.** and X.W. Wong (2011). "Low impact development techniques for sustainable environmental and water resources management." *4th American Society of Civil Engineering-*

Environmental & Water Resources Institute International Perspective on Water Resources & the Environment, Singapore.

119. Yi, X., A. Christina, and **Z. Zhou** (2011). "Evaluation and design of fluorescence *in situ* hybridization probes for the quantification of *Streptomyces*." *Singapore International Water Weeks*, Singapore.
120. Ong, J.L.E., X. Yi, X.Y.C. Chew, T. Wang, and **Z. Zhou** (2011). "Evaluation of antimicrobial resistance at environmental samples in Singapore." *Singapore International Water Weeks*, Singapore.
121. Christina, A., **Z. Zhou**, X. Yi, and T. Wang (2011). "Development of a 16S rRNA-targeted probe for *Streptomyces*." *American Society for Microbiology 111th General Meeting*, New Orleans, LA.
122. Chew, X.Y.C., X. Yi, J.L.E. Ong, T. Wang, and **Z. Zhou** (2011). "Antimicrobial resistance among *Streptomyces* in natural soil samples." *American Society for Microbiology 111th General Meeting*, New Orleans, LA.
123. **Zhou, Z.**, A. Salveson, K. Bourgeous, and N. Fontaine (2010). "How different is different? The traps and pitfalls of applying statistics on system performance evaluation." *83rd Annual Water Environment Federation Technical Exhibition and Conference*, New Orleans, LA.
124. **Zhou, Z.**, L. Raskin, and J. Zilles (2010). "Optimization of cluster analysis for FISH image analysis." *American Society for Microbiology 110th General Meeting*, San Diego, CA.
125. Rauch-Williams, T., A. Salveson, B. Narayanan, **Z. Zhou**, J. Drewes, E. Dickenson, C. Higgins, K. Hyland, S. Snyder, B. Vanderford, D. Gerrity, M. Benotti, E. Snyder, and D. Drury (2010). "Trace organic compounds removal during wastewater treatment - selection of a suite of indicator TOrC." *83rd Annual Water Environment Federation Technical Exhibition and Conference*, New Orleans, LA.
126. **Zhou, Z.**, A. Salveson, B. Finney, R. Gearheart, and M. Burke (2009). "Cost capacity analysis and WAWTTAR model for small-scale water reuse." *24th Annual WateReuse Symposium*, Seattle, WA.
127. **Zhou, Z.**, A. Salveson, B. Finney, R. Gearheart, and M. Burke (2009). "Cost-effective technologies for small-scale water reuse." *California Water Environment Association Annual Conference*, Palm Springs, CA.
128. **Zhou, Z.**, A. Salveson, B. Finney, R. Gearheart, and M. Burke (2009). "Cost-effective technologies for small-scale water reclamation plants." *82nd Annual Water Environment Federation Technical Exhibition and Conference*, Orlando, FL.
129. **Zhou, Z.**, A. Salveson, B. Finney, and M. Burke (2009). "Cost-effective technologies for small-scale water reclamation plants (WRF 06-008)." *13th Annual Water Reuse & Desalination Research Conference*, Huntington Beach, CA.
130. **Zhou, Z.**, A. Salveson, J. Brown, J. Lopez, D. Sullivan, H. Breitenkam, R. Cisterna, E. Vadiveloo, R. Harris, S. Snyder, E. Snyder, and J. Drewes (2009). "Aquatic toxicology and removal of microconstituents through membrane processes." *American Water Works Association 10th Biennial Membrane Technology Conference and Exposition*, Memphis, TN.
131. **Zhou, Z.**, A. Salveson, J. Brown, J. Lopez, R. Cisterna, E. Vadiveloo, and H. Breitenkam (2009). "Advanced membrane treatment of wastewater and resulting aquatic impact of microconstituents in receiving waters." *California Water Environment Association Annual Conference*, Palm Springs, CA.
132. **Zhou, Z.**, A. Salveson, J. Brown, J. Lopez, R. Cisterna, E. Vadiveloo, and H. Breitenkam (2009). "Treatment of endocrine disruptors and pharmaceuticals through membrane processes." *American Membrane Technology Association 2009 Conference & Exposition*, Austin, TX.

133. **Zhou, Z.**, A. Salveson, J. Brown, J. Lopez, R. Cisterna, E. Vadiveloo, and H. Breitenkam (2009). "Evaluation of endocrine disrupting potentials in membrane effluents using aquatic toxicity tests and fish bioassays." *American Water Works Association Research Symposium*, Austin, TX.
134. **Zhou, Z.**, A. Salveson, J. Brown, G. Juby, and S. Li (2009). "Pathogen and microconstituent removal using a non-biological treatment process." *WateReuse California Annual Conference*, San Francisco, CA.
135. Vadiveloo, E., R. Cisterna, R. Harris, H. Breitenkam, T. Greiner, P. Pitt, P. Vinci, and **Z. Zhou** (2009). "Identifying the feasibility of canal recharge for indirect potable reuse: the Plantation experience." *Florida Water Resources Conference*, Palm Beach County, FL.
136. Vadiveloo, E., R. Cisterna, H. Breitenkam, J. Lopez, R. Harris, T. Greiner, P. Pitt, K. Alexander, R. Latimer, P. Vinci, **Z. Zhou**, and A. Salveson (2009). "Identifying the feasibility of canal recharge for indirect potable reuse: the Plantation experience." *82nd Annual Water Environment Federation Technical Exhibition and Conference*, Orlando, FL.
137. Alexander, K., R. Cisterna, E. Vadiveloo, A. Salveson, and **Z. Zhou** (2009). "Quantifying emerging contaminant removal with advanced water treatment in Arizona and Florida." *13th Annual Water Reuse & Desalination Research Conference*, Huntington Beach, CA.
138. **Zhou, Z.**, A. Salveson, B. Finney, R. Gearheart, and M. Burke (2008). "Low-cost treatment technologies for small-scale water reclamation plants (WateReuse Foundation 06-008)." *23rd Annual WateReuse Symposium*, Dallas, TX.
139. **Zhou, Z.**, A. Salveson, J. Brown, J. Lopez, D. Sullivan, H. Breitenkam, R. Cisterna, V. Enrique, R. Harris, S. Snyder, E. Snyder, and J. Drewes (2008). "Removal of microconstituents in an advanced water treatment facility and evaluation of potential water quality impact of discharged effluent to surface canals and groundwater." *81st Annual Water Environment Federation Technical Exhibition and Conference*, Chicago, IL.
140. **Zhou, Z.**, A. Salveson, J. Brown, J. Lopez, R. Cisterna, E. Vadiveloo, and H. Breitenkam (2008). "Water quality through advanced wastewater treatment (AWT) facilities and recharge modeling (WaterReuse Research Foundation 06-019)." *23rd Annual WateReuse Symposium*, Dallas, TX.
141. **Zhou, Z.**, A. Salveson, J. Brown, and J. Lopez (2008). "Water quality through advanced wastewater treatment (AWT) facilities and recharge modeling (WateReuse Research Foundation 06-019)." *California Section Annual Conference*, Newport Beach, CA.
142. Poust, S., A. Salveson, **Z. Zhou**, J. Lopez, D. Sullivan, H. Breitenkam, R. Cisterna, E. Vadiveloo, R. Harris, J. Brown, S. Jain, M. Loinaz, and H. Joseph (2008). "Trace organics contaminant monitoring: removal, fate, and transport." *Water Quality Technology Conference and Exposition*, Cincinnati, OH.
143. Poust, S., A. Salveson, **Z. Zhou**, J. Lopez, D. Sullivan, H. Breitenkam, R. Cisterna, E. Vadiveloo, R. Harris, J. Brown, and S. Jain (2008). "Trace organics and advanced wastewater treatment plants: removal, transport, and toxicology." *Florida Water Resources Conference*, Tampa, FL.
144. **Zhou, Z.**, M. Robert, L. Raskin, and J. Zilles (2007). "Cumulative effects of land application of manure on levels of antimicrobials and antimicrobial resistant bacteria in soils." *American Society for Microbiology 107th General Meeting*, Toronto, Ontario, Canada.
145. Greeley, T., **Z. Zhou**, and J. Zilles (2007). "Comparing abundance of *Candidatus* Accumulibacter phosphatis and performance in a full-scale wastewater treatment plant's transition to enhanced biological phosphorus removal." *American Society for Microbiology 107th General Meeting*, Toronto, Ontario, Canada.

146. **Zhou, Z.**, M. Robert, L. Raskin, and J. Zilles (2006). "Quantification of MLS_B antimicrobial resistance in soil amended with swine wastes." *American Society for Microbiology 106th General Meeting*, Orlando, FL.
147. **Zhou, Z.**, M.N. Pons, L. Raskin, and J. Zilles (2005). "Automated image analysis for quantitative fluorescence *in situ* hybridization in environmental samples." *American Society for Microbiology 105th General Meeting*, Atlanta, GA.
148. **Zhou, Z.**, A. Jindal, M. Robert, L. Raskin, and J. Zilles (2005). "MLS_B resistance levels vary greatly for different populations in swine waste samples." *International Union of Microbiological Societies Meeting*, San Francisco, CA.
149. **Zhou, Z.**, A. Jindal, M. Wagoner, L. Raskin, and J. Zilles (2004). "FISH analysis of MLS_B antimicrobial resistance in swine waste." *American Society for Microbiology 104th General Meeting*, New Orleans, LA.
150. Yang, L., Y. Gu, and Z. Zhou (2001). "Research on biological regeneration of organoclay." *5th National Environmental Microbiological Symposium of Chinese Society of Microbiology*, Nanjing, Jiangsu, China.
151. Yang, L., Y. Gu, and **Z. Zhou** (2001). "Investigation of high efficiency benzene degrading microbe." *5th National Environmental Microbiological Symposium of Chinese Society of Microbiology*, Nanjing, Jiangsu, China.
152. **Zhou, Z.** and M. Zhang (1999). "Use of protozoan (*Tetrahymena pyriformis*) bioassay to evaluate the toxicity and mutation of pesticides." *Biennial Conference of Nanjing Society of Microbiology*, Nanjing, Jiangsu, China.

TECHNICAL REPORTS

1. Hoskins, T., C. Foley, J. Hoverman, A. Kohli, L.S. Lee, D.d.A. Miranda, G. Peaslee, M. Sepúlveda, M. Venier, C. Xia, S. Zack, **Z. Zhou**, and L. Dahmen (2025). "Indiana statewide PFAS assessment."
2. Zhou, Z. (2022). "Emerging contaminant removal and microbial growth in membrane filtration and activated carbon point-of-use systems." Lisle, IL.
3. Ji, Y., B. McCullouch, and **Z. Zhou** (2021). "Evaluation of our current and other available anti-Icing/de-Icing products under controlled environmental conditions to test effectiveness."
4. Salveson, A., **Z. Zhou**, B. Finney, M. Burke, and J.C. Ly (2010). "Low-cost technologies for small-scale water reclamation plants." Alexandria, VA, USA.
5. Salveson, A., J. Brown, and **Z. Zhou** (2010). "Monitoring microconstituents in an advanced wastewater treatment (AWT) facility and modeling discharge of reclaimed water to surface canals for indirect potable use." Alexandria, VA, USA.

INVITED PRESENTATIONS

04/2026	The AI-driven bio-factory: leveraging biodesign and machine learning for high-efficiency energy and wastewater systems	2026 ASCE Indiana Section Annual Meeting	Indianapolis, IN
04/2026	AI-Driven machine learning frameworks for optimizing biomimetic algal biofuel production	2026 Academy Convocation and Celebration of Excellence Luncheon	Washington, DC
01/2026	Tiny virus, big data: Integrating biomimetic agents and AI for sustainable algal biofuels	University of Michigan	Ann Arbor, MI

07/2025	Retention of PFAS on spent filters	Water Quality Research Foundation Summer School	Online
04/2025	Development of next-generation machine learning models and bioreactors for wastewater treatment and nutrient recycling in aquaponics	USDA BiG project seminar series	West Lafayette, IN
02/2025	Development of antibiotic resistance in point-of-use water filtration systems	Purdue Antimicrobial Resistance Conference	West Lafayette, IN
02/2025	Membrane and activated carbon point-of-use water filtration systems: emerging contaminant removal, microbial growth, and disposal	University of Missouri-Columbia	Columbia, MO
10/2024	Environmental biotechnology – Microbial solutions to environmental challenges	Purdue University Interdisciplinary Life Science Program	West Lafayette, IN
09/2024	Microbial solutions to environmental challenges	Purdue-Notre Dame Great Lakes Science Workshop	West Lafayette, IN
04/2024	PFAS removal and microbial growth in membrane filtration and activated carbon POU water filtration systems	Institute for a Sustainable Future, Purdue University	West Lafayette, IN
11/2023	Antibiotic resistance emergence, persistence, and treatment	King Abdullah University of Science and Technology	Online
06/2023	Environmental biotechnology research at Purdue	Purdue Great Lakes Agencies Northwest Indiana Meeting	Portage, IN
04/2023	PFAS treatability by POU AC and RO	2023 Water Quality Association (WQA) Convention & Exposition	Las Vegas, NV
04/2023	Retention of PFAS on spent treatment media	WQA PFAS Symposium	Las Vegas, NV
03/2023	Emerging contaminant removal and microbial growth in membrane filtration and activated carbon POU devices	Association of Environmental Engineering and Science Professors (AEESP) Research and Education Distinguished Lecture Conference	South Bend, IN
10/2022	Emerging contaminant removal and microbial growth in membrane filtration and activated carbon POU devices	WQRF - In the Know Webinar Series	Online
04/2022	Treatment and reuse of fertigation water	AeroFarms	Online
07/2021	Emerging contaminant removal and microbial growth in membrane filtration and activated carbon POU systems	2021 WQA Convention & Exposition	Las Vegas, NV

11/2019	Removal of emerging pollutants	International Scientific Congress on multiple barrier system for safe and healthy water preservation, Universidad Nacional de San Antonio Abad del Cusco (UNSAAC)	Cusco, Peru
11/2019	Nutrient control with wastewater treatment techniques	International Scientific Congress on multiple barrier system for safe and healthy water preservation, UNSAAC	Cusco, Peru
11/2019	Electrochemical filtration of antibiotics and antibiotic resistance genes	International Scientific Congress on multiple barrier system for safe and healthy water preservation, UNSAAC	Cusco, Peru
11/2019	Eutrophication and control of microbial growth	International Scientific Congress on multiple barrier system for safe and healthy water preservation, UNSAAC	Cusco, Peru
11/2019	Membrane filtration, including electrochemical carbon nanotubes and graphene filters	International Scientific Congress on multiple barrier system for safe and healthy water preservation, UNSAAC	Cusco, Peru
11/2019	Elimination of pathogenic protozoa	International Scientific Congress on multiple barrier system for safe and healthy water preservation, UNSAAC	Cusco, Peru
11/2019	Point-of-use water filtration systems	International Scientific Congress on multiple barrier system for safe and healthy water preservation, UNSAAC	Cusco, Peru
11/2019	Techniques to control eutrophication	International Scientific Congress on multiple barrier system for safe and healthy water preservation, UNSAAC	Cusco, Peru
11/2019	Nanotechnology in the treatment of drinking water	International Scientific Congress on multiple barrier system for safe and healthy water preservation, UNSAAC	Cusco, Peru
11/2018	Antibiotic resistance in urban and natural environments	University of Notre Dame	South Bend, IN
10/2018	Water safety	Purdue Chapter of Engineers Without Borders	West Lafayette, IN
11/2017	Water	Guest lecturer in ENGR 103 (Global Engineering Practice & Design), Purdue University	West Lafayette, IN
09/2017	Electrochemical carbon nanotube filters for water and wastewater treatment	The 20th Annual Indiana Pollution Prevention Conference and Trade Show	Indianapolis, IN
11/2016	Water	Guest lecturer in Global Engineering Practice & Design, Purdue University	West Lafayette, IN
10/2016	Antibiotic resistance in urban and natural environments	Department of Biological Sciences, Purdue University,	Calumet, IN
06/2016	Antibiotic resistance in urban and natural environments	International Symposium of One Health: the Role of Microbes	Boston, MA
03/2016	Antibiotic resistance	Environmental Science Club, Purdue University	West Lafayette, IN

09/2014	Antimicrobials and antimicrobial resistance in natural and urban environments	Purdue Water Community Brown Bag Lunch Seminar Series	West Lafayette, IN
08/2013	Renewable methane production from carbon dioxide and water in a microbial electrosynthesis cell	Technical session "Sustainable Energy from Biomass and Wastewater" in the 15th Asian Chemical Congress	Singapore
06/2012	Electrode-driven anaerobic respiration for improved biofuel production	City University of Hong Kong–NUS Joint Seminar	Singapore
04/2012	Development of molecular biology techniques for the risk assessment of antibiotic resistance in environmental samples	Low-Carbon Forum of Urban and Regional Development, Peking University,	Shenzhen, China
02/2012	Evaluation of antimicrobial resistance at environmental samples	NUS–Peking University Scientific Workshop	Singapore
02/2012	Development of molecular microbiology tools for water quality monitoring	Singapore Ministry of Home Affairs–NUS Focus Group Meeting	Singapore
05/2011	Microbial conversion of CO_2 to biofuel without biomass processing	NUS Industry Liaison Office–Siemens Joint Seminar	Singapore
11/2011	Microbial conversion of CO_2 to biofuel	Singapore Economic Development Board–NUS Meeting on CO_2 Conversion and Utilization Program,	Singapore
06/2010	Environmental sustainability: a microbiologist's perspective	University of Michigan–NUS Joint Seminar	Singapore
06/2010	Environmental risk assessment of macrolide-lincosamide-streptogramin B antimicrobial resistance	Michigan State University–NUS–Singapore Public Utilities Board Joint Seminar	Singapore
03/2010	Advanced membrane treatment of wastewater and resulting aquatic impact of microconstituents in receiving waters	Singapore Public Utilities Board	Singapore

VISITING SCHOLARS HOSTED

2022	Alam Zeb Khan	Degradation of pulp and paper wastewater with fungal strains	Quaid-I-Azam University
2018	Dr. Lei Chen	Removal of pharmaceuticals and personal care products (PPCPs) in the electrochemical carbon nanomaterial filter	Nanjing Forestry University, China
2017–2019	Dr. Bolin Li	Development of Energy-efficient Wastewater Treatment Technologies	Wuhan University of Technology, China
2015–2016	Dr. Cheng Liu	Development of Nanomaterials for Wastewater Treatment	Hohai University, China
2014-2015	Dr. Shaohua Lin	Development of Nanomaterials for Wastewater Treatment	Nanjing Forestry University, China

RESEARCH PERSONNEL MENTORED

Previous lab members working as faculty in academia

1. Hongmei Jing, Professor, Chinese Academy of Science, China
2. Yanbiao Liu, Professor, Dalian University of Technology, China
3. Xinzhu Yi, Associate Professor, South China Normal University, China
4. Zhe Sun, Assistant Professor, Chinese Academy of Sciences, China
5. Nishu Goyal, Associate Professor, University of Petroleum and Energy Studies, India
6. Mrutyunjay Padhiary, Assistant Professor, Assam University, India
7. Thai Hoang Le, Lecturer, Ho Chi Minh City International University, Vietnam
8. Sanjay Nagarajan, Lecturer, University of Bath, UK
9. Sol Park, Teaching Faculty I, Florida A&M University-Florida State University, U.S.
10. Francisco J Montalvo, Lecturer, Purdue University, U.S.
11. Huanqi He, Assistant Professor, Benedict College, U.S.

Postdocs

2013–2014	Dr. Laurence Glass-Haller	Rapid and accurate quantification of antibiotic resistant bacteria and quantitative risk assessment for water security	NUS
2013–2014	Dr. Thai Hoang Le	Rapid and accurate quantification of antibiotic resistant bacteria and quantitative risk assessment for water security	NUS
2013–2014	Dr. Yanbiao Liu	Development of electrochemical carbon nanotube filters to remove off-flavor compounds	NUS
2012–2013	Dr. Hongmei Jing	Photosynthesis through electrode-driven anaerobic Respiration	NUS
2011	Dr. Yiling Koh	Photosynthesis through electrode-driven anaerobic Respiration	NUS

Research Engineers

2014	Tianren Wang	Rapid and accurate quantification of antibiotic resistant bacteria and quantitative risk assessment for water security	NUS
2013–2014	Vaishnavi Sivachidambaram	Rapid and accurate quantification of antibiotic resistant bacteria and quantitative risk assessment for water security	NUS
2011–2013	Sanjay Nagarajan	Photoelectrochemical water splitting for the production of value-added chemicals	NUS

Ph.D. Students (15)

2024–present	Xiaobai Hu	PFAS removal	Purdue
2024–present	Yuxing (James) Jiang	Bioaccumulation and biosorption of PFAS and their precursors	Purdue
2024–present	Haozhe Zheng	Development of electrochemical PFAS sensors	Purdue
2024–present	Young Jun Kim	Optimization of pilot-scale bioreactors through machine learning	Purdue
2023–present	Hongji Su	Wastewater treatment driven by artificial intelligence	Purdue
2023–present	Wanyue Hui	Emerging contaminant removal with electrochemical filters	Purdue
2022–2026	Amanda Michelle Lopez	Cost-effective algal biofuel production with biomimicry techniques	Purdue
2021–2024	Francisco J Montalvo	Enhancing water access and health in drought-affected regions: A study on POU water treatment intervention	Purdue

2020–2023	Sharon Hughes (co-chaired)	Techno-economic analysis of biofuel	Purdue
2016–2024	Ejike Akobundu Ken-Opurum	Antibiotic resistance in POU water filtration systems	Purdue
2014–2019	Zhe Sun	Application of photochemical and biological approaches for cost-effective algal biofuel production	Purdue
2014–2019	Mian Wang	Development and removal of antibiotic resistance genes	Purdue
2011–2016	Chen Wu (co-chaired)	Molecular microbiology for improved biofuel production	NUS
2011–2016	Nishu Goyal (co-chaired)	Biochemical Conversion of Carbon Dioxide	NUS
2010–2015	Xinzhu Yi	Evaluation of antibiotic resistance at urban environments	NUS

Ph.D. Students (incomplete)

2014–2016	Sadia Jame	Electrochemical removal of chemical and biological contaminants with nanomaterials	Purdue
2012–2017	Mrutyunjay Padhiary	Electrosynthesis of biofuels from carbon dioxide	NUS

Master's Students (thesis)

2026–present	Hongyu Wei	Smart wastewater treatment	Purdue
2023–2024	Nathaniel B. Bone	Mathematical modeling of algae-virus infection dynamics for cost-effective biofuel production	Purdue
2021–2023	Wanyue Hui	Manganese removal by activated carbon filters	Purdue
2021–2023	Rui Li	Arsenite removal by reverse osmosis membranes	Purdue
2021–2023	Qianyu (Jonathan) Fan	Electrochemical defluoridation	Purdue
2019–2021	Hsin-Yin Yu	Emerging contaminant removal in POU devices	Purdue
2019–2021	Shreya Gupta	Emerging contaminant removal in POU devices	Purdue
2016–2018	Ran Chen	Antibiotic resistance in environmental samples	Purdue
2015–2017	Sol Park	DNA removal in carbon nano-tube filters	Purdue
2013–2014	Qing Xia	Phenol removal with electrochemical carbon nanotube filters coupled with *in situ* generated H_2O_2	NUS
2013–2014	Xiao Jin	Research on electrochemical carbon nanotube filters for bacterial and DNA removal	NUS
2012–2014	Tianren Wang	Evaluation of microbial regrowth after treatment of disinfectants or antimicrobials	NUS
2011–2013	Subhashini Kashinath	Utilization of landfill gases as a renewable source of energy in India	NUS

Master's Students (non-thesis)

2024–2025	Haozhe Zheng	Purdue
2021–2023	Mohammad Hassan Chaudhry (co-chaired)	Purdue
2018–2019	Xiaoyi Peng	Purdue
2017–2019	Yi Ji	Purdue
2017–2019	Sacheev Mandhle	Purdue
2015–2017	Huanqi He	Purdue

Graduate Independent Study Module Students

2023	Mohd Bilal Shadab	Water quality	Purdue
2023	Vatsal Virbhadra Parekh	Data science in biological wastewater treatment	Purdue
2022–2023	Mohammad Hassan Chaudhry	Measurement of Arsenite and Arsenate in Drinking Water	Purdue
2022	Hao Wu	Electrochemical Defluorination	Purdue
2019–2021	Lingjun Xu	Electro-Fenton treatment of organic contaminants	Purdue
2018–2019	Yiming Yang	Improvement of AOC measurements	Purdue
2016–2017	Wei Liu	Electrochemical water treatment	Purdue
2015–2016	Huanqi He	Electron-Fenton treatment of chemical contaminants	Purdue

Undergraduate Independent Study Module Students

2026–present	Anusri Gautam	Smart wastewater treatment	EEE, Purdue
2026–present	Kyra Lynn Daniels	PFAS bioaccumulation	EEE, Purdue
2026–present	Caroline L. Spurgeon	Electrochemical filtration	EEE, Purdue
2026–present	Lucas J Arone	Electrochemical filtration	EEE, Purdue
2026	Alyssa Sarah Rizzardo	Electrochemical PFAS sensors	EEE, Purdue
2026	Gia Phong Phuong	Electrochemical PFAS sensors	ME, Purdue
2025	Alexander J. Walters	Quantification of PFAS	Pre-Dentistry, Purdue
2025	Sarah Choi	Cost-effective algal biofuel	Biological Engineering, Purdue
2024–2025	Hadley Reese Thompson	Cost-effective biofuel production	EEE, Purdue
2023–2024	Kiefer Kettenis	Algal biofuel production	FYE, Purdue
2022	Giulio Pettenati	Microbial growth in POU systems	CE, Purdue
2022	Noah Blaustein	Microbial growth in POU systems	CE, Purdue
2021–2022	Ashley Lynn Sanchez Gonzalez	Total dissolved solids (TDS) measurement in POU systems	EEE, Purdue
2021–2022	Leyan Peng	AOC measurement in POU systems	EEE, Purdue
2021	Shreya Mullangi	Algal biofuel	CE, Purdue
2021	Preethi Goli	AOC measurement in POU systems	CS, Purdue
2020–2021	Sungmin Hong	Water quality measurement	EEE, Purdue
2020–2021	Benjamin E. Jolkovsky	POU filtration systems	EEE, Purdue
2020–2021	Chance Lehman	Algal virus for biofuel production	EEE, Purdue
2020–2021	Hannah Congleton	AOC measurement in POU system	EEE, Purdue

2020–2021	Sophie Mendelson	Microbial growth in POU systems	EEE, Purdue
2020–2021	Victoria Rose Pompeo	PFAS removal in POU systems	EEE, Purdue
2019–2020	Charles A. Graham	PFAS treatment in POU filters	EEE, Purdue
2019–2020	Yifei Bi	Metal removal in POU systems	EEE, Purdue
2017–2018	Benjamin M Stryker	Electrochemical water treatment	EEE, Purdue
2017–2018	Shujun Zhou	Electrochemical water treatment	EEE, Purdue
2017–2018	Songhao Wu	Efficient biofuel production	EEE, Purdue
2016–2017	Tianlong Sun	Microbial electrosynthesis for biofuel production	EEE, Purdue
2016–2017	Jingfei Deng	Antibiotic resistant bacteria in the environment	EEE, Purdue
2015–2017	Luna Nguyen	Efficient production of biofuels from carbon dioxide	EEE, Purdue
2015–2016	Mingyu Zhang	Development of CNT electrochemical filter for water purification	EEE, Purdue
2015–2016	Leslie Yoo	Enhanced biofuel production from carbon dioxide	EEE, Purdue
2014–2015	Emily Traxler	Development and persistence of antibiotic resistance	EEE, Purdue
2014–2015	Neil Perry	Enhanced biofuel production from carbon dioxide	EEE, Purdue
2014–2015	Ryan N Loveless	Development of graphene electrochemical filter for water purification	EEE, Purdue
2014–2015	Haitian Liu	Enhanced biofuel production from carbon dioxide	EEE, Purdue
2014–2015	Yvonne Shi	Development of graphene electrochemical filter for water purification	EEE, Purdue
2014–2015	Heyi Wang	Development of graphene electrochemical filter for water purification	EEE, Purdue
2014–2015	Maithilee Das	Enhanced biofuel production from carbon dioxide	EEE, Purdue
2011–2012	Zhe Zhang	Bioremediation in marine oil spill	CE, NUS

Undergraduate Research Assistants

2023–2024	Oliver Shi	Thermodynamic analysis of viral infection of algae	Purdue
2019–2020	Kendall Cooper Schwarz	Enhanced biological phosphorus removal	Purdue
2016	Mustafa Reyad Ghuneim	Resource recovery and reuse from human urine	Purdue
2015	Nathalia Delgadillo Ordoñez (co-supervised)	Effects of lithium on the performance of anaerobic digesters	Purdue
2013–2014	Wei Liang Tay	Design of FISH Probes to quantify linezolid resistance	NUS
2012–2013	Qing Wei	Genetic diversity of erythromycin resistance genes in soils in Singapore	NUS
2011	Shenyan Cao	Biodiesel production of microalgae	NUS
2010–2011	Tianren Wang	Evaluation of MLS_B antimicrobial resistance in environmental samples	NUS

Purdue Summer Undergraduate Research Fellowship (SURF) Students

2017	Benjamin M Stryker	Electrochemical removal of metals using carbon nanotube filters	Purdue
2015	Nathaniel Kallmyer (co-supervised)	Resource recovery and reuse from human urine	Purdue

U.S. Military Academy (West Point) Cadet's/Midshipmen Summer Program Students

2016	Joshua Hulgan	Efficient production of biofuels from carbon dioxide	Purdue
2016	Peter Zhu	Efficient production of biofuels from carbon dioxide	Purdue

Final Year Industry Project Students from Singapore Republic Polytechnic

2013	Jess Junhan Loong	Testing of linezolid resistance with FISH probes	NUS
2013	Xin Hui Soh	Occurrence of antibiotic resistance genes in environmental samples	NUS
2013	Yan Li	Microbial regrowth after exposure to erythromycin	NUS
2013	Chang Gao	Testing of PKS primers with conventional PCR	NUS
2013	Abizer Imran	Optimization of hybridization conditions for PKS primers	NUS

Independent Work Program Students for U.S. DOE Solar Decathlon

2012–2013	Xun Long Kew	Development of a grey water filtration system	CEE, NUS
2012–2013	Jason Hong Yang Tan	Development of a grey water filtration system	CEE, NUS
2012–2013	Miao He	Development of a grey water filtration system	CEE, NUS
2012–2013	Minghui Teo	Development of a grey water filtration system	CEE, NUS

Industrial Attachment Program (IAP) Students

2013	Elizabeth Ying Ping Wong	CEE, NUS
2013	Erik Christianto	CEE, NUS
2013	Hoang Linh Bui	CEE, NUS
2013	Khittisun Chaemdikawiwat	CEE, NUS

Undergraduate Research Opportunities Program (UROP) Students

2012	Shenyan Cao	Cost analysis of algae-based biofuel	CEE, NUS

Undergraduate Final Year Project (Senior Thesis) Students

2013–2014	Yi Kong	Development of electrochemical carbon nanotube filters to remove off-flavor compounds	NUS
2013–2014	Dustin Juen Hon Lee	Development of electrochemical carbon nanotube filters to remove off-flavor compounds	NUS
2013–2014	Vidushini Siva	Optimization of methane production in a microbial electrolysis cell	NUS

2012–2013	Li Jie Hsien	Optimization of hydrogen production to support methanogenesis in a microbial electrolysis cell	NUS
2012–2013	Shang Long Chua	Theoretical and experimental evaluations of methane production in a microbial electrolysis cell	NUS
2012–2013	Wen Chao Cheng	Evaluation of antimicrobial resistance in environmental samples	NUS
2011–2012	Jin Quan Max Auw	Development of oligonucleotide probes for *in situ* quantification of *Streptomyces*	NUS
2011–2012	Yuanyan Du	Studies on 2-methylisoborneol- and geosmin-producing *Actinomycetes* in water catchment area	NUS
2011–2012	Xieheng Kong	Antimicrobial resistance of *Streptomyces* at environmental samples in Singapore	NUS
2011–2012	Chenghui Lin	Evaluation of MLS_B antimicrobial resistance in environmental samples	NUS
2011–2012	Mohammad Sairi B Amir	Development of FISH probes to quantify methanogens	NUS
2011–2012	Tianren Wang	Evaluation of microbial regrowth after treatment of disinfectants or antimicrobials	NUS
2010–2011	Jie Li Eugene Ong	Evaluation of MLS_B antimicrobial resistance at environmental samples	NUS
2010–2011	Xin Yu Cynthia Chew	Evaluation of antibiotic-producing *Streptomyces* from soil samples	NUS
2010–2011	Agnes Christina	Quantification of *Streptomyces* using fluorescence *in situ* hybridization	NUS

THESIS EXAMINATION AND DEFENSE COMMITTEE

Ph.D. Dissertation Examination Committee

2025	Rajesh Nandi	Enhancing anaerobic digestion of aquaculture sludge through co-digestion, pretreatment strategies and biochar supplementation	ABE, Purdue
2024	Kyyngkeun Jo	PFAS removal in water by using a membrane technology	ME, Purdue
2024	Nowrin Akter Shaika	Algal treatment of agricultural wastewater	ABE, Purdue
2024	Aliya Ehde	The microbial and chemical dynamics of drinking water quality within building plumbing.	ABE, Purdue
2024	Nhu Hoan Van Pham	Wind-driven physical processes in shallow lakes	CE, Purdue
2024	Jemuel S. Doctolero	Optimization of aquaponics systems	ABE, Purdue
2023	Neha Shakelly	Addressing uncertainty in economic and environmental assessments of emerging energy technologies	EEE, Purdue
2023	Elijah Ojo Openiyi	Mitigation of PFAS in agricultural fields using sorbent materials	HORT, Purdue

2022	Amit Chaturvedi	Development of efficient transition metallic cathode electrocatalyst for application in single chambered microbial fuel cell	ChE, Indian Institute of Technology Roorkee
2022	Kush Paliwal	eDNA transport in lotic environments	CE, Purdue
2021	Xing Li	Phages as surrogates for pathogenic viruses in analysis and validation of UV disinfection of air and surfaces	CE, Purdue
2021	Jennifer A Rackliffe	Optimizing co-digestion of agro-industrial feedstocks and predicting feedstock renewable energy potential via anaerobic digestion	ABE, Purdue
2021	Weerarathna Vidanage Poorna	Development of novel molecular tools to study the dynamics of individual SAR11 phylotypes in microbial communities	CEE, NTU
2019	Christian Ley	Biofilm detachment in plumbing systems	CE, Purdue
2018	Peng Chen	Improving nitrogen use efficiency in decoupled aquaponics system	ABE, Purdue
2018	Yi-Ju Wang	Nitrogen removal in sustainable aquaculture production	Horticulture, Purdue
2018	Sarah E. Daly	Anaerobic digestion of dairy manure	ABE, Purdue
2017	Raymond RedCorn	Conversion of municipal organic waste into higher value acids and sugars	ABE, Purdue
2014	Chang Ding	Isolation and characterization of dehalogenators that detoxify polybrominated diphenyl ethers and chlorinated alkanes	CEE, NUS
2014	Khorshed Alam Akm	Removal of fluoride from water solution using innovative nanoscale sorbent	CEE, NUS
2014	Siok Ling Low	Microalgae cultivation using permeate from membrane bioreactor	CEE, NUS
2013	Nandar Kyaw	The study of ultraviolet based advanced oxidation process modeling – disinfection and oxidation for drinking water treatment	CEE, NUS
2013	Yujia Shen	Development of microbial electrochemical sensor for toxicity screening of influent wastewater	CEE, NUS
2013	Bijing Cai	Fouling propensity of secondary effluents in ultrafiltration membrane process	CEE, NUS
2013	Yue Ma	Formation and risks of disinfection by-products in ballast water chlorination process	CEE, NUS
2012	Shruti Pavagadhi	Determination and toxicological evaluation of microcystins in tropical reservoirs	CEE, NUS
2012	Venketeswari Parida	Forward osmosis process for secondary effluent and seawater application	CEE, NUS
2012	Nichanan Thepsuparungsikul	Development of carbon nanotube-modified electrodes for microbial fuel cell application	CEE, NUS
2012	Xiaoying Zhu	Development of novel functionalized membranes for antifouling performances in water or wastewater treatment	CEE, NUS

2012	Betha Raghu	Physical, chemical, and toxicological characteristics of particulate emissions from stationary engine fueled with ultralow sulfur diesel and waste cooking oil derived biodiesel	CEE, NUS
2011	Jing Yu	Occurrence and fate of perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) in water and wastewater and their removal using a hybrid PAC-MBR system	CEE, NUS
2011	Caian Fan	Influence of trace erythromycin and erythromycin-H_2O on microbial consortia in sequencing batch reactors	CEE, NUS
2011	Thi Thai Yen Doan	Enhanced lipid production of marine microalgae for biodiesel feedstock.	CEE, NUS
2010	Rajesh Kumar Balasubramanian	Heterogeneous catalysis of plant-derived oils to biodiesel	CEE, NUS

Ph.D. Comprehensive Qualifying Examination Committee

2013	Yang Yu	Arsenic removal from water by functional yttrium-based adsorptive materials	CEE, NUS
2013	Shamik Chowdhury	Development of novel graphene-based nanocomposites for carbon dioxide capture and storage	CEE, NUS
2013	Le Wang	Novel MBR fouling control with quorum quenching	CEE, NUS
2013	Tze Ying Wong	Fate and transport of perflouoroalkylsulfonates and perfluoro carboxylates in ambient air	CEE, NUS
2012	Dandan Zhao	Arsenic adsorption	CEE, NUS
2012	Fengxue Xing	Biobutanol production from lignobiomass	CEE, NUS
2012	Daphane Tan	Fate and behavior of emerging organic contaminants from raw sewage in water environment	CEE, NUS
2012	Genevieve Gabrielle Rose Vergara	Pathogens in recreational waters of Singapore	CEE, NUS
2012	Yu Yan	Realization of direct biological butanol production from lignocellulosic biomass by wild-type *Clostridium*	CEE, NUS
2011	Yun Wang	Quorum quenching as novel fouling control strategy for MBR fouling	CEE, NUS
2011	Siyan Zhao	Reductive dechlorination of chloroform and identification of reductive dehalogenase genes	CEE, NUS
2011	Yong Bin Phua	Rainwater harvesting and treatment system	CEE, NUS
2011	Govindaswamy Balaji	Assessment of air quality monitoring in urban cities through switching of fuels	CEE, NUS
2010	Yujia Shen	Development of microbial electrochemical sensor for toxicity screening of influent wastewater	CEE, NUS

2010	Pei Xiong	Application of UVA/LED/TiO_2 process for wastewater treatment, pharmaceutical degradation and bacteria disinfection	CEE, NUS

Ph.D. Oral Qualifying Examination Committee

2014	Yang Yu	Arsenic removal from water by functional yttrium based adsorptive materials	CEE, NUS
2013	Fengxue Xing	Biobutanol production from lignobiomass	CEE, NUS
2013	Yu Yan	Realization of direct biological butanol production from lignocellulosic biomass by wild-type clostridium	CEE, NUS
2013	Mohammad Sherafatmand	Microbial fuel cells for degradation of polycyclic aromatic hydrocarbons from the soil	CEE, NUS
2013	Jothinathan Lakshmi	O_3/H_2O_2 based AOP for PPCPs removal: kinetic studies on influence of initiator, promoter and inhibitors in presence/absence of NOM/EFOM	CEE, NUS
2013	Behdad Chehrenegar	Removal of emerging contaminants using plant-based system	CEE, NUS
2013	Wei Hong Fan	Tropospheric halocarbons in Southeast Asia-levels, sources, and delineation of regional and local-scale emissions	CEE, NUS
2013	Genevieve Gabrielle Rose Vergara	Pathogens in recreational waters of Singapore	CEE, NUS
2013	Yun Wang	Novel MBR fouling control with quorum quenching	CEE, NUS
2013	Mahsa Foolad	Fate and transport of sewage-associated indicators through soil column	CEE, NUS
2012	Siyan Zhao	Reductive dechlorination of chloroform and identification of reductive dehalogenase genes	CEE, NUS
2012	Amalraj Appavoo Initha	Photocatalytic degradation of carbamazepine using graphene-TiO_2 nanocomposites	CEE, NUS
2012	Krishnan Padmaja	Photocatalytic construction material for mitigation of air pollutants	CEE, NUS
2012	Chenxi Sun	Inactivation kinetics and mechanism of indicator and enteric viruses in tropical surface water	CEE, NUS
2012	Jinzhi Lim	Production of off-flavours and cylindrospermopsins by cyanobacteria in tropical aquatic ecosystems	CEE, NUS
2012	Xueqing Shi	Treatment of pharmaceutical wastewater under anaerobic processes	CEE, NUS
2012	Kai Yin Melvin Tan	Development and application of a novel anaerobic forward osmosis membrane bioreactor (AnFOMBR)	CEE, NUS
2011	Nan Li	Versatile preparation of ultrafiltration/nanofiltration membranes through a one-step simultaneous phase inversion and cross-linking method for water treatment applications	CEE, NUS

2011	Yuen Sean Lam	Novel syntrophic microbial consortium for the bioconversion of hemicellulose to value-added products	CEE, NUS
2011	Pei Xiong	Application of UVA/LED/TiO_2 process for wastewater treatment-pharmaceutical degradation and bacteria disinfection	CEE, NUS
2011	Yu Ling	Heavy metal removal from water by using affinity membrane	CEE, NUS
2011	Yujia Shen	Development of microbial electrochemical sensor for toxicity screening of influent wastewater	CEE, NUS
2011	Vasanth Natarajan	Optimization of biochemical conversion process for lignocellulosic biomass to sugars by integrating the kinetic models	CEE, NUS
2010	Akm Khorshed Alam	Development of an innovative nano-scale sorbent for treatment of ionic contaminants in water solution	CEE, NUS
2010	Yue Ma	Formation and risks of disinfection by-products in ballast water chlorination process	CEE, NUS
2010	Chang Ding	Isolation and characterization of dehalogenators that detoxify polybrominated diphenyl ethers and chlorinated alkanes	CEE, NUS
2010	Bijing Cai	Fouling propensity of secondary effluents in ultrafiltration membrane process	CEE, NUS

M.S. Examination Committee (thesis)

2025	Issac Bradford	Estimating biogeochemical current states in inland agricultural water bodies with remote sensing	ABE, Purdue
2025	Avanthi Venugopal Sridhar	Effects of cyanuric acid on chlorine dynamics and algal control in swimming pools	CE, Purdue
2025	Shohoria Afrin Shorno	Disinfection efficacy of commercial far UV-C fixtures using the continuous challenge agent introduction and decay methods	CE, Purdue
2024	Yolanys Nadir Aranda Vega	Use of algae, cyanobacteria, and indigenous bacteria for the sustainable treatment of aquaculture wastewater	ABE, Purdue
2022	Andrea Slotke	Monitoring harmful algal blooms in Kosciusko County, Indiana with remote sensing insights	ABE, Purdue
2021	Jason Randall	Experimental measurements on devices for real-time inactivation of airborne biological threats	CE, Purdue
2020	Kush Paliwal	Analyzing the effects of flowing water on the detection and quantification of Salmon eDNA	CE, Purdue
2018	Tianqi Wang	Waste materials and management: lessons from the Flint water crisis and blast furnace slag usage in Indiana	CE, Purdue
2017	Gaopin Cao	Formation and removal of toxic disinfection by-products from cross-linked polyethylene pipes in building premise plumbing system	EEE, Purdue

2014	Ling Ding	Assessing the performance of antimicrobial concrete admixtures in concrete subjected to microbially induced corrosion	CE, Purdue
2014	Zihan Wang	Reductive dehalogenation of chlorinated hydrocarbons by established cocultures	CEE, NUS
2012	Marc-Antoine Metais	Bio-hydrogen & bio-butanol generation by bacteria isolated from spent mushroom substrate	CEE, NUS
2011	Zi Tan	Optimisation of microbial fuel cells	CEE, NUS
2011	Junyou Zhang	Forward osmosis membrane bioreactor for water reuse	CEE, NUS
2011	Xue Feng	The effect of backwashing procedures on filter ripening and general effluent quality	CEE, NUS
2011	Pak Hang Martin Fung	Optimization of photobioreactor for astaxanthin production in *Chlorella Zofingiensis*	CEE, NUS
2010	Sowpati Jayaker	Assessment of synergistic effect of UV/H_2O_2 integrated disinfection process	CEE, NUS

M.S. Advisory Committee (non-thesis)

2025–present	George James Mcatee	CE, Purdue
2025–present	Bhavesh Kuman Sharma	CE, Purdue
2025–present	Ella Tietz	CE, Purdue
2024–present	Sophia Sample	CE, Purdue
2023–2025	Jackson Coleman	CE, Purdue
2022–2024	Haozhe Zheng	EEE, Purdue
2022–2024	Amin Golnabi	CE, Purdue
2021–2023	Shivani Cheernahalli Manjunath	EEE, Purdue
2021–2023	Chathura Viswanath	CE, Purdue
2021–2023	Mohammad Hassan Chaudhry	EEE, Purdue
2021–2023	Jamaie Scott	CE, Purdue
2021–2023	Deepika Sree Solamuthu Krishnakumar	CE, Purdue
2021–2023	Sihan Zhou	CE, Purdue
2020-2022	Adedolapo Wasiu Adesope	CE, Purdue
2018–2019	Calvin Liu	CE, Purdue
2017–2018	Latha Bhat	CE, Purdue
2016–2018	Jesse Hamm	EEE, Purdue
2016–2018	Yifan Tong	EEE, Purdue
2016–2018	Wei Liu	EEE, Purdue
2016–2018	Yichen Wu	CE, Purdue

TEACHING EXPERIENCE

2023–present	**Lecturer**	Design Principles and Practice of Drinking Water Systems (online)	graduate	CE, Purdue
2022-2024	**Co-Lecturer**	EEE Graduate Research Seminar	graduate	EEE, Purdue
2022–present	**Lecturer**	Biological Principles in Wastewater Treatment (online)	graduate	Edx & Purdue
2022	**Lecturer**	Nutrient Removal and Resource Recovery in Wastewater (online)	graduate	Edx & Purdue

2022	**Lecturer**	Modern Biotechnologies for Wastewater Treatment (online)	graduate	Edx & Purdue
2021	**Lecturer**	Emerging Contaminant Removal (online)	graduate	EEE, Purdue
2021	**Co-Lecturer**	Introduction to Engineering of Water	undergraduate	CE, Purdue
2019	**Co-Lecturer**	Nanotechnology for Civil Engineering	undergraduate	CE, Purdue
2018	**Lecturer**	Membranes for Water Treatment	graduate	EEE, Purdue
2016–2020	**Co-Lecturer**	Senior Design	undergraduate	EEE, Purdue
2016–2017	**Co-Lecturer**	Direct Potabilization	graduate	EEE, Purdue
2015–present	**Lecturer**	Environmental Biotechnology	graduate	CE, Purdue
2015–present	**Lecturer**	Wastewater Treatment Processes	undergraduate	CE/EEE, Purdue
2014	**Lecturer**	Water and Wastewater Treatment	undergraduate	CE/EEE, Purdue
2012–2014	**Lecturer**	Topics in Environmental Biotechnology	graduate	CEE, NUS
2011–2014	**Lecturer**	Wastewater Microbiology	undergraduate	CEE, NUS
2010–2014	**Co-lecturer**	Environmental Engineering Principles	graduate	CEE, NUS
2010–2014	**Coordinator** and **Resource Person**	Design Project	undergraduate	CEE, NUS
2010–2012	**Lecturer**	Environmental Microbiological Principles	undergraduate	CEE, NUS
2007	**Teaching Assistant**	Engineering Risk and Uncertainty	undergraduate	CEE, UIUC
2006	**Teaching Assistant**	Environmental Engineering	undergraduate	CEE, UIUC
2006	**Guest Lecturer**	Biological Principles of Environmental Engineering Processes	graduate	CEE, UIUC
2005	**Co-lecturer**	Fluorescence *in situ* hybridization workshop	graduate	CEE, UIUC

SERVICE TO DEPARTMENT/UNIVERSITY

2025–present	**Member**	Faculty Governance Committee	CCE, Purdue
2025	**Judge**	12th Annual Graduate Industrial Research Symposium	ABE, Purdue
2022–2025	**Chair**	University Senate Budget Interpretation, Evaluation and Review Committee	Purdue
2022–present	**Member**	Graduate Committee	EEE, Purdue
2022	**Reviewer**	Purdue Engineering Virtual Graduate Showcase	College of Engineering, Purdue
2018–2021	**Member**	Academics Committee	EEE, Purdue

2020	**Reviewer**	Most Outstanding Interdisciplinary Project Award (MOIPA)	Graduate School, Purdue
2017	**Reviewer**	Ismail Travel Awards	Graduate School, Purdue
2017	**Member**	Internal Review Committee	CE, Purdue
2017	**Reviewer**	Engineering Projects in Community Service (EPICS)	Purdue
2016–2018	**Member**	Space/Facilities/Safety Committee	EEE, Purdue
2016	**Reviewer**	Graduate School Fellowship	Purdue
2016	**Reviewer**	Future Faculty Member Workshop	Purdue
2015–2017	**Judge**	Office of Interdisciplinary Graduate Programs (OIGP) Spring Reception	Purdue
2015–2016	**Member**	Academics Committee	EEE, Purdue
2015	**Reviewer**	Future Faculty Member Workshop	Purdue
2014–2016	**Executive Committee Member**	Purdue Water Community	Purdue
2014–2015	**Member**	Engagement Committee	EEE, Purdue
2014–2015	**Member**	Seminar Committee	EEE, Purdue
2014–2015	**Member**	Faculty Search Committee	EEE, Purdue
2013–2014	**Member**	Student Affairs/Alumni Committee	CEE, NUS
2013–2014	**Member**	Board of Examiners Committee	CEE, NUS
2012–2013	**Member**	Engineering Accreditation Board Committee	CEE, NUS
2012	**Chairperson**	Sessions "Efficient Systems for Safe Drinking Water, Integrated Technology Based on Reduce, Reuse, and Recycle (3R)" and "River Ecological Rehabilitation"	NUS–Peking University Scientific Workshop
2012, 2013	**Interviewer**	M. Eng. Student Admission Committee	CEE, NUS
2011–2014	**Member**	Curriculum Committee	CEE, NUS
2011, 2013	**Interviewer**	Ph.D. Student Admission Committee	CEE, NUS
2011, 2012	**Interviewer**	Student Exchange Program Selection Committee	CEE, NUS
2011	**Moderator / Track Lead**	Energy Efficiency in Industrial Processes in NUS–Industry Energy Efficiency Workshop	Energy Studies Institute, NUS
2010	**Judge**	Environmental Science and Engineering Poster Symposium	CEE, NUS
2004–2006	**Volunteer**	Graduate Student Recruiting Committee	CEE, NUS
2003–2006	**President**	Gamma Alpha Graduate Society	

SERVICE TO PROFESSION

2026	**Reviewer**	American Chemistry Society Petroleum Research Fund
2026	**Reviewer**	RGC/General Research Fund (GRF) of Hong Kong
2026	**Panelist**	U.S. NSF
2026	**Reviewer**	Nebraska Corn Board
2026	**Panelist**	"Multifaceted Challenges of Plastic Pollution and Possible Remedies" by Dr. Jenna Jambeck, Purdue Engineering Distinguished Lecture Series
2025-present	**Member**	Environmental Health & Water Quality Committee, ASCE
2025	**Panelist**	U.S. NSF

2025-present	**Member**	National Council of Examiners for Engineering and Surveying (NCEES) Fundamental Engineering (FE) exam committee
2025	**Reviewer**	National Natural Science Foundation of China (NSFC)/Research Grants Council (RGC) Joint Research Scheme (JRS)
2025-present	**Vice-Chair**	Water Supply and Wastewater Committee, AAEES
2025	**Reviewer**	RGC/Faculty Development Scheme (FDS) of Hong Kong
2025	**Reviewer**	RGC/GRF of Hong Kong
2025	**Reviewer**	RGC/GRF of Hong Kong
2025	**Reviewer**	Legislative-Citizen Commission on Minnesota Resources Review
2024	**Panelist**	U.S. NSF
2024	**Panelist**	U.S. NSF
2023	**Reviewer**	RGC/GRF of Hong Kong
2023	**Panelist**	U.S. NSF
2023	**Panelist**	U.S. NSF
2022	**Panelist**	U.S. NSF
2022	**Reviewer**	Research Grants Council of Hong Kong
2022	**Panelist**	ENG, CBET, U.S. NSF
2022	**Panelist**	U.S. NSF
2021	**Reviewer**	Nazarbayev University Research Council, Faculty-Development Competitive Research Grants Program, Kazakhstan
2021	**Panelist**	ENG, CBET, U.S. National Science Foundation
2021	**Reviewer**	Oak Ridge Associated Universities (ORAU) Ralph E Powe Junior Faculty Enhancement Awards
2021	**Reviewer**	RGC of Hong Kong
2020	**Reviewer**	The Antibiotic Resistance Programme, The Netherlands Organisation of Health, Research and Development (ZonMw)
2020	**Reviewer**	French National Research Agency / RGC of Hong Kong Joint Research Scheme (JRS)
2020	**Reviewer**	RGC of Hong Kong
2020	**Panelist**	U.S. NSF
2019	**Reviewer**	German-Israeli Water Technology Cooperation Program, Israeli Ministry of Science and Technology (MOST)
2019	**Panelist**	"Protecting Drinking Water" by Dr. Joan Rose, Purdue Engineering Distinguished Lecture Series
2019	**Reviewer**	Student Services Committee Academic Job Application Review, AEESP
2019	**Panelist**	ENG, CBET, U.S. NSF
2019	**Reviewer**	RGC of Hong Kong
2019	**Panelist**	U.S. NSF
2018	**Reviewer**	French National Research Agency / RGC of Hong Kong Joint Research Scheme (JRS)
2018	**Panelist**	ENG, CBET, U.S. NSF
2018	**Reviewer**	Research Grants Council of Hong Kong
2018	**Panelist**	U.S. NSF
2017	**Panelist**	ENG, CBET, U.S. NSF
2017	**Reviewer**	Ministry of Education and Science of the Russian Federation
2017	**Reviewer**	RGC of Hong Kong

2017–2020	**Project Advisory Board Member**	"Mitigating the Risk of Antibiotic Resistance at Critical Control Points in the Beef Cattle Manure Management Systems", USDA
2016	**Reviewer**	RGC of Hong Kong
2016	**Panelist**	U.S. NSF
2016	**Panelist**	ENG, CBET, U.S. NSF
2016	**Panelist**	ENG, CBET, U.S. NSF
2016	**Reviewer**	Indiana Water Resources Research 104B Grant, USGS
2015	**Panelist**	ENG, CBET, U.S. NSF
2015	**Reviewer**	RGC of Hong Kong
2014	**Reviewer**	Student Services Committee Academic Job Application Review, AEESP
2014	**Judge**	Singapore Science & Engineering Fair, Singapore Ministry of Education, the Agency for Science, Technology & Research and the Science Centre Singapore
2013	**Judge**	Applied Materials Clean Tech Competition, Center for Science Teaching and Learning
2012–2014	**Honorary Auditor**	BioEnergy Society of Singapore
2012–2013	**Workgroup Member**	Guidelines for Treated Greywater Quality, Singapore Public Utilities Board
2013	**Reviewer**	Ministry of Education and Science of the Russian Federation
2013	**Reviewer**	Singapore NSF
2012	**Judge**	Singapore Science & Engineering Fair, Singapore Ministry of Education, the Agency for Science, Technology & Research and the Science Centre Singapore
2010	**Judge**	Singapore Science Mentorship Program Youth Science Conference
2009–2010	**Board Director / Membership Chair**	Chinese American Environmental Professionals Association, Oakland, CA
2008–2012	**Project Advisory Committee Member**	"Microbial Ecology of Drinking Water Distribution Systems", U.S. Water Research Foundation (formerly AwwaRF)

JOURNAL EDITOR

2026–present	**Editor**	Journal of Hazardous Materials
2025–present	**Associate Editor**	ASCE Journal of Environmental Engineering
2022–present	**Review Editor**	Frontiers in Microbiology - Microbiotechnology
2021–present	**Editorial Board Member**	International Biodeterioration & Biodegradation
2019	**Handling Editor**	Special issue of "Environmental Plastics" for PLOS ONE
2012–present	**Academic Editor**	PLOS ONE

JOURNAL REVIEWER (369 manuscripts in 100 journals)

Journal name	# of reviews
ACS Applied Materials & Interfaces	1
ACS Environmental Au	1
ACS ES&T Water	5
ACS ES&T Engineering	2
ACS Omega	1
American Journal of Infection Control	1
Applied and Environmental Microbiology	1
Applied Energy	3
Applied Microbiology and Biotechnology	3
Archives of Microbiology	1
AWWA Water Science	2
Biochemical Engineering Journal	6
Bioengineered	1
Biomass Conversion and Biorefinery	1
Bioresource Technology	18
Bioresource Technology Reports	1
Biotechnology for Biofuels	3
Bulletin of Environmental Contamination and Toxicology	2
Carbon	1
Case Studies in Chemical and Environmental Engineering	1
Chemical Engineering Journal	5
Chemical Engineering Journal Advances	1
Chemosphere	6
Critical Reviews in Environmental Science and Technology	14
Critical Reviews in Microbiology	1
Current Opinion in Solid State & Materials Science	1
Desalination	1
Desalination and Water Treatment	1
Discover Public Health	1
Engineering	2
Environmental Chemistry	1
Environmental Engineering Science	9
Environment International	6
Environmental Microbiology Reports	2
Environmental Pollution	9
Environment Research	3
Environmental Science: Advances	2
Environmental Science and Pollution Research	1
Environmental Science and Ecotechnology	2
Environmental Science & Technology	51
Environmental Science & Technology Letters	2
Environmental Science: Nano	2
Environmental Science and Pollution Research	4
Environmental Science: Processes and Impacts	2
Environmental Science: Water Research & Technology	14

Environmental Technology	2
Food Chemistry	1
Frontiers in Microbiology	4
Frontiers in Public Health	1
International Biodeterioration & Biodegradation	13
International Journal of Chemical Engineering	1
International Journal of Environmental Science and Technology	4
International Journal of Environmental Research and Public Health	1
JAC-Antimicrobial Resistance	1
Journal of Applied Microbiology	1
Journal of Bacteriology	1
Journal of Chemical Technology and Biotechnology	1
Journal of Cleaner Production	7
Journal of Contaminant Hydrology	1
Journal of CO_2 Utilization	1
Journal of Environmental Engineering	8
Journal of Environmental Quality	6
Journal of Hazardous Materials	20
Journal of Materials Chemistry A	1
Journal of Medical Microbiology	1
Journal of Oceanology and Limnology	1
Letter in Applied Microbiology	1
mLife	1
Marine Pollution Bulletin	1
Molecules	1
Microbial Cell Factories	3
Nanoscale	2
Nature Communications	1
Nature Water	1
npj Biofilms and Microbiomes	1
Pedosphere	1
PeerJ - Life & Environment	1
PLOS Global Public Health	1
PLOS ONE	3
Process Safety and Environmental Protection	1
Regional Studies in Marine Science	1
Renewable Energy	11
RSC Advances	6
RSC Sustainability	1
Separation and Purification Technology	2
Science Advances	1
Science of the Total Environment	11
Scientific Reports	4
Smart Science	1
Soil Ecology Letters	1
The ISME Journal	2
Trends in Biotechnology	1
Urban Water Journal	1

Waste and Biomass Valorization	2
Water Emerging Contaminants & Nanoplastics	1
Water Environment Research	1
Water Research	24
Water Research X	2
Water Science and Engineering	1
World Journal of Microbiology and Biotechnology	1

PROFESSIONAL MEMBERSHIPS

2026–present	Member	American Association for the Advancement of Science (AAAS)
2026–present	Member	American Society of Agricultural and Biological Engineers (ASABE)
2026–present	Member	American Society for Engineering Education (ASEE)
2026–present	Member	American Water Works Association (AWWA)
2026–present	Member	Water Environment Federation (WEF)
2011–present	Member	American Society of Civil Engineers (ASCE)
2011–present	Member	Association of Environmental Engineering and Science Professors (AEESP)
2004–present	Member	American Society for Microbiology (ASM)
2016–2018	Communication Officer	The Overseas Chinese Society for Microbiology (Sino-Micro)
2012–2014	Member	BioEnergy Society of Singapore (BESS)
2011–2016	Member	International Water Association (IWA)
2008–2010	Member	AWWA
2007–2010	Board Director / Membership Chair	Chinese American Environmental Professionals Association (CAEPA)
2007–2010	Member	WEF