

RESUME

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RESEARCH INTERESTS

- Sustainable technologies for water and wastewater treatment
- Water reuse
- Waste-to-energy conversion

EDUCATION

- 1998 Ph.D. University of Delaware (Civil Engineering), Newark, Delaware
Dissertation: "Equilibrium Aspects of Heavy Metal Interactions with Wastewater and Wastewater Particulates."
Advisor: Dr. C.P. Huang, Distinguished Professor of Environmental Engineering.
- 1989 M.S. Tongji University (Environmental Engineering), Shanghai, China
Thesis: "Using Anaerobic Combined-bed Reactor and Anaerobic Sequencing Batch Reactor."
Advisor: Prof. Guowei Gu and Prof. Chonghua Zhang.
- 1986 B.S. Qingdao Institute of Architectural Engineering (Environmental Engineering), Qingdao, China

EMPLOYMENT HISTORY

- 2003 – Professor (2017); Associate Professor (2009); Assistant Professor (2003)
Department of Civil, Architectural & Environmental Engineering
Senior Investigator, Center for Research in Energy and Environment (CREE)
Missouri University of Science and Technology, Rolla, MO
- 2001 – 2003 Assistant Professor, University of Alabama at Birmingham, Birmingham, AL
- 1998 – 2001 Process Engineer/Design Engineer, Roy F. Weston, Inc., Westchester, PA
- 1994 – 1997 Graduate Research Assistant, University of Delaware, Newark, DE
- 1989 – 1994 Assistant Professor, Tongji University, Shanghai, China

PROFESSIONAL ENGINEER REGISTRATION

- P.E. Registration in New York, Missouri, and Ohio.

REFEREED JOURNAL PAPERS (Scopus H = 34, Google H = 36; Corresponding Author*)

2024

84. Zhang, Q., Wu, G., Liao, S., Zhu, X., Li, B., Wang, J., Liu, G.* , 2024. Improving Nitrogen Removal and Reducing Aeration Consumption for Shenshui Guangming Wastewater Treatment Plant Using iMLE Process. China Water & Wastewater (in Chinese; accepted)
83. Farrow, E.M., Wang, J.*, Burken, J.G., Shi, H., Yang, J.*, Hua, B., Deng, B., 2024. Selected trace element uptake by rice grain as affected by soil arsenic, water management and cultivar - A field investigation. Frontiers in Environmental Science, section Toxicology, Pollution and the Environment (**Minor revision submitted**).

2022

82. Campbell, K., Wang, J.*, 2022. Understanding the role of activated sludge in oxygen transfer: effects of sludge settleability, solids retention time, and nitrification reaction. *Water Environment Research*, 94 (11), e10806 (**Cover story**).
81. Liu, X., Wang, J.*, Huang, Y.W., 2022. Understanding the role of nano-TiO₂ on the toxicity of Pb on *C. dubia* through modeling – is it additive or synergistic? *Frontiers of Environmental Science & Engineering* 16(5), 59.

2021

80. Zhang, Q., Huang, R., Jiang, L., Lu, Z., Wu, G., Liu, G.*, Li, B., Wang, J., 2021. Enhancing nitrogen removal and reducing aeration energy for wastewater treatment with intermittent Modified Ludzack-Ettinger process: A field demonstration. *Journal of Water Process Engineering* 43, 102303.
79. Wang, L., Li, B., Li, Y.*, Wang, J., 2021. Enhanced biological nitrogen removal under low dissolved oxygen in an anaerobic-anoxic-oxic system: kinetics, stoichiometry and microbial community. *Chemosphere* 263, 128184.
78. Liu, X., Wang, J.*, Huang, Y.W., 2021. Quantifying the effect of nano-TiO₂ on the toxicity of lead on *C. dubia* using a two-compartment modeling approach. *Chemosphere* 263, 127958.
77. Campbell, K., Wang, J.*, Tucker, R., Struempf, C., 2021. Implementation of Long Solids Retention Time Activated Sludge Process for Rural Residential Community. *Water Environment Research*, 93(2), 174-185.

2020

76. Yu, Y.H., Su, J.F., Shih, Y., Wang, J., Wang, P.Y., Huang, C.P.*, 2020. Hazardous wastes treatment technologies. *Water Environment Research* 92, 1833-1860.
75. Campbell, K., Wang, J.*, 2020. New insights into the effect of surfactants on oxygen transfer in activated sludge process. *Journal of Environmental Chemical Engineering* 8, 104409.
74. Liu, X., Wang, J.*, 2020. Algae (*Raphidocelis subcapitata*) Mitigate Combined Toxicity of Microplastic and Lead on *Ceriodaphnia dubia*. *Frontiers of Environmental Science and Engineering* 14(6), 97 (**Cover story**).
73. Campbell, K., Wang, J.*, Daigger, G., 2020. Filamentous Organisms Degrade Oxygen Transfer Efficiency by Increasing Mixed Liquor Apparent Viscosity: Mechanistic Understanding and Experimental Verification. *Water Research* 173, 115570.

2019

72. Wang, J., Shih, Y., Wang, P.Y., Yu, Y.H., Su, J.F., Huang, C.P.*, 2019. Hazardous wastes treatment technologies. *Water Environment Research* 91(10), 1177-1198.
71. Liu, X., Wang, J.*, Huang, Y.W., Kong, T., 2019. Algae (*Raphidocelis*) reduce combined toxicity of nano-TiO₂ and lead on *C. Dubia*. *Science of the Total Environment* 686, 246-253.
70. Campbell, K., Wang, J.*, Daniels, M., 2019. Assessing Activated Sludge Morphology and Oxygen Transfer Performance Using Image Analysis. *Chemosphere* 223, 694-703.
69. Campbell, K., Wang, J.*, Liu, G., Daigger, G., 2019. Activated Sludge Morphology Significantly Impacts Oxygen Transfer at the Air-Liquid Boundary. *Water Environment Research* 91, 500-509.
68. Wu, X., Huang, J., Lu, Z., Chen, G., Wang, J., Liu, G.*, 2019. *Thiothrix eikelboomii* Interferes Oxygen Transfer in Activated Sludge. *Water Research* 151, 134-143.

2018

67. Gheni, A., Liu, X., ElGawady, M.A.*, Shi, H., Wang, J., 2018. Leaching Assessment of Eco-Friendly Chip Seal Pavement. *Transportation Research Record* 2672(52), 67-77.
66. Wang, J., Wang, P.Y., Yu, Y.H., Su, J.F., Huang, C.P.*, 2018. Hazardous wastes treatment technologies. *Water Environment Research* 90(10), 1679–1719.
65. Liu, X., Wang, J.*, Gheni, A., ElGawady, M.A., 2018. Reduced zinc leaching from scrap tire during pavement applications. *Waste Management* 81, 53–60.
64. Liu, G.*, Wang, J.*, Campbell, K., 2018. Formation of Filamentous Microorganisms Impedes Oxygen Transfer and Decreases Aeration Efficiency for Wastewater Treatment. *Journal of Cleaner Production* 189, 502-509.
63. Wang, L., Dong, H., Wang, J., Qiang, Z.*, 2018. Full-scale study of a continuous-flow intermittent aeration anoxic/oxic bioreactor for decentralized wastewater treatment. *Acta Scientiae Circumstantiae* 38(5), 1812-1819 (in Chinese).
62. Hu, J., Wang, J.*, Liu, S., Zhang, Z., Zhang, H., Cai, X., Pan, J., Liu, J., 2018. Effect of TiO₂ nanoparticle aggregation on marine microalgae *Isochrysis galbana*. *J. Environ. Sci.* 66, 208 – 215.

2017

61. Liu, G., Wang, J.*, 2017. Enhanced removal of total nitrogen and total phosphorus by applying intermittent aeration to the Modified Ludzack-Ettinger (MLE) process. *Journal of Cleaner Production* 166, 163-171.
60. Liu, G., Wang, J.*, 2017. Achieving advanced nitrogen removal for small flow wastewater using a baffled bioreactor (BBR) with intermittent aeration. *J. Environ. Man.* 199, 222–228.

2016

59. Liu, G., Wang, J.*, 2016. The Role of Solids Retention Time in Ammonia-based Feedback Aeration Control. *J. Environ. Eng.* 142(7): 04016029.
58. West, D.M., Wu, Q., Donovan, A., Shi, H.*, Ma, Y., Jiang, H., Wang, J., 2016. N-Nitrosamine Formation by Monochloramine, Free Chlorine, and Peracetic Acid Disinfection with Presence of Amine Precursors in Drinking Water System. *Chemosphere* 153, 521-527.

2015

57. Wu, Q., Shi, H.*, Ma, Y., Adams, C., Jiang, H., Wang, J., Eichholz, T., Timmons, T., 2015. Removal of N-Nitrosamine Precursors in Drinking Water System using Adsorption Methods. *Separation and Purification Technology* 156, 972–979.
56. Liu, G., Wang, J.*, 2015. Quantifying the chronic effect of low DO on the nitrification process. *Chemosphere* 141, 19-25.
55. Liu, G., Wang, J.*, 2015. Modeling effects of DO and SRT on activated sludge decay and production. *Water Research* 80, 169-178.
54. Feng, P., Guan, X.*, Sun, Y., Choi, W., Qin, H., Wang, J., Qiao, J., Li, L., 2015. Weak magnetic field accelerates chromate removal by zero-valent iron. *J. Environ. Sci.* 31, 175-183.
53. Farrow, E., Wang, J.*, Burken, J., Shi, H., Yan, W., Yang, J., Hua, B., Deng, B., 2015. Reducing arsenic accumulation in rice grain through iron oxide amendment. *Ecotoxicology and Environmental Safety* 118, 55-61.

2014

52. Sun, Y., Guan, X.*, Wang, J., Meng, X., Xu, C., Zhou, G., 2014. Effect of Weak Magnetic Field on Arsenate and Arsenite Removal from Water by Zero Valent Iron: An XAFS Investigation. *Environ. Sci. Technol.* 48, 6850-6858.
51. Huang, C.P.*, Wang, J., 2014. Specific Chemical Interactions between Metal Ions and

Biological Solids Exemplified by Sludge Particulates. *Bioresource Technol.* 160, 32–42.
50. Liu, G., Wang, J.*, 2014. Role of Solids Retention Time on Complete Nitrification: Mechanistic Understanding and Modeling. *J. Environ. Eng.* 140(1), 48–56.

2013

49. Liu, G., Wang, J.*, 2013. Long-Term Low DO Enriches and Shifts Nitrifier Community in Activated Sludge. *Environ. Sci. Technol.* 47, 5109-5117.
48. Dan, Y., Zimmerman, C., Liu, K., Shi, H., Wang, J.*, 2013. Increased Leaching of As, Se, Mo, and V from High Calcium Coal Ash Containing Trona Reaction Products. *Energy and Fuels* 27, 1531–1537.

2012

47. Hu, J., Wang, D., Forthaus, B.E., Wang, J.*, 2012. Quantifying the Effect of Nanoparticles on As(V) Ecotoxicity Exemplified by Nano-Fe₂O₃ (magnetic) and Nano-Al₂O₃. *Environ. Toxicol. Chem.* 31, 2870-2876.
46. Liu, G., Wang, J.*, 2012. Probing the Stoichiometry of the Nitrification Process Using the Respirometric Approach. *Water Research* 46, 5954–5962.
45. Hu, J., Wang, D., Wang, J.T., Wang, J.*, 2012. Toxicity of Lead on *Ceriodaphnia dubia* in the Presence of Nano-CeO₂ and Nano-TiO₂. *Chemosphere* 89, 536-541.
44. Liu, G., Wang, J.*, 2012. Effects of Nano-CuO and Nano-MgO Particles on Activated Sludge. *Water Environ. Res.* 84, 569-576.
43. Liu, G., Canter, T., Wang, D., Wang, J.*, Fitch, M., Burken, J., 2012. Baffled Bioreactor for Municipal Wastewater Treatment. *J. Environ. Eng.* 138, 239-247.
42. Hu, J., Wang, D., Wang, J.T., Wang, J.*, 2012. Bioaccumulation of Fe₂O₃(magnetic) nanoparticles in *Ceriodaphnia dubia*. *Environ. Pollut.* 162, 216-222.

2011

41. Su, T., Wang, J.*, 2011. Modeling Batch Leaching Behavior of Arsenic and Selenium from Bituminous Coal Fly Ashes. *Chemosphere* 85, 1368-1374.
40. Su, T., Shi, H., Wang, J.*, 2011. Impact of Trona-based SO₂ Control on the Elemental Leaching Behavior of Fly Ash. *Energy & Fuels* 25, 3514-3521.
39. Bin, H., Yan, W., Wang, J., Deng, B., Yang, J.*, 2011. Arsenic Accumulation in Rice Grains as Affected by Cultivars and Water Management Practices. *Environ. Eng. Sci.* 28, 591-596.
38. Canter, T.H., Burken, J.G.*, Wang, J., Fitch, M.W., Kinnevan, K.J., Wedge, K., Tucker, R.E., 2011. Environment of Warfare. *J. Environ. Eng.* 137, 525-530.
37. Wang, D., Hu, J., Forthaus, B.E., Wang, J.*, 2011. Synergistic Toxic Effect of Nano-Al₂O₃ and As(V) on *Ceriodaphnia dubia*. *Environ. Pollut.* 159, 3003-3008.
36. Liu, G., Wang, D., Wang, J.*, Mendoza, C., 2011. Effect of ZnO Particles on Activated Sludge: Role of Particle Dissolution. *Sci. Total Environ.* 409, 2852-2857.
35. Wang, D., Hu, J., Irons, D.R., Wang, J.*, 2011. Synergistic Toxic Effect of Nano-TiO₂ and As(V) on *Ceriodaphnia dubia*. *Sci. Total Environ.* 409, 1351-1356.

2010 and earlier

34. Tang, Y., Wang, J., Gao, N., 2010. Characteristics and model studies for fluoride and arsenic adsorption on goethite. *J. of Environ. Sci.* 22, 1689–1694.
33. Shi, H.*, Witt, E.C., Shu, S., Su, T., Wang, J., Adams, C., 2010. Toxic trace element assessment for soils/sediments deposited during Hurricanes Katrina and Rita from southern Louisiana, USA: A sequential extraction analysis. *Environ. Toxicol. Chem.* 29, 1419-1428.
32. Su, T., Guan, X., Tang, Y., Gu, G., Wang, J.*, 2010. Predicting Competitive Adsorption

- Behavior of Major Toxic Anionic Elements onto Activated Alumina: A Speciation-Based Approach. *J. Hazard. Mater.* 176, 466-472.
31. Tang, Y., Guan, X., Wang, J.*, Gao, N., McPhail, M.R., and Chusuei, C.C., 2009. Fluoride adsorption onto granular ferric hydroxide: Effects of ionic strength, pH, surface loading, and major co-existing anions. *J. Hazard. Mater.* 171, 774-779.
 30. Guan, X., Su, T., Wang, J.*, 2009. Quantifying effects of pH and surface loading on arsenic adsorption on NanoActive alumina using a speciation-based model. *J. Hazard. Mater.* 166, 39-45.
 29. Wang, T., Wang, J.*, Tang, Y., Shi, H., Ladwig, K., 2009. Leaching Characteristics of Arsenic and Selenium from Coal Fly Ash: Role of Calcium. *Energy & Fuels* 23, 2959-2966.
 28. Tang, Y., Guan, X., Su, T., Gao, N., Wang, J.*, 2009. Fluoride Adsorption onto Activated Alumina: Modeling the Effects of pH and Some Competing Ions. *Colloids and Surfaces A: Physicochem. Eng. Aspects* 337, 33-38.
 27. Su, T., Shu, S., Shi, H., Wang, J.*, Adams, C., and Witt, E., 2008. Distribution of Toxic Trace Elements in Soil/Sediment in Post-Katrina New Orleans and the Louisiana Delta. *Environ. Pollut.* 156, 944-950.
 26. Su, T., Guan, X., Gu, G., Wang, J.*, 2008. Adsorption characteristics of As(V), Se(IV), and V(V) onto activated alumina: effects of pH, surface loading, and ionic strength. *J. Colloid Interface Sci.* 326, 347-353.
 25. Guan, X., Wang, J.*, Chusuei, C., 2008. Removal of arsenic from water using granular ferric hydroxide: macroscopic and microscopic studies. *J. Hazard. Mater.* 156, 178-185.
 24. Wang, J.*, Wang, T., Burken, J.G., Chusuei, C.C., Ban, H., Ladwig, K., Huang, C.P., 2008. Adsorption of Arsenic(V) onto Fly Ash: A Speciation-Based Approach. *Chemosphere* 72, 381-388.
 23. Witt, E.*, Adams, C., Wang, J., Shaver, D., and Filali-Meknassi, Y., 2007. Selected chemical composition of deposited sediments in the flooded areas of New Orleans following Hurricane Katrina, in Farris, G., Smith, G., Crane, M., Demas, C., Robbins, L. and Lavoie, D. (eds.) *Science and the Storms--the USGS Response to the Hurricanes of 2005*, U.S. Geological Survey Circular 1306, U.S. Department of the Interior, U.S. Geological Survey, p. 201-206.
 22. Witt, E.*, Adams, C., Wang, J., Shaver, D., and Filali-Meknassi, Y., 2007. Soil and Sediment Chemistry in the Mississippi River Delta Following Hurricane Katrina, in Farris, G., Smith, G., Crane, M., Demas, C., Robbins, L. and Lavoie, D. (eds.) *Science and the Storms--the USGS Response to the Hurricanes of 2005*, U.S. Geological Survey Circular 1306, U.S. Department of the Interior, U.S. Geological Survey, p. 207-212.
 21. Wang, T., Wang, J.*, Burken, J.G., Ban H., and Ladwig K., 2007. The Leaching Characteristics of Selenium from Coal Fly Ashes. *J. Environ. Qual.* 36, 1784-1792.
 20. Wang, J.*, Wang, T., Mallhi, H., Liu, Y., Ban H., and Ladwig, K., 2007. The Role of Ammonia on Mercury Leaching from Coal Fly Ash. *Chemosphere* 69, 1586-1592.
 19. Wang, J.*, Huang, C.P., and Allen, H.E., 2007. Effect of pH on Metal Uptake by Anaerobic Sludge. *Environ. Eng. Sci.* 24(8), 1095-1104.
 18. Wang, T., Wang, J.*, Ban, H., and Ladwig, K., 2007. Quantifying the Availability and the Stability of Trace Cationic Elements in Fly Ash. *Waste Manage.* 27, 1345-1355.
 17. Adams, C.*, Witt, E., Wang, J., Shaver, D., Summers, D., Filali-Meknassi, Y., Shi, H., Luna, R., Anderson, N., 2007. Chemical Quality of Depositional Sediments and Associated Soils in New Orleans and the Louisiana Peninsula following Hurricane Katrina. *Environ. Sci. Technol.* 41, 3437-3443.
 16. Wang, J.*, Ban, H., Teng, X., Wang, H., and Ladwig, K., 2006. Impacts of pH and Ammonia on the Leaching of Cu(II) and Cd(II) from Coal Fly Ash. *Chemosphere* 64, 1892-1898.
 15. Wang, J.*, Huang, C.P., and Allen, H.E., 2006. Predicting Metals Partitioning in Wastewater Treatment Plant Influent. *Water Research* 40, 1333 - 1340.
 14. Wang, J.*, Teng, X., Wang, H., and Ban, H., 2004. Characterizing the Metal Adsorption

- Capability of a Class F Coal Fly Ash. *Environ. Sci. Technol.* 38, 6710 - 6715.
13. Wang, J.*, Huang, C.P., and Allen, H.E., 2003. Modeling Heavy Metal Uptake by Sludge Particulates in the Presence of Dissolved Organic Matter. *Water Research* 37, 4835 - 4842.
 12. Wang, J., Huang, C.P.*, and Pirestani, D., 2003. Interactions of Silver with Wastewater Constituents. *Water Research* 37, 4444 - 4452.
 11. Kim, D.W., Cha, D.K.*, Wang, J., and Huang, C.P., 2002. Heavy Metal Removal by Activated Sludge: Influence of *Nocardia amarae*. *Chemosphere* 46, 137 - 142.
 10. Huang, C.P.*, and Wang, J., 2001. Factors Affecting the Distribution of Heavy Metals in Wastewater Treatment Process: Role of Sludge Particulate. *Water Sci. Technol.* 44, 47 - 52.
 9. Wang, J., Huang, C.P.*, and Allen, H.E., 2000. Surface Physical-Chemical Characteristics of Sludge Particulates. *Water Environ. Res.* 72, 545 - 553.
 8. Wang, J., Huang, C.P.*, Allen, H.E., Poesponegoro, I., Poesponegoro, H., and Takiyama L.R., 1999. Effects of Dissolved Organic Matter (DOM) and pH on Heavy Metal Uptake by Sludge Particulates Exemplified by Copper(II) and Nickel(II): Three-Variable Model. *Water Environ. Res.* 71, 139 - 147.
 7. Wang, J., Huang, C.P.*, Allen, H.E., Cha, D.K., and Kim, D.W., 1998. Adsorption Characteristics of Dye onto Sludge Particulates. *J. Colloid Interface Sci.* 208, 518 - 528.
 6. Wang, J., Huang, C.P.*, Allen, H.E., Takiyama, L.R., Poesponegoro, I., Poesponegoro, H., and Pirestani, D., 1998. Acid Characteristics of Dissolved Organic Matter in Wastewater. *Water Environ. Res.* 70, 1041 - 1048.
 5. Qiang, Z., Zhao, J., and Wang, J.*, 1997. Treatment of Phenolic Wastewater with Anaerobic-aerobic Reaction System. *Environ. Pollut. Control.* 19(2), 1 - 4 (in Chinese).
 4. Qiang, Z., Zhao, J., and Wang, J.* 1996. Cultivation of Anaerobic Phenol-degrading Sludge. *Chongqing Environ. Sci.* 18(4), 21 - 25 (in Chinese).
 3. Wang, J., Gu, G.*, and Zhang, C., 1993. Anaerobic Biodegradation of Phenol - Bacterial Acclimation and System Performance. *Water Sci. Technol.* 28(7), 17 - 22.
 2. Li, Z., Gu, G.*, and Wang, J. 1991. Municipal Sewage Treatment with an Enhanced Primary Treatment Process. *Shanghai Environ. Sci.* 11(7), 17 - 19 (in Chinese).
 1. Wang, J., and Gu, G.*, 1990. A Study on Anaerobic Processes for High Concentrated Phenol-bearing Wastewater Treatment. *Shanghai Environ. Sci.* 9(4), 17 - 20 (in Chinese).

BOOK CHAPTERS

3. Xie, L., Li, Y., Wang, J., 2013. Exploring the Bilingual Instruction Strategy to Teaching Introduction to Environmental Engineering course. In *Teaching Non-English-Oriented Courses with English and Bilingual Instruction: Practice and Research at Tongji University* (Chief Editor: Chen, Yiyi). Tongji University Press, Shanghai, China (in Chinese).
2. Wang, J., and Gu, G., 1996. The Design of Wastewater Treatment Plants for Leather Making Industry. *Handbook of Environmental Engineering* (Chief Editor: Zhang, Zijie). Publishing House of High Education, Beijing, China, 1024 - 1038 (in Chinese).
1. Gu, G., and Wang, J., 1996. The Design of Trickle Filters. *Handbook of Environmental Engineering* (Chief Editor: Zhang, Zijie). Publishing House of High Education, Beijing, China, 617 - 637 (in Chinese).

INDUSTRIAL PUBLICATIONS (Corresponding Author*)

3. Tucker, R.*, Wang, J., Tupper, S.H. 2018. The Army is Always in Need of Water. *The Professional Bulletin of Army Engineers*, May – August 2018, 25 – 28.
2. Tucker, R., Liu, G., Wang, J.*, He, P., Brooks, L.C., Dusenbury, J., Shalewitz, R., Neuendorff, L.K., White, G., Harris, W., and White, C.S. 2016. Wasting Less Water: Deployable Wastewater Treatment System Tested at Ford Leonard Wood. *The Professional Bulletin of Army Engineers*, May – August 2016, 46 – 48.

1. Wang, J.*, Liu, G., Tucker, R. 2016. Baffled Bioreactor – A Small Community Wastewater Solution. Water Innovations, March 2016, 28 – 32.

GRANTS AND CONTRACTS (\$5.5 M total; \$4.2 M as the PI)

32. **PI:** NSF, "Understanding the role of activated sludge in oxygen transfer to improve wastewater treatment sustainability"; October 2022 to September 2025; \$419,999 (NSF Award Number 2146781; J. Wang 100%).
31. **PI:** ESTCP-ERDC, "Demonstrating a BBR-based low energy closed-loop greywater reuse prototype (Contract Number W912HZ21C0021)"; May 2021 to May 2024; \$654,968 (Subaward of a \$1.1 M ESTCP project in collaboration with Army ERDC; J. Wang 100%) (Consulting).
30. **PI:** Ozark Rivers Solid Waste Management District, "Anaerobic Digestion of Food Waste Part 2 – Effect of Temperature", January 2022 to December 2022; \$23,550 (J. Wang 100%).
29. **PI:** Ozark Rivers Solid Waste Management District, "Anaerobic Digestion of Food Waste", January 2021 to December 2022; \$47,349 (J. Wang 100%).
28. **Co-PI:** DOE RUN CO, "Plant analysis for revegetation of lead/zinc mine tailings using biosolids and other amendments", July 2016 to June 2017; \$28,000 (PI: J. Burken).
27. **Co-PI:** MDNR, "Mechanical and environmental assessment of using scrap tires as an aggregate in construction", August 2015 to January 2017; \$205,388 (J. Wang 50%; M. ElGawady 50%).
26. **Co-PI:** Doe Run Company, "Potential for Concurrent Mine Tailings Stabilization and Biomass Production at Viburnum Mine 28", June 2015 to January 2016; \$23,800 (PI J. Burken and other 2 Co-PIs).
25. **Co-PI:** Mississippi Lime Company, "Toxic Elements Leaching Evaluation and Control from Coal Fly Ash by Using Lime Products", October 2014 to March 2015; \$9,746 (H. Shi 70%; J. Wang 30%).
24. **Co-PI:** PerkinElmer, "Cutting Edge Research and Applications by Modern NexION 300 ICP-MS: Single Nanoparticle Multi-Element ICP-MS Methods Development for Nanoparticle Characterization and Quantification (Grant No. 0040182)"; January 2014 to December 2016; \$238,788 (H. Shi 50%; X. Liang 40%; J. Wang 10%).
23. **Co-PI:** Tulsa Metropolitan Utility Authority, "Characterization and Removal of N-Nitrosamines Precursors and N-Nitrosamines in Source and Finished Water (Grant No. 00038453)"; January 2013 to December 2013; \$49,976 (H. Shi 70%; J. Wang 30%).
22. **PI:** US Army Tank-Automotive Research, Development, and Engineering Center (TARDEC), "Deployable Baffled Bioreactor for Military Base Wastewater Treatment and Reuse (Contract Number: W56HZV-12-C-0439)"; October 2012 to October 2015; \$1,145,000 (Consulting).
21. **PI:** NUTC, "Use of Adsorption Mechanism to Decrease Heavy Metal Mobility in Soil (Grant No. DTRT06-G-0014)"; August 2012 to December 2013; \$13,281 (J. Wang 50%; J. Burken 50%).
20. **Co-PI:** Leonard Wood Institute (LWI), "Conversion of Organic Wastes to Energy via Anaerobic Digestion at Contingency Bases (LWI Subaward No. 400-238)"; June 2012 to March 2013; \$30,000 (J. Burken 60%; J. Wang 40%).
19. **Co-PI:** The Bill & Melinda Gates Foundation Grand Challenges Explorations Round 7 Project (Phase I), "Biogas Generator Powered by Self-Sustaining Mixing Mechanism (Grant Number: OPP1044366)"; November 2011 to April 2013; \$120,000 (Consulting).
18. **PI:** EPRI and NUTC, "Effects of Trona on the leaching of trace elements from coal fly ash " (EPRI Agreement EP-P41401/C18238)"; November 2011 to December 2012; \$204,207 (J. Wang 50%; H. Shi 50%).
17. **Co-PI:** Army Research Laboratory (ARL) through Leonard Wood Institute (LWI), "Alternating BBR for Wastewater Treatment Focusing on Nitrogen Removal (Contract Number: 400-209)"; June 2011 to September 2011; \$74,480 (Consulting).

16. **PI:** Army Research Laboratory (ARL) through Leonard Wood Institute (LWI), “Feasibility Study of Using BBR to Treat Lightly Polluted Water for Beneficial Use (Contract Number: LWI-000-004)”; December 2010 to March 2011; \$74,480 (Consulting).
15. **Co-PI:** Missouri Department of Natural Resources (MDNR), “Economics of Waste to Energy Anaerobic Digestion in Missouri”; August 2010 to January 2012; \$48,431 (J. Burken 70%; J. Wang 15%; M. Mormile 15%).
14. **PI:** State Key Laboratory of Pollution Control and Resource Reuse, China, “Toxic effect of nanoparticles on water environment”; Awarded to School of Environmental Science and Engineering, Tongji University; September 2010 to June 2011; RMB 300,000 Yuan (~\$45,000) (J. Wang 100%).
13. **PI:** Army Research Laboratory (ARL) through Leonard Wood Institute (LWI), “Developing Full-Scale Deployable Water Reclamation Stations for Military Bases (Contract Number: LWI-191-059)”; September 2009 to December 2010; \$522,808 (Consulting).
12. **PI:** Army Research Laboratory (ARL) through Leonard Wood Institute (LWI), “Developing a Deployable Wastewater Treatment and Reuse System for Military Base Camps (Contract Number: LWI 281173)”; September 2008 to December 2009; \$516,456 (J. Wang 60%).
11. **PI:** USDA through Lincoln University, “Reducing Arsenic Uptake by Domestic Rice Plants (Contract Number 3432; USDA Award Number 2008-38814-04727)”; September 2008 to August 2012; \$157,215 (J. Wang 100%).
10. **PI:** EPRI and NUTC, “Leaching Behavior of Coal Combustion Products and the Environmental Implication in Road Construction”; April 2006 to July 2011; \$322,497 (EPRI: \$214,997; NUTC: \$107,500) (J. Wang 100%).
9. **Co-PI:** USGS, “Sediment Contamination in Post-Katrina New Orleans and the Louisiana Peninsula: Heavy Metals, PCBs and Pesticides”; July 2006 to June 2007; \$85,000 (J. Wang 40%; Other Co-Principal Investigators: 60%).
8. **Co-PI:** Anheuser-Busch Foundation, “Biological Energy Generation from Waste Solids”; May 2005 to May 2006; \$50,000 (J. Wang 49%; other Co-Principal Investigators: 51%).
7. **PI:** EPRI, “Leaching and Modeling of As and Se from Fly Ash”, EPRI PID #007513; July 2004 to December 2006; \$52,056 (J. Wang: 90%; J. Burken: 10%).
6. **PI:** EPRI, “Mercury Interactions with Fly Ash and FGD Materials”, EPRI PID #043352; June 2004 to December 2005; \$56,139 (J. Wang 100%).
5. **PI:** UM Research Board, “Mercury Interactions with Ash Containing Sorbent & Ammonia”; June 2004 to December 2005; \$27,800 (J. Wang 100%).
4. **PI:** USGS and EPRI, “The Leaching Behavior of Arsenic and Selenium from Fly Ash and Their Potential Impact on Water Quality”, USGS PID 2004MO34B and EPRI PID #060672; March 2004 to March 2006; \$34,000 (J. Wang: 90%; J. Burken: 10%).
3. **Co-PI:** EPRI, “The Effect of Ammonia on Metal Leaching from Coal Ashes”; July 2002 to December 2003; \$169,055 (J. Wang: 50%; H. Ban: 50%).
2. **PI:** Shanghai Young Scientist Foundation, China, “Anaerobic Combined-bed for the Treatment of High Concentrated Phenol-bearing Wastewater”; 1990 to 1992 (at Tongji University) (J. Wang 100%).
1. **Co-PI:** National Natural Science Foundation, China, “Water Pollution Control Planning for the City of Changzhou”; National Key Project 75-59-04; 1987 to 1990 (at Tongji University) (J. Wang 20%).

PATENTS

8. Wang J. 2021. Methods and Apparatuses for Water, Wastewater, and Waste Treatment (US Patent Number 10906826).
7. Wang J. 2018. Apparatus for Water, Wastewater, and Waste Treatment (US Patent Number 9938173).

6. Wang J., Canter, T. 2016. Methods and Apparatuses for Water and Wastewater Treatment (China Patent Number: 201280038462.1).
5. Wang, J. 2005. Biological Reactor for Treating Wastewater (China Patent Number ZL 02 1 12275.X).
4. Wang, J. 2004. Biological Reactor for Treating Wastewater (US Patent number 6787035).
3. Wang, J., Choi, H. 2004. Biological Reactor for Treating Wastewater (Korea Patent Number 0446107).
2. Wang, J., Choi, H. 2004. Apparatus for Treating Water or Wastewater (Korea Patent Number 0464716).
1. Wang, J. 2003. Apparatus for Treating Water or Wastewater (US Patent Number 6599418).

RESEARCH NEWS COVERAGE

(Examples below exemplify the numerous news coverages on my sustainable wastewater treatment technologies)

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- 2015. Converting wastewater into fresh water far more efficiently. Engineering News
- 2015. US researcher develops energy efficient waste-water treatment technology. WaterTechnology.Net
- 2015. New wastewater treatment methods could improve process, save energy. Wastewater
- 2015. University professor develops system to turn wastewater into fresh water. Tech Times
- 2015. Wastewater into "Freshwater" - Newly developed technologies produce cleaner treated water for less. Clean Technica
- 2015. System to turn wastewater into fresh water developed. Science Daily
- 2015. Research and designs support energy-efficient wastewater treatment. WE&T Magazine
- 2015. Military tests innovative baffled bioreactor. ASCE Magazine
- 2015. Missouri S&T researcher cleans wastewater. Missouri S&T News Release
- 2011. Where rice may not be so nice. Missouri S&T News Release
- 2009. S&T researcher thinks "inside the box" to create self-contained wastewater system for soldiers, small towns. Missouri S&T News Release
- 2006. UMR study tackles pollution prevention at power plants. UMR News Release

FULL-LENGTH PROCEEDINGS (Corresponding Author*)

30. Dan, Y., Zimmerman, C., Liu, K., Shi, H., and Wang, J.* (2012) Effect of Trona on the Leaching of As, Se, Mo, and V from Class C Coal Ash. 29th Annual international Pittsburgh Coal Conference. Pittsburgh, PA, USA. October (Oral presentation).
29. Liu, G., Wang, D., Wang, J.* (2010) Effect of Nano CuO and MgO on Activated Sludge. The Sixth International Conference on Sustainable Water Environment: Water Infrastructures in Time of Climate Change. University of Delaware, Newark, DE, USA (Oral presentation).
28. Hu, J., Wang, D., Wang, J.* (2010) Aggregation Kinetics of TiO₂ Nanoparticles. The Sixth International Conference on Sustainable Water Environment: Water Infrastructures in Time of Climate Change. University of Delaware, Newark, DE, USA (Oral presentation).
27. Wang, D., Hu, J., Wang, J.* (2010) The Role of Surface Accumulation of Toxins on Nanotoxicology. The Sixth International Conference on Sustainable Water Environment: Water Infrastructures in Time of Climate Change. University of Delaware, Newark, DE, USA (Oral presentation).
26. Su, T., Wang, J.*, Ladwig, K. (2008) Impact of Trona Injection on Ash Leaching Characteristics. International Pittsburgh Coal Conference 2008, Pittsburgh, PA, USA (Oral presentation).
25. Su, T., Shu, S., Shi, H., Wang, J.*, Adams, C., Witt, E. (2008) Heavy Metal Distribution in Post-Katrina New Orleans and Louisiana Peninsula. Preprints, 235 ACS National Meeting, 48,

- 653-657. New Orleans, LA (Oral presentation).
24. Su, T., Guan, X., Wang, J.* (2008) Quantifying arsenic adsorption onto activated alumina in the presence of other competing elements. Preprints, 235 ACS National Meeting, 48, 447-453. New Orleans, LA (Oral presentation).
23. Guan, X., Wang, J.*, Chusuei, C.C. (2007) Adsorption of arsenic on granular ferric hydroxide: a macroscopic and microscopic study. 234 ACS National Meeting, Boston, MA (Oral presentation).
22. Wang, T., Wang, J.*, Ladwig, K. (2007) The Leachability and Speciation of Arsenic and Selenium in Coal Fly Ash. Proceedings, 2007 World of Coal Ash Conference, Northern Kentucky, Kentucky, USA (CD proceedings; oral presentation).
21. Wang, T., Su, T., Wang, J.*, Ladwig, K. (2007) Calcium Effect on Arsenic (V) Adsorption onto Coal Fly Ash. Proceedings, 2007 World of Coal Ash Conference, Northern Kentucky, Kentucky, USA (CD proceedings; oral presentation).
20. Wang, J.*, Adams, C., Witt, E.C., Shaver, D.K., Summers, D.A., and Filali-Meknassi, Y. (2006) Chemical Quality of Soil and Sediment Samples in Post Katrina New Orleans. Pre-prints, 232 ACS National Meeting, San Francisco, CA (oral presentation).
19. Wang, T., Wang, J.*, Ban, H., and Ladwig, K. (2006) Effect of Activated Carbon Injection on the Leaching of Trace Oxyanionic Elements from Fly Ash. Pre-prints, 232 ACS National Meeting, San Francisco, CA (oral presentation).
18. Mallhi, H., Wang, J.*, Ban, H., and Ladwig, K. (2006) Interactions between Mercury and Fly Ash in the Presence of Ammonia. Pre-prints, 232 ACS National Meeting, San Francisco, CA (oral presentation).
17. Wang, T., Wang, J.*, and Ban, H. (2005) Determining the Total Leaching Potential of Trace Cationic Elements in Fly Ash Exemplified by Cd(II), Cu(II), and Ni(II). Proceedings, 2005 World of Coal Ash Conference, Lexington, Kentucky, USA (CD proceedings; oral presentation).
16. Wang, J.*, Ban, H., Teng, X., and Ladwig, K. (2005) The Effect of Ammonia on the Leaching of Cu(II) and Cd(II) from Fly Ash. Proceedings, 2005 World of Coal Ash Conference, Lexington, Kentucky, USA (CD proceedings; oral presentation).
15. Wang, T., Wang, J.*, Burken, J., and Ban, H. (2005) The Leaching Behavior of Arsenic from Fly Ash. Proceedings, 2005 World of Coal Ash Conference, Lexington, Kentucky, USA (CD proceedings; oral presentation).
14. Wang, H., Teng, X., Wang, J.*, Ban, H., Golden, D., and Ladwig, K. (2003) Environmental Impact of Metal Leaching from Ammoniated Power Plant Fly Ash. Proceedings, 2003 SWE (The Society of Women Engineers) Annual Conference. Birmingham, AL (CD proceedings; oral presentation).
13. Teng, X., Wang, H., Wang, J.*, Ban, H., Golden, D., and Ladwig, K. (2003) The Effect of Ammonia on Mercury Release from Coal Fly Ash. Proceedings, 28th International Technical Conference on Coal Utilization & Fuel Systems. Clearwater, Florida, USA. ISBN No. 0-932066-28-4, Library of Congress Card Catalog No. 86-06147, pp. 22.1-22.3 (Oral presentation).
12. Wang, H., Teng, X., Wang, J., Ban, H.*, Golden, D., and Ladwig, K. (2003) The Effect of Ammonia on Nickel Leaching from Coal Ashes. Proceedings, 15th International Symposium on Management & Use of Coal Combustion Products (CCPs), American Coal Ash Association (ACAA). Tampa, Florida. EPRI 1004699, Vol. 2, pp. 7601-7612 (Oral presentation).
11. Teng, X., Wang, H., Ban, H., and Wang, J.* (2003) Effect of Ammonia on Metal Leaching From Fly Ash. Proceedings, 76th WEF Annual Conference and Exposition, WEFTEC'2003. Los Angeles, CA (CD proceedings).
10. Wang, J.*, and Huang, C.P. (2002) Heavy Metal Interactions with Activated Sludge Particles. Proceedings, 75th WEF Annual Conference and Exposition, WEFTEC'2002, Chicago, Illinois (CD proceedings; oral presentation).
9. Wang, J.*, and Huang, C.P. (2000) Characteristics of Sludge Particulates in relation to Heavy Metal Uptake. Proceedings, 73rd WEF Annual Conference and Exposition, WEFTEC'2000,

- Anaheim, California (CD proceedings; oral presentation).
8. Wang, J., and Huang, C.P.* (1999) Heavy Metal Uptake by Sludge Particulates in the Presence of Dissolved Organic Matter. Proceedings, 72nd WEF Annual Conference and Exposition, WEFTEC'99, New Orleans, Louisiana (CD proceedings; oral presentation).
 7. Huang, C.P.*, Wang, J., Takiyama, L.R., and Myoda, S. (1998) Fate of Heavy Metals in Wastewater Treatment Systems: Evaluation of Pertinent Parameters and Predictive Models. Workshop Proceedings, 71st WEF Annual Conference and Exposition, WEFTEC'98, Orlando, Florida (Oral presentation).
 6. Wang, J., Huang, C.P.*, Allen, H.E., Takiyama, L.R., Poesponegoro, I., Poesponegoro, H., and Pirestani, D. (1997) Heavy Metal Binding Capacity of Dissolved Organic Matter (DOM) in Wastewater Treatment Plants. Proceedings, 70th WEF Annual Conference and Exposition, WEFTEC'97, Vol. 1, Paper 9735002. Chicago, Illinois (Oral presentation).
 5. Kim, D.W., Cha, D.K.*, Wang, J., and Huang, C.P. (1997) Fate of Heavy Metals in Nocardia Forming Sludge. Proceedings, 70th WEF Annual Conference and Exposition, WEFTEC'97, Vol. 1. Chicago, Illinois (Oral presentation).
 4. Takiyama, L.R., Huang, C.P.*, Allen, H.E., Wang, J., Poesponegoro, I., Poesponegoro, H., and Pirestani, D. (1997) The Influence of pH on Kinetics of Heavy Metal Uptake by Sludge Particulates. Proceedings, 70th WEF Annual Conference and Exposition, WEFTEC'97, Vol. 1. Chicago, Illinois (Oral presentation).
 3. Wang, J., Huang, C.P.*, and Allen, H.E. (1997) Surface Physical-chemical Characteristics of Sludge Particulates. Proceedings, Environmental Laboratories: Moving Toward the 21st Century Conference, pp. 9.1-9.12. The Water Environment Federation (WEF). Philadelphia, Pennsylvania (Oral presentation).
 - 2 Wang, J., Huang, C.P.*, Allen, H.E., Poesponegoro, I., Poesponegoro, H., and Takiyama, L.R. (1997) Predicting Metals Uptake. Biosolids Technical Bulletin, 3(2), 8 - 11.
 1. Wang, J., Huang, C.P.*, Allen, H.E., Poesponegoro, I., Poesponegoro, H., and Takiyama, L.R. (1996) Effects of Dissolved Organic Matter (DOM) and pH on Heavy Metal Uptake by Sludge Particulates: Three-variable Model. Proceedings, 69th WEF Annual Conference and Exposition, WEFTEC'96, Vol. 1, Paper # 9646004. Dallas, Texas (Oral presentation).

CONFERENCE PRESENTATIONS/POSTERS (Presenter*)

39. Wang, J.*. (2023) iMLE Process for Enhanced Nutrient Removal - Full-Scale Implementation. 2023 MWEA Fall Technical Conference, Columbia, MO (Oral presentation).
38. Wang, J.*, Liu, X., Ghenni, A.A., ElGawady, M.A. (2018) Reduced Zinc Leaching From Scrap Tire During Pavement Application. 256th ACS National Meeting & Exposition, Boston, MA (Oral presentation).
37. Wang, J.* (2018) Why should we promote low DO aeration? 256th ACS National Meeting & Exposition, Boston, MA (Oral presentation).
36. Ghenni, A.*, Liu, X., ElGawady, M.A., Wang, J., Shi, H. (2018) Leaching Assessment of Eco-Friendly Chip Seal Pavement. 2018 TRB Annual Meeting, Washington, DC (January) (Oral presentation).
35. Liu, X.*, Ghenni, A.A., ElGawady, M.A., Wang, J. (2017) Reduced Zinc Leaching From Scrap Tire During Pavement Application. Mid-American Environmental Engineering Conference (MAEEC), St. Louis, MO (Oral presentation).
34. Huang, C.P.*, Wang, J., Park, S.W. (2017) Surface complex formation between heavy metal ions and sludge particulates. 254th ACS National Meeting, Washington, DC (August) (Oral presentation).
33. Campbell, K.*, Wang, J. (2016) Respirometric Determination of Activated Sludge Mass Transfer Resistances. Mid-American Environmental Engineering Conference (MAEEC), Edwardsville, IL (Oral presentation).

32. Campbell, K.* , Wang, J. (2015) Effects of mixing and microbial community on oxygen transfer and uptake. Mid-American Environmental Engineering Conference (MAEEEC), Columbia, MO (Oral presentation).
31. Shi, H.* , West, D., Wu, Q., Mu, R., Donovan, A., Wang, J., Jiang, H. (2014) Occurrence and Control of N-Nitrosamines and their Precursors in Drinking Water System. SWAWWA Conference, Tulsa. OK (Oral presentation).
30. Wang, J.* , Hu, J. (2014) Synergistic toxic effect of arsenic and environmentally friendly metal oxide nanoparticles. 248th ACS National Meeting, San Francisco, CA (Oral presentation).
29. Shi, H.* , West, D., Wu, Q., Ma, Y., Wang, J., Adams, C., Jiang, H., Eichholz, T. (2014) Occurrence and Control of N-Nitrosamines and their Precursors in Drinking Water System. 248th ACS National Meeting, San Francisco, CA (Oral presentation).
28. Dan, Y., Zimmerman, C., Liu, K., Shi, H., and Wang, J.* (2013) Increased Leaching of As, Se, Mo and V from Trona Injected Coal Fly Ash. PITTCON 2013, Philadelphia, PA. March (Oral presentation).
27. Wang, J.* (2012) Effect of Trona on the Leaching of Trace Elements from Coal Fly Ash - LEAF Leaching of CCP's. Transportation Infrastructure Conference, National University Transportation Center, Missouri University of Science and Technology, Rolla, MO. September (Oral presentation).
26. Liu, G., Wang, J.* (2012) Nitrification Performance under Low Dissolved Oxygen in Activated Sludge. The 8th International Conference on Sustainable Water Environment, Guilin, China. July (Oral presentation).
25. Su, T.* , Wang, J. (2011) EDTA extraction of As and Se from coal fly ash. 242th ACS National Meeting, Denver, CO (Oral presentation).
24. Su, T.* , Wang, J. (2011) Time and pH dependent leaching of trace oxyanions from coal fly ash. 242th ACS National Meeting, Denver, CO (Oral presentation).
23. Clark, B.* , Wang, J., and Shi, H. (2010) Heavy Metal Concentrations in Infant Formula Purchased from U.S. Supermarkets. Spring 2010 ACS National Meeting (239th), San Francisco, California (Poster Presentation).
22. Wang, J.* (2010) Modeling Metal Adsorption using A Speciation-Based Approach. Spring 2010 ACS National Meeting (239th), San Francisco, California. (Oral Presentation).
21. Wang, J.* (2010) Introducing the Baffled Bioreactor (BBR) – A Low-Maintenance and Low-Energy Consumption Technology for Advanced Wastewater Treatment. 60th Annual Environmental Engineering Conference – Designing for Sustainability, University of Kansas, Lawrence, Kansas (Oral Presentation).
20. Wang, D.* , Irons, D., Wang, J. (2009) Nanotoxicology: Effect of Engineered Nanomaterials on Lead Toxicity. SETAC North America 30th Annual Meeting, New Orleans, LA (Poster Presentation).
19. Su, T., Wang, J.* (2009) Impact of Trona Addition on Ash Leaching Characteristics. 238th ACS National Meeting, Washington, DC (Oral presentation).
18. Cobb, G.P.* , Presley, S.M., Rainwater, T.R., Abel, M.T., Demas, C.R., Plumlee, G.S., van Metre, P.C., Wang, J., Su, T., Adams, C., Suedel, B., Steevens, J., and Kennedy, A. (2008) Contaminant Distributions in New Orleans and Surrounding Areas Following Hurricanes Katrina and Rita. SETAC North America 29th Annual Meeting, Tampa, FL (Oral presentation).
17. Su, T.* , Shu, S., Shi, H., Wang, J., Adams, C., Witt, E.C. (2008) Levels of Major Toxic Elements in Soil/Sediment in Post-Katrina New Orleans and Louisiana Peninsula. SETAC North America 29th Annual Meeting, Tampa, FL (Poster presentation).
16. Shi, H.* , Ding, J., Adams, C., Wang, J., Witt, E.C. (2008) Pesticide and Polychlorinated Biphenyl in Soil and Sediment Samples Collected from New Orleans Region following Hurricanes Katrina. SETAC North America 29th Annual Meeting, Tampa, FL (Oral presentation).
15. Shi, H.* , Shu, S., Su, T., Ding, J., Adams, C., Wang, J., Witt, E.C. (2008) Fractionation of

Toxic Trace Elements in Sediment and Soil Samples Collected from Great New Orleans Region following Hurricanes Katrina. SETAC North America 29th Annual Meeting, Tampa, FL (Poster presentation).

14. Tang, Y., Su, T., Gao, N., Wang, J.* (2008) Quantifying fluoride adsorption onto activated alumina (AA). Gordon Research Conference (GRC), Environmental Sciences: Water. Holderness School, Plymouth, NH (Poster presentation).

13. Su, T., Guan, X., Tang, Y., Gu, G., Wang, J.* (2008) Adsorption characteristics of As(V) onto activated alumina: A speciation based modeling approach. Gordon Research Conference (GRC), Environmental Sciences: Water. Holderness School, Plymouth, NH (Poster presentation).

12. Guan, X., Wang, J.* (2006) Modeling Arsenic Adsorption by Activated Alumina using a Speciation-based Approach. 232 ACS Annual Conference, San Francisco, CA (Poster presentation).

11. Wang, J.*, Wang, T., Mallhi, H., Liu, Y., Ban, H., Ladwig, K (2006) Impact of Ammonia Complexation on Mercury Leaching from Fly Ash. Gordon Research Conference (GRC), Environmental Sciences: Water. Holderness School, Plymouth, NH (Poster presentation).

10. Wang, T.*, Wang, J. (2005) The Leaching Behavior of Selenium from Coal Fly Ash. 22 Midwest Chinese American Science & Technology Association (MCASTA) Annual Conference, St. Louis, MO (Oral presentation).

9. Kasthuri, L.P.*, Wang, J., Ladwig K. (2005) Leaching of As and Se from Different Fly Ashes under Simulated Conditions. 40th ACS Midwest Regional Meeting, Joplin, MO (Oral presentation).

8. Kasthuri, L.P.*, Wang, J. (2005) The Leaching Behavior of Arsenic and Selenium from Fly Ash under Different Conditions. Mid-America Environmental Engineering Conference, St. Louis, MO (Oral presentation).

7. Wang, T.*, Wang, J., Chusuei, C., Ban, H. (2005) Release of Arsenic from Coal Fly Ash Surface. 229th ACS San Diego National Meeting, San Diego, California (Poster presentation).

6. Ban, H.*, Wang, H., Teng, X., Wang, J. (2003) Ammonia Effect on Metal Leaching from Fly Ash. Twentieth Annual International Pittsburgh Coal Conference, Pittsburgh, PA (Oral presentation).

5. Teng, X., Wang, H., Wang, J., Ban, H.* (2003) Ash Surface Characteristics for Metal Adsorption. 2003 International Ash Utilization Symposium. Lexington, Kentucky, USA (Oral presentation).

4. Wang, H., Teng, X., Wang, J., Ban, H.* (2003) Leaching Kinetics of Trace Elements from Ammoniated Coal Ash. 2003 International Ash Utilization Symposium, Lexington, Kentucky, USA (Oral presentation).

3. Wang, J.*, Huang, C.P. (2001) The Role of Dissolved Organic Matter in Metals Fate and Transport in Wastewater Treatment Plants. The Second Annual Symposium on Natural Organic Matters in Soils and Water, The Ohio State University, Columbus, Ohio (Oral presentation).

2. Wang, J.*, Huang, C.P. (1997) Modeling the Organic Matter Adsorption by Sludge Particulates Exemplified by New Coccine. 71st Colloid & Surface Science Symposium, ACS Division of Colloid and Surface Chemistry. Newark, Delaware (Oral presentation).

1. Wang, J.*, Gu, G. (1989) Partial Anaerobic Process for the Treatment of Phenol-bearing Wastewater. First Symposium on Water Pollution Control in China. Shanghai, China (Oral presentation).

TECHNICAL REPORTS

23. Wang, J., Liu, G. (2015) Tricon Deployable Baffled Bio-Reactor for Military Base Wastewater Treatment and Reuse. Final Technical Report submitted to TARDEC (Contract No. W56HZV-12-C-0439).

22. Shi, H., Wang, J. (2014) Characterization and Removal of N-Nitrosamines Precursors and N-Nitrosamines in Source and Finished Water. Tulsa Metropolitan Utility Authority, Tulsa, OK.
21. Medina, V.F., Waisner, S., Cosper, S., Rodriguez, G., Gilbert, D., Tucker, R., MacAllister, I., Scholze, R., Burken, J., and Wang, J. 2014. Anaerobic Digestion Assessment for Contingency Base Waste. Leonard Wood Institute; US Army Engineer Research and Development Center (ERDC). ERDC TR-14-3.
20. Wang, J., Shi, H. (2013) Effect of Trona on the Leaching of Trace Elements from Coal Fly Ash. EPRI Project Final Report (submitted July 2013).
19. Canter, T., Wang, J. (2012) Biogas Generator Powered by Self-Sustaining Mixing Mechanism. Gates Foundation Phase I Financial and Scientific Report (submitted November 2012).
18. Canter, T., Wang, J. (2011) Alternating BBR for Wastewater Treatment Focusing on Nitrogen Removal. Leonard Wood Institute (LWI) Final Technical Report (submitted September 2011).
17. Wang, J. (2011) Feasibility Study of Treating Lightly Polluted Water for Beneficial Use. Leonard Wood Institute (LWI) Final Technical Report (submitted March 2011).
16. Wang, J., Su, T. (2011) Leaching Behavior of Coal Combustion Products and The Environmental Implication in Road Construction. National University Transportation Center (NUTC) Technical Report.
15. Wang, J. (2011) Leaching Behavior of Coal Combustion Products and the Environmental Implication in Road Construction. EPRI Technical Report No XXXX, Palo Alto, CA.
14. Wang, J. (2011) Impact of Sodium Sorbent Based SO_x Emission Control Technologies on Fly Ash Leaching Characteristics. EPRI Technical Report No XXXX, Palo Alto, CA.
13. Wang, J., Fitch, M., and Burken, J.G. (2010) Developing full-scale deployable water reclamation stations for Military bases. Final Report, Leonard Wood Institute Project No. LWI-191-059.
12. Wang, J., Fitch, M., and Burken, J.G. (2009) Developing a Deployable Wastewater Treatment and Reuse System for Military Base Camps. Final Report, Leonard Wood Institute Project No. LWI 281173.
11. Wang, J. (2008) The Leaching Behavior of Arsenic and Selenium from Coal Fly Ash. EPRI Technical Report No 1015545, Palo Alto, CA.
10. Wang, J. (2007) The Effect of Ammonia on Mercury Partitioning in Fly Ash. EPRI Technical Report No.1014014, Palo Alto, CA.
9. Witt, E., Shi, H., Karstensen, K.A., Wang, J., and Adams, C.D. (2008) Environmental Chemical Data for Perishable Sediments and Soils Collected in New Orleans, Louisiana, and along the Louisiana Delta following Hurricanes Katrina and Rita, 2005. USGS Scientific Investigations Report 2008-5031.
8. Raper, J., Wang, J., Mormile, M.R., Burken, J.G., and Dandurand, M. (2006) Biological Energy Generation from Waste Solids. Final Report, UMR Project#: 00008170, Anheuser-Busch Foundation.
7. Ban, H. and Wang, J. (2005) Effects of Ammonia on Trace Element Leaching from Coal Fly Ash. EPRI Technical Report No. 1010063, Palo Alto, CA.
6. Huang, C.P., Allen, H.E., Wang, J., Takiyama, L.R., Poesponegro, H., Poesponegro, I., Pirestani, D., Myoda, S.P., and Crumety, D. (2000) Chemical Characteristics and Solids Uptake of Heavy Metals in Wastewater Treatment. Final Report, WERF Project 93-CTS-1, Water Environment Research Foundation (WERF).
5. Narrative of Proposed Activity for Red Lion Road Site Closure at Philadelphia Northeast Airport (Roy F. Weston; submitted to Northeast Airport, Philadelphia; 2000).
4. Desktop Study for Condensate Treatment at the Fresh Kills Landfill Leachate Treatment Facility (Roy F. Weston; submitted to Paulus, Sokolowski, and Sartor, Inc. (PS&S) and New York City Department of Sanitation (DOS); 2000).

3. Evaluation of Ambersorb Adsorption, Air Stripping, GAC Adsorption, and Advanced Oxidation Technologies on the Remediation of Groundwater Contaminated by Chlorinated Organic Pollutants (Roy F. Weston; submitted to Air Force Center for Environmental Excellence (AFCEE); 1999).
2. Wang, Jianmin (1991) Treating High-Strength Phenol Wastewater Using Packed Anaerobic Upflow Bed. Final Report, Contract No.: (89) YG01006, Shanghai Science and Technology Commission.
1. Gu, G., Cai, B., Ding, G., Ouyang, M., and Wang, J. (1990) Water Pollution Control Planning for the City of Changzhou. Final Report, National Key Project 75-59-04, National Natural Science Foundation.

INVITED TALKS

25. Enhanced nutrient removal from wastewater through an intermittent aeration strategy. Invited by Session Chair, ENVR: Water Reuse & Recycling: Innovative Solutions for Treatment & Implementation, 256th ACS National Meeting & Exposition, Boston, MA (Aug. 2018)
24. Why should we promote low DO aeration? Invited by Fudan University, Shanghai, China (June 2018)
23. Enhancing Nutrient Removal using iMLE Process. Invited by Shanghai University, China (June 2018)
22. Why should we promote low DO aeration? Invited by:
 - (a) Research Center for Eco-Environmental Sciences (June 2017)
 - (b) Shanghai University (June 2017)
21. Sustainable wastewater treatment through low DO aeration. Invited by Biological Sciences Department (Oct. 2016)
20. Harnessing Energy and Freshwater from Wastewater: Is It Feasible? Invited by China Petroleum University, Qingdao, China (June 2016)
19. Low DO sustainable wastewater treatment process. Invited by Tongji University, Shanghai, China (June 2016)
18. Sustainable wastewater treatment and its implications. Invited by St. Louis University, St. Louis, MO (October 2015)
17. Thoughts on Wastewater Treatment Sustainability. Invited by Tongji University, Shanghai, China (June 2015)
16. Nitrification kinetics under low DO conditions. Invited by Tongji University, Shanghai, China (June 2015)
15. Practical Approaches to Improve Activated Sludge Process Performance. Invited by Sanitation Districts of Los Angeles County (August 2014)
14. Reducing Energy Consumption Through Low DO Aeration. Invited by:
 - (a) Renmin University of China (July 2014)
 - (b) Kunming University of Science and Technology (July 2014)
13. Nitrification Performance Under Low DO in Activated Sludge. Invited by Shanghai Institute of Technology (June 2013)
12. Baffled Bioreactor (BBR) for Advanced Wastewater Treatment. Invited by:
 - (a) Chongqing University (July 2012)
 - (b) Guilin University of Technology (July 2012)
11. Modeling Metal Adsorption using A Speciation-Based Approach. Invited by Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences (June 2010)
10. Leaching of arsenic and selenium from coal fly ash. Invited by Omega Chi Epsilon – the Chemical Engineering Honor Society at Missouri S&T (October, 2008)
9. Adsorption of As(V), Se(IV), and V(V) onto Activated Alumina: A Speciation-based Modeling Approach. Invited by:

- (a) Shanghai University (June, 2008)
 - (b) Shandong Agriculture University, China (June 2010)
 - (c) National Taiwan University (October 2010)
8. Fate and Transport of Heavy Metals in Wastewater Treatment Plants. Invited by:
 - (a) Qingdao Polytechnic University (June, 2008)
 - (b) Chongqing University (June, 2008)
 - (c) Xi'an Jiaotong University (June, 2008)
 7. Major Processes Impacting Arsenic and Selenium Leaching from Coal Fly Ash. Invited by:
 - (a) Civil and Environmental Engineering, University of Missouri – Columbia (February, 2008);
 - (b) Geology and Geophysics & Petroleum Engineering Department, Missouri S&T (March, 2008)
 - (c) School of Environmental Science and Engineering, Tongji University (June, 2008)
 - (d) College of Agricultural & Natural Sciences, Lincoln University (March, 2009)
 6. Interactions of Arsenic and Selenium with Fly Ash. Invited by School of Municipal and Environmental Engineering, Harbin Institute of Technology, China (September, 2006).
 5. Leaching of Trace Elements from Coal Fly Ash. Invited by:
 - (a) Department of Mining and Nuclear Engineering, UMR (January, 2006)
 - (b) Jiangsu Polytechnic University, China (July, 2006)
 - (c) School of Environmental Engineering, Chongqing University, China (Sept., 2006)
 4. Summary for the EPRI Funded Projects at UMR. Invited by EPRI Advisory Board Meeting, St. Louis (September, 2005).
 3. Metal Speciation in Ammonia-Contaminated Fly Ash. Invited by:
 - (a) School of Environmental Science and Engineering, Tongji University (09/21/04)
 - (b) School of Municipal and Environmental Engineering, Harbin Institute of Technology (09/23/04)
 - (c) Department of Environmental Engineering, Tsinghua University (09/24/04)
 - (d) Department of Chemical and Biological Engineering, UMR (10/21/04)
 2. Metal Interactions with Fly Ash in the Presence of Ammonia. Invited by School of Environmental Science and Engineering, Tongji University, China (December 2003)
 1. Effect of Ammonia on Metal Leaching from Fly Ash. Invited by WEF Student Chapter Society Night (November 2003)

HONORS AND AWARDS

- Excellence in Review Award, Frontiers of Environmental Science and Engineering (2016)
- CAPEES Best Paper Award (2015)
- Distinguished Service Award, CAPEES (2014)
- 2010 Faculty Research Award, Missouri University of Science and Technology (2010)
- Joseph H. Senne, Jr. Faculty Achievement Award, Academy of Civil Engineers, Missouri University of Science and Technology (2010)
- ExCEED (Excellence in Civil Engineering Education) Fellow, American Society of Civil Engineers (ASCE) (2002)
- Employee Recognition, Roy F. Weston, Inc. (2001)
- Publication Award, Roy F. Weston, Inc. (2000)
- Student Research Award, Pennsylvania Water Environment Association (1997)
- Best Paper Award (second place), Chesapeake Water Environment Association (1996)
- Xing-Yuan Education Award, Xing-Yuan Education Foundation, Tongji University (1993)
- Outstanding Teacher Award, Tongji University (1993)
- Distinguished Research Achievement Award, Tongji University (1992)

- Outstanding Teacher Award, Tongji University (1991)

ADVISEE AWARDS

- Xuesong Liu (Ph.D. student) received Best Presentation Award in 2017 MAEEC Conference at Washington University (Oct. 2017).
- Ken Campbell (Ph.D. student) received Best Presentation Award in 2016 MAEEC Conference at SIUE (Oct. 2016).
- Ken Campbell (Ph.D. student) received the third place award in 2016 Graduate Fellows Poster Session presentation (Feb. 2016).
- Guoqiang Liu (Ph.D. student) received 2015 CAPEES Best Paper Award (July 2015).
- In April 2010 undergraduate student Brandi Clark received prestigious NSF Graduate Research Fellowship (GRF).
- In May 2009 an undergraduate student design team from CE 369 class won the second place award in the final competition in 2008-2009 Metcalf & Eddy Academic Design Competition.
- In April 2009, an undergraduate student Brandi Clark won Second Place Award in Engineering, as well as the Best Bibliography Award, at the undergraduate research conference at Missouri S&T, for her paper “Determination of Mercury in Baby Formula Purchased from U.S. Supermarkets.”
- In 2009 Tina Su (Ph.D. student) received ERC Barr Engineering Student Publication Award in the second annual award ceremony (first place).
- In April 2008 two undergraduate student design teams from CE 369 class were selected as the top 5 teams 2007-2008 Metcalf & Eddy Academic Design Competition. The other universities represented are Rose-Hulman Institute of Technology, University of Waterloo and the University of Wisconsin in Madison; this is the first time we participated in this competition. Teams were not selected including Widener, Notre Dame, UIUC, Iowa Sate, Villanova, and Alberta. One of our teams won the second place award in the final competition.
- In 2007 Tian Wang (Ph.D. student) received ERC Barr Engineering Student Publication Award in the first annual award ceremony (third place).
- In April 2006 undergraduate student Ryan Sitzes received Judge's Choice award for outstanding achievement in WERC environmental design contest; this was the first time we participated in this competition.

DOCTORAL DISSERTATION ADVISED

2022 – Tong Zhou	Understanding the oxygen transfer process in the mixed liquor for activated sludge process
2015 – 2020 Xuesong Liu	The combined toxic effect of nanoparticles and lead in the presence of algae (Raphidocelis)
2014 – 2020 Ken Campbell	Physical and biological factors affecting oxygen transfer in the activated sludge wastewater treatment process
2008 – 2012 Guoqiang Liu	Nitrification performance of activated sludge under low DO conditions (Associate Professor at Jinan University, China)
2008 – 2011 Tingzhi Su	Leaching characteristics of inorganic contaminants from coal fly ash (Missouri S&T Degree)
2009 – 2011 Ji Hu	Fate and transport of nanoparticles in the environment (The Second

Institute of Oceanography, Hangzhou, China)

2007 – 2009 Yulin Tang	Modeling the adsorption characteristics of typical inorganic anions in water (Professor at Tongji University)
2006 – 2008 Tingzhi Su	Quantifying arsenic, selenium, and vanadium adsorption onto activated alumina – A speciation-based surface complexation approach (Tongji University Degree)
2004 – 2007 Tian Wang	The leaching behavior of arsenic, selenium and other trace elements in coal fly ash

MASTER STUDENTS ADVISED

- 2022 – Shubhankar Pradip Shinde: Anaerobic digestion of food waste using self-mixing anaerobic digester
- 2011 – 2012 Eric Farrow: Trace Element Accumulation in Rice: Effects of Soil Arsenic, Irrigation Management, Cultivar, Phosphate Application and Iron Oxide Amendment
- 2005 – 2007 Harmanjit Mallhi: Impact of Ammonia on the Leaching Characteristics of Mercury from Coal Fly Ash
- 2004 – 2006 Lenin Kasthuri: Leaching of Arsenic and Selenium from Fly Ash in the Simulated Field Systems

UNDERGRADUATE RESEARCH ADVISED

Danielle Sheahan – Activated sludge particle size monitoring; 2017

Margo Daniels - Oxygen Transfer: Effects of Mixing; 2016 - 2017

Kyle Thompson - Monitoring Toxic elements in protein powders; 2012 - 2013

Forrest Carithers - Arsenic uptake by rice; 2011 – 2013

Brett Forthaus - Nanotoxicity; 2010 – 2011

David Irons - Nanotoxicity; 2009 – 2010

Brandi Clark (EPA GRO Fellow; OURE Fellow) - (a) Trace Elements in Baby Formula, EPA; (b) Arsenic Uptake by Rice Plants, USDA; (c) Mercury Concentrations in Baby Foods, OURE; 2008 – 2010

Mike Dandurand - Biological Energy Generation from Waste Solids. Anheuser-Busch Foundation; 2006

Ryan Sitzes - Semi conductor wastewater treatment for TMAH removal – WERC Environmental Design Contest; 2006

POST-DOCTORAL RESEARCH SCHOLARS ADVISED

- Demin Wang - Synergistic effect of nanoparticles and heavy metals; 2009 – 2010
- Xiaohong Guan - Removal of Arsenic from Drinking Water using Aluminum Oxides and Granular Ferric Hydroxide; 2007. Professor at Tongji University

VISITING SCHOLARS HOSTED

- Prof. Haotao Shang, China University of Geosciences; 2011
- Prof. Ping Cao, Shang Technical University; 2008 – 2009
- Prof. Guoji Ding, Shanghai University; 2008 – 2009

UNDERGRADUATE DESIGN ADVISED – many

GRADUATE STUDENT COMMITTEES

Ph.D.:

2016 Mariam Al-Lami (Advisor: J. Burken)
2015 Jimoh Oladejo Tijani (Advisor: Leslie Petrik, U. of The Western Cape, South Africa)
2015 Junnan Cao (Advisor: B. Bate)
2014 Matt Limmer (Advisor: J. Burken)
2013 Xin Kang (Advisor: B. Bate)
2009 Honglan Shi (Advisor: C. Adams)
2009 Shi Shu (Advisor: G. Morrison)
2008 Evelyn Chamberlain (Advisor: C. Adams)
2007 Hong Wang (Advisor: G. Morrison)
2006 Hua Jiang (Advisor: C. Adams)

M.S.:

2018 Austin Doss (Advisor: M. Fitch)
2014 Hongwan Li (Advisor: G. Morrison)
2013 Yongbo Dan (Advisor: H. Shi)
2012 Samantha Markus (Advisor: J. Burken)
2011 Tim Canter (Advisor: M. Fitch)
2009 Carrie Bender (Advisor: D. Wronkiewicz)
2008 Matt Lueders (Advisor: C. Adams)
2008 Sushmita Dhakal (Advisor: J. Burken)
2006 Rohiniben Patel (Advisor: C. Adams)
2005 Liang Yu (Advisor: C. Adams)

COURSES TAUGHT

CE/EnvE 2601 Principles of Environmental Engineering and Sciences
Spring 2006; Fall 2006; Spring 2007; Fall 2007; Spring 2008; Fall 2016; Fall 2017; Spring 2018;
Fall 2018; Fall 2019; Fall 2020; Fall 2021

EnvE 3603 Chemical Fundamentals of Environmental Engineering
Fall 2008; Fall 2009; Fall 2011; Fall 2012; Fall 2013; Spring 2015; Spring 2016; Spring 2017;
Spring 2019; Spring 2020; Spring 2020; Spring 2022

CE/EnvE 3615 Water and Wastewater Engineering
Spring 2004; Fall 2004; Spring 2005; Spring 2006; Spring 2007; Fall 2007; Fall 2008;
Fall 2009; Fall 2011; Fall 2012; Fall 2013; Fall 2014; Fall 2015; Fall 2016; Fall 2017; Fall 2018;
Fall 2019; Fall 2020; Fall 2021; Fall 2022

CE/ArchE 4097 Senior Design
Fall 2003; Spring 2004; Fall 2004; Fall 2009; Spring 2010; Fall 2018; Spring 2019

CE/EnvE 5619 Environmental Engineering Design
Fall 2004; Fall 2005; Fall 2006; Spring 2008; Spring 2009; Spring 2010; Spring 2012;

CE/EnvE 6611 Physicochemical Operations in Environmental Systems
Spring 2009; Spring 2012; Spring 2013; Spring 2014; Spring 2015; Spring 2016; Spring 2017;
Spring 2018; Spring 2019; Spring 2020; Spring 2021

CE/EnvE 6600 Physicochemical Operations in Environmental Systems
Fall 2019; Fall 2020; Fall 2021; Fall 2022

COURSES TAUGHT AT TONGJI UNIVERSITY

Undergraduate Courses

Introduction of Environmental Engineering (Co-instructor) – Spring 2011; Summer 2012, 2013;

Graduate Courses

Wastewater treatment theory and technology (Co-instructor) - Fall 2010; Spring 2011; Summer 2012; Summer 2013;

Technical English for Environmental Science (Co-instructor) - Fall 2010

COURSES TAUGHT AT UAB

Undergraduate Courses

CE 484 Engineering Hydraulics – Fall 2001, Fall 2002, Spring 2003

CE 333 Water Supply and Drainage Design – Spring 2002

CE 335 Introduction to Water and Wastewater Treatment – Summer 2002

Graduate Courses

CE 691A Special topics on Water and Wastewater Treatment – Summer 2002

CE 682/782 Water Treatment Engineering – Fall 2002

CE 690/790 Advanced Wastewater Treatment – Spring 2003

PEER REVIEW ACTIVITIES

Journals (> 40)

ACS Omega; Analytical Methods; ASCE Practice Periodical of Hazardous, Toxic, and Radioactive Waste Management; Carbon; Chemical Engineering Journal; Chemical and Biochemical Engineering Quarterly; Chemical Geology; Chemosphere; CLEAN - Soil, Air, Water; Crit. Rev. Environ. Sci. Technol.; Desalination/Desalination and Water Treatment; Energy and Fuels; Engineering; Environmental Chemistry Letters; Environmental Engineering and Management Journal; Environmental Engineering Science; Environmental Pollution; Environmental Progress; Environmental Science and Technology; Environmental Protection Engineering; Environmental Technology; Environmental Toxicology; Frontiers of Environmental Science and Engineering; Fuel; Industrial & Engineering Chemistry Research; International Journal of Environmental Analytical Chemistry; International Journal of Environmental Science and Technology; International Journal of Phytoremediation; Journal of the Air and Waste Management Association; Journal of Colloid and Interface Science; Journal of Environmental Engineering; Journal of Environmental Management; Journal of Environmental Quality; Journal of Environmental Sciences; Journal of Environmental Science and Health, Part A; Journal of Hazardous Materials; Journal of Water Process Engineering; KSCE Journal of Civil Engineering; Journal of Water Process Engineering; Nature- Scientific Reports; Science of the Total Environment; Separation and Purification Technology; Waste Management; Water Environment Research; Water Science and Technology; Water Research;

Funding Agencies (8 total)

Upper Great Plains Transportation Institute; Lincoln University; Ministry of Education, China; National Research Foundation, South Africa; National Science Foundation - Regular and SBIR programs; UM Research Board; Water Resources Research Institute of UNC; Wyoming Water Research Program;

EDITORIAL BOARDS

- Sustainable Environment Research. 2013 - 2018
- Chinese Journal of Environmental Engineering. 2014 - 2018

CONFERENCE/WORKSHOP CHAIR AND ORGANIZER

- Organizer, 2018 Annual Mid-American Environmental Engineering Conference (MAEEC), October 2018, Rolla, MO.
- Session Chair, ENVR: Chemical Reactions at Solid-Water Interfaces of Natural & Built Environment, 256th ACS National Meeting & Exposition, Boston, MA (2018).
- Organizer, Wastewater Treatment Technologies for Rural Applications Mini-Workshop. Rizhao City, China, June 2015
- Chair, Water Quality Session, Water Challenges and Opportunities - A symposium in celebration of 50th Anniversary of Missouri Water Resources Research Center. Columbia, MO, October 2014
- Co-Chair, Session Water Treatment Technology for Emerging Contaminants, Symposium ENVR022a: Thermodynamics and Kinetics in Treatment Processes, Past, Present and Future: Symposium in Honor of Prof. Chin-Pao Huang, 248th ACS National Meeting, San Francisco, CA, August 2014
- Organizing Committee Chair, AEESP 50th Anniversary Conference Workshop - Environmental Education and Research in China (with Y. Xie, Z. Ren, and Q. Li) (July 2013)
- Program committee member, The 8th International Conference on Sustainable Water Environment, Guilin, China July 17-19 2012
- Organized a team of US professors to visit several universities in China, including Chongqing University, Guilin University of Technology, and Xi'an University of Architecture and Technology for potential collaboration in July 2012

PROFESSIONAL ORGANIZATION SERVICES AND RECOGNITIONS

- AEESP Outstanding Dissertation Award Committee, 2014 - 2016
- Member, CAPEES Board of directors, 2014 - 2018
- Chair of the Board, CAPEES, 2013
- President, CAPEES, 2012
- Certificate of Appreciation, for ACS journal peer review services, Dec 15, 2011
- Certificate of Appreciation, ACS Division of Environmental Chemistry, July 15, 2010
- Chief Editor, Chinese-American Professors in Environmental Engineering and Science (CAPEES) Newsletter. 2007 – 2011
- Member, Students & Young Professionals Committee (SYPC), Water Environment Federation (WEF). 2002 - 2009
- Member, Education Committee, Alabama Water Environment Association (AWEA). January 2002 – August 2003
- Judge, WEFTEC'2002 Student Design Competition (October 2002)

PROFESSIONAL AFFILIATIONS

- Founding member, Chinese-American Professors in Environmental Engineering and

- Science (CAPEES) (July 2007)
- American Chemical Society (Member since March 2005)
- Water Environment Federation (Member since November 1996)
- Association of Environmental Engineering and Science Professors (Member since January 2008)
- American Society for Engineering Education (2005 - 2011)

UNIVERSITY SERVICE

- Campus COI committee (2021 -)
- Environmental Engineering Lab Coordinator (Spring 2020 -)
- Library liaison (many years)
- Campus and CEC Promotion and Tenure Review Committee (Fall 2020 - 2022)
- Chair, Department Promotion and Tenure Review Committee (Fall 2020 - 2022)
- University Parking Committee (Fall 2019 - 2020)
- University Promotion and Tenure Policy Committee (Fall 2018 – Fall 2020)
- Faculty Senate (Fall 2017 – Spring 2019)
- Department OURE Coordinator (Fall 2016 -)
- Chair, GeoTech faculty search (AY 2016)
- Research Engineering Tech 1 hiring committee (2015)
- Advisor, Freshman Engineering Program (Fall 2014 – Spring 2016)
- Campus Tuition and Residence Committee (Fall 2014 -)
- Phonathon activities (2013)
- Spring 2012 open house (Feb. and April 2010)
- Chair, Environmental Engineering faculty search (AY 2012)
- Spring 2010 open house (Feb. and April 2010)
- Member, Mathes Chair search committee (March 2008 – April 2010)
- Advisor, 2007-2008 Metcalf & Eddy Academic Design Competition teams (in conjunction with CE/EnvE 369) (Spring semester 2008)
- Fall 2007 phonathon organizer (set a new record of \$132,260; exceeded goal of \$130k)
- Judge, CGS Graduate Research Showcase (April 2007)
- Co-Lead with Dr. Adams in establishing Agreement of Academic Cooperation on Environmental Discipline Between the University of Missouri-Rolla, USA and Harbin Institute of Technology, People's Republic of China (Signed November, 2006)
- Co-Lead with Dr. Adams in establishing Agreement of Academic Cooperation on Environmental Discipline Between the University of Missouri-Rolla, USA and Tongji University, People's Republic of China (Signed April, 2006)
- Member, EnvE UPC (Since 2003)
- Member, CE UPC (2003 – 2006; 2011 -)
- Member, CE GAC (2006 – 2011)
- Advisor of Environmental Engineering Undergraduate Student Competition (Fall 2005 – Spring 2006)
- UMR promotion in China:
 - 2004: visited Tongji University, Harbin Institute of Technology, and Tsinghua University;
 - 2005: visited Tongji University, Ocean University of China;
 - 2006: visited Tongji University, Jiangsu Polytechnic University, Chongqing University, and Harbin Institute of Technology;
- Open House activities (April 2004)
- Phonathon activities (2003 - 2005)

- Society Night speaker (November 12, 2003)
- Rolla Nite activities at St. Louis (2003; 2005 – organizer)

COMMUNITY SERVICE

- Juror, Phelps County Circuit Court (Sept. – Dec. 2012).
- Advisor for two wastewater treatment plant design teams, Engineers without Borders (EWB) (Spring 2008).
- Volunteer: Environmental assessment for New Orleans (October 12-15, 2005).
- Volunteer Expert for an EPA - ASCE project: Clean Water for Sustainable Cities in China (September 2003 – May 2004).
- PE exam review at Fort Leonard Wood (March 5, 2004).
- Help with MATHCOUNTS Competition (March 2004).

PROFESSIONAL DEVELOPMENT

- Completed a 13-session English communication training course Fall 2006.
- Conducting Research on Teaching and Learning in Engineering and the Sciences: Workshop conducted by Richard Felder; March 11, 2005.
- Helping Students Get On Course - a two-Day Workshop: January 6 & 7, 2005.
- UMR Writing group activities (2004 – 2005).
- Preparations for On Course – The Next step: January 4, 2005.
- NFTS/On Course activities: September 8; September 14; October 13; 2004.
- On Course Teaching Workshop (August 16 – 17, 2004).
- New Faculty Teaching Scholars (NFTS) Program (AY 2004 – 2005): Course Design Retreat: September 30 – October 2, 2004; Teaching Renewal Conference: February 24 – February 26, 2005; Academic Portfolio Retreat: May 16 – May 18, 2005.
- ASCE ExCEED Mini-Teaching Workshop at UMR (October 7 – 8, 2004).
- UMR Freshmen Faculty Forum (FFF) – bi-weekly (Fall 2003 and Spring 2004).
- Training at the Using Tests to Enhance the Teaching/Learning Progress Workshop with Dr. Leon J. Gross, February 7, 2003 (UAB).
- Training at the Teaching Portfolios Workshop with Dr. Peter Seldin, January 24, 2003 (UAB).
- Training at the ASCE ExCEED Teaching Workshop. United States Military Academy, West Point, NY. July 28 – August 2, 2002.