

**Curriculum Vitae
Clemson University
Environmental Engineering and Earth Sciences
College of Engineering, Computing and Applied Science (CECAS)
Department of Microbiology, College of Science (COS)
Finneran Environmental, LLC**

NAME

Kevin T. Finneran

PERSONAL INFORMATION

Professor
Environmental Engineering and Earth Sciences
Microbiology
312 Biosystems Research Complex (BRC)
105 Collings Street
Clemson, SC 29634

Principal
Finneran Environmental, LLC: *specialty remediation services*
Clemson, SC 29631

EDUCATION

Ph.D., University of Massachusetts at Amherst, 2001, Microbiology
B.S., Rutgers University, 1996, Environmental Sciences

PROFESSIONAL EXPERIENCE

Clemson University, 2019-Present, Professor of Environmental Engineering and Earth Sciences,
2010-2019 Associate Professor of Environmental Engineering and Earth
Sciences

Clemson Presidential Leadership Institute (PLI), 2020-2021 Cohort, Nominated by Dean of CECAS
and Chair of EES, the Clemson PLI is a one-year experience for faculty and staff
identified as future leaders at Clemson or elsewhere

Clemson University, 2015-Present, Professor of Microbiology (Joint Appointment)

University of Illinois at Urbana Champaign, 2004-2010, Assistant Professor of Civil and
Environmental Engineering

University of Illinois at Urbana Champaign, 2008-2010, Affiliate Faculty for the Institute of
Genomic Biology (IGB)

Middlesex Community College at Lowell, 2003-2004, Adjunct Professor of Biological Sciences

GeoSyntec Consultants, 2001-2004, Environmental Microbiologist and “Professional” Level Scientist

University of Massachusetts at Amherst, 1997-2001, Graduate Research Assistant (1998-2001) and Graduate Teaching Assistant (1997)

U.S. EPA Environmental Response Team Center Edison, NJ, 1994-1997, Cooperative Education Internship Environmental Scientist

HONORS AND AWARDS (*DENOTES RECOGNITION OF INTERNATIONAL SIGNIFICANCE)

Research

***Kavli Fellow of the National Academy of Sciences (NAS) (May 2012)**

- **The Kavli program recognizes researchers who are considered global leaders in their respective field**
- **The program recognized (Dr. Finneran) for Bioremediation and Fate & Transport of Environmental Contaminants**

Best student paper award, Association for Environmental Health Sciences (AEHS) annual east coast conference on contaminated soil, sediment, and water, Amherst, MA, October 2007 (Student: Na Wei)

Best student paper award, Association for Environmental Health Sciences (AEHS) annual east coast conference on contaminated soil, sediment, and water, Amherst, MA, October 2009 (Student: Kay Dunnett)

Best student paper award, Association for Environmental Health Sciences (AEHS) annual east coast conference on contaminated soil, sediment, and water, Amherst, MA, October 2013 (Student: Jovan Popovic)

*Best student paper award, Battelle Conference on In Situ and On Site, and Sustainable Remediation, Miami, FL, May 2015 (Student: Jolanta Niedzwiecka)

Clemson University Department of Environmental Engineering and Earth Sciences, Environmental Scholars Award, April 2015 (Student: Jolanta Niedzwiecka)

Best Student Presentation, Clemson Hydrogeology Symposium, April 2018 (Student: Morgan Ivey)

Best Student Poster, SC Water Research Conference, March 2019 (Student: Joel Neuder)

Teaching

Incomplete list of teachers ranked excellent by their students, spring 2007, CEE 330

Incomplete list of teachers ranked excellent by their students, fall 2007, CEE 330

List of teachers ranked excellent by their students, spring 2008, CEE 444

List of teachers ranked excellent by their students, fall 2008, CEE 330

List of teachers ranked excellent by their students, spring 2009, CEE 330

List of teachers ranked excellent by their students, fall 2009, CEE 330

University of Illinois Engineering Council Award for Excellence in Advising, 2009

University of Illinois Engineering Council Award for Excellence in Advising, 2010

CONSULTING EXPERIENCE

Finneran Environmental, LLC, Principal (January 2008-present), specialty remediation consulting services to the environmental engineering community

- Data analyses and interpretation to support remedial investigation and remedial approach design
- Implementation and oversight of in situ and ex situ remediation
- Fate and transport studies for environmental contaminants in natural and engineered settings
- Electron donor amendment strategies including:

Representative Clients (Confidential Clients listed as such):

1. Meritor, Inc, Troy, MI, develop field remediation strategies for TCE contaminated aquifer material and revise current approach for in situ remediation (January 2016-Present)
2. United States DoD under Battelle, Inc, Cape, Inc, and Noreas, Inc: develop field remediation strategies for TCE and Cr(VI) contaminated aquifer material and revise current approach for in situ remediation (December 2019-Present)
3. SGW Services, Sao Paulo Brazil, data analysis and interpretation for in situ remediation (December 2020-Present)
4. BE3 Corporation, Buffalo NY, Technical consulting and remedial design for a TCE and Cr(VI) contaminated redevelopment site (May 2020-Present)
5. Thompson Hine, LLC, Scientific Advisor to Legal Counsel for Confidential Fortune 500 Client (July 2017-2023)
6. Hollingsworth Saco Lowell Easley Site Trust, lead consultant, data analyses and field bioremediation design for a TCE-contaminated site in SC (February 2013-2023)
7. Draper Aden and Associates, Formerly Solutions, IES, Raleigh, NC (2015-2021), review ESTCP documents for eventual publication in a remediation “wiki”
8. EcoStar, LLC, Louisville, KY (2015-2021), petroleum hydrocarbon bioremediation in contaminated groundwater
9. Devlin & Parkinson, PA, Litigation Support & Expert Witness PCB fate and transport (2018-2021)
10. Provectus Environmental Products, Freeport, IL, data analyses and interpretation, all bioremediation sites (2017-2019)

11. Burns & McDonnell Consulting, Chesterfield, MO (2008-2018), developed laboratory and field remediation strategies for RDX and TCE contamination
12. EnviroSouth Consulting, Greenville, SC (2014- 2015), data analysis, sample planning, and bioremediation design for a TCE contaminated site in Spartanburg, SC
13. Carus Corporation Remediation Products & Services, Peru, IL (2011-2012), expert services for bioremediation and biodegradation

MEMBERSHIPS (PROFESSIONAL SOCIETY MEMBERSHIPS)

Member, American Chemical Society, ACS (1998-Present)

Member, Association of Environment Engineering and Science Professors, AEESP, (2005-Present)

- Chair of the Awards Committee (2019-2022 term)

Member, American Society of Microbiology, ASM (1998-Present)

Member, International Society for Microbial Ecology, ISME (2010-Present)

Member, National Groundwater Association, NGWA, (2003-Present)

- Member of the NGWA Groundwater Summit sci advisory board

Member, Society for Industrial Microbiology, SIM (2011-Present)

PROFESSIONAL ACTIVITIES

1. Professional Society

National Groundwater Association, Elected to the NGWA Scientific Board of Directors (Term 2022-2024, nominated for re-election)

National Groundwater Association National Meeting Steering Committee, 2019-Present

Chair of the Awards Committee, AEESP, 2019-2022

Environmental Division Co-Chair, Society for Industrial Microbiology, 2020-2022

SIMB Annual Meeting, Invited Session Chair, Summer 2021

National Groundwater Association (NGWA) Groundwater Summit, Invited Session Chair, December 2020

ACS Spring National Meeting, Invited Session Chair, Spring 2019

Battelle In Situ and On-Site Bioremediation Conference, Invited Speaker (three sessions), Spring 2019

SIMB Annual Meeting, Invited Session Chair, Summer 2019

Association of Environmental Geologists (AEG) National Meeting, Invited Session Chair, Summer 2019

National Groundwater Association (NGWA) Groundwater Summit, Invited Session Chair, December 2019

Chair Elect (2019-2021), Society for Industrial Microbiology (SIMB) Division of Environmental Microbiology

Invited Session Chair, Society for Industrial Microbiology (SIMB) Annual Meeting, 2017 Denver, CO, Biodegradation and Bioremediation Session

Invited Session Chair, Battelle International Symposium on Bioremediation and Sustainable Environmental Technologies, 2017 Miami, FL, Explosives and Energetics Remediation

Invited Session Chair, ACS National Meeting, Summer 2016 Philadelphia, PA, Bioremediation and Biodegradation: Innovative Research and Tools for In Situ and Ex Situ Strategies

Invited Session Chair, Battelle International Symposium on Bioremediation and Sustainable Environmental Technologies, 2013 Jacksonville, FL, Altering subsurface geochemistry for remediation session and Biofuels session

Kavli Fellow, National Academy of Sciences and Alexander von Humboldt Foundation, as part of the NAS/AVHF German American Frontiers of Science Conference (GAFOS) series, inaugural presentation given May 10-13, 2012

Invited Session Chair, Association for Environmental Health Sciences (AEHS) Annual Conference on Contaminated Soil, Sediment, and Water, Bioremediation Session (Sponsored Session) (2012, 2013)

Invited Steering Committee Member, Battelle Conference on Chlorinated and Recalcitrant Compounds 2010, *only academic invited to participate on the 6 person steering committee*

Invited Panelist, DuPont Remediation Group Panel on Biological-Abiotic Reactions for in situ and ex situ remediation, 2009-2010

Invited Session Chair, Battelle In Situ and On Site Bioremediation Conference, Fuel Oxygenates and Petroleum Contamination, May 2009

Invited Session Chair, Battelle In Situ and On Site Bioremediation Conference, Fuel Oxygenates and Petroleum Contamination, to be held May 2009, Baltimore, MD (2009)

Invited Session Chair, Association for Environmental Health Sciences (AEHS) Annual Conference on Contaminated Soil, Sediment, and Water, Environmental Biotechnology Session (Sponsored Session) (2006)

Invited Session Chair, Association for Environmental Health Sciences Annual Northeast Conference on Contaminated Soil, Sediment, and Water, Bioremediation Session (2006-2008, 2003-2004)

Editorial Board, Soil and Sediment Contamination: an International Journal (see above) (Taylor and Francis journal for AEHS) (2002-present)

Submitted "Willingness to Serve" statement to National Ground Water Association (NGWA) for conference committee coordination and organization (2004-present)

Scientific Advisory Board member, Association for Environmental Health Sciences Annual Northeast Conference on Contaminated Soil, Sediment, and Water (2001-present)

2. Federal and State

Invited by U.S. Department of Defense to Attend a “By Invitation Only” Expert Panel Summit on “*Biogeochemical Processes in the Degradation of Chlorinated Solvents*; current state of knowledge and RFP development for FY2008 DoD research statements of need” (co-sponsored by U.S. EPA) (2007)

Reviewed the U.S. EPA Document “Monitored Natural Attenuation of Methyl tert Butyl Ether (MTBE)”, authored by John Wilson et al, at the request of the U.S. EPA (2006)

BOOKS AND MONOGRAPHS

1. Finneran, K.T. and D.R. Lovley, In Situ Bioremediation: Anaerobic Bioremediation of MTBE and TBA: *in MTBE Remediation Handbook*, P. Kostecki and E. Moyer, Editors. Amherst Scientific Publishers, Amherst, MA, 265-278 (2003)

REFEREED JOURNAL PUBLICATIONS (H-INDEX = 28)

1. Finneran, K.T. and D.R. Lovley, Anaerobic Degradation of Methyl tert-Butyl Ether (MTBE) and tert-Butyl Alcohol (TBA), *Environ. Sci. Technol.* 35(9), 1785-1790 (2001)
2. Finneran, K.T., R.T. Anderson, and D.R. Lovley, Potential for Bioremediation of Uranium-Contaminated Aquifers with Microbial U(VI) Reduction, *Soil and Sediment Contamination: an International Journal*, 11(3), 339-357 (2001)
3. Finneran, K.T., D.R. Lovley, and E. Moyer, Anaerobic Strategies for Enhanced MTBE and TBA Bioremediation, *Journal of Contaminated Soil, Sediment, and Water, Special Fuel Oxygenates Issue*, Spring 2001, 91-94 (2001)
4. Finneran, K.T., H.R. Forbush, C.V. Gaw-VanPragh, and D.R. Lovley, *Desulfitobacterium metallireducens* sp. Nov., an Anaerobic Bacterium that Couples Growth to the Reduction of Metals, Humic Substances, and Chlorinated Compounds, *Int. J. Syst. Evol. Microbiol.*, 52, 1929-1935 (2001)
5. Finneran, K.T., C.V. Johnsen, and D.R. Lovley, *Rhodoferox ferrireducens* sp. Nov., a Psychrotolerant, Facultatively Anaerobic Bacterium that Respires Fe(III) and Nitrate Coupled to the Oxidation of Acetate, *Int. J. Syst. Evol. Microbiol.*, 53(3), 669-673 (2002)
6. Holmes, D.H., K.T. Finneran, and D.R. Lovley, Enrichment of *Geobacteraceae* Associated with Stimulation of Dissimilatory Metal Reduction in Uranium-Contaminated Aquifer Sediments, *Appl. Environ. Microbiol.*, 68(5), 2300-2306 (2002)
7. Finneran, K.T., Housewright, M.E., and D.R. Lovley, Multiple Influences of Nitrate on Uranium Solubility during Bioremediation of Uranium-Contaminated Sediment, *Environ. Microbiol.*, 4(9), 510-516 (2002)
8. Shelobolina, E.S., K.R. O'Neill, K.T. Finneran, L.A. Hayes, D.R. Lovley, Potential for In Situ Bioremediation of a Low-pH, High-Nitrate Uranium-Contaminated Groundwater, *Soil and Sediment Contamination: an International Journal*, 12(6), 865-884 (2003)

9. Nevin, K.P., K.T. Finneran, and D.R. Lovley, Microorganisms Associated with Uranium Bioremediation in a High Salinity Subsurface Sediment, *Appl. Environ. Microbiol.*, 69(6), 3672-3675 (2003)
10. Kwon, M.J., and K.T. Finneran, Microbially-Mediated Hexahydro-1,3,5-trinitro-1,3,5-triazine Biodegradation by Extracellular Electron Shuttling Compounds, *Appl. Environ. Microbiol.*, 72(9), 5933-5941 (2006)
11. Reinauer, K., Y. Zhang, X. Yang and K.T. Finneran, Tert-Butyl Alcohol Biodegradation by Psychro- and Thermo-tolerant Microbial Cultures Enriched from Granular Activated Carbon, *Biodegradation*, 19(2), 259-268 (2007)
12. Hatch, J.L. and K.T. Finneran, Reduced extracellular Electron Shuttles as Electron Donors for Hydrogen Production in Fermentative Bacterial Metabolism, *Current Microbiology*, 56(3), 268-273 (2007)
13. McKelvie, J.R., S.K. Hirschorn, G. Lacrampe-Couloume, J. Lindstrom, J. Braddock, K.T. Finneran, D. Trego, and B. Sherwood-Lollar, Evaluation of TCE and MTBE in situ Biodegradation: Integrating Stable Isotope, Metabolic Intermediate, and Microbial Lines of Evidence, *GWMR*, 27(4), 63-73 (2007)
14. Kwon, M.J., and K.T. Finneran, Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) and Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX) Biodegradation Kinetics amongst several Fe(III)-Reducing Genera, *Soil and Sediment Contamination*, 17(1), 1-15 (2008)
15. Kwon, M.J. and K.T. Finneran, Distribution of Products and Mineralization Potential for Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) in Abiotic versus Biological Degradation Pathways with Anthraquinone-2,6-Disulfonate (AQDS) and *Geobacter metallireducens*, *Biodegradation*, 19(5), 705-715 (2008)
16. Wei, Na, and K.T. Finneran, Microbial Community Analyses of Three Distinct, Liquid Cultures that Degrade Methyl tert Butyl Ether (MTBE) using Anaerobic Metabolism, *Biodegradation*, 20(5), 695-707 (2009)
17. Kwon, M.J. and K.T. Finneran, Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) Reduction is concurrently Mediated by Direct Electron Transfer from Hydroquinones and the Resulting Biogenic Fe(II) formed during Electron Shuttle-Amended Biodegradation, *Environmental Engineering Science*, 26(5), 961-971 (2009)
18. Kwon, M.J. and K.T. Finneran, Electron Shuttle-Stimulated RDX Mineralization and Biological Production of 4-nitro-2,4-diazabutanal (NDAB) in RDX-Contaminated Aquifer Material, *Biodegradation*, 21(6), 923-937 (2010)
19. Wei, Na, and K.T. Finneran, 2011, The Influence of Ferric Iron on Complete Dechlorination of Trichloroethylene (TCE) to Ethene: Fe(III) Reduction does not Always Inhibit Complete Dechlorination, *Environ. Sci. Technol.*, 45(17), 7422-7430

20. Kwon, M.J., E. O'Loughlin, D. Antonopoulos, and K.T. Finneran, 2011, Geochemical and Microbiological Processes Contributing to the Transformation of Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) in Contaminated Aquifer Material, *Chemosphere*, 84(9), 1223-1230
21. Wei, Na, and K.T. Finneran, 2011, Microbial Community Composition during Anaerobic TBA Mineralization in Fuel Contaminated Aquifer Material, *Environ. Sci. Technol.*, 45(7), 3012-3018
22. Mohatt, J.L., L. Hu, K.T. Finneran, and T.J. Strathmann, 2011, Biologically Mediated Abiotic Transformation of the Antimicrobial Agent Sulfamethoxazole under Iron-Reducing Soil Conditions, *Environ. Sci. Technol.*, 45(11), 4793-4801
23. Ye, X., X. Zhang, E. Morgenroth, and K.T. Finneran, 2011, Anthrahydroquinone-2,6-disulfonate (AH₂QDS) increases hydrogen molar yield and xylose utilization in growing cultures of *Clostridium beijerinckii*, *Applied Microbiol Biotechnol.*, 92(4), 855-864
24. Ye, X., X. Zhang, E. Morgenroth, and K.T. Finneran, 2012, Anthrahydroquinone-2,6-disulfonate increases the rate of hydrogen production during *Clostridium beijerinckii* fermentation with glucose, xylose, and cellobiose, *International Journal of Hydrogen Energy*, 37, 11701-11709
25. Wei, N. and K.T. Finneran, 2013 Low and High Acetate Amendments are Equally as Effective at Promoting Complete Dechlorination of Trichloroethylene (TCE), *Biodegradation*, 24, 413-425
26. Zhang, X., X. Ye, K.T. Finneran, J. Zilles, and E. Morgenroth, 2013, Interactions between *Clostridium beijerinckii* and *Geobacter metallireducens* in co-culture fermentation with anthrahydroquinone-2, 6-disulfonate (AH₂QDS) for enhanced biohydrogen production from xylose, *Biotechnology and Bioengineering*, 110(1), 164-172
27. Azam, H.M. and K.T. Finneran, 2013, Ferric Iron Increases Fe(III)-Reducing Microbial Diversity and Carbon Oxidation in On-Site Wastewater Systems, *Chemosphere* 90(4), 1435-1443
28. Michael F. Fanizza, Hongkyu Yoon, Changyong Zhang, Martinus Oostrom, Thomas W. Wietsma, Nancy J. Hess, Mark E. Bowden, Timothy J. Strathmann, Kevin T. Finneran, and Charles J. Werth, 2013, Pore Scale Evaluation of Uranyl Phosphate Precipitation in a Model Groundwater System, *Water Resources Research*, 49(2), 874-890
29. Ye, X., X. Zhang, E. Morgenroth, and K.T. Finneran, 2013, Exogenous anthrahydroquinone-2,6-disulfonate specifically increases xylose utilization during mixed sugar fermentation by *Clostridium beijerinckii* NCIMB 8052, *International Journal of Hydrogen Energy*, 38, 2719-2727
30. Millerick, K.A., S.R. Drew, and K.T. Finneran, 2013, Electron Shuttle Mediated Biodegradation of Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX) Adsorbed to Granular Activated Carbon, *Environmental Science and Technology*, 47:8743-8750
31. Zhang, X. X. Ye, B. Guo, K.T. Finneran, J. Zilles, and E. Morgenroth, 2013,

Lignocellulosic hydrolysates and extracellular electron shuttles for H₂ production using co-culture fermentation with *Clostridium beijerinckii* and *Geobacter metallireducens*, *Bioresource Technology*, 147:89-95

32. Kwon, M.J., N. Wei, K. Millerick, J. Popovic, and K.T. Finneran, 2014, *Clostridium geopurificans* strain MJ1 sp. nov., a Strictly Anaerobic Bacterium that Grows via Fermentation and Reduces the Cyclic Nitramine Explosive Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX), *Current Microbiology*, 68:743-750
33. Reinauer, K. J. Popovic, C. Weber, K.A. Millerick, M.J. Kwon, N. Wei, Y. Zhang, and K.T. Finneran, 2014, *Hydrogenophaga carboriunda* sp. nov., a Tertiary Butyl Alcohol Oxidizing, Psychrotolerant Aerobe Derived from Granular Activated Carbon, *Current Microbiology*, 68:510-517
34. Azam, H.M. and K.T. Finneran, 2014, Fe(III) Reduction Mediated Phosphorus Removal as Vivianite in Septic System Wastewater, *Chemosphere*, 97:1-9
35. Niedzwiecka, J.B. and K.T. Finneran, 2015, Frontier Review: Combined biological and abiotic reactions for degradation of explosives and insensitive munitions (IM), *Environ Sci: Water Res & Technol*, 1:34-39
36. Millerick, K.A., J.T. Johnston, and K.T. Finneran, 2016, Photobiological transformation of hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) using *Rhodobacter sphaeroides*, *Chemosphere*, 159:138-144
37. Popovic, J., Ye. X., Haluska, A., and K.T. Finneran, 2017, Increasing xylose consumption and butanol production with ferric iron and extracellular electron shuttling molecules during fermentation with *Clostridium beijerinckii* NCIMB 8052 and a novel, solventogenic Bacterium, *Applied Microbiol Biotechnol*, 101:8053-8061
38. Niedzwiecka, J.B., S.R. Drew, M.A. Schlautman, K.A. Millerick, E. Grubbs, N. Tharayil, and K.T. Finneran, 2017, Iron and Electron Shuttle Mediated (Bio)Degradation of 2,4-Dinitroanisole (DNAN), *Environ Sci Technol*, 51:10729-10735
39. Popovic, J., Ye. X., Haluska, A., and K.T. Finneran, 2018, Electron Shuttling to Ferrihydrite Selects for Fermentative rather than Fe(III) Reducing Biomass in Xylose-Fed Batch Reactors Derived from Three Different Inoculum Sources, *Biotechnology and Bioengineering*, 115: 577-585
40. Li, B., A.R. Pales, H.M. Clifford, S. Kupis, S. Hennessey, W.Z. Liang, S. Moysey, B. Powell, K.T. Finneran, and C. J.G. Darnault, 2018, Preferential Flow in the Vadose Zone and Interface Dynamics: Impact of Microbial Exudates, *J Contam Hydrol*, 558: 72-89
41. Finneran, K.T. and J. Popovic, 2018, Mini Review: Solvent Production from Xylose, *Appl Microbiol Biotechnol*, 102: 8707-8715
42. Jessica A Deaver, Karla I Diviesti, Mehul Soni, Barbara J Campbell, Kevin T Finneran, Sudeep C Papat, 2020, Palmitic acid limits methane production in anaerobic co-digestion of fats, oils, and grease in wastewater sludge, *Chemical Eng Journal*, 396: 125235-125262
43. Popovic, J. and K.T. Finneran, 2020, Enhancing xylose and glucose utilization as well as solvent production using a simplified three-electrode potentiostat system

during *Clostridium* fermentation, J Industrial Microbiol, 47: 889-895

44. Haluska, A. and K.T. Finneran, 2020, Increasing electron donor concentration does not accelerate complete microbial reductive dechlorination in contaminated sediment with native organic carbon, Biodegradation: 32: 577-593, DOI: [10.1007/s10532-021-09953-y](https://doi.org/10.1007/s10532-021-09953-y)
45. Jessica A Deaver, Karla I Diviesti, Mehul Soni, Vijay Shankar, Kevin T Finneran, Sudeep C Papat, 2021, Taxonomic and Functional Variations Induced by an Overloading in Anaerobic Codigestion of Municipal Wastewater Sludge with Fats, Oils, and Grease, ES&T Engineering, 1: 1205-1216, <https://doi.org/10.1021/acsestengg.1c00086>
46. Kim, Han Suk, Sang Hoon Lee, Ho Young Jo, K.T. Finneran, and Man Jae Kwon, 2021, Diversity and composition of soil Actinobacteria and Proteobacteria communities as a bacterial indicator of past land-use change from forest to farmland, Sci Tot Environ, 797: 148944-148950
47. Kang, Myeong-Jung, Han-Suk Kim, Yidan Zhang, Kanghyun Park, Ho Young Jo, K.T. Finneran, and Man Jae Kwon, 2023, Potential natural attenuation of petroleum hydrocarbons in fuel contaminated soils: Focusing on anaerobic fuel biodegradation involving microbial Fe(III) reduction, Chemosphere, 341: 140134-140145

CONFERENCE PROCEEDINGS

1. K.T. Finneran and D.R. Lovley, 2001, Anaerobic Degradation of MTBE and TBA, Proceedings from the EPA/API Workshop on MTBE Biodegradation, Cincinnati, OH (February 1-3, 2000)
2. Reinauer, Kimberly, Yang Zhang, Xiaomin Yang and K.T. Finneran, 2006, Biodegradation of tert-Butyl Alcohol by a Mixed, Aerobic Culture, Second International Meeting on Environmental Biotechnology and Engineering (2IMEBE), Mexico City, Mexico (September 26-29, 2006)
3. Hatch, Jennifer, and K.T. Finneran, 2006, Increasing Fermentative Hydrogen Production using a Microbial Physiology Approach, Second International Meeting on Environmental Biotechnology and Engineering (2IMEBE), Mexico City, Mexico (September 26-29, 2006)
4. Reinauer, Kimberly, Yang Zhang, Xiaomin Yang and K.T. Finneran, 2006, Biodegradation of tert-Butyl Alcohol by a Mixed, Aerobic Culture, National Ground Water Association (NGWA) 2006 Petroleum Hydrocarbons and Organic Chemicals in Groundwater, Houston, TX (November 6-7, 2006)
5. Niedwiecka, J.B. and K.T. Finneran, 2014, Joint Army, Navy, NASA, Air Force (JANNAF) workshop proceedings: fate, transport, and effects of insensitive munitions, issues and recent data, JANNAF 2014 IM meeting, Charleston, SC, sponsored by SERDP-DoD, May 18-22, 2014

RESEARCH REPORTS (FINAL REPORTS LISTED)

1. K.T. Finneran, and X. Zhang, "Phosphorus removal in on-site (septic) systems by adding Fe(III) to stimulate Fe(III) reduction", University of Illinois and University of Massachusetts, Final Report, CICEET (September 2010)
2. K.T. Finneran, and E. Morgenroth, "Hydrogen production in *Clostridium beijerinckii* using reduced extracellular electron shuttling compounds", Clemson University and ETH Zurich, Final Report, National Science Foundation project number 0756054 (September 2011)
3. K.T. Finneran, "Complete dechlorination of trichloroethylene (TCE) by non-Dehalococcoides microorganisms", Clemson University, Final Report, National Science Foundation project number 1102889 (October 2012)
4. K.T. Finneran, "Combined biological and chemical reactions in the biodegradation of insensitive munitions", Clemson University, Final Report, SERDP Project ER-2222 (October 2017)

OTHER SCHOLARLY PUBLICATIONS (ABSTRACTS, INVITED REVIEWS, DISCUSSIONS)

5. K.T. Finneran, H.M. Forbush, R.T. Anderson, P.E. Long, D.R. Lovley, Microbiological and Geochemical Analysis of Microbial Uranium Reduction in a Uranium-Contaminated Aquifer, ASM General Meeting, Los Angeles, CA, May 21-25, 2000
6. K.T. Finneran, R.T. Anderson, D.R. Lovley, Stimulated U(VI) Remediation in a Uranium-Contaminated Aquifer, SETAC Annual Meeting, Nashville, TN, November 12-16, 2000
7. C. Johnsen, D. Holmes, K.T. Finneran, R.T. Anderson, D.R. Lovley, Stimulated Uranium Immobilization within Uranium-Contaminated Aquifers, Departmental Annual Meeting, Amherst, MA, March 10, 2001
8. E. Shelobolina, J. Tor, K.T. Finneran, K. Kashefi, D.R. Lovley, Enrichment and Isolation of Novel Mesophilic and Thermophilic Microorganisms, Departmental Annual Meeting, Amherst, MA, March 10, 2001
9. K.T. Finneran, R.T. Anderson, D. Holmes, S. Ciuffo, P.E. Long, D.R. Lovley, Geochemical and Microbiological Analysis of Bioremediation of Uranium-Contaminated Subsurface Environments, ASM General Meeting, Orlando, FL, May 20-24, 2001
10. D.E. Holmes, R.A. O'Neil, K.T. Finneran, D.R. Lovley, Enrichment of Geobacteraceae Associated with Stimulation of Dissimilatory Metal Reduction in Uranium-Contaminated Aquifer Sediments, ASM General Meeting, Salt Lake City, UT, May 19 – 23, 2002
11. C.V. Johnsen, K.T. Finneran, D.R. Lovley, *Geoferax ferrireducens* gen. nov., sp. Nov.: A Facultatively Anaerobic, Acetate- and Benzoate-Oxidizing Psychrotolerant Fe(III)-Reducing Bacterium, ASM General Meeting, Salt Lake City, UT, May 19 – 23, 2002

12. R.T. Anderson, K.T. Finneran, J. Jones, J.D. Istok, T.C. Wilson, P.E. Long, D.R. Lovley, Stimulated In Situ Removal of U(VI) from Uranium-Contaminated Groundwater, ASM General Meeting, Salt Lake City, UT, May 19 – 23, 2002
13. K.T. Finneran, E.S. Shelobolina, D.R. Lovley, Removal of Dissolved U(VI) Associated with Nitrate Reduction in a Low-pH, High Nitrate Aquifer, ASM General Meeting, Salt Lake City, UT, May 19 – 23, 2002
14. K.T. Finneran, R.T. Anderson, P.J. Zeeb, E.E. Cox, D.R. Lovley, Geochemical and Microbiological Analysis of Bioremediation of Uranium-Contaminated Subsurface Environments, SERDP/ESTCP Partners Meeting, Washington, DC, December 3-5, 2002
15. S. Dworatzek, and P.J. Zeeb, and K.T. Finneran, TCE Bioremediation in a Deep, Basalt Aquifer, Battelle In Situ and On Site Bioremediation Symposium, Orlando, FL, June 2 – 6, 2003
16. K.T. Finneran, S. Dworatzek, and P.J. Zeeb, TCE Bioremediation in a Deep, Basalt Aquifer, ASM General Meeting, Washington, DC, May 18 – 22, 2003
17. Chartrand, M., G.L. Couloume, K.T. Finneran, P.R. Chang, P.J. Zeeb, and B. Sherwood-Lollar, Evidence of Biodegradation at a DNAPL Contaminated, Fractured Bedrock Field Site using Stable Carbon Isotope Analyses, Battelle Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA May 24-27, 2004
18. Kwon, Man Jae and K.T. Finneran, Humic Substances Mediated Biodegradation of Hexhydro-1,3,5-trinitro-1,3,5-triazine (RDX), ISSM/IJSEB Joint International Conference on Subsurface Microbiology, Jackson, WY, August 20 – 26, 2005
19. Kwon, Man Jae and K.T. Finneran, Humic Substances Mediated Biodegradation of Hexhydro-1,3,5-trinitro-1,3,5-triazine (RDX), SERDP/ESTCP Partners Meeting, Washington, DC, November 30 – December 1, 2005
20. Kwon, Man Jae and K.T. Finneran, Humic Substances Mediated Biodegradation of Hexhydro-1,3,5-trinitro-1,3,5-triazine (RDX), AEHS International Conference on Contaminated Soil, Sediment, and Groundwater, Amherst, MA, October 20 – 24, 2005
21. Finneran, K.T. Humic-substance and Iron Mediated Degradation of Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX): the Role of Electron Shuttles in Bioremediation. AEHS Annual West Coast Conference on Contaminated Soils, Sediment, and Water, San Diego, CA, March 13 – 16, 2006
22. Kwon, Man Jae, S. Drew, and K.T. Finneran, Humic Substances Mediated Biodegradation of Hexhydro-1,3,5-trinitro-1,3,5-triazine (RDX) and Other Explosives Residues in Sediment and Water, Battelle International Conference on Recalcitrant and Chlorinated Compounds, Monterey, CA, accepted for presentation May 22 – 25, 2006
23. Kwon, Man Jae, S. Drew, and K.T. Finneran, Extracellular Electron Shuttle Mediated Biodegradation of Hexahydro-1,3,5-trinitro-1,3,5-Triazine (RDX) in RDX-Contaminated Aquifer Material, ASM General Meeting, Orlando, FL, May 21-25, 2006

24. Zhang, Yang, and K.T. Finneran, Tert-Butyl Alcohol Biodegradation by a Mixed Bacterial Culture Enriched from Granular Activated Carbon, ASM General Meeting, Orlando, FL, May 21-25, 2006
25. Reinauer, Kimberly, Yang Zhang, Xiaomin Yang and K.T. Finneran, Biodegradation of tert-Butyl Alcohol by a Mixed, Aerobic Culture, Second International Meeting on Environmental Biotechnology and Engineering (2IMEBE), Mexico City, Mexico, September 26-29,2006
26. Hatch, Jennifer, and K.T. Finneran, Increasing Fermentative Hydrogen Production using a Microbial Physiology Approach, Second International Meeting on Environmental Biotechnology and Engineering (2IMEBE), Mexico City, Mexico, September 26-29,2006
27. Zhang, Yang, and K.T. Finneran, Tert-Butyl Alcohol (TBA) Biodegradation by a Mixed Bacterial Culture YZ1 Enriched from Granular Activated Carbon (GAC), AEHS International Conference on Contaminated Soil, Sediment, and Groundwater, Amherst, MA, October 16 – 19, 2006
28. Reinauer, Kimberly, and K.T. Finneran, Biodegradation of tert-Butyl Alcohol by a Mixed, Aerobic Culture, AEHS International Conference on Contaminated Soil, Sediment, and Groundwater, Amherst, MA, October 16 – 19, 2006
29. Kwon, Man Jae, and K.T. Finneran, Bioremediation of Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) and 1,3,5,7-tetranitroperhydro-1,3,5,7-tetrazocine (HMX)-Contaminated Sediments, AEHS International Conference on Contaminated Soil, Sediment, and Groundwater, Amherst, MA, October 16 – 19, 2006
30. Hatch, Jennifer, and K.T. Finneran, Increasing Fermentative Hydrogen Production using a Microbial Physiology Approach, AEHS International Conference on Contaminated Soil, Sediment, and Groundwater, Amherst, MA, October 16 – 19, 2006
31. Bell, Caitlin, and K.T. Finneran, Electron Shuttles in Bioremediation: PCB and Chlorinated Ethene Biodegradation, AEHS International Conference on Contaminated Soil, Sediment, and Groundwater, Amherst, MA, November 6 – 7, 2006
32. Reinauer, Kimberly, and K.T. Finneran, Biodegradation of tert-Butyl Alcohol by a Mixed, Aerobic Culture, National Groundwater Association (NGWA) Conference on Petroleum Hydrocarbon Remediation, October 16 – 19, 2006
33. Reinauer, Kimberly, Yang Zhang, Xiaomin Yang and K.T. Finneran, 2006, Biodegradation of tert-Butyl Alcohol by a Mixed, Aerobic Culture, National Ground Water Association (NGWA) 2006 Petroleum Hydrocarbons and Organic Chemicals in Groundwater, Houston, TX, November 6-7, 2006
34. Bell, Caitlin, and K.T. Finneran, Extracellular Electron Shuttling Compounds in Bioremediation of Chlorinated Organic Compounds, Battelle Conference on Remediation of Contaminated Sediment, Savannah, GA, January 22-25, 2007
35. Finneran, K.T. Extracellular Electron Shuttles in Bioremediation and Biotechnology, to be presented at the Battelle Conference on In Situ and On Site Bioremediation, Baltimore, MD, May 6-10, 2007

36. Reinauer, Kimberly, and K.T. Finneran, Aerobic Biodegradation of Tert-Butyl Alcohol (TBA) by Cultures Derived from Granular Activated Carbon, ASM General Meeting, Toronto, Ontario, Canada, May 20-24, 2007
37. Bell, Caitlin, and K.T. Finneran, Concurrent Fe(III) Reduction and Complete Dechlorination of Chlorinated Ethenes in Contaminated Marine Sediment, ASM General Meeting, Toronto, Ontario, Canada, May 20-24, 2007
38. Hatch, Jennifer, and K.T. Finneran, Physiological Approaches to Increase Molar H₂ Yield in Fermentative Cultures: Use of Extracellular electron Shuttles, ASM General Meeting, Toronto, Ontario, Canada, May 20-24, 2007
39. Kwon, Man Jae, and K.T. Finneran, Multiple Electron Transfer Pathways for RDX and HMX in the Presence and Absence of Bioavailable Fe(III), ASM General Meeting, Toronto, Ontario, Canada, May 20-24, 2007
40. Kwon, Man Jae, and K.T. Finneran, Multiple Electron Transfer Pathways for RDX and HMX in the Presence and Absence of Bioavailable Fe(III), AEHS International Conference on Contaminated Soil, Sediment, and Groundwater, Amherst, MA, October 15-18, 2007
41. Wei, Na, and K.T. Finneran, Anaerobic MTBE and TBE Biodegradation during Shifting Biochemical Conditions, AEHS International Conference on Contaminated Soil, Sediment, and Groundwater, Amherst, MA, October 15-18, 2007
42. Finneran, K.T. Sustainable Bioremediation: Use of DDGS and Stabilized WWS as Electron Donors in Bioremediation, Battelle Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA, May 19-22, 2008
43. Kwon, Man Jae and K.T. Finneran, Biotic and Abiotic Reactions and the Microbial Community that Develops during Electron Shuttle Mediated RDX Biodegradation, ASM General Meeting, Boston, MA June 1-5, 2008
44. Wei, Na and K.T. Finneran, Three Novel, Anaerobic Microbial Cultures that Degrade MTBE as the Sole Carbon and Energy Source, ASM General Meeting, Boston, MA June 1-5, 2008
45. Ye, Xiaofeng and K.T. Finneran, Hydrogen Production Increases in *Clostridium* fermentation using Extracellular Electron Shuttles, ASM General Meeting, Boston, MA June 1-5, 2008
46. Finneran, K.T. Biotic and Abiotic Reactions and the Microbial Community that Develops during Electron Shuttle Mediated RDX Biodegradation, ACS National Meeting, Philadelphia, PA, August 17-21, 2008
47. Kwon, Man Jae, and K.T. Finneran, Biotic and Abiotic Reactions and the Microbial Community that Develops during Electron Shuttle Mediated RDX Biodegradation, AEHS International Conference on Contaminated Soil, Sediment, and Groundwater, Amherst, MA, October 20-23, 2008
48. Wei, Na, and K.T. Finneran, Anaerobic MTBE and TBE Biodegradation during Shifting Biochemical Conditions, AEHS International Conference on Contaminated Soil, Sediment, and Groundwater, Amherst, MA, October 20-23, 2008

49. Wei, Na, and K.T. Finneran, Complete Dechlorination of TCE to Ethene in Sediment and Enrichments not dominated by *Dehalococcoides*, REMTEC Conference, Atlanta, GA, March 3-5, 2009
50. Dunnett, Kayleigh, and K.T. Finneran, Tert Butyl Alcohol Biodegradation in Inoculated Bio-GAC Systems, REMTEC Conference, Atlanta, GA, March 3-5, 2009
51. Kwon, Man Jae, and K.T. Finneran, Biotic and Abiotic Reactions and the Microbial Community that Develops during Electron Shuttle Mediated RDX Biodegradation, American Chemical Society National Meeting, Salt Lake City, UT, March 22-26, 2009
52. Wei, Na, and K.T. Finneran, Anaerobic MTBE and TBE Biodegradation during Shifting Biochemical Conditions, National Tanks Conference and Expo, Sacramento, CA, March 30-April 1, 2009
53. Dunnett, Kayleigh, and K.T. Finneran, Tert Butyl Alcohol Biodegradation in Inoculated Bio-GAC Systems, National Tanks Conference and Expo, Sacramento, CA, March 30-April 1, 2009
54. Finneran, K.T., Complete Reduction of TCE to Ethene by Sediment and Subsequent Enrichments not Dominated by *Dehalococcoides*, Battelle In Situ and On Site Bioremediation Conference, Baltimore, MD, May 5-8, 2009
55. Finneran, K.T., Enhanced RDX Mineralization using Mixed Biotic-Abiotic Reactions mediated by Extracellular Electron Shuttles, Battelle In Situ and On Site Bioremediation Conference, Baltimore, MD, May 5-8, 2009
56. Finneran, K.T., Three Novel, Anaerobic Cultures that Degrade MTBE with AQDS/Fe(III), Sulfate, and Fumarate, Respectively, Battelle In Situ and On Site Bioremediation Conference, Baltimore, MD, May 5-8, 2009
57. Ye, Xiaofeng, and K.T. Finneran, Extracellular Quinone/Hydroquinones Increase Biohydrogen and Bio-butanol in Growing and Resting Cells of *Clostridium beijerinckii*, American Society for Microbiology General Meeting, May 18-22, 2009
58. Wei, Na, and K.T. Finneran, Complete Reduction of Trichloroethylene to Ethene with Concurrent Fe(III) Reduction and Development of a Unique Microbial Community using Acetate as the Sole Electron Donor, American Society for Microbiology General Meeting, May 18-22, 2009
59. Kwon, Man Jae, and K.T. Finneran, Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX) Mineralization in the presence of Extracellular Electron Shuttling Compounds and an Fe(III)-Reducing Microbial Community, American Society for Microbiology General Meeting, May 18-22, 2009
60. Popovics, Jovan, and K.T. Finneran, Distillers' Dry and Wet Grains (DDGS and DWS) as an Electron Donor Source for Bioremediation of Trichloroethylene and for Stimulating Fe(III) Reduction, American Society for Microbiology General Meeting, May 18-22, 2009

61. Azam, Hossain, and K.T. Finneran, Ferric Iron Amendment Increases Carbon Oxidation and Phosphorus Removal in On-Site Wastewater (Septic Systems), American Society for Microbiology General Meeting, May 18-22, 2009
62. Wei, N., and K.T. Finneran, Effect of Fe (III) Reduction in the Biodegradation of Chlorinated Ethenes, 26th AEHS International Conference on Contaminated Soil, Sediment, Groundwater and Energy, Amherst, MA, October 18-21, 2009
63. Azam, H and K.T. Finneran, Ferric Iron Amendment Increases Carbon Oxidation and Phosphorus Removal in On-Site Wastewater (Septic Systems), 26th AEHS International Conference on Contaminated Soil, Sediment, Groundwater and Energy, Amherst, MA, October 18-21, 2009
64. Ye, X., X. Zhang and K. T. Finneran, Increased hydrogen production rate and yield by reduced shuttling compounds in *Clostridium* fermentation, 26th AEHS International Conference on Contaminated Soil, Sediment, Groundwater and Energy, Amherst, MA, October 18-21, 2009
65. Haluska, A., X. Ye and K.T. Finneran, Oxidized Extracellular Electron Shuttles (Quinones) Increase Fermentative Biobutanol Yield, 26th AEHS International Conference on Contaminated Soil, Sediment, Groundwater and Energy, Amherst, MA, October 18-21, 2009
66. Ye, X., X. Zhang, E. Morgenroth and K. T. Finneran, Increased hydrogen production by reduced electron shuttling compounds, 16th Annual Petroleum & Biofuels Environmental Conference, Houston, TX, November 3-5, 2009
67. Haluska, A., X. Ye and K.T. Finneran, Oxidized Extracellular Electron Shuttles in Biobutanol Production, 16th Annual Petroleum & Biofuels Environmental Conference, Houston, TX, November 3-5, 2009
68. Shin, P.G. and K.T. Finneran, Anaerobic Biodegradation of MTBE and TBA with three novel Microbial Cultures, 16th Annual Petroleum & Biofuels Environmental Conference, Houston, TX, November 3-5, 2009
69. Wei, N., and K.T. Finneran, Effect of Fe (III) Reduction in the Biodegradation of Chlorinated Ethenes, American Society for Microbiology General Meeting, San Diego, CA, May 23-27, 2010
70. Azam, H and K.T. Finneran, Ferric Iron Amendment Increases Carbon Oxidation and Phosphorus Removal in On-Site Wastewater (Septic Systems), American Society for Microbiology General Meeting, San Diego, CA, May 23-27, 2010
71. Ye, X., X. Zhang and K. T. Finneran, Increased hydrogen production rate and yield by reduced shuttling compounds in *Clostridium* fermentation, American Society for Microbiology General Meeting, San Diego, CA, May 23-27, 2010
72. Haluska, A., X. Ye and K.T. Finneran, Oxidized Extracellular Electron Shuttles in Biobutanol Production, American Society for Microbiology General Meeting, San Diego, CA, May 23-27, 2010
73. Dunnett, K.A. and K.T. Finneran, Biodegradation of RDX Adsorbed to Granular Activated Carbon using Extracellular Electron Shuttling Compounds, American Society for Microbiology General Meeting, San Diego, CA, May 23-27, 2010

74. Ye, X. and K. T. Finneran, Increased hydrogen production rate and yield by reduced shuttling compounds in *Clostridium* fermentation, Association of Environmental Geologists (AEG) Annual Meeting, Charleston, SC, September 22-24, 2010
75. Millerick (Dunnett), K.A. and K.T. Finneran, Biodegradation of RDX Adsorbed to Granular Activated Carbon using Extracellular Electron Shuttling Compounds, Association of Environmental Geologists (AEG) Annual Meeting, Charleston, SC, September 22-24, 2010
76. Wei, N. and K.T. Finneran, Fe(III) Reduction does not Inhibit Complete Reductive Dechlorination of TCE, American Society for Microbiology General Meeting, New Orleans, LA, May 20-24, 2011
77. Ye, X. and K.T. Finneran, Increasing Fermentative Hydrogen Production and Xylose Uptake using Extracellular Hydroquinones, American Society for Microbiology General Meeting, New Orleans, LA, May 20-24, 2011
78. Popovic, J. and K.T. Finneran, Increasing fermentative butanol production in *Clostridium beijerinckii* using extracellular electron shuttling compounds, 28th AEHS International Conference on Contaminated Soil, Sediment, Groundwater and Energy, Amherst, MA, October 20-23, 2011
79. Millerick, K.A. and K.T. Finneran, Biodegradation of RDX Adsorbed to Granular Activated Carbon using Extracellular Electron Shuttling Compounds, American Chemical Society Spring Meeting, San Diego, CA, March 25-29, 2012
80. Ramasubramania, N. and K.T. Finneran, DOE Annual PI Meeting, Washington, DC, April 2012
81. Millerick, K.A. and K.T. Finneran, Photobiological degradation of RDX Adsorbed to Granular Activated Carbon and using Extracellular Electron Shuttling Compounds, Battelle Remediation of Chlorinated Solvent and Recalcitrant Compounds Annual Meeting, Monterey, CA, May 21-24, 2012
82. Popovic, J. and K.T. Finneran, Increasing fermentative butanol production in *Clostridium beijerinckii* using extracellular electron shuttling compounds, American Society for Microbiology General Meeting, San Francisco, CA, June 16-19, 2012
83. Millerick, K.A. and K.T. Finneran, Photobiological degradation of RDX Adsorbed to Granular Activated Carbon and using Extracellular Electron Shuttling Compounds, American Society for Microbiology General Meeting, San Francisco, CA, June 16-19, 2012
84. Niedzwiecka, J.B. and K.T. Finneran, Degradation of the insensitive munition DNAN using mixed biological and chemical reactions, REMTEC Meeting, Denver, CO, March 4-6, 2013
85. Millerick, K.A. and K.T. Finneran, Photobiological degradation of RDX Adsorbed to Granular Activated Carbon and using Extracellular Electron Shuttling Compounds, American Chemical Society, New Orleans, LA, April 7-11, 2013
86. Millerick, K.A. and K.T. Finneran, Photobiological degradation of RDX Adsorbed to Granular Activated Carbon and using Extracellular Electron Shuttling

Compounds, Battelle Bioremediation and Sustainable Environmental Technologies, Jacksonville, FL, June 10-13, 2013

87. Niedzwiecka, J.A. and K.T. Finneran, Combined Biological and Chemical Reaction Mechanisms for 2,4-Dinitroanisole (DNAN) Biodegradation, Battelle Bioremediation and Sustainable Environmental Technologies, Jacksonville, FL, June 10-13, 2013
88. Popovic, J. and K.T. Finneran, Butanol Hyper-Production and Increased Consumption of a Major Lignocellulosic Feedstock (Xylose) through Unbalanced Fermentations in Clostridia, Battelle Bioremediation and Sustainable Environmental Technologies, Jacksonville, FL, June 10-13, 2013
89. Weber, C.D. and K.T. Finneran, The Septic Snorkel: Enhanced COD Degradation in Septic Systems using Carbon-Fiber Electrodes, Battelle Bioremediation and Sustainable Environmental Technologies, Jacksonville, FL, June 10-13, 2013
90. Popovic, J. and K.T. Finneran, Butanol Hyper-Production and Increased Consumption of a Major Lignocellulosic Feedstock (Xylose) through Unbalanced Fermentations in Clostridia, AEHS Annual East Coast Conference on Contaminated Soil, Sediments, Water, and Energy, Amherst, MA, October 21-24, 2013, ** Best Student Paper Award
91. Weber, C.D. and K.T. Finneran, The Septic Snorkel: Enhanced COD Degradation in Septic Systems using Carbon-Fiber Electrodes, AEHS Annual East Coast Conference on Contaminated Soil, Sediments, Water, and Energy, Amherst, MA, October 21-24, 2013
92. Popovic, J. and K.T. Finneran, Butanol Hyper-Production and Increased Consumption of a Major Lignocellulosic Feedstock (Xylose) through Unbalanced Fermentations in Clostridia, American Society for Microbiology General Meeting, Boston, MA, May 17-20, 2014
93. Niedzwiecka, J.A. and K.T. Finneran, Combined Biological and Chemical Reaction Mechanisms for 2,4-Dinitroanisole (DNAN) Biodegradation, American Society for Microbiology General Meeting, Boston, MA, May 17-20, 2014
94. Millerick, K.A. and K.T. Finneran, Photobiological degradation of RDX Adsorbed to Granular Activated Carbon and using Extracellular Electron Shuttling Compounds, American Chemical Society 248th National Meeting, San Francisco, CA, August 10-14, 2014
95. Niedzwiecka, J.A. and K.T. Finneran, Combined Biological and Chemical Reaction Mechanisms for 2,4-Dinitroanisole (DNAN) Biodegradation, American Chemical Society 248th National Meeting, San Francisco, CA, August 10-14, 2014
96. Niedzwiecka, J.A. and K.T. Finneran, Combined Biological and Chemical Reaction Mechanisms for 2,4-Dinitroanisole (DNAN) Biodegradation, Battelle Bioremediation Conference, Miami, FL, May 19-22, 2015 **BEST STUDENT PAPER AWARDED
97. Niedzwiecka, J.A. and K.T. Finneran, Combined Biological and Chemical Reaction Mechanisms for 2,4-Dinitroanisole (DNAN) Biodegradation, American Society

for Microbiology General Meeting, New Orleans, LA, May 30-June 2, 2015 **
SELECTED FOR PRESENTATION IN POPULAR MEDIA PRESS ROOM

98. Ivey, Morgan and K.T. Finneran, Antimethanogenic reagents in environmental remediation of TCE, Clemson University Hydrogeology Annual Symposium, April 2016
99. Ivey, Morgan and K.T. Finneran, Antimethanogenic reagents in environmental remediation of TCE, Emerging Contaminants Summit, Denver, CO , April 2016
100. Ivey, Morgan and K.T. Finneran, Antimethanogenic reagents in environmental remediation of TCE, Clemson University Hydrogeology Annual Symposium, April 2017, **Best Student Paper Award**
101. Ivey, Morgan and K.T. Finneran, Antimethanogenic reagents in environmental remediation of TCE, ASM Microbe General Meeting, June 2018, Atlanta, GA
102. McGee, Kameryn and K.T. Finneran, In situ activated carbon for TCE remediation, ASM Microbe General Meeting, June 2018, Atlanta, GA
103. Rogier, Alexander and K.T. Finneran, Rendered animal co-products as electron donors in bioremediation, ASM Microbe General Meeting, June 2018, Atlanta, GA
104. Neuder, Joel and K.T. Finneran, Fate and transport of 2,4-dinitroanisole in wastewater sludge, SC Water Research Conference, March 2019, Myrtle Beach, SC, **Best Student Poster Award**

The following conferences were attended via abstract submission 2020:

ASM: 2021, 2022, 2023

Battelle: 2021, 2022

RemTec Summit: 2021, 2022, 2023

Association of Environmental and Engineering Geologists: 2021, 2022


INVITED PRESENTATIONS

1. Strain SO2: a novel iron-reducing microorganism, Department of Microbiology Fall 1998 Seminar Series, University of Massachusetts, Amherst, MA, November 1998
2. Anaerobic Degradation of MTBE and TBA, EPA/API Workshop on MTBE Biodegradation, Cincinnati, OH, February 1-3, 2000
3. Anaerobic Degradation of Methyl tert-Butyl Ether (MTBE) and tert-Butyl Alcohol (TBA), Association for the Environmental Health of Soils (AEHS)/Navy: 10th Annual National West Coast Conference on Contaminated Soils and Groundwater, San Diego, CA, March 20 -25, 2000
4. Anaerobic Degradation of Methyl tert-Butyl Ether (MTBE) and tert-Butyl Alcohol (TBA), Department of Microbiology, Fall 2000 Seminar Series, University of Massachusetts, Amherst, MA, September 2000
5. Stimulated U(VI) Remediation in a Uranium-Contaminated Aquifer, Society for Environmental Toxicology and Chemistry (SETAC) Annual Meeting, Nashville, TN, November 12 – 16, 2000
6. Anaerobic Degradation of Methyl tert-Butyl Ether (MTBE) and tert-Butyl Alcohol (TBA), Battelle Symposium on In Situ and On Site Bioremediation, San Diego, CA, June 4 – 7, 2001
7. Anaerobic Bioremediation Strategies for MTBE and TBA, Groundwater Resources Association of California Symposium on Emergent and Recalcitrant Compounds, San Jose, CA, June 14 – 15, 2001
8. Anaerobic Degradation of Methyl tert-Butyl Ether (MTBE) and tert-Butyl Alcohol (TBA), AEHS International Congress on Petroleum Contamination, London, UK, August 14 – 16, 2001
9. Anaerobic Degradation of Methyl tert-Butyl Ether (MTBE) and tert-Butyl Alcohol (TBA), AEHS International Conference on Contaminated Soil, Sediment, and Groundwater, Amherst, MA, October 22 – 25, 2001
10. Anaerobic Degradation of Methyl tert-Butyl Ether (MTBE) and tert-Butyl Alcohol (TBA), NGWA Conference on MTBE, Orange, CA, June 6 – 7, 2002
11. Geochemistry and Microbiology of U(VI) Reduction in the Low pH FRC Aquifer Material, NABIR Investigators Meeting, Oak Ridge, TN, September 23, 2002
12. Anaerobic Degradation of Methyl tert-Butyl Ether (MTBE) and tert-Butyl Alcohol (TBA), NGWA Northeast Focus, Burlington, VT, October 3 – 4, 2002
13. Geochemistry and Microbiology of in situ U(VI) Bioremediation, University of Massachusetts, Lowell, CCES Seminar Series, November 13, 2002
14. Bioremediation and Biodegradation, Invited Lecture for the Course *Environmental Microbiology*, University of Massachusetts, Lowell, April 14, 2003

15. The Role of Fe(III) and Humics in the Biodegradation of Metal and Organic Contaminants, Battelle In Situ and On Site Bioremediation Symposium, Orlando, FL, June 2 – 6, 2003
16. Extracellular Electron Shuttling in Bioremediation and Biotechnology, AEHS International Conference on Contaminated Soil, Sediment, and Groundwater, Amherst, MA, October 16 – 19, 2006
17. Extracellular Electron Shuttle Mediated biodegradation of the Explosives RDX and HMX in Pure Culture and Contaminated Aquifer Material, Northeastern University, Department of Civil and Environmental Engineering, October 20, 2006
18. Extracellular Electron Shuttle Mediated biodegradation of the Explosives RDX and HMX in Pure Culture and Contaminated Aquifer Material, University of Wisconsin Madison, Department of Civil and Environmental Engineering, November 14, 2006
19. Mixed Biological-Abiotic Degradation of the Cyclic Nitramine Explosives RDX and HMX, Presented at Johns Hopkins, Department of Geography and Environmental Engineering, May 11, 2007
20. Anaerobic MTBE and TBE Biodegradation during Shifting Biochemical Conditions, AEHS International Conference on Contaminated Soil, Sediment, and Groundwater, Amherst, MA, October 15-18, 2007
21. An Explosive Topic: Biodegradation of RDX with Extracellular Electron Shuttles, Keynote Presentation, University of Massachusetts Department of Microbiology Annual Retreat, February 2008
22. Complete TCE Dechlorination in the Absence of *Dehalococcoides*, AEHS International Conference on Contaminated Soil, Sediment, and Groundwater, Amherst, MA, October 20-23, 2008
23. Molecular Tools in MTBE and Petroleum Bioremediation, AEHS International Conference on Contaminated Soil, Sediment, and Groundwater, Amherst, MA, October 20-23, 2008
24. Mixed Biological-Abiotic Degradation of the Cyclic Nitramine Explosives RDX and HMX, Presented at the University of Massachusetts Department of Environmental Engineering, October 2008
25. Three Novel, Anaerobic Cultures that Degrade MTBE with AQDS/Fe(III), Sulfate, and Fumarate, Respectively, Battelle In Situ and On Site Bioremediation Conference, Baltimore, MD, May 5-8, 2009
26. Enhanced RDX Mineralization using Mixed Biotic-Abiotic Reactions mediated by Extracellular Electron Shuttles, Battelle In Situ and On Site Bioremediation Conference, Baltimore, MD, May 5-8, 2009
27. Complete Reduction of TCE to Ethene by Sediment and Subsequent Enrichments not Dominated by *Dehalococcoides*, Battelle In Situ and On Site Bioremediation Conference, Baltimore, MD, May 5-8, 2009

28. Fe(III) Reduction does not Inhibit Complete Reductive Dechlorination, Association of Environmental Geologists (AEG) Annual Meeting, Charleston, SC, September 22-24, 2010
29. Increasing biological butanol production using extracellular electron shuttling compounds, Society for Industrial Microbiology Annual Meeting, New Orleans, LA, July 24-26, 2011
30. Microbial reactions with iron and extracellular electron shuttles that degrade RDX and insensitive munitions (IM), Society for Industrial Microbiology Annual Meeting, New Orleans, LA, July 24-26, 2011
31. Novel approaches for trichloroethylene (TCE) biodegradation and the role of Fe(III) reduction in complete reductive dechlorination, SC ASM chapter annual meeting, Columbia, SC, October 21, 2011
32. Novel approaches for trichloroethylene (TCE) biodegradation and the role of Fe(III) reduction in complete reductive dechlorination, Clemson University Department of Genetics and Biochemistry Spring 2012 seminar series, April 13, 2012
33. Bioremediation: past, present, and future, Kavli Fellows Frontiers of Science Symposium, Potsdam, Germany, May 8-13, 2012
34. Microbial reactions with iron and extracellular electron shuttles that degrade RDX and insensitive munitions (IM), Society for Industrial Microbiology Annual Meeting, Washington, DC, August 12-14, 2012
35. Novel strategies in groundwater bioremediation: new solutions to old problems, South Carolina Water Resources Conference, Columbia, SC, October 11-12, 2012
36. SERDP In Progress Review, Arlington, VA, February 25, 2013
37. Microbial reactions with iron and extracellular electron shuttles that degrade RDX and insensitive munitions (IM), Missouri Science and Technology (MST) Civil and Environmental Engineering Seminar Series, April 19, 2013
38. Microbial reactions with iron and extracellular electron shuttles that degrade RDX and insensitive munitions (IM), University of Massachusetts at Lowell Environmental Technologies Working Group via the Department of Chemistry, October 21, 2013
39. SERDP In Progress Review, Arlington, VA, May 7-8, 2014
40. Microbial reactions with iron and extracellular electron shuttles that degrade RDX and insensitive munitions (IM), Joint Army, Navy, NASA, Air Force (JANNAF) Conference, Environmental Health and Restoration Working Group, Charleston, SC, May 18-20, 2014
41. Microbial reactions with iron and extracellular electron shuttles that degrade RDX and insensitive munitions (IM), University Council on Water Research (UCOWR), Tufts University, Medford, MA, June 18-20, 2014

42. Fe(III) Reduction does not Inhibit Complete Dechlorination, Air and Waste Management Association, Invited Talk, AWMA National Symposium, Raleigh, NC, June 21-24, 2015
43. Novel strategies in groundwater bioremediation: new solutions to old problems, UMASS AEHS Annual East Coast Conference on Contaminated Soil, Water, Sediment, and Energy, Amherst, MA, October 18-22, 2015
44. Bioremediation Session Chair, Emerging Contaminants Summit Spring 2016 Meeting, Denver, CO, Invited Session Chair, Opening Remarks and Brief Update on the state of the science
45. Bioremediation Session Chair, American Chemical Society Fall 2016 Meeting, Philadelphia, PA, Invited Session Chair, Opening Remarks
46. New Approaches to Old Problems: Everything you think you knew about chlorinated solvent remediation may be incorrect, Groundwater Professionals of North Carolina (GWPNC) Meeting, Charlotte, NC, September 22, 2016
47. New approaches to old problems: understanding the role of metal reduction in complete dechlorination, South Carolina Association of Environmental Professionals (SCAEP), Columbia, SC, March 2016
48. KEYNOTE LECTURE: Advanced Oxidation and Reduction Technologies (AORT) Conference, Atlanta GA, November 2016
49. What do you want me to do with this electron acceptor? Disrupting fermentative biomass with electron shuttles and iron, Invited Speaker: North Carolina State University, seminar series Environmental Engineering, November 3, 2017
50. Combined microbial-chemical reactions for explosives and energetics remediation, Invited Speaker: South Carolina Association of Environmental Professionals (SCAEP), Greenville, SC, March 2017
51. Chromium Remediation: understanding the required microbiology and chemistry to increase the rate and extent of reactions, Invited Speaker, Association of Engineering Geologists (AEG) Carolinas Meeting, Charlotte, NC, January 2018
52. The role of activated carbon for in situ remediation, Society for Industrial Microbiology (SIMB) Annual Meeting, Chicago, IL, August 12-15, 2018
53. KEYNOTE: Meeting of the National Renderers Association, Fats and Proteins Research Foundation (FPRF), Animal co-products as electron donors for in situ bioremediation, to be presented October 23, 2018, Laguna Niguel, Orange County, CA
54. Animal co-products as electron donors for in situ bioremediation, NGWA Groundwater Summit and NGWA Week, December 1-3, 2018, Las Vegas, NV
55. In Situ Bioremediation: advances and opportunities, ARC of IAEG, Jeju Island South Korea, September 23-25, 2019
56. Combined microbial and chemical reactions for TCE reduction and explosives biodegradation, Korea University, September 26, 2019

57. Animal co-products as electron donors for in situ bioremediation: TCE reduction, NGWA Groundwater Summit and NGWA Week, December 3-6, 2019, Las Vegas, NV
 58. Activated carbon and biochar for in situ bioremediation, NGWA Groundwater Summit and NGWA Week, December 7-10, 2020, Online Virtual Conference
 59. Animal co-products as electron donors for in situ bioremediation: ammonium flux and total protein oxidation, NGWA Groundwater Summit and NGWA Week, December 6-8, 2021, Las Vegas, NV
 60. New uses for old amendments: activated carbon and rendered animal co-products in bioremediation, 2022, Rutgers University 100th anniversary Env Sci Dept, Online presentation
 61. Animal co-products as electron donors for in situ bioremediation: field application potential, NGWA Groundwater Summit and NGWA Week, December 5-7, 2022, Las Vegas, NV
 62. Combined biological and chemical reactions with activated carbon, NGWA Groundwater Summit and NGWA Week, December 4-7, 2023, Las Vegas, NV
 63. Influence of Activated Carbon on Microbial Transformation of Chlorinated Solvents and Explosives, AEHS West Cost Conference, March 18-20, 2024
 64. Chlorinated Solvents, PFAS, and Activated Carbon Chemical and Biological Impacts of Partitioning Technologies, RemTEC Summit, October 15-18, 2024
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PATENTS

Title: Electron Donors for Environmental Remediation using Rendered Animal Co-Products
United States Patent Pending: Filed 08/01/2019
Patent # US 16/454,995
Filed by Clemson University Research Foundation (CURF)

Title: Extracellular Electron Shuttles Increase Biological Butanol Production in Anaerobic,
Fermentative Bacteria
United States Patent (Provisional) Filed 06/01/2009
Patent # US 61/177,525
Filed by Illinois Office of Technology Mgmt

SPONSORED RESEARCH (CHRONOLOGICAL ORDER)

- “Biodegradation of the cyclic nitramine explosive RDX mediated by Fe(III)- and humics-reducing microorganisms”, Department of Defense Strategic Environmental Research and Development Program (SERDP), Principal Investigator, \$320,000 (\$202,844), (2004-2007)
- “Tert-Butyl Alcohol (TBA) Biodegradation in Aerobic, Granular Activated Carbon Matrices: Environmental Influences on Growth and Degradation Kinetics”, British Petroleum – The Atlantic Richfield Company, \$36,000 (\$36,000), (2005-2006)
- “Anaerobic Methyl tert-Butyl Ether (MTBE) and tert-Butyl Alcohol (TBA) Biodegradation: Reaction Kinetics and Microbial Physiology”, American Petroleum Institute (API), \$46,000 (\$46,000), (2006-2007)
- “Tert-Butyl Alcohol (TBA) Biodegradation in Aerobic, Granular Activated Carbon Matrices: Environmental Influences on Growth and Degradation Kinetics (Phase 2 of a 3-phase investigation)”, British Petroleum – The Atlantic Richfield Company, \$36,000 (\$36,000), (2006)
- “Anaerobic Methyl tert-Butyl Ether (MTBE) and tert-Butyl Alcohol (TBA) Biodegradation during Shifting Biogeochemical Conditions”, American Petroleum Institute (API), \$63,000 (\$63,000), (2007-2008)
- “Phosphorus Removal in Retrofitted On-Site Wastewater (Septic) Systems by Stimulating Microbial Fe(III) Reduction”, Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET), a division of NOAA, \$322,381 (\$214,826), (2007-2010)
- “Distillers’ Dry Grains with Solubles (DDGS) as a Novel Electron Donor Source for Enhanced Bioremediation”, UIUC Research Board, \$10,500 (\$10,500), (2008)
- “Reduced Extracellular Electron Shuttling Compounds as Electron Donors for Biological Hydrogen Production in Fermentative Pure Cultures”, National Science Foundation, \$275,893 (\$218,452), (2008-2010)
- “Characterizing the Combined Roles of Iron and Transverse Mixing on Uranium Bioremediation in Groundwater using Microfluidic Pore Networks”, Department of Energy, \$461,000 (\$328,297), (2009-2012)
- “Complete Reductive Dechlorination of Trichloroethylene (TCE) by Non-*Dehalococcoides* Microorganisms”, National Science Foundation, \$300,000 (\$300,000), (2009-2012)
- “Biodegradation of RDX and TCE in Contaminated Aquifer Material”, Burns & McDonnell, \$18,000 (\$18,000), (2010)
- “The Combined Role of Biological and Chemical Reactions in the Degradation of Insensitive Munitions (IM)” Department of Defense Strategic Environmental Research and Development Program (SERDP), Principal Investigator, \$592,000 (\$355,200), (2012-2015)
- “Anaerobic Biodegradation of tert-butyl Alcohol and Methyl tert-butyl Ether” American Petroleum Institute (API), Principal Investigator, \$78,000 (\$78,000) (2012-

- 2013), Administered as a gift award via the Clemson University Foundation (CUF)
- “Anaerobic Biodegradation of tert-butyl Alcohol and Methyl tert-butyl Ether” American Petroleum Institute (API), Principal Investigator, \$78,000 (\$78,000) (2013-2014), Administered as a gift award via the Clemson University Foundation (CUF)
- “Radionuclide Waste Disposal: Development of multi-scale and modeling capabilities” DOE EPSCoR, Co-PI, \$5,300,000 all increments (Co-PI; 2015-2018)
- “NSF RAPID: Understanding the microbial ecology of MTBE degradation in the Port of Houston spill”, Principal Investigator, National Science Foundation, \$49,300 (\$49,300), (2015-2016)
- “Uranium remediation at the former Cimarron facility”, Burns and McDonnell and EPM, Principal Investigator, \$69,800 (\$69,800), (2015-2017)
- “The Combined Role of Biological and Chemical Reactions in the Degradation of Insensitive Munitions (IM)” Department of Defense Strategic Environmental Research and Development Program (SERDP), Principal Investigator, \$592,000 (\$31,600), (2015-2017)
- “Does inhibiting methanogenesis increase the rate and extent of complete dechlorination”, PeroxyChem, LLC, Principal Investigator, \$67,300 (2016-2018)
- “Use of Animal Co-Products as electron donors in bioremediation: Phase 1”, ACREC, Principal Investigator, \$45,000 (2017-2018)
- “In situ activated carbon for petroleum hydrocarbon biodegradation”, BP, Principal Investigator, \$50,000 (2018-2019)
- “Use of Animal Co-Products as electron donors in bioremediation: Phase 2”, ACREC, Principal Investigator, \$64,000 (2018-2019)
- “Use of Animal Co-Products as electron donors in bioremediation: Phase 3”, ACREC, Principal Investigator, \$67,000 (2019-2021)
- “Use of Animal Co-Products as electron donors in bioremediation: Phase 4”, ACREC, Principal Investigator, \$72,000 (2023-2024)
- “Influence of Particulate Amendments on TCE Reductive Dechlorination in the Presence of PFAS: Laboratory and Field Studies”, Department of Defense Strategic Environmental Research and Development Program (SERDP), Co-Principal Investigator, \$1,282,067 (PI: \$382,000) (2023-2026)
- “Microbial-Chemical Degradation and Attenuation of Styrene, Styrene Polymers, and the Herbicide Picloram in Co-Mingled Plumes with Chlorinated Compounds”, DuPont-Corteva, Principal Investigator, \$191,747 (2022-2024)
- “Use of Animal Co-Products as electron donors in bioremediation: Phase 4”, ACREC, Principal Investigator, \$24,530 (2023-2024)
- Microbial-Chemical Degradation and Attenuation of Styrene, Styrene Polymers, and the Carbon Tetrachloride in Co-Mingled Plumes, Phase 2”, DuPont-Corteva, Principal Investigator, \$255,797 (2024-2026)

OTHER SPONSORED ACTIVITY

Equipment Grant, Illinois Engineering Tuition Surcharge Funds, Laboratory Experiments in Molecular Biology: Teaching Lab Improvement for CEE courses, \$27,100 (2006)

Equipment Grant, Molecular Biology Instrumentation Grant for Quantitative PCR, UIUC Research Board, \$15,000, 2009

Equipment Grant, Life Technologies QPCR Platform, Clemson University Departmental Award, \$10,000, 2013

Doctoral Graduates (Not co-advised)

- Kwon, Man Jae, “Biodegradation of the cyclic nitramine explosive (RDX) using extracellular electron shuttling compounds,” **currently a Full Professor at Korea University, Seoul, South Korea**, formerly an Assistant Professor at the Korean Institute of Science and Technology (KIST); formerly a Director’s Postdoctoral Fellow at Argonne National Laboratory
- Wei, Na, “The role of Fe(III) reduction in complete reductive dechlorination of TCE,” **currently an Associate Professor the University of Illinois**, the University of Pittsburgh in CEE and a postdoctoral research fellow at the University of Illinois Institute for Genomic Biology (IGB)
- Ye, Xiaofeng, “Increasing biological hydrogen production with extracellular hydroquinones,” **currently a Program Leader/Technical Development Manager with Novozymes Biological Products in Franklinton/RTP, NC**, formerly Novozymes fermentation leader, Beijing, China, formerly a senior research engineering with Novozymes in Franklinton/Research Triangle Park, NC
- Azam, Hossain, “Influence of Fe(III) reduction on phosphate removal and carbon mineralization in septic wastewater,” **currently an Associate Professor at the University of the District of Columbia of Civil and Environmental Engineering**; formerly an assistant professor at Manhattan College and postdoctoral research associate in the Department of Mechanical Engineering at the University of Illinois, and formerly a Research Assistant Professor at George Washington University with a joint appointment (research) to the Metropolitan Washington DC Water Board
- Millerick (Dunnett), Kayleigh, “Biodegradation of RDX Adsorbed to Granular Activated Carbon,” formerly an EPA STAR fellow, formerly a graduate fellow under the Graduate Assistance in Areas of National Need (GAANN) program; **currently an ASSOCIATE Professor at the Texas Tech Department of Civil and Environmental Engineering**; formerly a postdoctoral associate at the University of Illinois Department of Civil and Environmental Engineering
- Popovic, Jovan “Increasing Biological Butanol Production and Xylose Consumption in Clostridia spp. Using unbalanced Fermentations with Iron and Electron Shuttles”; **currently a senior scientist for Naval Facilities Engineering Service Command (NAVFACS), Port Hueneme, CA**; previously a postdoctoral associate at the University of Minnesota Center for Biotechnology (Dr. Sebastian Behrens, PI)
- Zhang, Xinyu, “Increasing molecular hydrogen output in fermentative and respiratory co-cultures”; **currently a research professor at Purdue University (Co-adviser: Morgenroth)**
- Niedzwiecka, Jolanata, “Combined biological and chemical reactions for the degradation of explosives and insensitive munitions”; **currently a Lead Science Academic at a Private School, Warsaw, Poland and Environmental Consultant**

Deaver, Jessica, "Impact of fats, oil, and greases (FOG) on methane production in anaerobic digesters"; **currently a Post Doc at North Carolina State University**

Sumner, Catherine, "Impact of metals and microbial communities on PCB transformation in Lake Hartwell sediment"; **currently a Post Doc at EPA Research Triangle Park**

Masters Graduates

Bell, Caitlin, "Biodegradation of chlorinated solvents and PCBs as influenced by Fe(III) reduction and electron shuttles," (May 2007)

Hatch, Jennifer, "Using extracellular electron shuttles to increase hydrogen yield in fermentative pure cultures," (May 2007)

Reinauer, Kimberly, "Biological degradation of tert-butyl alcohol in granular activated carbon," (May 2007)

Zhang, Yang, "Pure microbial cultures derived from GAC that is actively used to adsorb tert-butyl alcohol," (May 2007)

Wei, Na, "Anaerobic degradation of methyl tert butyl ether and tert butyl alcohol under shifting biogeochemical conditions," (May 2008)

Shin, Patricia, "Influence of tungstate on microbial sulfate and Fe(III) reduction," (December 2009)

Dunnett, Kay, "Degradation of tert butyl alcohol in flowing granular activated carbon bioreactors," (December 2009)

Haluska, Anne, "Increased fermentative butanol production using extracellular electron shuttling compounds," (May 2010)

Jurado, Luis Andres, M.S. Environmental Engineering, "Uranium reduction as influenced by ferric and ferrous iron in biological and strictly chemical systems," (May 2011)

Popovic, Jovan, M.S. Environmental Engineering, "Increasing biological butanol yield using extracellular electron shuttling compounds," (May 2012)

Ramasubramanian, Neeraja, M.S. Environmental Engineering, "Novel electron shuttling compounds for use in bioremediation," (August 2012)

Weber, Christopher, M.S. Environmental Engineering, "The Influence of Fe(III) Reduction on Carbon Mineralization in Septic Systems and Municipal Wastewater, with a Specific Influence on Pharmaceutically Active Compounds," (August 2013)

Haluska, Alexander, M.S. Environmental Engineering, "Biodegradation of Hydraulic Fracturing (Frac) Fluids under Shifting Ionic Strength Gradients" (August 2014)

Khanna, Ayush, M.S. Environmental Engineering, "TCE Biodegradation using Algal Biomass as an Electron Donor" (August 2014)

Galloway, Sarah, M.S. Environmental Engineering, "Photobiological Degradation of the Nitramine Explosive RDX" (May 2015)

Kunkle, Amanda, M.S. Environmental Engineering, "Biodegradation of the Crude Oil Dispersant Corexit", co-advised with David Freedman (May 2015)

Thompson, Courtney, M.S. Environmental Engineering, "Tert-butyl alcohol biodegradation by anaerobic microbial communities," (May 2015)

Vecchiarelli, Paul, M.S. Environmental Engineering, "Phosphate recovery in engineered wastewater systems using microbially mediated Fe(III) reduction" (August 2016)

Hotzelt, Nicholas, M.S. Environmental Engineering, "NSF RAPID: Understanding the microbial ecology of MTBE degradation in the Port of Houston spill" (August 2016)

Hennessy, Sarah, M.S. Environmental Engineering, "Uranium transport in subsurface environments" (August 2017)

Ivey, Morgan, M.S. Environmental Engineering, "Antimethanogenic reagents and the influence on in situ bioremediation of TCE" (August 2018)

McGee, Kameryn, M.S. Environmental Engineering, "The role of in situ activated carbon on TCE biodegradation" (August 2018)

Rogier, Alexander, M.S. Environmental Engineering, "Rendered animal co-products as electron donors for in situ bioremediation" (August 2018)

Neuder, Joel, M.S. Environmental Engineering, "Fate of 2,4-Dinitroanisole in wastewater treatment plants" (May 2019)

Houston, John, M.S. Environmental Engineering, "Use of rendered animal co-products as electron donors, mechanistic studies" (May 2020)

Harigovind, Sreedhar, M.S. Environmental Engineering, "The role of in situ activated carbon on reductive dechlorination of TCE" (May 2021)

Kumar, Varun Chetan, M.S. Environmental Engineering, "Using anti methanogenic reagents (AMRs) in remediation; impact on methane production in situ" (May 2021)

Shivani Swamy, M.S. Environmental Engineering, "Using palm oil as an electron donor for in situ remediation" (Fall 2021)

Gregory, Reagan, M.S., Environmental Engineering, "The role of in situ activated carbon on microbial activity and combined microbial-chemical reactions for chlorinated solvents"

Current Graduate Advising

Sumner, Catherine, Ph.D., Environmental Toxicology, "Impact of adsorbed PCB congeners on reductive dechlorination"

Florez-Garcia, Marcela, MS, EES

Motta, Katherine, MS, EES

Thomas, Marlow, MS, EES (BS-MS)

Rogers, Adam, MS, EES (BS-MS)

Barkley, Megan, MS, EES (BS-MS)

Undergraduate Research Assistants Trained:

Oi Fei Ivy Choi (through 2005)
Anna Knussmann (through 2005)
Cynthia Pancake (through 2006)
Margaret Brown (through 2006)
Cheng Su Wang (through 2006)
Rachel Castillo (through 2007)
Jovan Popovics (2007-2010)
Rory Polera (2008)
Thomas Foley (2008-2009)
Erica Scheet (2008-2010)
Brendan Powers (2008-2009)
Marianela Hechavarria (2008; SROP)
Erin Grubbs (2010-2013)
Kathryn Fauerby (2011-2013)
Jessica Bush (2011-2013)
Cassandra DeVol (2012-2013)
Carina Vargas (2012-2014)
Alec Wasner (2013-2014)
Juliet Johnston (2013-2014)
Nicholas Hotzelt (2014-2015)
Gina Straga (2014-2015)
Alexandra McIntyre (2014-2015)
Cody Bergen (2015-2016)
Haley Durning (2015-2016)
Kesley Herring (2015-2016)
Garion Waschcer (2015-2016)
Kameryn McGee (2015-2016)
Olivia Felber (2015-2017)
Katherine Norvell (2016-2017)
Gunnar Thomas Branagh (2016-2018)
Thomas Dick (2017-2018)
Sean Horgan (2017-2018)
Tejas Athevele (2018)
Natalie Croom (2019)
Megan Zeaser (Microbiology) (2019-2020)
James Zbinden (2019-2020)
Jacob Edwards (2019-2020)

TEACHING

Courses Taught (Beginning Fall 2004)

At Clemson University

Semester	Courses Taught	Credit Hrs. (units)	Clock Hrs. Per Week	Number of Students	Type of Instruction
Fall 2010	EEES851	3	1.5	35	Lecture
Spring 2011	EEES202	3	1.5	15	Lecture
Spring 2011	EEES2020L	1	3	15	Laboratory
Fall 2011	EEES851	3	1.5	36	Lecture
Fall 2011	EEES837	3	1.5	14	Discussion
Fall 2011	EEES861/961	1	1	91	Seminar
Fall 2011	GEOL851	1	1	16	Seminar
Spring 2012	EEES202	4	1.5	27	Lecture
Spring 2012	EEES202L	0	6	27	Laboratory
Spring 2012	EEES861/961	1	1	79	Seminar
Spring 2012	GEOL851	1	1	13	Seminar
Fall 2012	EEES 851	3	1.5	24	Lecture
Fall 2012	EEES837	3	1.5	4	Discussion
Spring 2013	EEES202	4	1.5	34	Lecture
Spring 2013	EEES202L	0	6	34	Laboratory
Spring 2013	EEES861/961	1	1	85	Seminar
Fall 2013	EEES 8510	3	1.5	25	Lecture
Spring 2014	EEES2020	4	1.5	40	Lecture
Spring 2014	EEES2020L	0	6	40	Laboratory
Spring 2014	EEES4370/6370	3/4	1.5	11/11	Seminar
Fall 2014	EEES 8510	3	1.5	24	Lecture
Spring 2015	EEES2020	4	1.5	34	Lecture
Spring 2015	EEES2020L	0	6	34	Laboratory
Spring 2015	EEES4370/6370	3/4	1.5	8/8	Seminar
Fall 2015	EEES 8510	3	1.5	31	Lecture
Spring 2016	EEES2020	4	1.5	42	Lecture
Spring 2016	EEES2020L	0	6	42	Laboratory
Spring 2016	EEES4370/6370	3/4	1.5	16	Lecture
Fall 2016	EEES 8510	3	1.5	20	Lecture
Spring 2017	EEES2020	4	1.5	30	Lecture
Spring 2017	EEES2020L	0	6	30	Laboratory
Spring 2017	EEES4370/6370	3/4	1.5	12	Lecture
Summer 2017	EEES4010/6010	3	Online	10	Lecture
Fall 2017	EEES 8510	3	1.5	24	Lecture
Spring 2018	EEES2020	4	1.5	34	Lecture
Spring 2018	EEES2020L	0	6	34	Laboratory
Spring 2018	EEES4370/6370	3/4	1.5	10	Lecture
Summer 2018	EEES4010/6010	3	Online	21	Lecture
Fall 2018	EEES 8510	3	1.5	20	Lecture
Spring 2019	EEES2020	4	1.5	30	Lecture
Spring 2019	EEES2020L	0	6	30	Laboratory

Spring 2019	EEES4370/6370	3/4	1.5	15	Lecture
Summer 2019	EEES4010/6010	3	Online	30	Lecture
Fall 2019	EEES 8510	3	1.5	15	Lecture
Spring 2020	EEES2020	4	1.5	28	Lecture
Spring 2020	EEES2020L	0	6	28	Laboratory
Spring 2020	EEES4370/6370	3/4	1.5	10	Lecture
Summer 2020	EEES4010/6010	3	Online	25	Lecture
Fall 2020	EEES 8510	3	1.5	12	Lecture
Spring 2021	EEES2020	4	1.5	25	Lecture
Spring 2021	EEES2020L	0	6	25	Laboratory
Spring 2021	EEES4370/6370	3/4	1.5	15	Lecture
Summer 2021	EEES4010/6010	3	Online	12	Lecture
Fall 2021	EEES 8510	3	1.5	16	Lecture

Same through 2024

At University of Illinois

Semester	Courses Taught	Credit Hrs. (units)	Clock Hrs. Per Week	Number of Students	Type of Instruction
Fall 2004	CEE595AG	1	1	62	Seminar
Spring 2005	CEE595AG	1	1	53	Seminar
Spring 2005	CEE330	3	2.5	61	Lecture
Fall 2005	CEE498BP	3	4	9	Laboratory
Spring 2006	CEE330	3	2.5	58	Lecture
Fall 2006	CEE498BP	3	4	7	Laboratory
Fall 2006	CEE595G	0	1	14	Seminar
Spring 2007	CEE330	3	2.5	54	Lecture
Spring 2007	CEE595G	1	1	14	Seminar
Fall 2007	CEE330	3	2.5	64	Lecture
Spring 2008	CEE444	3	2.6	23	Lecture
Fall 2008	CEE330	3	2.5	64	Lecture
Spring 2009	CEE498BP	3	4	6	Laboratory

New Course Development (List Courses Developed)

At University of Illinois

CEE498BP: Biological Principles Laboratory Course

At Clemson University

EEES 4370/6370: Biodegradation and Bioremediation

EEES Honors Course Series (H3000, H3010, H4010, H4950)

UNIVERSITY AND PUBLIC SERVICE

Continuing Education (Lecturer, Developer, Conference Chair, etc.).

1. Invited Course: British Petroleum and the American Petroleum Institute, Molecular Tools in MTBE and Petroleum Bioremediation, AEHS International Conference on Contaminated Soil, Sediment, and Groundwater, Amherst, MA, October 20-23, 2008

Committees (Group according to department, college, university.)

Department: Chair, Departmental Curriculum committee (2014-)
Chair, Graduate Program committee (2015-2017)
Member, Faculty Chair search committee (2014-2015)
Member, Biosystems Engineering Faculty Search Committee (2013)
Chair, Environmental Engineering and Earth Sciences Honors College Program Curriculum Committee (2012-)
Member, Environmental Engineering and Earth Sciences Awards Committee (2011-2015)
Member, Environmental Engineering and Earth Sciences Undergraduate Environmental Engineering Degree Curriculum Committee (2010-)
Faculty Member, (Illinois) General and Biological Qualifying Exam Committees, (2005-2009)

College: Chair, College curriculum committee (2020-2023)
Member, College curriculum committee (2014-Present)
Associate Dean for Research and Graduate Studies Advisory Board (2013-2015)
Member, (Illinois) College of Engineering Subcommittee on Engineering Biology/Chemistry

University: Undergraduate Curriculum Committee (2022-Present)
Participant, University Wide Focus Group on Research Administration Systems (2012)
Member, (Illinois) Langelier Scholarship Committee (2005-2010)

OTHER SERVICE

Environmental division coordinator (2016-current), Society for Industrial Microbiology (SIMB)
AEESP Awards Committee (2016-current), currently chair of the committee
Presentation to the Clemson University ASM student chapter, spring 2012

Chi Epsilon Student/Professor Lunch (2008) (two times)

Invited to Present to local (UIUC) student chapter of ASCE; presented “Bioremediation in the Lab and Field: Lab Data to Real World Applications”; invited by students in CEE 330 (2005)

Ad Hoc Reviewer for: Applied and Environmental Microbiology, Applied Microbiology and Biotechnology, Biodegradation, Bioremediation Journal, Bioresource Technology, Biotechnology and Bioengineering, Environmental Engineering Science, Environmental Science and Technology, International Journal of Hydrogen Energy, International Journal of Environmental Research and Public Health, Journal of Air and Waste Management, Journal of Environmental Engineering ASCE, Journal of Air and Waste Management, Journal of Membrane Science, Process Biochemistry, The International Society for Microbial Ecology (ISME) Journal (a Nature Publication), Nature Biotechnology

Last Updated October 2024