

DONNA E. FENNELL
Curriculum Vitae

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EDUCATION

- 1998 Cornell University, School of Civil and Environmental Engineering, Ithaca, NY
Ph.D. Civil and Environmental Engineering
Dissertation: "Comparison of Alternate Hydrogen Donors for Anaerobic Reductive Dechlorination"
Advisor: Professor James M. Gossett
- 1988 Cornell University, Department of Agricultural and Biological Engineering, Ithaca, NY
M.S. Agricultural and Biological Engineering
Thesis, "Kinetic Phase Separation of Anaerobic Digestion of Sorghum"
Advisor: Professor William J. Jewell
- 1985 University of Arkansas, Department of Agricultural Engineering, Fayetteville, AR
B.S. Agricultural Engineering, with honors

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RESEARCH, TEACHING AND ADMINISTRATION EXPERIENCE

- 2014-present Associate Chair, Department of Environmental Sciences, Rutgers University, New Brunswick, NJ
- 2011-2012 Visiting Fellow, Laboratorium voor Microbiologie, Wageningen University and Research Center, Wageningen, The Netherlands
- 2009-present Associate Professor, Department of Environmental Sciences, Rutgers University, New Brunswick, NJ
- 2002-2009 Assistant Professor, Department of Environmental Sciences, Rutgers University, New Brunswick, NJ
- 2001-2002 Research Associate, Department of Biochemistry and Microbiology, Rutgers University, New Brunswick, NJ
- 1999-2001 Postdoctoral Associate, Department of Biochemistry and Microbiology, Rutgers University, New Brunswick, NJ
- 1999 Research Associate, School of Civil and Environmental Engineering, Cornell University, Ithaca, NY
- 1998-1999 Postdoctoral Associate, School of Civil and Environmental Engineering, Cornell University, Ithaca, NY
- 1993-1998 Graduate Assistant, School of Civil and Environmental Engineering, Cornell University, Ithaca, NY
- 1987-1992 Research Support Specialist, Department of Agricultural and Biological Engineering, Cornell University, Ithaca, NY
- 1985-1987 Graduate Assistant, Department of Agricultural and Biological Engineering, Cornell University, Ithaca, NY

AWARDS, RECOGNITIONS, AND HONOR SOCIETIES

- 2011-2012 Fellowship, Wageningen Institute for Environment and Climate Research, in conjunction with Professor Hauke Smidt of Wageningen University and Research Center
- 2009 Excellence in Review Award, *Environmental Science and Technology*
- 2009 Rutgers University, School of Environmental and Biological Sciences, Excellence in Teaching Award.
- 2007 *Sigma Xi*, The Scientific Research Society
- 2007 Research on bioremediation of dioxin- and PCB- contaminated sediments featured in "The Soil Explorers" made by Partners Video Magazine, a production of the Cooperative State Research, Education, and Extension Service (CSREES) [http://www.csrees.usda.gov/newsroom/partners/soil_explorers.html].
- 2006 Best Paper Award, American Society for Engineering Education, Environmental Engineering Division. Jones, S., Bhandari, A., Clapp, L., **Fennell, D.**, LaPara, T. and Tull, K. Diversity in environmental engineering: The good and bad. In *Proceedings of the Annual Conference for the American Society of Engineering Education*, Chicago, IL, June **2006**.
- 2006 Appointment to the Science Advisory Board for Chambers Works, Deepwater NJ, DuPont Corporation.
- 1997 General Electric Faculty for the Future Loan to Grant

- 1996-1997 American Association of University Women (AAUW) Educational Foundation Engineering Dissertation Fellowship
- 1996 Netherlands Organization for International Cooperation in Higher Education Scholarship for the Summer Course in The Netherlands, Dutch Language and Culture
- 1995 The Alice H. Cook and Constance E. Cook Award, Cornell University, 1995. "In recognition of efforts on behalf of women at Cornell and beyond."
- 1985 Outstanding Senior, Department of Agricultural Engineering, University of Arkansas, Fayetteville, AR
- 1984 *Tau Beta Pi*, The Engineering Honor Society
- 1984 *Alpha Epsilon*, The Agricultural Engineering Honor Society

PROFESSIONAL SUMMARY

Research Funding (as PI or co-PI):

Total: \$7.4 million

As PI: \$1.48 million

National Science Foundation: \$1.13 million

Department of Defense: \$2.44 million

Research Productivity (Google Scholar as of June 2015)

Citations: 1932

h-index: 21

i10-index: 30

Journal Publications (40 published; 2 in review)

Book Chapters (5 published)

Conference Proceedings Papers (18 published)

Invited Seminars (36)

Invited Conference Platform Presentations (21)

Conference Platform Presentations (37)

Conference Poster Presentations (109)

Ph.D. Students Supervised (6 completed, 1 in progress)

M.S. Students Supervised (8 completed, 2 in progress)

Undergraduate Students Supervised (22 completed, 1 in progress)

Post-doctoral Researchers/Research Associates Supervised (3 completed)

RESEARCH FOCUS

Professor Donna E. Fennell leads a research program at Rutgers University that investigates challenging issues in environmental engineering and science. Her work on reductive dechlorination of dioxins and furans, biotransformation of complex contaminant mixtures in groundwater, bacterial activity in air, and ammonia toxicity in anaerobic digesters, represents a range of projects addressing fundamental and applied topics that are novel and which lead to new solutions to enhance environmental quality.

TEACHING

International Teaching

- 2015 Environmental Microbiology. An undergraduate course for environmental engineering students. March 16-20, 2015. School of Environment and Energy, South China University of Technology. Guangzhou, China. Course organizer: Professor Yuan Ren.
- 2013 Environmental Engineering. An undergraduate course for environmental engineering students. May 27-31, 2013. School of Environment and Energy, South China University of Technology. Guangzhou, China. Course organizers: Professors Yuan Ren and Xiaoqin Li.
- 2009 Assessment and Remediation of Contaminated Sediments. A graduate course taught at the University of Helsinki, Lahti Campus, Finland. October 12–16, 2009. Course organizers: Max Häggblom (Rutgers University) and Anna-Lea Rantalainen (University of Helsinki).

Rutgers University

Courses Taught

- 2010-present 11:090:101:05 THE BYRNE SEMINARS: Repairing the Raritan (100%)
- 2010-present 16:375:529 Biodegradation and Bioremediation (100% organization, 50% teaching)
- 2007-present 11:375:201 Biological Concepts in Environmental Science (25%)
- 2003-present 11:375:302 Elements of Water and Wastewater Treatment (100%)
- 2003-present 16:375:504 Elements of Water and Wastewater Treatment (100%) co-taught with 11:375:302
- 2002-present 11:117:413 Unit Processes in Bioenvironmental Engineering (100%)
- 2002-present 11:117:414 Unit Processes in Bioenvironmental Engineering Lab. (100%)
- 2001 11:126:394 Applied Microbiology (50%)

Course Contributor

- 2012, 2014 16:682:521 Graduate Seminar in Microbial Biology
- 2010, 2013 11:776:410 Plants for Bioenergy
- 2010-present 11:375:322 Energy Technology and its Environmental Impact
- 2010 16:712:605 Graduate Seminar in Oceanography
- 2004 11:375:310 Analytical Environmental Chemistry Laboratory
- 2002-present 16:375:613 Graduate Seminar in Environmental Sciences
- 2002-present 11:117:100 Introduction to Bioenvironmental Engineering
- 2002-present 14:440:100 Freshman Engineering Orientation (Organizer for the Bioenvironmental Engineering Program from 2006-2014)
- 2001-2008 16:375:529 Biodegradation and Bioremediation
- 2001 11:126:405 Microbial Ecology
- 2000 11:126:405 Microbial Technology

Cornell University

Course Contributor

- 1998-1999 Chemistry for Environmental Engineers

- 1998-1999 Environmental Quality Engineering
- 1998-1999 Microbiology for Environmental Engineers
- 1995 Environmental Quality Engineering (teaching assistant)
- 1993 Environmental Quality Engineering (teaching assistant)

PRESS

- 2015 Horses in the Morning; Live interview about horse waste anaerobic digestion
[<http://www.horsesinthemorning.com/hitm-for-04-29-2015-derby-trivia-manure-digester-dean-reeves-on-derby-2015/>]
- 2015 Star Ledger; quoted in "Passaic River polluters funding bacteria study to clean up toxic mess" [http://www.nj.com/news/index.ssf/2015/02/passaic_river_polluters_bacteria_study.html]
- 2015 Daily Targum; interviewed for "EPA Partners with U. to Clean Toxic Passaic River" [March 12, 2015.]
- 2013 Daily Targum; interviewed for "New Brunswick Water Safety" [<https://vimeo.com/dailytargum>]
- 2012 Daily Targum; quoted in "Center shares studies on equine science, safe riding" [<http://www.dailytargum.com/article/2012/12/center-shares-studies-on-equine-science-safe-riding>]
- 2009 Lancaster Farming; quoted in "Transforming waste to wealth on the horse farm."

INDUSTRY INTERACTION

- 2012-2013 Science Advisor to Battelle Memorial Institute for preparation of an engineering issue paper on technologies and applications specific to bioremediation of dioxins.
- 2008-2010 Globe Die Cutting Products, Technology assessment for paper product development
- 2007-2010 Earth Pledge, Technical advisor for anaerobic digestion of food waste
- 2006-present Dupont Corporation, Science Advisory Board for Chambers Works
- 2004 GeoSyntec Inc. and US Geological Survey, Technical review for in situ bioremediation

REVIEWING

Reviewer for Professional Journals

- 2014-present *Atmospheric Environment*
- 2012-present *CLEAN*
- 2012-present *Journal of Environmental Engineering*
- 2011-present *Soil Science*
- 2008-present *Chemosphere*
- 2008-present *Journal of Bacteriology*
- 2005-present *Journal of Environmental Toxicology and Chemistry*
- 2004-present *Applied and Environmental Microbiology*
- 2004-present *Biotechnology and Bioengineering*
- 2003-present *Biodegradation*
- 2002-present *Soil and Sediment Contamination Journal*
- 2002-present *FEMS Microbiology Ecology*
- 2001-present *Environmental Science and Technology*
- 2000-present *Water Research*

2000-present *Bioremediation Journal*

Reviewer of Documents and Grants

Invited Reviewer

- 2014 National Science Foundation, Atmospheric and Geospace Sciences
- 2012 National Science Foundation, Dimensions of Biodiversity
- 2010 SERDP/ESTCP Monograph on Processes, Assessment and Remediation of Contaminated Sediment.
- 2009 SERDP/ESTCP Monograph on Bioaugmentation for Groundwater Remediation.
- 2009 Austrian Science Fund (FWF)
- 2008 Minnesota Sea Grant
- 2005 U.S. EPA National Risk Management Research Laboratory, GWESR [Document Review]
- 2005 Texas Sea Grant
- 2004 National Science Foundation, Microbial Interactions and Processes Program
- 2000 Natural Sciences and Engineering Research Council of Canada

Invited Panel Participant

- 2010 U.S. Department of Energy, Genomic Science and Technology for Energy and the Environment. December 7-10, 2010. Arlington, VA.
- 2010 European Union, FP7-KBBE-2010-4, FP7 Cooperation Work Programme: Food, Agriculture and Fisheries, and Biotechnology. April 19-23, 2010. Brussels, Belgium. [Reviews were accomplished remotely when travel to Europe was curtailed by eruptions from Eyjafjallajökull.]
- 2007 National Science Foundation, Environmental Engineering
- 2006 U.S. Department of Energy, Environmental Remediation and Science Program
- 2005 U.S. Environmental Protection Agency, SBIR I

AFFILIATIONS

Research and Educational Affiliations

- 2015-present Institute for Earth, Oceans and Atmospheric Sciences, Rutgers University
- 2014-present Bioenvironmental Engineering, Graduate Faculty, Rutgers University
- 2010-present Microbial Biology, Graduate Faculty, Rutgers University
- 2009-present Rutgers Energy Institute, Rutgers University
- 2006-present Equine Science Center, Rutgers University
- 2005-present Civil and Environmental Engineering, Graduate Faculty, Associate Member, Rutgers University
- 2003-present Center for Environmental Prediction, Rutgers University
- 2003-present Environmental Sciences, Graduate Faculty, Rutgers University
- 2003-2007 Bioresource Engineering, Graduate Faculty, Rutgers University (program disbanded)

PROFESSIONAL SERVICE

Professional Memberships and Committees

- 2014-2015 Councilor for the American Society for Microbiology, Division Q Environmental Microbiology
- 2014-2015 President, The New Jersey Branch of the American Society for Microbiology (The Theobald Smith Society)
- 2013-2014 President-elect, Theobald Smith Society
- 2013-2014 Chair of the American Society for Microbiology, Division Q Environmental Microbiology
- 2012-2013 Chair-elect of the American Society for Microbiology, Division Q Environmental Microbiology
- 2007-2010 *Sigma Xi*, Rutgers University Chapter, Secretary
- 2007-2008 Environmental Chemistry Division, American Chemical Society, Member at Large
- 2004-2010 Diversity and Demographics Committee, Association of Environmental Engineering and Science Professors
- 2003 New Jersey Water Environment Association Annual Meeting, Judge, Student Poster Competition, May 2004, Atlantic City, NJ
- 2003 Distinguished Speaker Committee, Association of Environmental Engineering and Science Professors
- 2003-2005 Theobald Smith Society, Local Councilor
- 2002-2010 Association of Environmental Engineering and Science Professors, member
- 2001 Sixth International *In Situ* and On-Site Bioremediation Symposium, Reviewer, Student Paper Competition, May 2001, San Diego, CA
- 2000-present American Society for Microbiology, member
- 1998 American Geophysical Union Spring Meeting, Judge, Student Poster Competition, May 1998, Boston, MA
- 1997-2010 American Chemical Society, member

Rutgers University Service

- 2014-2015 Faculty Search Committee, Johnson Family Chair in Watershed Ecology, School of Environmental and Biological Sciences
- 2014, 2015 Career Night, Representative for Bioenvironmental Engineering and Environmental Sciences Undergraduate Programs, School of Environmental and Biological Sciences
- 2013-2016 University Faculty Senator, representing the School of Environmental and Biological Sciences, Rutgers University Senate
- 2013, 2015 Hands-on modules for the Department of Environmental Sciences for the public. "Rutgers Day" the open house for Rutgers University.
- 2012-2015 Undergraduate Research Mixer, Representative for Bioenvironmental Engineering and Environmental Sciences Undergraduate Programs, School of Environmental and Biological Sciences
- 2012-2015 Assessment Committee, Bioenvironmental Engineering Undergraduate Program

- 2010-present Equipment Committee, Department of Environmental Sciences
- 2010-2011 Planning Committee, School of Environmental and Biological Sciences
- 2006-2008 Organize hands-on modules for environmental science for the public. "Ag Field Day" the open house for the School of Environmental and Biological Sciences.
- 2006-2010 Diversity Committee, School of Environmental and Biological Sciences
- 2006-2007 Seminar Committee, Rutgers Energy Institute
- 2005-2007 Panelist Douglass College Science Career Exploration Day
- 2004-2006 Project SUPER. Developed and ran a hands-on workshop for entering Douglas College Freshmen women attending the Douglass Project for Women in Math, Science and Engineering Orientation, Rutgers University
- 2005-2012 Recruitment and Outreach Committee, Department of Environmental Sciences
- 2003-2006 Reporter, Department of Environmental Sciences
- 2003 Faculty Search Committee, Department of Environmental Sciences
- 2003-2008 Ad-Hoc Co-Organizer in bringing the American Association of Environmental Engineering and Science Professors Annual Distinguished Speaker to a Joint Princeton-Rutgers Seminar (with Professor Catherine Peters of Princeton University).
- 2002-present Curriculum Committee, Bioenvironmental Engineering Undergraduate Program

Conference Organization

- 2015 Meeting organizer (with Professor Lee Kerkhof of Rutgers University and the Rutgers Student Branch of the American Society for Microbiology) for the New Jersey Branch of the American Society for Microbiology Meeting in Miniature. April 30, 2015. Rutgers University, New Brunswick, NJ.
- 2014 Symposium organizer for the 114th General Meeting of the American Society for Microbiology, Symposium entitled "A Strange Place for a Picnic: Microbial Appetites in Tough Neighborhoods". Division Q. May, 17-20, 2014. Boston, MA.
- 2011 Symposium organizer with Professor Brent Christner of Louisiana State University for the 111th General Meeting of the American Society for Microbiology, Symposium entitled "Microbes Controlling Climate?". Division Q. May 21-24, 2011, New Orleans LA.
- 2009 Symposium Organizer with Professor Gediminas Mainelis of Rutgers University for the 109th General Meeting of the American Society for Microbiology. Symposium entitled, Microbiology of the Atmosphere, Division Q. May 17-21, 2009, Philadelphia, PA.
- 2007 Symposium Organizer with Professor Lisa Totten, Rutgers University for the 234th American Chemical Society National Meeting, Boston MA, August 19-23. Symposium entitled, Fate of Persistent Organic Pollutants in Urban Systems, Division of Environmental Chemistry in conjunction with AEESP.
- 2004 Symposium Organizer with Professor Paige Novak, University of Minnesota for the 228th American Chemical Society National Meeting, Philadelphia, PA, August 22-27. Symposium entitled, Environmental Fate and Treatment of Persistent Halogenated Compounds, Division of Environmental Chemistry in conjunction with AEESP.
- 2002 Conference Co-Organizer with Professors Max Häggblom and Kenneth Lee, Rutgers University for the 34th Mid-Atlantic Industrial and Hazardous Waste Conference September 20-21, Rutgers University, New Brunswick, NJ, USA

Conference Session Moderator

- 2011 Session Moderator for “Biologically Based Alternative Energy and Environmental Impacts” at the International Symposium on Bioremediation and Sustainable Environmental Technologies, June 27-30, Reno, NV
- 2009 Session Moderator for “PCBs and Dioxins” at the Eleventh International *In Situ* and On-Site Bioreclamation Symposium, May 5-8, Baltimore, MD
- 2007 Session Moderator for “PCBs and Dioxins” at the Ninth International *In Situ* and On-Site Bioreclamation Symposium, May 6-10, Baltimore, MD
- 2005 Session Moderator for “PCBs and Dioxins” at the Eighth International *In Situ* and On-Site Bioreclamation Symposium, June 1-6, Baltimore, MD
- 2004 Session Moderator for “Environmental Fate and Treatment of Persistent Halogenated Compounds: Distribution and Fate in Natural Environments”, Division of Environmental Chemistry in conjunction with AEESP, the 228th American Chemical Society (ACS) National Meeting, August 22-27, Philadelphia, PA
- 2004 Session Moderator for “Environmental Fate and Treatment of Persistent Halogenated Compounds : Biotransformation and Treatment”, Division of Environmental Chemistry in conjunction with AEESP, the 228th American Chemical Society (ACS) National Meeting, August 22-27, Philadelphia, PA
- 2003 Session Moderator for “Enhanced Reductive Dechlorination II” at the Seventh International *In Situ* and On-Site Bioreclamation Symposium, June 1-6, Orlando, FL
- 2001 Session Moderator for “Enhanced Reductive Dechlorination II” at the Sixth International *In Situ* and On-Site Bioreclamation Symposium, June 4-7, San Diego, CA
- 1999 Session Moderator for “Enhanced Anaerobic Dechlorination” at the Fifth International *In Situ* and On-Site Bioreclamation Symposium, April 19-22, San Diego, CA

Other Service Activities

- 2010-2011 Chair North Brunswick Township, NJ Environmental Commission
- 2008-2011 Member of the North Brunswick Township, NJ Environmental Commission

RESEARCH SUPPORT

Total Funding \$7.4 million (excludes Hatch Funding)

Total Funding as PI \$ 1.48 million

Current

- 2015-2017 National Science Foundation. Airborne Microbes as Mitigators of Greenhouse Gases; \$227,573, 07/01/15 - 06/30/17, **PI: Fennell, D.E.**; Co-PIs: Krumins, V.; Mainelis, G. and Kerkhof, L.J. *selected for funding.*
- 2015-2017 Hudson River Foundation. Fate and Ecotoxicity of Pharmaceuticals and Personal Care Products, Emerging Contaminants in the Hudson River Ecosystem. \$169,886, 07/01/2015 – 06/30/2017. PI: Häggblom, M.M.; Co-PIs: Cooper, K.R.; White, L.A.; and **Fennell, D.E.**

- 2014-2016 Joint Genome Institute. Comparative metagenomic analysis of anaerobic MTBE-degrading enrichment cultures. small-scale microbial/metagenome sequencing. 09/02/14 – 03/02/16. **PI:** Häggblom, M.M.; Co-PIs: **Fennell, D.E.**; and Kerkhof, L.J.
- 2013-2016 National Science Foundation. Natural Attenuation and Enhanced Biodegradation of Methyl-tert-Butyl Ether in Anoxic Aquifers; \$330,000, 09/01/2014 – 08/30/17, **PI:** Häggblom, M.M.; Co-PIs: **Fennell, D.E.**; and Kerkhof, L.J.
- 2010-2015 Interdisciplinary Education in Environmental Science and Engineering, US Dept. of Education-Graduate Assistance in Areas of National Need (GAANN), \$831,051, 08/15/2010 – 08/14/2013, NCE, **PI:** Gimenez, D.; Co-PIs: **Fennell, D.E.** and Reinfelder, J.R.

Pending

- 2015-2017 Chemours. Microbial Processes at Area of Concern 1 at Chambers Works. \$425,000, 6/15/15 to 6/14/17. **PI:** **Fennell, D.E.**, Co-PIs: Kerkhof, L.J. and Young, L.Y.
- 2015-2018 Maxus Energy Corporation. Scientific Support of In Situ Bioremediation in the Passaic River. \$1,094,000, 2015 to 2018. **PI:** **Fennell, D.E.**, Co-PIs: Krumins, V.; Reinfelder, J.R.; and Young, L.Y.

Completed

- 2010-2014 Cooperative State Research, Education, and Extension Service (CSREES) Hatch Grant. “Microbial Processes in Bioenvironmental Engineering: Bioremediation, Bioaerosols and Bioenergy” \$2,500 **PI:** **Fennell, D.E.**
- 2014-2015 CEED/NIH Center Grant, Rutgers University; Effect of Nanotechnology-enabled Consumer Sprays on Personal Microbial Environment; \$25,000; 09/01/2014-03/31/2015; **PI:** Mainelis, G.; **Co-PI:** **Fennell, D.E.**
- 2012-2013 New Jersey Agricultural Experiment Station Internal Research Awards Program for use of the School of Environmental and Biological Sciences/New Jersey Agricultural Experiment Station Sequencing Facility. Bioammonia for hydrogen production: functional gene biomarker discovery. \$7,900. 06/2012-12/2013. **PI:** **Fennell, D.E.** (with Ph.D. Student, Amanda Luther).
- 2011-2014 New Jersey Department of Environmental Protection. Applying Innovative Diagnostic Tools at New Jersey Publicly Funded Sites. \$83,500. 06/30/2011-09/30/2012, **PI:** **Fennell, D.E.**; co-PI: Häggblom, M.M.
- 2010-2014 NIOSH. Advanced Sampler for Measuring Exposure to Biological Aerosols, \$784,747, 04/2010-03/2014, **PI:** Mainelis, G.; **Co-PI:** **Fennell, D.E.**
- 2010-2014 National Science Foundation. MSB: Air as an Active Bacterial Ecosystem \$481,172, 09/01/2010 – 08/30/13, **PI:** **Fennell, D.E.**; Co-PIs: Mainelis, G. and Kerkhof, L.J.
- 2007-2010 Academic Excellence Fund, Rutgers University. “Bio-Ammonia for a Portable Hydrogen Generator” \$80,000, 9/1/2007 to 8/31/2008. **PI:** Prakash, S.; **Co-PI:** **Fennell, D.E.**

- 2006-2011 DuPont Corporation. "Combined Physical-Chemical-Biological Treatment of 4-Chloroaniline and Aniline" \$325,010, 7/01/06 to 6/30/09. **PI: Fennell, D.E.**, Co-PI: Huang, W. No cost extension.
- 2006-2011 Department of Defense, Strategic Environmental Research and Development Program (SERDP). "Quantifying Enhanced Microbial Dehalogenation Impacting the Fate and Transport of Organohalide Mixtures in Contaminated Sediments" \$1,883,000, 3/2006 to 12/2009, PI: Häggblom, M.M.; Co-PIs: **Fennell, D.E.**; Kerkhof, L.J.; Totten L.A.; and Sowers K.R.
- 2002-2011 Cooperative State Research, Education, and Extension Service (CSREES) Hatch Grant. "Bioremediation of Dioxin/Furan Contaminated Sediments: Fundamental Studies for Technology Development" 2003, \$1500; 2004, \$1500; 2005, \$1500; 2006, \$1500; 2007, \$500 **PI: Fennell, D.E.**
- 2009-2010 Foundation for Environmental Research. Preliminary Investigation of Algal Aerosols. \$17,507, 06/2009-05/2010, **PI : Fennell, D.E.**; co-PI: Mainelis, G.
- 2008-2009 Rutgers Energy Institute, Competitive Graduate Student Fellowship. "Bio-Ammonia for Hydrogen Production" \$24,000, 9/01/2008 to 6/30/2009. **PI: Fennell, D.E.**; Co-PI: Prakash, S.
- 2006-2009 U.S. Department of Education, Grants in Areas of National Needs (GAANN). "Interdisciplinary Graduate Education in Environmental Science and Engineering" \$910,815, 6/01/06 to 5/31/09, PI: Gimenez, D.; Co-PIs: **Fennell, D.E.** and Robock, A.R.
- 2008-2009 Globe Die Cutting Products. "Variability of Anaerobic Degradation of Paper Samples under Simulated Landfill Conditions—Phase I, Proof of Principle" \$18,768, 9/15/2008 to 9/30/2009, **PI: Fennell, D.E.**
- 2008-2009 New Jersey State Equine Science Initiative. "Horse Manure to Bioenergy Technology for On-Farm or Regional Application" \$38,589, 9/1/2008 to 8/31/2009. **PI: Fennell, D.E.**; Co-PIs: Krumins, V.; Both, A.J.; Obropta, C.; and Westendorf, M.
- 2007-2008 New Jersey State Equine Science Initiative. "Horse Manure to Bioenergy Technology for On-Farm or Regional Application" \$50,000, 9/1/2007 to 8/31/2008. **PI: Fennell, D.E.**; Co-PIs: Krumins, V.; Both, A.J.; Obropta, C.; and Westendorf, M.
- 2006-2008 National Science Foundation, Small Grant for Exploratory Research. "Is Air an Active Microbial Ecosystem?" \$94,811, 7/01/06 to 6/30/08. **PI: Fennell, D.E.**, Co-PI: Mainelis, G.
- 2006-2008 New Jersey Agricultural Experiment Station, Rutgers University EcoComplex and Burlington County NJ. "A Study to Improve the Operation of the Burlington County Bioreactor Landfill and to Investigate Landfill Biogeochemical Processes in this Bioreactor" \$100,000, 7/1/06 to 6/30/08, PI: Ravit, B.; Co-PIs: **Fennell, D.E.** and Krogmann, U.
- 2006-2007 Cook College - NJAES Pre-Tenure Faculty Career Development Award. "Environmental Nanobiotechnology: Use and Effect of Carbon Nanotubes" \$30,000, 6/1/06 to 5/31/07, **PI: Fennell, D.E.**
- 2006-2007 New Jersey State Equine Science Initiative. "Horse Manure to Bioenergy Technology for On-Farm or Regional Application" \$50,000, 9/1/2006-8/31/2007, **PI: Fennell, D.E.**; Co-PIs: Obropta, C. and Westendorf, M.

- 2006-2007 New Jersey Board of Public Utilities. "Waste and Bioenergy Assessment for a State Wide (Bio)energy Master Plan" \$210,841, 9/2006 to 6/2007, PIs: Brennan, M. and Specca, D.; Collaborators: Schilling, B.; Tulloch, D.; Paul, S.; Sullivan, K.; Helsel, Z.; Hayes, P.; Melillo, J.; Simkins, B.; Phillipuk, C.; Both, A.J.; **Fennell, D.**; Bonos, S.; Westendorf, M.; and Brekke, R.
- 2006 Cook College – New Jersey Agricultural Experiment Station Intramural Awards Program, Research Infrastructure Awards. "An Accelerated Solvent Extraction (ASE) System for Analysis of Anthropogenic and Natural Chemicals in Environmental Samples and Biota" \$34,620, 2006. PI: Totten, L.A.; Co-PIs: **Fennell, D.E.**; Häggblom, M.M.; Huang, W.; Kerkhof, L.; Obropta, C.; Sikes, E.L.; and White, L.A.
- 2006 Cook College – New Jersey Agricultural Experiment Station Intramural Awards Program, Research Infrastructure Awards. "Infrastructure Upgrade in Support of Research Productivity in Environmental Sciences" \$17,000, 2006, PI: Young, L.Y.; Co-PIs: **Fennell, D.E.** and 13 others.
- 2005-2007 Hudson River Foundation. "Source Apportionment of Organic Contaminants in the NY/NJ Harbor Estuary" \$95,364, 7/1/2005 to 6/30/2007, PI: Totten, L.A.; Co-PI: **Fennell, D.E.**
- 2005 National Science Foundation Fellowship. "To attend the Summer Institute on Nanotechnology, Biotechnology, and Green Manufacturing for Creating Sustainable Technologies" \$2,350, 2005, **Fennell, D.E.**
- 2003-2006 New York Academy of Sciences. "A Mass Balance on Dioxins and Dioxin-Like Compounds in the NY-NJ Harbor Estuary" \$7000, 6/2003 to 12/2006, **PI: Fennell, D.E.**
- 2005-2006 Rutgers University Research Council Grant. "Anaerobic Dehalogenating Bacteria in Engineered Systems" \$2,500, 6/01/2005 to 5/31/2006, **PI: Fennell, D.E.**
- 2004-2005 New Jersey Water Resources Research Institute. "Fate of Brominated Flame Retardants in New Jersey Wastewater Treatment Facilities" \$30,000, 3/1/2004 to 2/29/2005. **PI: Fennell, D.E.**; Co-PIs: Totten, L.A. and Krogmann, U.
- 2004-2005 Academic Excellence Fund, Rutgers University (Instrumentation Grant). "Triple Quadrupole GC/MS For Analysis of Trace Organics in Environmental Matrixes" \$175,000, 2004-2005. PI: Totten, L.A.; Co-PIs: **Fennell, D.E.**; Reinfelder, J.R.; Huang, W.; Turpin, B.J.; Sherrell, R.M.; Sikes, E.L.; and White, L.A.
- 2004 GeoSyntec Inc. and US Geological Survey. "Design and Installation of a Microbial Biomat—Technical Review" \$4,500, 6/1-8/30/2004. **Fennell, D.E.**
- 2003-2004 New Jersey Agricultural Experiment Station, Planning Grant. "Control of Biological Air Quality in Residential and Occupational Indoor Air Environments", \$4,000, 7/1/2003 to 6/30/2004. **PI: Fennell, D.E.**; Co-PIs: Mainelis, G.; Both, A.J.; Ponessa, J.T.; White, J.A.; Marshall, B.; and Reiss, E.
- 2003 Association of Environmental Engineering and Science Professors Travel Grant to attend the Frontiers in Assessment Methods for the Environment Symposium. \$500, August, 2003. **Fennell, D.E.**
- 2001-2005 Department of Defense, Strategic Environmental Research and Development Program (SERDP). "*In Situ* Enhancement of Anaerobic Microbial Dechlorination of Polychlorinated Dibenzo-*p*-dioxins and Dibenzofurans in Marine and Estuarine

Sediments" \$556,975, 3/2001 to 12/2004. PI: Häggblom, M.M.; Co-PIs: **Fennell, D.E.** and Kerkhof, L.J.

Research Fellowships and Grants to Students

Total grants to students \$48,000

- 2014-2015 New Jersey Water Resources Research Institute, Student Grant in Aid. PI: Haider ALMNEHLAWI, Ph.D. student. \$5,000, **Faculty Advisor: Fennell, D.E.**
- 2012-2013 New Jersey Water Resources Research Institute, Student Grant in Aid. PI: Rattana, Sunirat, Ph.D. student. \$5,000, **Faculty Advisor: Fennell, D.E.**
- 2012-2013 New Jersey Water Resources Research Institute, Student Grant in Aid. PI: Luther, Amanda, Ph.D. student. \$5,000, **Faculty Advisor: Fennell, D.E.**
- 2009-2010 New Jersey Water Resources Research Institute, Student Grant in Aid. "Innovative Research and Development for Environmental Protection and Sustainable Waste and Wastewater Management System Design" PI: Babson, D., Ph.D. student. \$5,000, 2009 to 2010, **Faculty Advisor: Fennell, D.E.**
- 2008-2009 New Jersey Water Resources Research Institute, Student Grant in Aid. "PBDE'S and other Brominated Compounds in a Bioreactor Landfill" PI: Loudon, J., M.S. student. \$5,000, 2008 to 2009, **Faculty Advisor: Fennell, D.E.**
- 2007-2008 ARESTY Undergraduate Research Awards, Rutgers University. "Comparison of Microbial Communities in Anaerobic Biodigesters" PI: Schwab, B. \$450, 2007-2008, **Faculty Advisor: Fennell, D.E.**
- 2006 USDA CSREES EPA Region 2 Water Quality Coordination Project / NJWRRRI Undergraduate Student Stipend Program. "Enhancing Watershed Protection with Development of Economical Manure Management Technology: Horse Manure to BioEnergy" \$4,000, 5/2006 to 9/2006, **PI: Fennell, D.E.**
- 2006-present New Jersey Water Resources Research Institute, Student Grant in Aid. "Effect of Carbon Nanotubes on Dechlorinating Bacteria" PI: Kannepalli, S. Ph.D. student. \$5,000, 2006 to 2008, **Faculty Advisor: Fennell, D.E.**
- 2005-2006 Rutgers University Undergraduate Research Fellows Award. "Bioremediation of Heavy Metal and Chlorinated Solvent Co-Contaminants in Groundwater" PI: Thompson, J., \$2,000, 7/2005 to 6/2006, **Faculty Advisor: Fennell, D.E.**
- 2005-2006 New Jersey Water Resources Research Institute. Student Grant in Aid "Resistance of Fractured Rock Dechlorinating Bacteria to Pressure from Heavy Metals" PI: Son, E.-K. PhD Student, \$5,000, 3/1/2005 to 2/29/2006. **Faculty Advisor: Fennell, D.E.**
- 2004-2006 New Jersey Water Resources Research Institute. Student Grant in Aid "Investigation of bacterially-mediated dechlorination in dioxin-contaminated sediments in New Jersey" PI: Liu, F., PhD Student, \$5,000, 3/1/2004 to 2/29/2006. **Faculty Advisor: Fennell, D.E.**
- 2004-2005 Rutgers University Undergraduate Research Fellows Award. "Investigation of Ionic Air Cleaner Efficiency in Reducing Indoor Particulates and Bioaerosols" PI: Berry, D. \$1,500, 6/2004 to 6/2005. **Faculty Advisors: Mainelis, G., Fennell, D.E.**

PUBLICATIONS

In Preparation

(*Fennell's student; †Fennell's post-doctoral associate/research associate; #senior author)

1. †Krumins, V.; Capozzi, S.; **Fennell, D.E.**; and Rodenburg, L.A. **2015**. The bacterial microbiome of combined sewer sediments is highly diverse. prepared for submission to *Environmental Science and Pollution Research*.
2. *Rattana, S.; †Krumins, V.; and #**Fennell, D.E.** **2015**. Ammonia tolerant microorganisms in two landfill leachates. prepared for submission to *Water Research*.
3. *Luther, A.K.; Strom, P.; and #**Fennell, D.E.** **2015**. Transcriptional response of *Peptostreptococcus russellii* during growth under high ammonia concentrations. in preparation for submission to *Journal of Bacteriology*.
4. †Krumins, V.; *Abadjev, M.; Boeren, S.; Kruse, T.; Schaap, P.; Smidt, H.; Mainelis, G.; Kerkhof, L.J.; and #**Fennell, D.E.** **2015**. Proteomic analysis of *Sphingomonas aerolata* incubated in the airborne state. in preparation for submission to *Environmental Science and Technology*.

Submitted Peer-Reviewed Journal Articles

(*Fennell's student; †Fennell's post-doctoral associate/research associate; #senior author)

1. †Sun, W.; *Li, Y.; McGuinness, L.; *Luo, S.; Huang, W.; Kerkhof, L.; Mack, E.; Häggblom, M.; and #**Fennell, D.E.** **2015**. Identification of anaerobic aniline-degrading bacteria at a contaminated industrial site. accepted with minor revisions in *Environmental Science and Technology*.
2. *Luther, A.K.; Desloover, J.; **Fennell, D.E.**; and #Rabaey, K. **2015**. Electrochemically driven extraction and recovery of ammonia from human urine. in revision to *Water Research*.
3. Zhen, H.; †Krumins, V.; **Fennell, D.E.**; and # Mainelis G. **2015**. Development of a dual-internal-reference technique to improve accuracy when determining bacterial 16S rRNA:16S rRNA gene ratio with application to *Escherichia coli* liquid and aerosol samples. submitted to *Journal of Microbiological Methods*.

Published Peer-Reviewed Journal Articles

(*Fennell's student; †Fennell's post-doctoral associate/research associate; #senior author)

1. Han, T.; **Fennell, D.E.**; and #Mainelis, G. **2015**. Development and Optimization of the Electrostatic Precipitator with Superhydrophobic Surface (EPSS) Mark II for Collection of Bioaerosols in press, *Aerosol Science and Technology*.
2. #Wang, Z.; Huang, W.; Peng, P.; and **Fennell, D.E.** **2015**. Rapid dechlorination of 1,2,3,4-TCDD by Ag/Fe bimetallic particles. *Chemical Engineering Journal*, 273, 465-471.
3. †Krumins, V.; Mainelis G., Kerkhof, L.J.; and #**Fennell, D.E.** **2014**. Substrate-dependent rRNA production in an airborne bacterium. *Environmental Science and Technology Letters*, 9, 376-381.
4. *Zhen, H.; †Du, S.; Rodenburg, L.A.; Mainelis, G.; and #**Fennell, D.E.** **2014**. Reductive dechlorination of 1,2,3,7,8-pentachlorodibenzo-*p*-dioxin and Aroclor 1260, 1254 and 1242 by a mixed culture containing *Dehalococcoides mccartyi* strain 195. *Water Research*, 52, 51-62.

5. [#]Krumins, V. and **Fennell, D.E.** 2014. Identifying the correct biotransformation model from polychlorinated biphenyl and dioxin dechlorination batch studies. *Environmental Engineering Science*, 31 (10), 548-555.
6. Zhen, H.; Han, T.; **Fennell, D.E.**; and [#]Mainelis, G. 2014. A systematic comparison of four bioaerosol generators: Affect on culturability and cell membrane integrity when aerosolizing *Escherichia coli* bacteria. *Journal of Aerosol Science*, 70, 67-79.
7. Zhen, H.; Han, T.; **Fennell, D.E.**; and [#]Mainelis, G. 2013. Release of free DNA by Membrane-impaired bacterial aerosols due to aerosolization and air sampling." *Applied and Environmental Microbiology* 79, 7780-7789.
8. ^{*}Babson, D., Bellman K.; [#]Prakash, S.; **Fennell, D.E.** 2013. Anaerobic digestion for methane generation and ammonia reforming for hydrogen production: A thermodynamic energy balance of a model system to demonstrate net energy feasibility. *Biomass and Bioenergy*, 56, 493-505.
9. Liu, H.; Park, J-W.; **Fennell, D. E.**; Rodenburg, L. A.; Verta, M.; [#]Hägglom, M.M. 2013 Microbial reductive dechlorination of weathered polychlorinated dibenzofurans in Kymijoki sediment mesocosms. *Chemosphere*, 91, 212–221.
10. Maphosa, F.; Lieten, S.H.; Dinkla, I.; Stams, A.J.; [#]Smidt, H.; and **Fennell, D.E.** 2012. Ecogenomics of microbial communities in bioremediation of chlorinated contaminated sites. *Frontiers in microbiology*, 3.
11. ^{*}Wartell, B.; [¥]Krumins, V.; ^{*}Alt, J. ^{*}Kang, K.; ^{*}Schwab, B.J.; and [#]**Fennell, D.E.** 2012. Methane production from horse manure and stall waste with softwood bedding. *Bioresource Technology*, 112, 42–50.
12. [#]Rodenburg, L.A; Du, S.; Guo, J.; Oseagulu, N.; and **Fennell, D.E.** 2012. Evidence for dechlorination of polychlorinated biphenyls and polychlorinated dibenzo-*p*-dioxins in wastewater collection systems in the New York metropolitan area. Submitted to *Environmental Science and Technology*, 46, 6612–6620.
13. Park, J.W.; [¥]Krumins, V.; Gillespie, K.; Kjellerup, B.V.; Sowers, K.R.; Rodenburg, L.A.; Kerkhof, L.J.; **Fennell, D.E.**; and [#]Hägglom, M.M. 2011. The effect of cosubstrate-activation on indigenous and bioaugmented PCB dechlorinating bacterial communities in sediment microcosms. *Applied Microbiology and Biotechnology* 6, 2005-2017.
14. [#]Rodenburg, LA; [¥]Du, S.; Xiao, B.; and **Fennell, D.E.** 2011. Source apportionment of polychlorinated biphenyls in the New York/New Jersey Harbor. *Chemosphere*, 83 (6), 792-798.
15. [#]Rodenburg, L.A., [¥]Du, S., **Fennell, D.E.** and Cavallo, G. 2010. Evidence for Widespread Dechlorination of Polychlorinated Biphenyls in Groundwater, Landfills, and Wastewater Collection Systems. *Environmental Science and Technology*, 44, 7534-7540.
16. ^{*}Liu, F.; Cichocka, D.; Nijenhuis, I.; Richnow, H.H.; and [#]**Fennell, D.E.** 2010. Carbon isotope fractionation during dechlorination of 1,2,3,4-tetrachlorodibenzo-*p*-dioxin by a *Dehalococcoides*-containing culture. *Chemosphere* 80, 1113–1119.
17. Lu, G.-N.; [#]Dang, Z.; **Fennell, D.E.**; [#]Huang, W.; Li, Z.; and Liu, C.-Q. 2010. Rules of thumb for assessing reductive dechlorination pathways of PCDDs in specific systems. *Journal of Hazardous Materials*, 177, 1145-1149.
18. Wang, Z.; [#]Huang, W.; Peng, P.a.; and **Fennell, D.E.** 2010. Rapid transformation of 1,2,3,4-TCDD by Pd/Fe catalysts. *Chemosphere* 78, 147-151.
19. [¥]Krumins, V.; Park, J.-W.; ^{*}Son, E.-K.; Rodenburg, L.A.; Kerkhof, L.J.; Hägglom, M.M.; and [#]**Fennell, D.E.** 2009. PCB dechlorination enhancement in Anacostia River sediment microcosms. *Water Research*, 43, 4549 – 4558.

20. Seshadri, S.; Han, T.; †Krumins, V.; **Fennell, D.E.**; and †Mainelis, G. **2008**. Application of ATP bioluminescence method to characterize performance of bioaerosol sampling devices. *Journal of Aerosol Science*, 40,113-121.
21. Ahn, Y.-B.; †Liu, F.; **Fennell, D.E.**; and †Häggbloom, M.M. **2008**. Biostimulation and bioaugmentation to enhance dechlorination of polychlorinated dibenzo-*p*-dioxins in contaminated sediments. *FEMS Microbiology Ecology*, 66, 271-281.
22. †Krumins, V.; †Son, E.-K.; Mainelis, G.; and †**Fennell, D.E.** **2008**. Retention of inactivated bioaerosols and ethene in a rotating bioreactor constructed for bioaerosol activity studies. *Clean—Soil, Air, Water* (Special Issue on Bioaerosol Research) 36, 593-600.
23. †Liu, F. and †**Fennell, D.E.** **2008**. Dechlorination and detoxification of 1,2,3,4,7,8-hexachlorodibenzofuran by a mixed culture containing *Dehalococcoides ethenogenes* strain 195, *Environmental Science and Technology*, 42, 602–607.
24. Wang, Z.; †Huang, W.; **Fennell, D.E.**; and Peng, P. **2007**. Kinetics of reductive dechlorination of 1,2,3,4-TCDD in the presence of zero valent zinc, *Chemosphere*, 71(2), 360-368.
25. †Berry, D.; †Mainelis, G.; and **Fennell, D.E.** **2007**. Effect of an ionic air cleaner on indoor/outdoor particle ratios in a residential environment, *Aerosol Science and Technology*, 41, 315-328.
26. Ahn, Y.B.; Häggbloom, M.M.; and †**Fennell, D.E.** **2005**. Co-amendment with halogenated compounds enhances anaerobic microbial dechlorination of 1,2,3,4-tetrachlorodibenzo-*p*-dioxin and 1,2,3,4-tetrachlorodibenzofuran in estuarine sediments. *Environmental Toxicology and Chemistry*, 24, 2775-2784.
27. †Mainelis, G.; †Berry, D.; An, H.R.; Yao, M.; DeVoe, K.; **Fennell, D.E.**; and Jaeger, R. **2005**. Performance and design of a single-pass bubbling bioaerosol generator. *Atmospheric Environment*, 39, 3521-3533.
28. †Lee, K.Y.; Kostarelos, K.; and **Fennell, D.E.** **2004**. Modeling the transport of dissolved contaminants originating from a NAPL source containing PAH compounds in groundwater. *Journal of Environmental Engineering and Science*, 3, 541-548.
29. †**Fennell, D.E.**; Nijenhuis, I.; Wilson, S.F.; Zinder, S.H.; and Häggbloom, M.M. **2004**. *Dehalococcoides ethenogenes* strain 195 reductively dechlorinates diverse chlorinated aromatic pollutants. *Environmental Science and Technology*, 38, 2075-2081.
30. **Fennell, D.E.**; Rhee, S.-K.; Ahn, Y.B.; Häggbloom, M.M.; and †Kerkhof, L.J. **2004**. Detection and characterization of a dehalogenating microorganism by terminal restriction fragment length polymorphism fingerprinting of 16S rRNA in a sulfidogenic, 2-bromophenol-utilizing enrichment. *Applied and Environmental Microbiology*, 70, 1169-1175.
31. †Häggbloom, M.M.; Ahn, Y.B.; **Fennell, D.E.**; Kerkhof, L.J.; and Rhee, S.-K. **2003**. Anaerobic dehalogenation of organohalide contaminants in the marine environment. *Advances in Applied Microbiology*, 53, 61-84.
32. Ahn, Y.B.; Rhee, S.-K.; **Fennell, D.E.**; Kerkhof, L.J.; Hentschel, U.; and †Häggbloom, M.M. **2003**. Reductive dehalogenation of brominated phenolic compounds by microorganisms associated with the marine sponge *Aplysina aerophoba*. *Applied and Environmental Microbiology*, 66, 4159-4166.
33. Rhee, S.-K.; **Fennell, D.E.**; Häggbloom, M.M.; and †Kerkhof, L.J. **2003**. Detection by PCR of reductive dehalogenase motifs in a sulfidogenic 2-bromophenol-degrading consortium enriched from estuarine sediment. *FEMS Microbiology Ecology*, 43, 317-324.
34. Voordeckers, J.W.; **Fennell, D.E.**; Jones, K.; and †Häggbloom, M.M. **2002**. Anaerobic biotransformation of Tetrabromobisphenol A, Tetrachlorobisphenol A and Bisphenol A in estuarine sediments. *Environmental Science and Technology*, 36, 696-701.

35. Vargas, C.; **Fennell, D.E.**; and #Häggbloom, M.M. **2001**. Anaerobic reductive dechlorination of chlorinated dioxins in estuarine sediments. *Applied Microbiology and Biotechnology*, *57*, 786-790.
36. **Fennell, D.E.**; Carroll, A.B.; Zinder, S.H.; and #Gossett, J.M. **2001**. Assessment of indigenous reductive dechlorinating potential at a TCE-contaminated site using microcosms, polymerase chain reaction analysis, and site data. *Environmental Science and Technology*, *35*, 1830-1839.
37. **Fennell, D.E.** and #Gossett, J.M. **1998**. Modeling the production of and competition for hydrogen in a dechlorinating culture. *Environmental Science and Technology*, *32*, 2450-2460.
38. **Fennell, D.E.**; #Gossett, J.M.; and Zinder, S.H. **1997**. Comparison of butyric acid, ethanol, lactic acid, and propionic acid as hydrogen donors for the reductive dechlorination of tetrachloroethene. *Environmental Science and Technology*, *31*, 918-926.
39. **Fennell, D.E.**; Nelson, Y.M.; Underhill, S.E.; White, T.E.; and #Jewell, W.J. **1992**. TCE degradation in a methanotrophic attached-film bioreactor. *Biotechnology and Bioengineering*, *42*, 859-872.
40. **Fennell, D.E.**; Underhill, S.E.; and #Jewell, W.J. **1992**. Methanotrophic attached-film reactor development and biofilm characteristics. *Biotechnology and Bioengineering*, *40*, 1218-1232.

Book Chapters

1. Sun W.; Kruminis V.; **Fennell D.E.**; Kerkhof L.J.; and Häggbloom, M.M. **2014**. Anaerobic degradation of aromatic compounds. In: Manual of Environmental Microbiology, Fourth Edition, ASM Press. *In press*.
2. **Fennell, D.E.**; Du, S.; Liu, H.; Liu F.; and Häggbloom, M.M. **2011**. 6.13. Dehalogenation of Polychlorinated Dibenzo-*p*-Dioxins and Dibenzofurans, Polychlorinated Biphenyls and Brominated Flame Retardants and Potential as a Bioremediation Strategy. In Comprehensive Biotechnology: Principles, Applications and Regulations in Industry, Agriculture, Medicine and the Environment, Second Edition, Volume 6 Environmental Biotechnology, 6.13. pp. 135-149. S. Agathos, Volume Editor; M. Moo-Young, Editor-in-Chief. Pergamon, September 9, 2011 ISBN 9780444533524. [<http://store.elsevier.com/Comprehensive-Biotechnology/isbn-9780444533524/>]
3. Häggbloom, M.M.; **Fennell, D.E.**; Ahn, Y-B.; Kerkhof, L.J.; Liu, F.; and Ravit, B. **2006**. Microbial dehalogenation of organohalide pollutants in marine sediments. In Canepa, P. and Fava, F. (Eds.). Proceedings of International Summer School "Biomonitoring, bioavailability and microbial transformation of pollutants in sediments and approaches to stimulate their biodegradation", Genoa, Italy, September 12-14, 2005, pp. 109-122.
4. Häggbloom, M.M.; **Fennell, D.E.**; Ahn, Y-B.; Ravit, B.; and Kerkhof L.J. **2006**. Anaerobic dehalogenation of halogenated organic compounds: Novel strategies for bioremediation of contaminated sediments. In Twardowska, I.; Allen, H.E.; and Häggbloom, M.M. (Eds.), Viable Methods of Soil and Water Pollution Monitoring, Protection and Remediation, Proceedings of the NATO Advanced Research Workshop on Viable Methods of Soil and Water Pollution Monitoring, Protection and Remediation, Krakow, Poland, 27 June - 1 July 2005. NATO Science Series: IV: Earth and Environmental Sciences, Vol. 69, , Springer. pp. 505-521.
5. **Fennell, D.E.** and Gossett, J.M. **2003**. Microcosms For Site-Specific Evaluation of Enhanced Biological Reductive Dehalogenation. In Dehalogenation: Microbial Processes and Environmental Applications, Häggbloom, M.M. and Bossert, I.D. (Eds.). Kluwer Academic Publishers. pp. 385-420.

Editorials

1. Bhandari, A.; Jones, S.A.; Clapp, L.; **Fennell, D.**; and LaPara, T. **2006**. "Diversity in Environmental Engineering — Successes and Challenges." Editorial in *The Journal of Environmental Engineering*, 132, 701-702.
2. LaPara, T.; Jones, S.A.; Bhandari, A.; Clapp, L.; and **Fennell, D.**; **2006**. "Gender and Ethnic Diversity in Environmental Engineering." In AEESP Newsletter, pp. 2-3, September 2006.

Books Edited

1. Proceedings of the Thirty-Fourth Mid-Atlantic Industrial and Hazardous Waste Conference. Available on Compact Disc. Häggblom, M.M.; **Fennell, D.E.**; and Lee, K.Y. (Eds.). Rutgers University, New Brunswick, NJ, **2002**.
2. Anaerobic Degradation of Chlorinated Solvents. Sixth International *In Situ* and On-Site Bioreclamation Symposium. Magar, V.S.; **Fennell, D.E.**; Morse, J.J.; Alleman, B.C.; and Leeson, A. (Eds.). San Diego, CA. June 4-7. **2001**. Battelle Press, Columbus, OH.

Refereed Conference Proceedings

(*Fennell's student; †Fennell's post-doctoral associate; #senior author)

1. #Jones, S.; Bhandari, A.; Clapp, L.; **Fennell, D.**; LaPara, T.; and Tull, K. **2006**. Diversity in environmental engineering: The good and bad. In *Proceedings of the Annual Conference for the American Society of Engineering Education*, Chicago, IL, June 2006. 656. [Accessible on the internet at <http://www.asee.org/acPapers/code/getPaper.cfm?paperID=10452>].
2. Willis, M.; †Shoemaker, C.; Gossett, J.; and **Fennell, D.** **1999**. Applications of a competitive hydrogenotrophic biological dechlorination transport model for groundwater remediation. In *Engineered Approaches for In Situ Bioremediation of Chlorinated Solvent Contamination. Proceedings of the Fifth International In Situ and On-Site Bioreclamation Symposium*, 5(2): 27-33. April 19 - 22. San Diego, CA.
3. **Fennell, D.E.**; Stover, M.A.; Zinder, S.H.; and †Gossett, J.M. **1995**. Comparison of alternative electron donors for sustaining anaerobic reductive dechlorination of tetrachloroethene. In *Proceedings of the Third International In Situ and On-Site Bioreclamation Symposium*, 3(4): 9-16. April 24 - 27. San Diego, CA.

Non-Refereed Conference Proceedings

(*Fennell's student; †Fennell's post-doctoral associate; #senior author)

1. #**Fennell, D.E.**; †Krumins, V.; Park, J.-W.; Rodenburg, L.A.; Häggblom M.M.; and Kerkhof, L.J. **2008**. Stimulation of reductive dechlorination of PCBs in contaminated sediments. Symposia Papers Presented before the Division of Environmental Chemistry, American Chemical Society, 48(2), pp. 522-526. 236th ACS National Meeting, Philadelphia, PA.
2. *Kannepalli, S.; #**Fennell, D.E.**; and Huang, W. **2008**. Effect of double-walled carbon nanotubes on a TCE dechlorinating culture. Symposia Papers Presented before the Division of Environmental Chemistry, American Chemical Society, 48(2), pp. 369-372. 236th ACS National Meeting, Philadelphia, PA.
3. Lu, G.-N; Dang, Z.; **Fennell, D.E.**; and †Huang, W. **2008**. Reductive dechlorination reaction pathways of PCDD/Fs predicted with a computational chemistry approach. Symposia Papers Presented before the Division of Environmental Chemistry, American Chemical Society, 48(2), pp. 722-725. 236th ACS National Meeting, Philadelphia, PA.
4. *Li, Y.; #**Fennell, D.E.**; and Huang, W. **2008**. Transformation of aniline and 4-chloroaniline in sediments from an industrial site. Symposia Papers Presented before the Division of

- Environmental Chemistry, American Chemical Society, 48(2), pp. 534-537. 236th ACS National Meeting, Philadelphia, PA.
5. *Wartell, B.; *Krumins, V.; *George, R.; *Alt, J.; *Schwab, B.; *Kang, K.; and #Fennell, D.E. **2008**. Anaerobic digestion of equine stall waste. ASABE Paper No. 084253. Conference proceedings paper presented at the 2008 ASABE Annual International Meeting. June 29 – July 2, 2008. Providence, RI.
 6. #Fennell, D.E.; *Krumins, V.; Ravit, B.; and Totten; L.A. **2007**. Bioremediation approaches for PCB- and PCDD/F-contaminated sediments. Symposia Papers Presented before the Division of Environmental Chemistry, American Chemical Society, 47(2), pp. 393-397. 234th ACS National Meeting, Boston, MA.
 7. Du, S.; Xiao, B.; Belton, T.; Fennell, D.E.; and #Totten, L.A. **2007**. Source apportionment of PCBs in the Delaware River and NY/NJ Harbor. Symposia Papers Presented before the Division of Environmental Chemistry, American Chemical Society, 47(2), pp. 415-418. 234th ACS National Meeting, Boston, MA.
 8. *Babson, D.; #Krogmann, U.; Fennell, D.; and Ravit, B. **2007**. Development of a dynamic energy balance to assess operating efficiency of the Burlington County bioreactor landfill in New Jersey (USA). Sardinia 2007, The Proceedings of the Eleventh International Waste Management and Landfill Symposium. S. Margherita di Pula, Cagliari, Italy. Cossu, R.; Diaz, L.F.; and Stegmann, R. (Eds). 1 - 5 October 2007. pp. 773-774. CISA, Environmental Sanitary Engineering Centre, Italy.
 9. #Fennell, D.E.; *Son, E.-K.; and Lee, K.Y. **2004**. Identification of dechlorinating bacteria in a New Jersey fractured rock aquifer. Symposia Papers Presented before the Division of Environmental Chemistry, American Chemical Society, 44(2), pp. 1-4. 228th ACS National Meeting, Philadelphia, PA.
 10. #Fennell, D.E.; *Liu, F.; and *Giacalone, M. **2004**. Dehalogenation of polyhalogenated aromatics in cultures and enrichments. Symposia Papers Presented before the Division of Environmental Chemistry, American Chemical Society, 44(2), pp. 1075-1079. 228th ACS National Meeting, Philadelphia, PA.
 11. Zarnadze, A.; #Totten, L.; Fennell, D.E.; *Giacalone, M.; and Krogmann, U. **2004**. PBDEs in the NY/NJ Harbor estuary. Symposia Papers Presented before the Division of Environmental Chemistry, American Chemical Society, 44(2), pp. 1098-1102. 228th ACS National Meeting, Philadelphia, PA.
 12. Ahn, Y.-B.; #Fennell, D.E.; Kerkhof, L.J.; and Häggblom, M.M. **2004**. Strategies for enhancing anaerobic reductive dechlorination of 1,2,3,4-tetrachlorodibenzo-*p*-dioxin in estuarine sediments. Symposia Papers Presented before the Division of Environmental Chemistry, American Chemical Society, 44(2), pp. 1067-1069. 228th ACS National Meeting, Philadelphia, PA.
 13. #Fennell, D.E.; *Liu, F.; Ahn, Y.B.; and Häggblom; M.M. **2003**. Polychlorinated dioxin dehalogenation in cultures and sediments: Results and biokinetic modeling. Symposia Papers Presented before the Division of Environmental Chemistry, American Chemical Society, 43(2), pp. 164-168. 226th ACS National Meeting, New York, NY.
 14. *Son, E.-K.; Lee, K.Y.; and #Fennell, D.E. **2003**. Determining dechlorinating bioremediation potential in a fractured bedrock aquifer. Symposia Papers Presented before the Division of Environmental Chemistry, American Chemical Society, 43(2), pp. 248-250. 226th ACS National Meeting, New York, NY.
 15. #Assaf-Anid, N.M.; Blenner, M.; Totten, L.A.; Ahn, Y.B.; Fennell, D.E.; and Häggblom; M.M. **2003**. Agreement of computational chemistry predictions of reductive dechlorination pathways with experimental microcosm studies. Symposia Papers Presented before the Division of Environmental Chemistry, American Chemical Society, 43(2), pp. 1181-1185. 226th ACS National Meeting, New York, NY.

Non-Refereed Journal Articles

1. #Gossett, J. and **Fennell, D.** 2004. "A model for describing remediation processes for groundwater polluted with chlorinated organic compounds - Part 1," *Ma'im U'Svivah (Water and Environment, Israeli journal in Hebrew)*, 61, pp. 7-10.
2. #Gossett, J. and **Fennell, D.** 2004. "A model for describing remediation processes for groundwater polluted with chlorinated organic compounds - Part 2," *Ma'im U'Svivah (Water and Environment, Israeli journal in Hebrew)*, 62, pp. 29, 57-59.
3. #Gossett, J. and **Fennell, D.** 2004. "A comparison between experimental and numerical modeling results of remediation of polluted groundwater," *Ma'im U'Svivah (Water and Environment, Israeli journal in Hebrew)*, 62, pp. 21-28.

Peer Reviewed Technical Reports

1. **Fennell, D.E.** 2006. A Mass Balance on Dioxins and Dioxin-Like Compounds in the NY-NJ Harbor Estuary. A Report Submitted to The New York Academy of Sciences. [Included in the New York Academy of Sciences Harbor Project report on Dioxins. Accessible on the internet at <http://www.nyas.org/programs/harbor.asp>].
2. Morse, J.J.; Alleman, B.C.; Gossett, J.M.; Zinder, S.H.; **Fennell, D.E.**; Sewell, G.W.; and Vogel, C.M. 1997. A Treatability Test for Evaluating the Potential Applicability of the Reductive Anaerobic Biological *In Situ* Treatment Technology (RABITT) to Remediate Chloroethenes. A Technical Protocol developed for the Environmental Security Technology Certification Program, Department of Defense, USA. [Accessible on the internet at http://www.estcp.org/documents/techdocs/Rabitt_Protocol.pdf].

Technical Reports

1. Häggblom, M.M; **Fennell, D.E.**; Rodenburg, L.A.; Kerkhof, L.J.; and Sowers, K. 2012. Quantifying Enhanced Microbial Dehalogenation Impacting the Fate and Transport of Organohalide Mixtures in Contaminated Sediments. Final Technical Report. SERDP Project ER-1492. February 2012. [Accessible on the internet at <https://www.serdp-estcp.org/Program-Areas/Environmental-Restoration/Contaminated-Sediments/ER-1492>].
2. Brennan, M.; Specca, D.; Schilling, B.; Tulloch, D.; Paul, S.; Sullivan, K.; Helsel, Z.; Hayes, P.; Melillo, J.; Simkins, B.; Phillipuk, C.; Both, A.J.; **Fennell, D.**; Bonos, S.; Westendorf, M.; and Brekke, R. 2007. Assessment of Biomass Energy Potential in New Jersey. New Jersey Agricultural Experiment Station Publication No. 2007-1. Rutgers, the State University of New Jersey, New Brunswick, NJ. July, 2007. [Accessible on the internet at <http://www.bioenergy.rutgers.edu/biomass-energy-potential/njaes-biomass-assessment-finalreport.pdf>].
3. Häggblom, M.M; **Fennell, D.E.**; and Kerkhof, L.J. 2006. In Situ Enhancement of Anaerobic Microbial Dechlorination of Polychlorinated Dibenzo-p dioxins and Dibenzofurans in Marine and Estuarine Sediments SERDP CU-1208. Final Technical Report. December 18, 2006. [Accessible on the internet at <https://serdp-estcp.org/Program-Areas/Environmental-Restoration/Contaminated-Sediments/ER-1208/ER-1208>].
4. Jewell, W.J.; Carter, S.R.; **Fennell, D.E.**; Hicks, E.E.; Nelson, Y.M.; Nock, T.D.; Richards, B.K.; and Wilson, M.S. 1992. Methanotrophs for Pollution Control: TCE and Nutrient Removal with the Expanded Bed. Final Report prepared for the Gas Research Institute. PB-94-118049/XAB.
5. Jewell, W.J.; **Fennell, D.E.**; Nelson, Y.M.; Underhill, S.E.; Wilson, M.S.; White, T.E.; and Gossett, J.M. 1990. Methanotrophs and Methanogens for Pollution Control—PCE, TCE

Removal from Groundwater and Macronutrient Removals from Wastewater. Final Report prepared for the Gas Research Institute. PB-92-123645/XAB.

6. Jewell, W.J.; Nelson, Y.M.; **Fennell, D.E.**; Underhill, S.E.; Wilson, M.S.; and White, T.E. **1989**. Methanotrophs for Biological Pollution Control: Feasibility of Developing an Attached Microbial Film Reactor and Kinetics of TCE Removal. Final Report prepared for Radian Corporation and the Gas Research Institute. PB-94-118049/XAB.

PRESENTATIONS AND ABSTRACTS

Invited Presentations

1. 2015 Production of Non-chlorinated Dioxin by Dechlorination of PCDDs in Sediments. Presented at the Guangdong Institute of Eco-Environmental and Soil Sciences. Guangzhou, China. March 20, 2015.
2. 2014 Anaerobic Digestion. Cornell Cooperative Extension of Dutchess County. Dutchess County, Millbrook, NY. July, 28, 2014.
3. 2013 Bacterial Biodegradation of PCDD/Fs and PCBs and Aniline and Parachloroaniline. Presented at the Organic Analytical Group of the National Research Center for Geoanalysis, Beijing, China. May 26, 2013.
4. 2013 Common Problems, Common Solutions: Bacterial Dehalogenation of Aromatic Halogenated Pollutants. Presented at the South China Agricultural University, Guangzhou, China. May 29, 2013.
5. 2013 Bioremediation of Sediments Contaminated with PCDD/Fs and PCBs Using Anaerobic Reductive Dechlorination. Presented at the Guangzhou Institute of Geochemistry, Chinese Academy of Sciences, Guangzhou, China, May 30, 2013.
6. 2013 Bioremediation of Sediments Contaminated with PCDD/Fs and PCBs Using Anaerobic Reductive Dechlorination. Presented at the Institute of Eco-Environmental and Soil Sciences, Guangzhou, China, May 30, 2013.
7. 2013 From Earth to Sky: Finding Bacterial Activity during Biodegradation of VOCs. Presented at the School of Environment and Energy, South China University of Technology, Guangzhou, China. May 31, 2013.
8. 2013 Is Air an Active Bacterial Ecosystem? Presented at the School of Life Sciences, Sun Yat-sen University, Guangzhou, China. May 31, 2013.
9. 2012 Hydrogen Production from Bioammonia. Presented to the Deltares and Faculty of Geosciences Utrecht University. Utrecht, The Netherlands, January 25, 2012.
10. 2012 Hydrogen Production from Bioammonia. Presented to the Microbial Physiology Group Meeting at the Laboratorium voor Microbiologie at Wageningen University, The Netherlands, January 25, 2012.
11. 2012 Is Air an Active Microbial Ecosystem? Presented at the Helmholtz Centre for Environmental Research – UFZ. Leipzig, Germany. February 23, 2012.
12. 2012 Poop to Power: Making Methane from Manure. Rutgers University Equine Science Center Update. Rutgers University, New Brunswick, NJ. December 11, 2012.
13. 2009 Combined Physical-Chemical-Biological Treatment of Aniline and Para-Chloroaniline. Presented to the DuPont Corporate Remediation Group, Wilmington, DE. November 18, 2009.
14. 2008 Combined Biological-Physical-Chemical Treatment of 4-Chloroaniline and Aniline.

- Presented to the Science Advisory Board and Technical Team for DuPont Chambers Works. Wilmington, DE. March 26, 2008.
15. 2007 Microbial Dechlorination of Dioxins and PCBs. New Jersey Institute of Technology Graduate Seminar Series, Department of Civil and Environmental Engineering, In Cooperation with Department of Chemistry and Environmental Science, and Rutgers University – Newark Department of Earth and Environmental Sciences, Newark, NJ. October 10, 2007.
 16. 2007 Biological Approaches for Hazardous Waste Remediation. Presentation before the Trustees Advisory Committee for the School of Environmental and Biological Sciences, Rutgers University, New Brunswick, NJ. March 22, 2007.
 17. 2007 Remediation of Sediments Contaminated by Dioxins and PCBs: Is there a role for bioremediation? Presented at The Microbiology Mini-Symposium at Rutgers University: Cultivating Traditions, Current Strength, and Future Frontiers. New Brunswick, NJ. Jan. 25–26, 2007.
 18. 2007 Anaerobic Digestion: A Primer. Presentation to the BioEnergy Committee of the New Jersey Department of Agriculture. Trenton NJ. January 19, 2007.
 19. 2006 Making the Leap: Can Dehalorespiring Bacteria Be Used to Remediate PCDD/F- and PCB-Contaminated Sediments? Rutgers University, Fermentation Club, Department of Biochemistry and Microbiology, New Brunswick, NJ. November 3, 2006.
 20. 2006 Making the Leap: Can Dehalorespiring Bacteria Be Used to Remediate PCDD/F- and PCB-Contaminated Sediments? Cornell University, School of Civil and Environmental Engineering, Ithaca, NY. October 19, 2006.
 21. 2006 Using Dehalorespiring Bacteria to Remediate Contaminated Sediments: Stimulation, Pathways and Monitoring Tools. UFZ Centre for Environmental Research, Leipzig-Halle, Leipzig, Germany. October 13, 2006.
 22. 2006 Manure to Bioenergy: A Watershed Management Solution for New Jersey? presented at the USDA CSREES Regional Water Quality Project for EPA Region 2 Annual Meeting. Puerto Rico. June 15, 2006.
 23. 2004 Anaerobic Reductive Dechlorination of Chlorinated Solvents: State of the Science and Preliminary Results from the Passaic Formation at Rutgers Busch Campus Site. Invited talk at the Newark Basin Workshop, Rutgers University, New Brunswick, NJ. November 12, 2004.
 24. 2004 An Assessment of Inputs and Outputs of Dioxins and Dioxin-Like Compounds for the New York—New Jersey Harbor and Its Watershed. Invited lecture at the New York Academy of Sciences Harbor Consortium, New York, NY. June, 29, 2004.
 25. 2003 An Assessment of Inputs and Outputs of Dioxins and Dioxin-Like Compounds for the New York—New Jersey Harbor and Its Watershed. Invited lecture at the New York Academy of Sciences Harbor Consortium, New York, NY. December 12, 2003.
 26. 2003 An Assessment of Inputs and Outputs of Dioxins and Dioxin-Like Compounds for the New York—New Jersey Harbor and Its Watershed. Invited lecture at the New York Academy of Sciences PCBs-Dioxins Action Group. New York, NY. November 14, 2003.
 27. 2002 *In-Situ* Enhancement of Anaerobic Microbial Dechlorination of Polychlorinated Dibenzo-*p*-dioxins and Dibenzofurans in Marine and Estuarine Sediments, Department of Microbiology, Wageningen University, Wageningen, The Netherlands. June, 2002.

28. 2002 Life in the Slow Lane: Dioxin Dehalogenation in Sediments and Enrichment Cultures. Distinguished Seminar Series, Dept. of Biochemistry and Microbiology, Rutgers University, New Brunswick, NJ. October 14, 2002.
29. 2002 Engineering and Modeling Anaerobic Processes for Site Cleanup: How Knowledge of Dehalorespiring Organisms Altered Approaches for Remediation. Department of Environmental Sciences, Rutgers University, New Brunswick, NJ. March 2002.
30. 2002 Engineering and Modeling Anaerobic Processes for Site Cleanup: How Knowledge of Dehalorespiring Organisms Altered Approaches for Remediation. Department of Civil and Environmental Engineering, Temple University. Philadelphia, PA. February 2002.
31. 2001 Biodehalogenation for Bioremediation: Physiological and Molecular Characterization of Native Microbial Communities as Tools for Site Assessment. Drexel University, School of Environmental Science, Engineering and Policy. Philadelphia, PA. May 30, 2001.
32. 2000 *In-Situ* Enhancement of Anaerobic Microbial Dechlorination of Polychlorinated Dibenzo-*p*-dioxins and Dibenzofurans in Marine and Estuarine Sediments, School of Civil and Environmental Engineering, Cornell University, Ithaca, NY. October 2000.
33. 1999 Comparison of Hydrogen Donors for Anaerobic Reductive Dechlorination of Tetrachloroethene (PCE), Department of Civil Engineering, Auburn University, Auburn, AL. May 2, 1999.
34. 1999 Comparison of Hydrogen Donors for Anaerobic Reductive Dechlorination of Tetrachloroethene (PCE), Department of Civil and Environmental Engineering, Worcester Polytechnic Institute, Worcester, MA. February 15, 1999.
35. 1999 Comparison of Hydrogen Donors for Anaerobic Reductive Dechlorination of Tetrachloroethene (PCE), Department of Civil and Environmental Engineering, University of Maine, Orono, ME. October 23, 1998.
36. 1992 Methanotrophic bacteria for TCE degradation, Department of Microbiology, Wageningen University, Wageningen, The Netherlands. June 1992.

Invited Conference Platform Presentations and Abstracts

1. **Fennell, D.E.**; Zhen, H.; Liu, F.; and Liu, J. **2015**. Production of non-chlorinated dioxin by dechlorination of PCDDs in sediments. To be presented at the 250th Meeting of the American Chemical Society, August 16-20, 2015. Boston, MA.
2. Krumins, V.; Mainelis, G.; Kerkhof, L.; and **Fennell, D.E.** **2014**. Airborne Bacteria Utilize VOC Substrates to Produce Ribosomes and DNA. A presentation at the 114th General Meeting of the American Society for Microbiology, May, 17-20, 2014. Boston, MA.
3. **Fennell, D.E.** **2013**. What's up? Are microbes in air active? Invited presentation at the 2013 Symposium: Microbiology at Rutgers University, Cultivating Traditions, Current Strength, and Future Frontiers, January 31 - February 1, 2013. Rutgers University, New Brunswick, NJ.
4. **Fennell, D.E.** **2012**. Concluding remarks closing the Sense Symposium. A presentation at the Sense Symposium: Microbes for Sustainability. 4-5 April, 2012. Wageningen University, Wageningen, The Netherlands.

5. **Fennell, D.E.**; Babson, D.; and Prakash, S. **2012**. Bioammonia for hydrogen biofuel production during anaerobic digestion. A presentation at the Sense Symposium: Microbes for Sustainability. 4-5 April, 2012. Wageningen University, Wageningen, The Netherlands.
6. **Fennell, D.E.** **2011**. Linkages: Water and Renewable Energy Recovering Ammonia for Hydrogen Biofuel Production during Anaerobic Digestion. Invited presentation at the First Arab-American Frontiers of Sciences, Engineering, and Medicine Symposium sponsored by the Kuwait Institute for Scientific Research and the U.S. National Academies, October 17-19, 2011, Kuwait City, Kuwait.
7. **Fennell, D.E.**; Son, E.-K.; Krumins, V.; and Mainelis, G. **2011**. New Directions in Monitoring Growth and Activity of Airborne Bacteria. Invited presentation at the International Water Association Conference on Microbes in Wastewater and Waste Treatment, Bioremediation and Energy Production. 24-26 January 2011, Birla Institute of Technology and Science, Pilani, Goa, India.
8. Häggblom, M.M.; Park, J-W.; Liu, H.; **Fennell, D.E.**; Krumins, V.; Du, S.; Rodenburg, L.; Kerkhof, L.J.; Sowers, K.; and Kjellerup, B. **2010**. Harnessing the Activity of Dehalogenating Bacteria for Bioremediation of Sediments Contaminated with Organohalide Mixtures. Partners in Environmental Technology Technical Symposium, Nov. 30 -Dec. 2, 2010, Washington, D.C.
9. **Fennell, D.E.**; Krumins, V.; Park, J.-W.; Rodenburg, L.A.; Häggblom M.M.; and Kerkhof, L.J. **2009**. Enhancement of dechlorinator populations and reductive dechlorination activity in PCB- and chlorinated pesticide-contaminated sediment. Platform presentation at the Tenth International In Situ and On-Site Bioremediation Symposium. May 5-8, 2009. Baltimore, MD.
10. **Fennell, D.E.** **2008**. Stimulation of microbial reductive dechlorination of PCDD/Fs and PCBs. Platform presentation at the International Collaborative Workshop, Managing the Future of Our Environment, Chinese Academy Guangzhou Institute of Geochemistry (GIG), Guangzhou, China, November 12-14, 2008.
11. Krumins, V.; Wartell, B. and **Fennell, D.E.** **2008**. Anaerobic digestion of equine waste with softwood bedding. Invited presentation at the 8th Annual BioCycle Conference On Renewable Energy From Organics Recycling. October 6-8, 2008. Madison WI.
12. **Fennell, D.E.**; Krumins, V.; Park, J.-W.; Rodenburg, L.A.; Häggblom M.M.; and Kerkhof, L.J. **2008**. Stimulation of reductive dechlorination of PCBs in contaminated sediments. Featured platform speaker in the session "Processing of Organic Pollutants in Aquatic Systems: From Micropollutants to Industrial Contaminants" before the Division of Environmental Chemistry at the 236th Meeting of the American Chemical Society, August 17-21, 2008, Philadelphia, PA.
13. **Fennell, D.E.**; Liu, F., Son, E.-K.; and Krumins, V. **2008**. Biokinetic Analysis of PCDD/F Dechlorination by *Dehalococcoides*. Invited speaker in the session "PCBs and Dioxins" at the Sixth International Conference on Remediation of Chlorinated and Recalcitrant Compounds. May 19-22, 2008. Monterey, CA.
14. **Fennell, D.E.** and Liu, F. **2005**. Exploitation of *Dehalococcoides* sp. for dechlorination of polychlorinated dibenzo-*p*-dioxins and dibenzofurans. Invited platform presentation at the Society of Environmental Toxicology and Chemistry, North America, 26th Annual Meeting, November 13-17, Baltimore, MD.
15. **Fennell, D.E.** **2005**. A Mass Balance on PCDD/Fs and dioxin-Like PCBs for the New York-New Jersey Harbor. Invited platform presentation at the Society of Environmental Toxicology and Chemistry, North America, 26th Annual Meeting, November 13-17, Baltimore, MD.

16. **Fennell, D.E.** and Liu, F. **2004**. Dehalogenation of chlorinated dibenzo-*p*-dioxins and dibenzofurans by *Dehalococcoides ethenogenes* strain 195. Invited platform presentation at the 4th World Congress and 25th Annual Meeting of the Society for Environmental Toxicology and Chemistry, November 14-18, 2004, Portland, OR.
17. **Fennell, D.E.**; Ahn, Y.B.; Häggblom, M.M.; and Kerkhof, L.J. **2002**. Potential for dehalogenation of dioxins in marine and estuarine sediments. Invited platform presentation at the 18th Annual International Conference on Contaminated Soils, Sediments, and Water. October 21-24. University of Massachusetts, Amherst, MA.
18. **Fennell, D.E.**; Kerkhof, L.J.; Ahn, Y.B.; Rhee, S.K.; and Häggblom, M.M. **2001**. Stimulation of organohalide transformation in marine sediments via redox manipulation and haloprimer addition. Invited platform presentation at the 22nd Annual Meeting of the Society for Environmental Toxicology and Chemistry. November 11-15. Baltimore, MD.
19. **Fennell, D.E.**; Carroll, A.B.; Zinder, S.H.; and Gossett, J.M. **2000**. Assessment of indigenous reductive dechlorinating potential at a TCE-contaminated site using microcosms, polymerase chain reaction analysis, and site data. Invited platform presentation at the Northeastern Microbiologists: Physiology, Ecology, Taxonomy Conference, June, 2000, Blue Mountain Lake, NY.
20. Gossett, J.M. and **Fennell, D.E.** **1999**. Microcosm studies for evaluating reductive anaerobic *in situ* treatment technology. Invited platform presentation at the SERDP-ESTCP Partners for Environmental Technology Symposium. November. Washington, DC.
21. Gossett, J.M.; Smatlak, C.R.; **Fennell, D.E.**; and Zinder, S.H. **1996**. Reductive dehalogenation of chlorinated ethenes: competition and interdependence among microorganisms in mixed-culture systems. Invited platform presentation at the Mallorca Conference on Degradation of Organic Pollutants. June 29-July 3, Mallorca, Spain.

Conference Platform Presentations and Abstracts

1. Krumins, V.; Abadjev, M.; Mainelis, G.; Kerkhof, L.J.; Boeren, S.; Kruse, T.; Schaap, P.; Smidt, H.; and **Fennell, D.E.** **2014**. Proteomic analysis of *Sphingomonas aerolata* incubated in the airborne state. Platform presentation at the American Association for Aerosol Research 33rd Annual Conference, October 20-24, 2014. Orlando, FL.
2. Rattana, S.; Krumins, V.; and **Fennell, D.E.** **2014**. Enrichment and identification of ammonia tolerant microorganisms from landfill leachates. A presentation at the 29th International Conference on Solid Waste Technology and Management, March 30-April 2, 2014, Philadelphia, PA.
3. Luther, A.K.; Strom, P.; and **Fennell, D.E.** **2014**. Ammonia tolerance in the hyper-ammonia producing bacterium *Peptostreptococcus russellii*. Platform presentation at Novel Anaerobes, Wageningen University, July 1, 2014. Wageningen, The Netherlands.
4. Krumins, V.; Boeren, S.; Schaap, P.; Smidt, H.; Mainelis, G.; Kerkhof, L.J.; and **Fennell, D.E.** **2013**. Differential proteomic analysis and 16S rRNA gene expression to detect activity of *Sphingomonas aerolata* bioaerosols. American Association for Aerosol Research, 32nd Annual Conference, September 30 – October 4, 2013. Portland, OR.
5. **Fennell, D.E.**; Babson, D.; and Prakash, S. **2011**. Anaerobic digestion for methane generation and ammonia reforming for hydrogen production: A model system for more sustainable biofuel production. Platform presentation at the International Symposium on Bioremediation and Sustainable Environmental Technologies, June 27-30, Reno, NV

6. **Fennell, D.E.**; Du, S.; Zhen, H.; Park, J.-W.; Krumins, V.; Rodenburg, L.A.; Kerkhof, L.J.; and Häggblom, M.M. **2011**. Dechlorination pathway and rate during bioaugmentation and biostimulation for treatment of Aroclor-contaminated sediments. Platform presentation at the International Symposium on Bioremediation and Sustainable Environmental Technologies, June 27-30, Reno, NV
7. Loudon, J., Cooper, K.R. White, L.A., Krogmann, U., Ravit, B. and **Fennell, D.E.** **2009**. Reductive dechlorination of chloroethenes in landfill microcosms. Platform presentation at the Tenth International In Situ and On-Site Bioremediation Symposium sponsored by Battelle, May 5-8, Baltimore, MD.
8. Kannepalli, S.; **Fennell, D.E.**; and Huang, W. **2008**. Effect of double-walled carbon nanotubes on a TCE dechlorinating culture. Platform presentation before the Division of Environmental Chemistry at the 236th Meeting of the American Chemical Society, August 17-21, 2008, Philadelphia, PA.
9. Lu, G.-N; Dang, Z.; **Fennell, D.E.**; and Huang, W. **2008**. Reductive dechlorination reaction pathways of PCDD/Fs predicted with a computational chemistry approach. Platform presentation before the Division of Environmental Chemistry at the 236th Meeting of the American Chemical Society, August 17-21, 2008, Philadelphia, PA.
10. Li, Y.; **Fennell, D.E.**; and Huang, W. **2008**. Transformation of aniline and 4-chloroaniline in sediments from an industrial site. Platform presentation before the Division of Environmental Chemistry at the 236th Meeting of the American Chemical Society, August 17-21, 2008, Philadelphia, PA.
11. Rodenburg, L.A.; Krumins, V.; Park, J-W.; Häggblom, M.M.; Kerkhof L.J.; and **Fennell, D.E.** **2008**. Stimulation of PCB dechlorination and dechlorinators in contaminated sediments. Oral presentation at the 5th SETAC World Congress, 3 - 7 August 2008, Sydney, Australia.
12. **Fennell, D.E.**; Liu, F.; Son, E.-K.; and Krumins V. **2008**. Biokinetic analysis of PCDD/F dechlorination by *Dehalococcoides*. Platform presentation at the Sixth International Conference on Remediation of Chlorinated and Recalcitrant Compounds. May 19-22, Monterey, CA.
13. Babson, D.; **Fennell, D.**; Ravit, B.; and Krogmann, U. **2008**. Sustainable waste management system design: Developing and utilizing an energy balance to assess efficiency and propose enhancement. Platform presentation at the 22nd International Conference on Solid Waste, Journal of Solid Waste Technology and Management. March 30 - April 2, Philadelphia, PA.
14. Wartell, B.; Krumins, V.; **Fennell, D.** **2008**. The effect of softwood bedding on anaerobic digestion of equine waste. Platform presentation at the 22nd International Conference on Solid Waste, Journal of Solid Waste Technology and Management. March 30 - April 2, Philadelphia, PA.
15. **Fennell, D.E.**; Krumins, V.; Ravit, B.; and Totten, L.A. **2007**. Bioremediation approaches for PCB- and PCDD/F-contaminated sediments. Platform presentation at the 234th National Meeting of the American Chemical Society. August 19-23, 2007. Boston, MA.
16. Krumins, V.; Ravit, B.; Totten, L.; and **Fennell, D.** **2007**. Dechlorination of Native PCBs in Kearny Marsh Sediments. Platform presentation at the Meadowlands Symposium II. May 15-17. Lyndhurst, NJ.
17. **Fennell, D.E.**; Liu, F.; Son, E.-K.; and Krumins V. **2007**. Remediation of Sediments Contaminated by Dioxins and PCBs: Is There a Role for "Bio"? Platform presentation at

The Microbiology Mini-Symposium at Rutgers University: Cultivating Traditions, Current Strength, and Future Frontiers. January 25-26, 2007. New Brunswick, NJ.

18. Babson, D.; **Fennell, D.**; Ravit, B.; and Krogmann, U. **2007**. Development of a Dynamic Energy Balance to Assess Operating Efficiency of the Burlington County Bioreactor Landfill in New Jersey (USA). Platform presentation at Sardinia 2007: Eleventh International Waste Management and Landfill Symposium, Sardinia, Italy.
19. Liu, F.; **Fennell, D.E.**; Nijenhuis, I.; and Richnow, H.H. **2007**. Dechlorination of PCDD/Fs by *Dehalococcoides ethenogenes* strain 195 and assessment of carbon stable isotope fractionation. Platform presentation at the Ninth International Symposium on *In Situ* and On-Site Bioremediation sponsored by Battelle May 6-10. Baltimore MD.
20. Jones, S.A.; Bhandari, A.; Clapp, L.; **Fennell, D.**; LaPara, T.; and Tull, K. **2006**. Diversity in environmental engineering: The good and bad." Platform presentation at the Annual Conference and Exposition, American Society of Engineering Education, June 18-21, Chicago, IL.
21. **Fennell, D.E.**; Liu, F.; and Son, E.-K. **2006**. Reductive detoxification of chlorinated dioxin and furan contaminants as a bioremediation approach. Platform presentation at the American Society of Agricultural and Biological Engineering Annual International Meeting. Abstract 067061. July 9-12, 2006, Portland, OR.
22. Liu, F.; Nijenhuis, I.; Richnow, H.H.; and **Fennell, D.E.** **2006**. Microbial dechlorination of polychlorinated dibenzo-*p*-dioxins by *Dehalococcoides* sp. and the use of carbon stable isotope fractionation as a possible monitoring tool. Platform presentation at the International Symposium on Environmental Biotechnology 2006, July 9-13, Leipzig, Germany.
23. Son E.-K.; Lee. K.Y.; and **Fennell D.E.** **2005**. Identification of tetrachloroethene- and vinyl chloride-dechlorinating bacteria enriched from tetrachloroethene-contaminated groundwater and sediments. Platform presentation at the 21th Annual International Conference on Contaminated Soils, Sediments, and Water. University of Massachusetts, October 17-20. Amherst, MA.
24. Liu, F. and **Fennell, D.E.** **2005**. Dechlorination of polychlorinated dioxins and furans by *Dehalococcoides*. Platform Presentation at the Eighth International *In Situ* and On-Site Bioreclamation Symposium, June 1-6, Baltimore, MD.
25. **Fennell, D.E.**; Liu, F.; and Giacalone, M. **2004**. Dehalogenation of polyhalogenated aromatics in cultures and enrichments. Platform presentation at the 228th National Meeting of the American Chemical Society, August 22-26. Philadelphia, PA.
26. Ahn, Y.-B.; **Fennell, D.E.**; Kerkhof, L.J.; and Häggblom, M.M. **2004**. Strategies for enhancing anaerobic reductive dechlorination of 1,2,3,4-tetrachlorodibenzo-*p*-dioxin in estuarine sediments. Platform presentation at the 228th National Meeting of the American Chemical Society, August 22-26. Philadelphia, PA.
27. **Fennell, D.E.** and Liu, F. **2004**. Dechlorination of polychlorinated dioxins in pure cultures and stimulated sediments. Platform presentation at the Fourth International Conference on Remediation of Chlorinated and Recalcitrant Compounds, May 24-27, Monterey, CA.
28. Assaf-Anid, N.M.; Blenner, M.; Totten, L.A.; Ahn, Y.B.; **Fennell, D.E.**; and Häggblom; M.M. **2003**. Agreement of computational chemistry predictions of reductive dechlorination pathways with experimental microcosm studies. Platform presentation at the 226th National Meeting of the American Chemical Society, September 7-11. New York, NY.

29. **Fennell, D.E.**; Nijenhuis, I., Wilson, S.F.; Häggblom, M.M.; and Zinder, S.H. **2003**. Dioxin dehalogenation in sediments and cultures. Platform presentation at the Seventh International *In Situ* and On-Site Bioreclamation Symposium. June 1-5, Orlando, FL.
30. **Fennell, D.E.**; Voordeckers, J.M.; Jones, K.; Vargas, C.; Häggblom, M.M.; and Kerkhof, L.J. **2001**. Organohalide transformation in marine sediments stimulation via redox manipulation and haloprimer addition. Platform presentation at the Sixth International *In Situ* and On-Site Bioreclamation Symposium. June 4-7, San Diego, CA.
31. Alleman, B. E.; Morse, J. M.; Snyder, F.; Ackert, L.; Sewell, G.; Gossett, J. M.; and **Fennell, D.E.** **2001**. Reductive anaerobic biological *in situ* treatment technology (RABITT) treatability test: Results from Fort Lewis, WA: Platform presentation at the Sixth International *In Situ* and On-Site Bioreclamation Symposium. June 4-7, San Diego, CA.
32. **Fennell, D.E.**; Voordeckers, J.; Knight, V.K.; Häggblom, M.M.; and Kerkhof, L.J. **2000**. Molecular and biochemical characterization of dehalogenating consortia in marine sediments. Platform presentation at the 17th Annual International Conference on Contaminated Soils, Sediments, and Water. University of Massachusetts, October 16-19. Amherst, MA.
33. **Fennell, D.E.**; Carroll, A.B.; Gossett, J.M.; and Zinder, S.H. **2000**. Assessment of indigenous reductive dechlorinating potential at a TCE-contaminated site using microcosms, polymerase chain reaction analysis, and site data. Platform presentation at the Northeastern Microbiologists: Physiology, Ecology, Taxonomy (NEMPET) Meeting. June 15-17, 2000. Blue Mountain Lake, NY.
34. Alleman, B. E.; Morse, J. M.; Snyder, F.; Ackert, L.; Sewell, G.; Gossett, J. M.; and **Fennell, D.E.** **2000**. Reductive anaerobic biological *in situ* treatment technology (RABITT) treatability test: Results from Cape Canaveral Air Station: Platform presentation at the Second International Conference on Remediation of Chlorinated and Recalcitrant Compounds. May 22-25. Monterey, CA.
35. **Fennell, D.E.** and Gossett, J.M. **1999**. Modeling of microbial competition and dechlorination in aquifer microcosms. Platform presentation at the Fifth International *In Situ* and On-Site Bioreclamation Symposium. April 19-22. San Diego, CA.
36. **Fennell, D.E.** and Gossett, J.M. **1998**. Modeling the production and competitive uses of hydrogen in a PCE-dechlorinating mixed culture. Platform presentation at the American Geophysical Union Spring Meeting. May 26-29, Boston, MA.
37. **Fennell, D.E.**; Zinder, S.H.; and Gossett, J.M. **1997**. Comparative studies of hydrogen donors for stimulation of tetrachloroethene dechlorination. Platform presentation at the Fourth International *In Situ* and On-Site Bioreclamation Symposium. April 28-May 1, New Orleans, LA.

Conference Poster Presentations and Abstracts

1. Pelosi, A.; Reichard, M.; Davies, V.; Brazier, F.; Daley, E. Rattana, S.; and **Fennell, D.E.** **2015**. Microbial bio-dechlorination of TCE in soils from the Rutgers University campuses. A poster presented at the New Jersey Branch of the American Society for Microbiology Meeting in Miniature. April 30, 2015. Rutgers University, New Brunswick, NJ.
2. Bartos, W.; Daley, E.; Lilgeberg, C.; Looman, A.; Paralkar, S.; Rahman, A.; Vitucci, J.; Zhang, J.; Rattana, S.; and **Fennell, D.E.** **2015**. Co-digestion of wastewater treatment plant sludge and food waste. A poster presented at the New Jersey Branch of the American Society for Microbiology Meeting in Miniature. April 30, 2015. Rutgers University, New Brunswick, NJ.

3. Rattana, S.; Krumins, V.; and **Fennell, D.E. 2015.** Ammonia tolerant microorganisms in two landfill leachates. A poster presented at the New Jersey Branch of the American Society for Microbiology Meeting in Miniature. April 30, 2015. Rutgers University, New Brunswick, NJ. Outstanding poster award.
4. Luther, A.K.; Strom, P.; and **Fennell, D.E. 2015.** Transcriptional response of *Peptostreptococcus russellii* during growth under high ammonia concentrations. A poster presented at the New Jersey Branch of the American Society for Microbiology Meeting in Miniature. April 30, 2015. Rutgers University, New Brunswick, NJ.
5. Liu, T.; Sun, W.; **Fennell, D.E.**; Kerkhof, L.J.; Huang, W.; and Häggblom, M.M. **2014.** Anaerobic bacteria with the unusual appetite for MTBE. ISME Meeting, Seoul, South Korea, August 24-29, 2014.
6. Häggblom, M.M.; Kuokka, S.; Liu, H.; Dam, H.; Sohn, S.Y.; Park, J-W.; Ahn, Y-B.; Rantalainen, A-L.; Rodenburg, L.A.; **Fennell, D.E.**; and Kerkhof, L.J. **2014.** Reductive dechlorination of polychlorinated biphenyls, dibenzo-*p*-dioxins and dibenzofurans in contaminated river sediments. International Workshop on Urbanization in Watersheds: Ecological and Environmental Responses, October 12-17, 2014, Xiamen, China.
7. Nusrat, F. Rattana, S.; and **Fennell, D.E. 2014.** Characterization of ammonia stress and dnaK stress genes in Thailand and New Jersey landfill leachate digester communities. A poster presented at the RISE at Rutgers Summer Research Symposium, July 30, 2014. Piscataway, NJ. Fellow in the Rutgers School of Engineering's NSF-funded Green Energy Technology Undergraduate Program (GET-UP).
8. Merhav, M. and **Fennell, D.E. 2014.** Atmospheric bacteria: The solution to greenhouse gases?" A poster presented at the Rutgers ARESTY Summer Science Poster Session, August 8, 2014. Undergraduate Aresty Fellow.
9. Rattana, S.; Krumins, V.; and **Fennell, D.E. 2014.** Enrichment and identification of ammonia tolerant microorganisms from landfill leachates. A poster presented at the 29th International Conference on Solid Waste Technology and Management, March 30-April 2, 2014, Philadelphia, PA.
10. Krumins, V.; Abadjev, M.; Mainelis, G.; Kerkhof, L.J.; Boeren, S.; Kruse, T.; Schaap, P.; Smidt, H.; and **Fennell, D.E. 2014.** Proteomic response of *Sphingomonas aerolata* to aerosolization and exposure to a volatile substrate in the airborne state. A poster presented at the 114th General Meeting of the American Society for Microbiology, May, 17-20, 2014. Boston, MA.
11. Abadjev, M.; Krumins, V.; and **Fennell, D.E. 2013.** Benefits of informational analysis of organisms. A poster presented at the Rutgers ARESTY Summer Science Poster Session, August 8, 2013. Undergraduate Aresty Fellow.
12. Rattana, S. and **Fennell, D.E. 2013.** Mitigation of environmental nitrogen release by enrichment of hyper ammonia producing (HAP) bacteria in waste treatment systems. A poster presented at the Gordon Research Conference in Applied and Environmental Microbiology, July 7-12, 2013, Mount Holyoke College, South Hadley, MA.
13. Luther, A.K.; Strom, P.; and **Fennell, D.E. 2013.** Ammonia tolerance in *Peptostreptococcus russellii*. A poster presented at the Gordon Research Conference in Applied and Environmental Microbiology, July 7-12, 2013. Mount Holyoke College, South Hadley, MA.
14. Sun, W.; Mcguinness, L.; Kerkhof, L.; Häggblom, M.M.; and **Fennell, D.E. 2013.** Applying innovative environmental molecular diagnostics for informing bioremediation at contaminated sites: identification of in situ aniline biodegraders by stable isotope

- probing. A poster presented at the 113th General Meeting of the American Society for Microbiology. May 18–21, 2013. Denver, CO.
15. Krumins, V.; Mainelis, G.; Kerkhof, L.; ValaRae Partee, V.; and **Fennell, D.E. 2013.** Characterization of bioaerosol diversity and metabolic potential. A poster presented at the 113th General Meeting of the American Society for Microbiology. May 18–21, 2013. Denver, CO.
 16. Krumins, V.; Boeren, S.; Schaap, P.; Smidt, H.; Mainelis, G.; Kerkhof, L.J.; and **Fennell, D.E. 2013.** Proteomic Analysis of Aerosolized *Sphingomonas aerolata*. A poster presented at the 113th General Meeting of the American Society for Microbiology. May 18–21, 2013. Denver, CO.
 17. Rattana, S. and **Fennell, D.E. 2013.** Mitigation of environmental nitrogen release by enrichment of hyper ammonia producing (HAP) bacteria in waste treatment systems. Poster presented at the 2013 Symposium: Microbiology at Rutgers University, Cultivating Traditions, Current Strength, and Future Frontiers, January 31 - February 1, 2013.
 18. Krumins, V.; Mainelis, G.; Kerkhof, L.; ValaRae Partee, V.; and **Fennell, D.E. 2012.** Potential for metabolic activity of bioaerosols. Poster presented at the 31st Annual Conference of the American Association of Aerosol Research. October 8-12, 2012. Minneapolis, MN.
 19. Krumins, V.; Mainelis, G.; Kerkhof, L.; and **Fennell, D.E. 2011.** Metabolic activity of bacteria in the airborne state. Poster presented at the 30th Annual Conference of the American Association of Aerosol Research. October 3-7, 2011. Orlando, FL.
 20. Partee, V.; Krumins, V.; and **Fennell, D.E. 2011.** Characterization of the bacterial community in atmospheric samples. A poster presented at the RISE at Rutgers Summer Research Symposium, August 3, 2014. Piscataway, NJ. Undergraduate fellow in the Rutgers Research in Science and Engineering Program.
 21. Krumins, V.; Han, T.; Mainelis, G.; and **Fennell, D.E. 2011.** Metabolic activity of airborne bacteria. Abstracts of the 112th General Meeting of the American Society for Microbiology, June 21-24, New Orleans, LA.
 22. Ren, Y.; **Fennell, D.E.**; Rodenburg, L.A.; and Häggblom, M.M. **2010.** Enhancing dechlorination of PCBs in Anacostia River sediments by addition of halogenated co-substrates and surfactants. GeoTrop 2010 Conference, The 6th International Conference on Environmental Geochemistry in Tropics - Urban Issues, Xiamen, China, Nov. 4-6, 2010.
 23. Du, S.; Park, J.-W.; Zhen, H.; Rodenburg, L.A.; Krumins, V.; Kerkhof, L.J.; Häggblom, M.M.; and **Fennell, D.E. 2010.** PCB dechlorination pathways in biostimulated/bioaugmented Anacostia River sediments. Poster presented at the Partners in Environmental Technology Technical Symposium and Workshop sponsored by SERDP and ESTCP. November 30 - December 2, 2010. Washington, D.C.
 24. Liu H.; Park, J.-W.; **Fennell, D.E.**; and Häggblom, M.M. **2010.** Microbial reductive dechlorination of weathered polychlorinated dibenzo-*p*-dioxins and dibenzofurans in Kymijoki River sediment. A poster presented at the Partners in Environmental Technology Technical Symposium and Workshop sponsored by SERDP and ESTCP. November 30 - December 2, 2010. Washington, D.C.
 25. Zhen, H.; Du, S.; Rodenburg, L.A.; and **Fennell, D.E. 2010.** Reductive dechlorination of dioxins and PCBs by *Dehalococcoides* spp. A poster presented at the 13th International

- Symposium on Microbial Ecology, International Society for Microbial Ecology, 22-27 August, Seattle, WA.
26. Li, Y.; Mack, E.E. Huang, W.; and **Fennell, D.E. 2010.** Biological reductive dechlorination of para-chloroaniline and degradation of aniline in sediments from an industrial site. A poster presented at the 13th International Symposium on Microbial Ecology, International Society for Microbial Ecology, 22-27 August, Seattle, WA.
 27. Giordano, T.; Zhen, H.; Loudon, J.; and **Fennell, D.E. 2010.** Landfill leachate enrichment cultures partially reductively dechlorinate Aroclor 1260 and 1,2,3,4-Tetrachlorodibenzo-*p*-dioxin. A poster presented at the Rutgers ARESTY Summer Science Poster Session, August 12, 2010. Undergraduate Aresty Fellow.
 28. Park, J-W.; Krumins, V.; **Fennell, D.E.**; Kerkhof, L.J.; Rodenburg, L.A.; Kjellerup, B.V.; Gillespie, M.; Sowers, K.R.; and Häggblom, M.M. **2009.** Anaerobic PCB dechlorination by pentachloronitrobenzene-activated *Dehalococcoides* spp. Abstract Q-363, American Society for Microbiology 109th General Meeting, Philadelphia, PA, May 17-21, 2009.
 29. Krumins, V.; Park, J-W.; Du, S.; Rodenburg, L.A.; Kerkhof, L.J.; Häggblom, M.M.; and **Fennell, D.E. 2009.** Reductive dechlorination of PCBs in biostimulated contaminated sediment, Abstract Q-365, American Society for Microbiology 109th General Meeting, Philadelphia, PA, May 17-21, 2009.
 30. Krumins, V.; Park, J-W.; Häggblom, M.M.; Kerkhof, L.J.; Rodenburg, L.A.; and **Fennell, D.E. 2009.** Enhancement of reductive dechlorination and dechlorinators in PCB- and chlorinated pesticide-contaminated sediment. The Tenth International In Situ and On-Site Bioremediation Symposium. May 5-8, 2009, Baltimore, MD.
 31. Du, S.; Rodenburg, L.A.; Park, J-W.; Krumins, V.; Kerkhof, L.J.; Häggblom, M.M.; and **Fennell, D.E. 2009.** Mesocosm-scale investigation of PCB dechlorination in sediments with low concentration historical PCB contamination. Partners in Environmental Technology Technical Symposium, Dec. 1-3, 2009, Washington, D.C.
 32. Häggblom, M.M.; Park, J-W.; Liu, H.; **Fennell, D.E.**; Krumins, V.; Du, S.; Rodenburg, L.A.; Kerkhof, L.J.; Sowers, K.; and Kjellerup, B.V. **2009.** Quantifying enhanced microbial dehalogenation of organohalide mixtures in contaminated sediments. Partners in Environmental Technology Technical Symposium, Dec. 1-3, 2009, Washington, D.C.
 33. Liu H.; Park, J-W.; Rodenburg, L.A.; **Fennell, D.E.**; and Häggblom, M.M. **2009.** Microbial community analysis after dechlorination stimulating treatments of polychlorinated dibenzo-*p*-dioxin and dibenzofuran contaminated sediment. Abstract Q-372, American Society for Microbiology 109th General Meeting, Philadelphia, PA, May 17-21, 2009.
 34. Loudon, J.; Cooper, K.R.; White, L.A.; Krogmann, U.; Ravit, B.; and **Fennell, D.E. 2009.** Dechlorination of chloroethenes in landfill microcosms. Poster presented at the American Society for Microbiology 109th General Meeting, May 17-21, Philadelphia, PA. Philadelphia, PA.
 35. Loudon, J.; Cooper, K.R.; White, L.A.; Krogmann, U.; Ravit, B.; and **Fennell, D.E. 2009.** Anaerobic dehalogenation of chloroethenes in landfill microcosms. Poster Presented at the New Jersey Water Environment Association. 94th Annual Conference, May 10-15, Atlantic City, NJ.
 36. Loudon, J.; Cooper, K.R.; White, L.A.; Krogmann, U.; Ravit, B.; and **Fennell, D.E. 2009.** Reductive dechlorination of chloroethenes in landfill microcosms. Poster presentation at the Tenth International In Situ and On-Site Bioremediation Symposium sponsored by Battelle, May 5-8, Baltimore, MD.

37. Loudon, J.; Cooper, K.R.; White, L.A.; Krogmann, U.; Ravit, B.; and **Fennell, D.E. 2008.** Chlorinated ethenes in landfill microcosms. Poster presented at the Society of Environmental Toxicology and Chemistry-North America 29th Annual Meeting, November 16-20, Tampa, FL.
38. Seshadri, S.; Han, T.; Krumins, V.; Fennell, D.E.; and Mainelis, G. **2008.** Characterization of bioaerosol sampling devices using ATP bioluminescence, Poster presented at the 26th Annual Meeting of the American Association for Aerosol Research, October 20-24, 2008, Orlando, FL.
39. Wartell, B.; Krumins, V.; George, R.; Alt, J.; Schwab, B.; Kang, K.; and **Fennell, D.E. 2008.** Anaerobic digestion of equine stall waste. Poster Presented at the ASABE Annual International Meeting. June 29 – July 2, Providence, RI.
40. Seshadri, S.; Han, T.; Krumins, V.; **Fennell, D.E.**; and Mainelis, G. **2008.** A new method to characterize bioagent collection devices using ATP, poster presented at the 2008 Scientific Conference on Obscuration and Aerosol Research, Battelle Eastern Science and Technology Center, June 26, 2008, Aberdeen, MD.
41. Krumins, V.; Park, J.-W.; Rodenburg, L.A.; Häggblom, M.M.; Kerkhof, L.J.; and **Fennell, D.E. 2008.** Biostimulation of reductive dechlorination in PCB-contaminated sediment. Poster presented at the 108th General Meeting of the American Society for Microbiology. June 1-5, Boston, MA.
42. Son, E.-K.; Lee, K.Y.; and **Fennell, D.E. 2008.** Characterization of a novel *Dehalococcoides* enrichment culture dehalorespiring chlorinated ethenes. Poster presented at the 108th General Meeting of the American Society for Microbiology. June 1-5, Boston, MA. American Society for Microbiology Student Travel Grant to E.-K. Son.
43. Son, E.-K.; Krumins, V.; Mainelis, G.; and **Fennell, D.E. 2008.** Assessment of metabolic activity and growth capability of bacteria in air. Poster presented at the 108th General Meeting of the American Society for Microbiology. June 1-5, Boston, MA.
44. Liu, H.; Rodenburg, L.A.; **Fennell, D.E.**; and Häggblom, M.M. **2008.** Developing methods to stimulate dechlorination of historical polychlorinated dibenzo-*p*-dioxins and dibenzofurans in contaminated sediment. Poster presented at the 108th General Meeting of the American Society for Microbiology. June 1-5, Boston, MA.
45. Park, J.-W.; Krumins, V.; Kjellerup, B.V.; **Fennell, D.E.**; Kerkhof, L.J.; Sowers, K.R.; and Häggblom, M.M. **2008.** Developing PCR-based molecular methods for quantifying and monitoring dechlorination of polychlorinated compounds. Poster presented at the 108th General Meeting of the American Society for Microbiology, Q-415. June 1-5, Boston, MA.
46. Li, Y.; Huang, W.; and **Fennell, D.E. 2008.** Aniline and 4-chloroaniline transformation under different redox conditions. Poster presented at the 108th General Meeting of the American Society for Microbiology, Q010. June 1 - 5, Boston, MA.
47. Krumins, V.; Park, J.-W.; Rodenburg, L.A.; Häggblom, M.M.; Kerkhof, L.J.; and **Fennell, D.E. 2008.** Microcosms as a screening tool for PCB bioremediation. Poster presented at the Sixth International Conference on Remediation of Chlorinated and Recalcitrant Compounds. May 19-22, Monterey, CA
48. Li, Y.; Huang, W.; and **Fennell, D.E. 2008.** Transformation of 4-chloroaniline and aniline in contaminated aquifer sediments and aquatic sediments from an industrial site. Poster presented at the Sixth International Conference on Remediation of Chlorinated and Recalcitrant Compounds. May 19-22, Monterey, CA

49. Loudon, J.; Cooper, K.; Krogmann, U.; Ravit, B; and **Fennell, D. 2008.** Fate of chlorinated ethenes in landfill microcosms. Poster presented at the New Jersey Water Environment Association 93rd Annual Conference, April 30. Atlantic City, NJ. First place student poster competition.
50. Schwab, B. and **Fennell, D.E. 2008.** Comparison of microbial communities in anaerobic biodigesters. Poster presentation at the Aresty Research Center for Undergraduates, Fourth Annual, University-wide, Undergraduate Research Symposium, April 22, Rutgers University, New Brunswick, NJ. Fennell's freshman research student.
51. Wartell, B.; Krumins, V.; and **Fennell, D. 2008.** The effect of softwood bedding on anaerobic digestion of equine waste. Poster presentation at the 22nd International Conference on Solid Waste, Journal of Solid Waste Technology and Management. March 30 - April 2, Philadelphia, PA.
52. Kang, K.; Flaherty, R.; Prasad, S.; Rashkovsky, M.; Schleck, C.; Silang, J.; Thiel, C.; Liu, W. and **Fennell, D.E. 2008.** Biogas energy production from food and horse waste. Poster presented at the 2nd Annual Microbiology Mini-Symposium at Rutgers University: Cultivating Traditions, Current Strength, and Future Frontiers. February 7-8. New Brunswick, NJ. Students from Fennell's Bioenvironmental Engineering Laboratory course.
53. Park, J.-W.; Krumins, V.; **Fennell, D.E.**; Kerkhof, L.J.; and Häggblom, M.M. **2007.** Developing PCR-based molecular methods for quantifying and monitoring dechlorination of polychlorinated compounds. Poster presented at the Partners in Environmental Technology Technical Symposium and Workshop sponsored by SERDP and ESTCP. December 4-6, Washington, D.C.
54. Häggblom, M.M.; **Fennell, D.E.**; Kerkhof, L.J.; Totten, L.; Sowers, K.R.; Liu, H.; Liu, F.; Ahn, Y.-B.; Park, J.-W.; Krumins, V.; Kjellerup, B.V.; and Wright M. **2007.** Quantifying enhanced microbial dehalogenation of organohalide mixtures in contaminated sediments. Poster presented at the Partners in Environmental Technology Technical Symposium and Workshop sponsored by SERDP and ESTCP. December 4-6, Washington, D.C.
55. Krumins, V.; Park, J.-W.; Häggblom, M.M.; Kerkhof, L.J.; Totten, L.; and **Fennell, D.E. 2007.** Stimulation of PCB dechlorination and dechlorinators in sediment microcosms. Poster presented at the Partners in Environmental Technology Technical Symposium and Workshop sponsored by SERDP and ESTCP. December 4-6, Washington, D.C.
56. Liu, H.; Park, J.-W.; Liu, F.; Ahn, Y.-B.; **Fennell, D.E.**; and Häggblom, M.M. **2007.** Microcosm studies of polychlorinated dibenzo-*p*-dioxins and dibenzofurans dechlorination in Kymijoki River sediment, Finland. Poster presented at the 107th General Meeting of the American Society for Microbiology. June 1-5, Toronto, ON, Canada.
57. Krumins, V.; Liu, F.; and **Fennell, D.E. 2007.** Comparison of dechlorination of polychlorinated dibenzo-*p*-dioxin under conditions designed to enhance bioavailability. Poster Presented at the Ninth International Symposium on *In Situ* and On-Site Bioremediation sponsored by Battelle, May 6-10, Baltimore MD.
58. Park, J.-W.; Krumins, V.; **Fennell, D.E.**; Kerkhof, L.J.; and Häggblom, M.M. **2007.** Developing PCR-based molecular methods for quantifying and monitoring dechlorination of polychlorinated dibenzo-*p*-dioxin. Poster presented at the Theobald Smith Society Annual Meeting. New Jersey Branch, American Society for Microbiology. May 3, New Brunswick, NJ.

59. Loudon, J; Cooper, K.; Krogmann, U.; Ravit, B; and **Fennell, D. 2007**. Bioreactor landfill leachate: Initial assessment of bacterial diversity and toxicity to zebrafish (*Danio rerio*). Poster presentation at the Society of Environmental Toxicology and Chemistry - Hudson Delaware Chapter 23rd Annual Spring Meeting, April 26-27, Prallsville Mills, Stockton, NJ. Second place graduate student poster competition.
60. Son, E.-K.; Mainelis, G.; Krumins, V.; and **Fennell, D.E. 2007**. Is air an active microbial ecosystem? Poster presented at the 4th Annual Microbial Observatories/Microbial Interactions and Processes Principal Investigators Meeting and Workshop. National Science Foundation. March 1-3, 2007. Washington DC.
61. George, R.; Krumins, V.; and **Fennell, D.E. 2007**. Bioenergy production from methanogenic anaerobic digestion of horse waste. Poster presented at Microbiology at Rutgers: Cultivating Traditions, Current Strength, and Future Frontiers. January 25-26, New Brunswick, NJ. Fennell's undergraduate research student.
62. Liu, F.; Nijenhuis, I.; Richnow, H.-H.; and **Fennell, D.E. 2007**. Carbon stable isotope fractionation of 1,2,3,4-tetrachlorodibenzo-*p*-dioxin during reductive dechlorination by *Dehalococcoides* sp. Poster presented at the Microbiology Mini-Symposium at Rutgers University: Cultivating Traditions, Current Strength, and Future Frontiers. January 25–26. New Brunswick, NJ.
63. Alt, J.; Caluseriu, A.; Lam, K.; Thompson, J.; Song, J.; Ma Y.; and **Fennell, D.E. 2007**. Potential for methane production from the anaerobic digestion of New Jersey mixed waste biomass sources. Poster presented at the Presented at the Microbiology Mini-Symposium at Rutgers University: Cultivating Traditions, Current Strength, and Future Frontiers January 25–26, New Brunswick, NJ. Students from Fennell's Bioenvironmental Engineering Laboratory course.
64. Babson, D.; **Fennell, D.**; Krogmann, U.; and Ravit, B. **2007**. Development of a dynamic energy balance to assess operating efficiency of the Burlington County bioreactor landfill in New Jersey (USA). Poster presented at the New Jersey Meadowlands Symposium II, May 15-17. Lyndhurst, NJ.
65. Babson, D.; **Fennell, D.**; Krogmann, U.; and Ravit, B. **2007**. Bioenergy production from optimized bioreactor landfills. Poster presented at the Fifth Tripartite Workshop in Biotechnology, April 9-12. East Brunswick, NJ.
66. **Fennell, D.E.**; Liu, F.; and Krumins, V. **2006**. Effect of system heterogeneity on dechlorination of polychlorodibenzo-*p*-dioxin. Poster presented at the Partners in Environmental Technology Technical Symposium and Workshop sponsored by SERDP and ESTCP. November 28-30. Washington, D.C.
67. Häggblom, M.M.; **Fennell, D.E.**; Kerkhof, L.J.; Totten, L.A.; Sowers, K.R.; Ahn, Y.-B.; Liu, F.; Liu, H.; Park, J.-W.; and Krumins, V. **2006**. Quantifying enhanced microbial dehalogenation of organohalide mixtures in contaminated sediments. Poster presented at the Partners in Environmental Technology Technical Symposium and Workshop sponsored by SERDP and ESTCP. November 28-30, Washington, D.C.
68. **Fennell, D.E.**; Liu, F.; Nijenhuis, I.; and Richnow, H.-H. **2006**. Carbon stable isotope fractionation during dechlorination of polychlorinated dibenzo-*p*-dioxins by *Dehalococcoides ethenogenes* strain 195. Poster presented at the Partners in Environmental Technology Technical Symposium and Workshop sponsored by SERDP and ESTCP. November 28-30, Washington, D.C.
69. Ahn, Y-B.; Liu, F.; Liu, H.; **Fennell, D.E.**; Kerkhof, L.J.; and Häggblom, M.M. **2006**. Effect of biostimulation and bioaugmentation on the bacterial community and the dechlorination of PCDD/Fs in sediment from River Kymijoki, Finland. Poster presented at

- the Partners in Environmental Technology Technical Symposium and Workshop sponsored by SERDP and ESTCP. November 28-30, Washington, D.C.
70. Häggblom, M.M.; **Fennell, D.E.**; Kerkhof, L.J.; Totten, L.A.; Sowers, K.R.; Ahn, Y.-B.; Liu, F.; Liu, H.; Park, J.W.; and Krumins, V. **2006**. Quantifying enhanced microbial dehalogenation of organohalide mixtures in contaminated sediments. Poster presented at the 2nd Passaic River Symposium: Progress and Challenges. October 13, Montclair, NJ.
 71. **Fennell, D.E.** and Liu, F. **2006**. Dechlorination of PCDD/Fs and carbon stable isotope fractionation of PCDDs by *Dehalococcoides ethenogenes* strain 195. Poster presented at the 2nd Passaic River Symposium: Progress and Challenges. October 13, Montclair, NJ.
 72. Ahn, Y.-B.; Liu, F.; Liu, H.; **Fennell, D.E.**; Kerkhof, L.J.; and Häggblom, M.M. **2006**. Effect of biostimulation and bioaugmentation on the bacterial community and the dechlorination of 1,2,3,4-tetrachlorodibenzo-*p*-dioxin in historically contaminated sediments of River Kymijoki, Finland. Poster presentation at the American Society for Microbiology 106th General Meeting, May 21-25, Orlando, FL.
 73. Liu, F.; Nijenhuis, I.; Richnow, H.H.; and **Fennell, D.E.** **2006**. Investigation of carbon stable isotope fractionation of 1,2,3,4-tetrachlorodibenzo-*p*-dioxin during reductive dechlorination by *Dehalococcoides* sp. Poster presentation at the American Society for Microbiology 106th General Meeting, May 21-25, Orlando, FL.
 74. Liu, H.; Liu, F.; Ahn, Y.-B.; **Fennell, D.E.**; and Häggblom, M.M. **2006**. Reductive dechlorination of polychlorinated dibenzo-*p*-dioxins and dibenzofurans in sediments of River Kymijoki, Finland. Poster presentation at the American Society for Microbiology 106th General Meeting, May 21-25, Orlando, FL.
 75. **Fennell, D.E.**; Liu, F.; and Son, E.-K. **2006**. Investigation of PCDD/F Dechlorination Using a Competitive Dechlorination Model. Poster presentation at the American Society for Microbiology 106th General Meeting, May 21-25, Orlando, FL.
 76. **Fennell, D.E.**, Liu, F.; and Son E.-K. **2005**. Dechlorination of polychlorinated dibenzo-*p*-dioxins and dibenzofurans by *Dehalococcoides*. Poster presented at the Partners in Environmental Technology Technical Symposium and Workshop sponsored by SERDP and ESTCP. November 29 - December 1, Washington, D.C.
 77. Häggblom M.M.; **Fennell D.E.**; Ahn Y.-B.; Liu F.; Ravit B.; and Kerkhof L.J. **2005**. *In situ* enhancement of anaerobic microbial dechlorination: novel strategies for bioremediation of contaminated sediments. Poster presented at the Partners in Environmental Technology Technical Symposium and Workshop sponsored by SERDP and ESTCP. November 29 -December 1, Washington, D.C.
 78. **Fennell, D.E.**; Liu, F.; Son, E.-K.; Zarnadze, A.; Krogmann, U.; and Totten, L.A. **2005**. Biotransformation of halogenated contaminants in sludges and enrichments from municipal anaerobic digesters. Poster presentation at the Society of Environmental Toxicology and Chemistry, North America, 26th Annual Meeting, November 13-17, Baltimore, MD.
 79. Liu, F. and **Fennell, D.E.** **2005**. Microbial dechlorination of 1,2,3,4,7,8-hexachlorodibenzofuran by a *Dehalococcoides*-containing culture. Poster presentation at the 21th International Conference on Soils, Sediments and Water, October 17-20, Amherst, MA.
 80. Liu, F.; Son, E.-K.; and **Fennell, D.E.** **2005**. Dechlorination and detoxification of 1,2,3,4,7,8-hexachlorodibenzofuran by a *Dehalococcoides*-containing mixed culture.

- Poster presentation at the International Summer School "Biomonitoring, bioavailability and microbial transformation of pollutants in sediments and approaches to stimulate their biodegradation", September 12-14, Genoa, Italy. Best poster award.
81. Son, E.-K.; Lee, K.Y.; and **Fennell, D.E. 2005.** Microbial reductive dechlorination in a fractured rock aquifer, Poster presentation at the 105th General Meeting of the American Society for Microbiology, May 23-27, Atlanta, GA.
 82. Liu, F. and **Fennell, D.E. 2005.** Microbial dechlorination of polychlorinated dibenzo-*p*-dioxin/furan congeners by a *Dehalococcoides*, Poster presentation at the 105th General Meeting of the American Society for Microbiology, May 23-27, Atlanta, GA. American Society for Microbiology Student Travel Grant to F. Liu.
 83. Ahn, Y.-B.; **Fennell, D.E.**; and Häggblom, M.M. **2005.** Comparison of Anaerobic microbial communities amended with halogenated compounds to enhance dechlorination of 1,2,3,4-tetrachlorodibenzo-*p*-dioxin in estuarine sediments. Society for Industrial Microbiology Annual Meeting, Chicago, August 21-25, 2005.
 84. Häggblom, M.M.; **Fennell, D.E.**; Ahn, Y.-B.; Liu, F.; Ravit, B, Kerkhof, L.J. **2005.** In situ enhancement of anaerobic microbial dechlorination: novel strategies for bioremediation of contaminated sediments. SERDP and ESTCP Partners in Environmental Technology Technical Symposium & Workshop, Washington, D.C., Nov. 29 - Dec. 1, 2005.
 85. Son, E.-K.; Lee, K.Y.; and **Fennell, D.E. 2005.** PCE- And VC-dechlorinating bacteria from the Brunswick Formation, NJ, Poster presentation at the Eighth International *In Situ* and On-Site Bioreclamation Symposium, June 1-6, Baltimore, MD.
 86. **Fennell, D.E.**; Son, E.-K.; and Lee, K.Y. **2004.** Identification of dechlorinating bacteria in a New Jersey fractured rock aquifer. Poster presented at the 228th American Chemical Society National Meeting, August 22-26, Philadelphia, PA.
 87. Zarnadze, A.; Totten, L.; **Fennell, D.E.**; Giacalone, M.; and Krogmann, U. **2004.** PBDEs in the NY/NJ Harbor estuary. Poster presented at the 228th American Chemical Society National Meeting, August 22-26, Philadelphia, PA.
 88. **Fennell, D.E.**; Son, E.-K.; and Lee, K.Y. **2004.** Potential for anaerobic chloroethene remediation in a fractured rock aquifer. Poster presented at the Fourth International Conference on Remediation of Chlorinated and Recalcitrant Compounds, May 24-27, Monterey, CA.
 89. Liu, F.; Ahn, Y.-B.; Häggblom, M.M.; and **Fennell, D.E. 2004.** Investigation of bacterially-mediated dechlorination in polychlorinated dibenzo-*p*-dioxin contaminated freshwater sediments. Poster presentation at the American Society for Microbiology, 104th General Meeting. May 23-27. New Orleans, LA.
 90. Son, E.-K.; Ahn, Y.-B.; Lee, K.Y.; and **Fennell, D.E. 2004.** Microbial reductive dechlorination in a fractured rock aquifer. Poster presentation at the American Society for Microbiology, 104th General Meeting. May 23-27. New Orleans, LA.
 91. Ahn, Y.-B.; **Fennell, D.E.**; Kerkhof, L.J.; and Häggblom, M.M. **2004.** Anaerobic reductive dechlorination of 1,2,3,4-tetrachlorodibenzo-*p*-dioxin in estuarine sediments is enhanced by various halogenated electron acceptors. Poster presented at the American Society for Microbiology, 104th General Meeting. May 23-27. New Orleans, LA.
 92. Son, E.-K. and **Fennell, D.E. 2004.** Microbial reductive dechlorination in a fractured rock aquifer. Poster presented at the New Jersey Water Environment Association Annual Conference. May 7, Atlantic City, NJ. Third place student poster competition.
 93. Liu, F; Ahn, Y.B.; Häggblom, M.M.; and **Fennell, D.E. 2004.** Investigation of microbiological dechlorination of dioxins in dioxin-contaminated sediments. Poster

- presented at the New Jersey Water Environment Association Annual Conference. May 7. Atlantic City, NJ. First place student poster competition.
94. Häggblom, M.M., Ahn, Y. -B.; **Fennell, D.E.**; and Kerkhof, L.J. **2003**. Various halogenated electron acceptors enhance anaerobic microbial dechlorination of 1,2,3,4-tetrachlorodibenzo-*p*-dioxin and 1,2,3,4-tetrachlorodibenzofuran in estuarine sediments. Poster presented at the Partners in Environmental Technology Technical Symposium and Workshop sponsored by SERDP and ESTCP. December 2-4, Washington, D.C.
 95. **Fennell, D.E.**; Nijenhuis, I.; Wilson, S.F.; Häggblom, M.M.; and Zinder, S.H. **2003**. *Dehalococcoides ethenogenes* strain 195 dechlorinates a diverse suite of chlorinated aromatic compounds including polychlorinated benzenes, dioxins, furans, naphthalenes, and biphenyls. Poster presented at the Partners in Environmental Technology Technical Symposium and Workshop sponsored by SERDP and ESTCP. December 2-4, Washington, D.C.
 96. **Fennell, D.E.**; Nijenhuis, I.; Wilson, S.F.; Häggblom, M.M.; and Zinder, S.H. **2003**. *Dehalococcoides ethenogenes* strain 195 dechlorinates a diverse suite of chlorinated aromatic compounds including polychlorinated dioxins, furans, naphthalenes and biphenyls. Poster presented at FAME, Frontiers in Assessment Methods for the Environment Symposium, an AEEESP Symposium. August 10-13. University of Minnesota, Minneapolis, MN.
 97. **Fennell, D.E.**; Nijenhuis, I.; Wilson, S.F.; Häggblom, M.M.; and Zinder, S.H. **2003**. Dehalogenation of halogenated aromatic compounds by *Dehalococcoides ethenogenes* strain 195 in pure and mixed culture. Poster presented at the 103rd General Meeting of the American Society for Microbiology. May 18-22. Washington D.C.
 98. Ahn, Y.-B.; **Fennell, D.E.**; Kerkhof, L.J.; and Häggblom, M.M. **2003**. *In situ* enhancement of anaerobic microbial dechlorination of 1,2,3,4-tetrachlorodibenzo-*p*-dioxin in estuarine sediments. Poster presented at the 103rd General Meeting of the American Society for Microbiology. May 18-22. Washington D.C.
 99. **Fennell, D.E.**; Ahn, Y. -B.; Kerkhof, L.J.; and Häggblom, M.M. **2002**. Preliminary assessment of a bioprocess model to describe the dehalogenation of spiked 1,2,3,4-tetrachlorodibenzo-*p*-dioxin in marine sediments. Poster presentation at the 34th Mid-Atlantic Industrial and Hazardous Waste Conference. September 20-21. Rutgers University, New Brunswick, NJ.
 100. Ahn, Y.-B.; **Fennell, D.E.**; Kerkhof, L.J.; and Häggblom, M.M. **2002**. Halogenated aromatic compounds prime anaerobic microbial dechlorination of 1,2,3,4-tetrachlorodibenzo-*p*-dioxin. Poster presentation at the 34th Mid-Atlantic Industrial and Hazardous Waste Conference. September 20-21. Rutgers University, New Brunswick, NJ.
 101. Ahn, Y.-B.; Rhee, S.-K.; **Fennell, D.E.**; Kerkhof, L.J.; Hentshel, U.; and Häggblom, M.M. **2002**. Reductive dehalogenation of haloaromatics by microorganisms associated with the marine sponge *Aplysina aerophoba*. Poster presented at the 102nd General Meeting of the American Society for Microbiology. May 19-23. Salt Lake City, UT.
 102. **Fennell, D.E.**; Ahn, Y.-B.; Rhee, S.-K.; Kerkhof, L.J.; and Häggblom, M.M. **2002**. Stimulation of dioxin dechlorination in marine and estuarine sediments. Poster presented at the 102nd General Meeting of the American Society for Microbiology. Abstract Q141. May 19-23, Salt Lake City, UT.
 103. Rhee, S.-K.; **Fennell, D.E.**; Häggblom, M.M.; and Kerkhof, L.J. **2002**. Detection of DNA fragments containing motifs of reductive dehalogenase gene in a sulfidogenic 2-bromophenol-degrading consortium enriched from estuarine sediment. Poster presented

- at the 102nd General Meeting of the American Society for Microbiology. Abstract Q146. May 19-23. Salt Lake City, UT.
104. Häggblom, M.M.; **Fennell, D.E.**; Kerkhof, L.J.; Rhee, S-K.; and Ahn, Y-B. **2001**. Enhancing Anaerobic Dehalogenation of Organhalides in Contaminated Sediments. 33rd Mid-Atlantic Industrial & Hazardous Waste Conference, Manhattan College, Riverdale, NY, June 18-20, 2001.
 105. Häggblom, M.M.; Ahn, Y.-B.; **Fennell, D.E.**; Kerkhof, L.J.; and Rhee, S.-K. **2001**. Molecular characterization of anaerobic microbial dehalogenating communities in marine and estuarine sediments. Poster presented at the Partners in Environmental Technology Technical Symposium and Workshop sponsored by SERDP and ESTCP. November 27-29. Washington, DC.
 106. Häggblom, M.M.; Ahn, Y.B.; **Fennell, D.E.**; Kerkhof, L.J.; and Rhee, S.K. **2001**. Enhancement of anaerobic microbial dechlorination of 1,2,3,4-tetrachlorodibenzo-*p*-dioxin in marine and estuarine sediments. Poster presented at the Partners in Environmental Technology Technical Symposium and Workshop sponsored by SERDP and ESTCP. November 27-29. Washington, DC.
 107. Voordeckers, J.; **Fennell, D.**; and Häggblom, M.M. **2000**. Anaerobic dehalogenation of tetrabromobisphenol A and related compounds. Northeastern Microbiologists: Physiology, Ecology, Taxonomy. June 15-17, 2000, Blue Mountain Lake, NY.
 108. Carroll, A.B.; **Fennell, D.E.**; Anguish, T.W.; Gossett, J.M.; and Zinder, S.H. **2000**. Molecular characterization of TCE-contaminated sites. Poster presented at the 100th General Meeting of the American Society for Microbiology. May 21-25, Los Angeles, CA.
 109. **Fennell, D.E.** and Gossett, J.M. **2000**. TCE dechlorination and competition for donor in aquifer microcosms. Poster presented at the Second International Conference on Remediation of Chlorinated and Recalcitrant Compounds. May 22-25. Monterey, CA.
 110. Carroll, A.B.; **Fennell, D.E.**; Gossett, J.M.; and Zinder, S.H. **1999**. The molecular detection of "*Dehalococcoides ethenogenes*" in PCE- and TCE-contaminated sites by PCR amplification of 16S rDNA. Poster presented at the 99th General Meeting of the American Society for Microbiology. May 30-June 3, Chicago, IL.
 111. Willis, M.; Shoemaker, C.; Gossett, J.; and **Fennell, D.** **1999**. A bioremediation groundwater transport model incorporating competitive biokinetics of dechlorination. Poster presented at the Fifth International *In Situ* and On-Site Bioreclamation Symposium. April 19-22. San Diego, CA.

PROFESSIONAL DEVELOPMENT

- 2015 HERS (Higher Education Resource Services) Bryn Mawr Summer Institute. HERS is a two-week immersion course for development of leadership and management skills for women in higher education administration. HERS uses a three-pronged leadership development model emphasizing self-knowledge, networking and institutional awareness. Training is provided in budgeting and financial management, negotiation, conflict management, and legal issues in higher education. <http://hersnet.org/>
- 2013 OASIS (Objective Analysis of Self and Institution Seminar) Leadership and Development Program. Office for the Promotion of Women in Science, Engineering and Mathematics, Rutgers University. OASIS is a leadership and professional development program designed to accelerate the career development and

- advancement of academic women in science, technology, engineering, mathematics through a combination of workshops, networking, mentoring and individual coaching.
- 2005 NSF Summer Institute on Nanotechnology, Biotechnology and Sustainable Engineering, Northwestern University, Evanston, IL.
 - 2005 Rutgers University President's Traveling Faculty Seminar
 - 2003 Bioremediation System Design Using Visual MODFLOW and RT3D, Battelle Bioremediation Symposium
 - 2003 The Triad Approach, New Jersey Department of Environmental Protection
 - 2001 Practical Reactive Transport Modeling For Evaluating *In Situ* Bioremediation, Battelle Bioremediation Symposium
 - 1998 U.S. EPA. Hazardous Materials Incident Response Operations Training Course (40 hr HAZWOPER)
 - 1997 Certificate of Dutch as a Foreign Language, intermediate level reading and listening
 - 1984 Engineer in Training, State of Arkansas, Engineer-Intern Certificate Number 3624

MENTORING

Research Associates

- 2010-2014 Dr. Valdis Krumins
MSB: Air as an Active Bacterial Ecosystem
National Science Foundation

Post-Doctoral Associates

- 2012-present Dr. Weimin Sun
Applying Innovative Diagnostic Tools at New Jersey Publicly Funded Sites
New Jersey Department of Environmental Protection
- 2009-2011 Dr. Songyan Du
Quantifying Enhanced Microbial Dehalogenation Impacting the Fate and Transport of Organohalide Mixtures in Contaminated Sediments. Strategic Environmental Research and Development Program (DoD)
- 2006-2009 Dr. Valdis Krumins
Quantifying Enhanced Microbial Dehalogenation Impacting the Fate and Transport of Organohalide Mixtures in Contaminated Sediments. Strategic Environmental Research and Development Program (DoD)

Graduate Students

Ph.D. Dissertation Advisor

- 2013-present Haider Salman AL mnehlawi, Ph.D. Candidate, Project: Aerobic mineralization of lightly and non-chlorinated dibenzo-*p*-dioxin and dibenzofuran by sediment microorganisms.
- 2010-2015 Sunirat Rattana. Ph.D. Candidate, Environmental Sciences. Project: Kinetics of ammonia release from organic nitrogen and ammonia tolerance by hyper-ammonia producing bacteria. Defended June 3, 2015
- 2010-2015 Amanda Luther (co-advised with Professor Peter Strom). Ph.D. Candidate, Environmental Sciences. Project: Anaerobic digestion and microbial fuel cells. Defended March 26, 2015.

- 2007-2013 Yun Li, Ph.D., Environmental Sciences. Project: Combined Biological and Physical-Chemical Degradation of Aniline and Parachloroaniline. Ph.D. Dissertation. Rutgers University, 355 pp., 2014.
- 2006-2010 David Babson, Ph.D., Environmental Sciences. Dissertation. Enhancing Energy Recovery from Biomass Waste Streams—From Mega-Landfills and Biorefineries to Microbial Communities. Ph.D. Dissertation. Rutgers University, 264 pp., 2010.
- 2003-2009 Eun-Kyeu Son, Ph.D., Environmental Sciences. Ph.D. Dissertation. Characterization of Bacterial Processes in the Subsurface and the Atmosphere, Ph.D. Dissertation. Rutgers University, 181 pp., 2009.
- 2002-2007 Fang Liu, Ph.D., Environmental Sciences. Ph.D. Dissertation. Microbial Dechlorination of Polychlorinated Dibenzo-*p*-Dioxins and Dibenzofurans: Pathways, Kinetics and Environmental Implications, Ph.D. Dissertation. Rutgers University, 189 pp., 2007.

M.S. Thesis Advisor

- 2008-2010 Liang Chen, M.S., Environmental Sciences. Master of Science Thesis. Inhibition of Anaerobic Degradation of Treated Paper Samples Under Simulated Landfill Conditions. M.S. Thesis, Rutgers University, 99 pp., 2010.
- 2007-2009 Brian Wartell, M.S., Environmental Sciences. Master of Science Thesis. Anaerobic Digestion of Equine Waste. M.S. Thesis, Rutgers University, 122 pp., 2009.
- 2006-2011 Jennifer Loudon, M.S., Environmental Sciences. Master of Science Thesis. Reductive Dehalogenation Potential in a Leachate Recirculating Landfill and Its Affect on Leachate Toxicity. M.S. Thesis, Rutgers University, 102 pp., 2011.

M.S. Critical Essay Advisor

- 2014-present Laura Girard. M.S. Student, Microbial Biology. Degradation of volatile fungal metabolites by bacteria.
- 2014-present Mosam Bhatt. M.S. Student, Environmental Sciences. Organohalide respiration by *Dehalococcoides*.
- 2012-2014 Mpho Batlhophi. M.S. Student, Microbial Biology. Topic: Phase separation for anaerobic digestion. M.S. 2014.
- 2010-2011 Lisa Oberreiter. M.S. Student, Environmental Sciences. Topic: Pharmaceutical Compounds in Wastewater. M.S. 2011.
- 2008-2011 Xian Liu, M.S. Student, Environmental Sciences. Topic: Bioammonia for Hydrogen Production. M.S. 2011.
- 2006-2007 Wen Liu, M.S., Environmental Sciences. Topic: Dechlorination with Bimetallic Catalytic Particles. M.S. 2007.
- 2003-2006 Matthew Giacalone, M.S., Environmental Sciences. Topic: Polybrominated Diphenyl Ether Flame Retardants in Sewage and Sludges. M.S. 2006.

Committee Member

- 2015 Dan Milleman, Ph.D., Environmental Sciences, Qualifying Exam Committee Member.
- 2015 Margaret Garcia, M.S., Environmental Sciences. M.S. Committee Member.

2015 Michael Lang, M.S., Environmental Sciences. M.S. Committee Member.

2015-present Sarah Wolfson, Ph.D., Environmental Sciences, Dissertation Committee Member.

2014-2015 SeoYean Sohn, Ph.D., Environmental Sciences, Dissertation Committee Member.

2014 Marie Markantonis, Ph.D. Dissertation review, Martin-Luther-Universität, Halle-Wittenberg, Halle/Saale, Germany

2014 Shiming Tan, M.S., Microbial Biology. M.S. Committee Member.

2014 Dersan Patel, M.S., Environmental Sciences. M.S. Committee Member.

2013-present Sarah Janssen, Ph.D., Environmental Sciences, Qualifying Exam Committee Member.

2013-present Jennifer Therkorn, Ph.D., Environmental Sciences, Qualifying Exam Committee Member, Dissertation Committee Member.

2013 Jia Guo, Ph.D., Microbial Biology, Qualifying Exam Committee Member.

2010-2011 Daniel Berkowitz, M.S. Student, Environmental Sciences. M.S. Committee Member.

2010-2011 Sean Bugel, Ph.D., Environmental Sciences. Ph.D. Dissertation Committee.

2008-2015 Huajun Zhen, Ph.D., Environmental Sciences. Qualifying Exam Committee, Dissertation Committee Member.

2008-2015 Isabel Gray, Ph.D., Environmental Sciences. Qualifying Exam Committee Member, Dissertation Committee Member.

2008 Wen Liu, Ph.D., Environmental Sciences. Qualifying Examination Committee Member.

2008 Nora Lopez, Ph.D., Environmental Sciences. Ph.D. Qualifying Examination Committee Member.

2007-2010 Laura Youngster, Ph.D., Environmental Sciences. Ph.D. Dissertation Committee Member.

2007 Yingjun Ma, Ph.D., Environmental Sciences. Ph.D. Qualifying Examination Committee Member.

2007-2011 Hui Lui, Ph.D., Environmental Sciences. Ph.D. Qualifying Examination Committee Member, Dissertation Committee Member.

2006 Steven Yergeau, Ph.D., Environmental Sciences. Ph.D. Qualifying Examination Committee Member.

2006 Wenyi Zhu, Ph.D., Environmental Sciences. Ph.D. Qualifying Examination Committee Member.

2006 Andy Sandy, Ph.D., Environmental Sciences. Ph.D. Qualifying Examination Committee Member.

2005-2009 Heyreoun An, Ph.D., Environmental Sciences Ph.D. Qualifying Examination Committee Member, Ph.D. Dissertation Committee Member.

2005 Sung Won Yoon, Ph.D., Environmental Sciences. Ph.D. Qualifying Examination Committee Member.

2005 Taweechai (Chai) Jiaranaikhajorn, M.S. Bioresource Engineering. M.S. Thesis Committee Member.

2005 Haining Cindy Chiang, Ph.D., Environmental Sciences. Ph.D. Qualifying Examination Committee Member.

- 2004-2008 Karen Pesce, Ph.D., Environmental Sciences. Ph.D. Qualifying Examination Committee Member, Ph.D. Dissertation Committee Member.
- 2002-2004 Piyapawn Somsamak, Ph.D. Environmental Sciences. Ph.D. Dissertation Committee Member.
- 2004 Archil Zarnedze, Ph.D., Environmental Sciences. Ph.D. Qualifying Examination Committee Member.
- 2004 Feng Qiao, Ph.D., Environmental Sciences. Ph.D. Qualifying Examination Committee Member.
- 2003 Dawn Mason, M.S., Bioresource Engineering. M.S. Thesis Committee Member.
- 2002-2006 E. Jane Pavlik, Ph.D., Molecular and Biosciences. Ph.D. Qualifying Examination Committee Member, Ph.D. Dissertation Committee Member.

K-12 Teachers

- 2011 Eileen Teel, Thorne Middle School, mathematics
Loren Rogers, Thorne Middle School, biology
Elena A. Podgorny, Scotch Plains Fanwood High School, physics
NSF-Funded Research Experience for Teachers at Rutgers University (RU-RET) (PI: Professor Kim Cook-Chennault; co-PI Professor Evelyn Laffey, Rutgers University School of Engineering.) The three teachers performed research and lesson planning related to bioenergy production from waste.

Undergraduate Student Researchers

- 2015-present Cassidy Schneider, Bioenvironmental Engineering undergraduate researcher Douglass Residential College Science, Technology, Engineering, and Mathematics (STEM) Summer Research Experience. Dechlorinating bacteria in sediments of the Passaic River.
- 2014 Maytal Merhav. Biochemical Engineering undergraduate researcher. Aresty Research Fellow. Microbes in Air.
- 2014 Faria Nusrat. Chemistry undergraduate, Bloomfield University. Fellow in the Rutgers School of Engineering's NSF-funded Green Energy Technology Undergraduate Program (GET-UP).
- 2012-2013 Maksim Abadjev, Bioenvironmental Engineering undergraduate researcher Aresty Research Fellow. Microbes in Air.
- 2011 Valarae Partee, Environmental Engineering undergraduate student from the University of Georgia. Rutgers RiSE (Research in Science and Engineering) Fellow. Microbes in air.
- 2010-2011 Neil Ramchandani. Bioenvironmental Engineering undergraduate researcher. Project: Anaerobic digestion of food waste at Rutgers University.
- 2009 Tom Giordano. Bioenvironmental Engineering undergraduate researcher. Project: Dechlorination of dioxins by landfill bacteria. Aresty Research Funding.
- 2009-2010 Irene Donne. Bioenvironmental Engineering undergraduate researcher. Project: Chlorinated aniline dechlorination in sediments. Douglass Residential College Science, Technology, Engineering, and Mathematics (STEM) Summer Research Experience.

- 2008-2009 Rutgers University Chapter of Engineers Without Borders, Thailand Project Group Advisor and PI on RU-EWB EPA P3 Grant Application. Project: Safe, Sustainable Community Water System in Phrao, Thailand.
- 2008 Jared Brisman, Bioenvironmental Engineering undergraduate researcher. Project: PCB dechlorination in sediments.
- 2007-2009 William Zupko, Middlesex County Community College, NJ Star Program. Project: PCB dechlorination in sediments.
- 2007-present Bryan Schwab, Bioenvironmental Engineering undergraduate researcher. Projects: Anaerobic digestion of horse manure; Activity of bacteria in air. Aresty Research Funding.
- 2007-2008 Kathleen Kang, Bioenvironmental Engineering undergraduate researcher. Projects: Anaerobic digestion of horse manure; Biodegradation of aniline and parachloroaniline in groundwater.
- 2007 Jeffery Alt, Bioenvironmental Engineering undergraduate researcher. Project: Anaerobic digestion of horse manure.
- 2006 Angelica Cardon, Environmental Sciences undergraduate researcher. Project: Detection of bacteria in air.
- 2006-2007 Robin George, Biomedical Engineering undergraduate researcher. Project: Anaerobic digestion of horse manure.
- 2006 Jenna Ciano, Biological Sciences undergraduate researcher. Project: Effect of carbon nanotubes on microbial processes.
- 2005-2006 Danielle Amari, Bioenvironmental Engineering undergraduate researcher. Project: Dechlorination of PCE and PCDD/Fs.
- 2005-2006 Alexandra Caluseriu, Bioenvironmental Engineering undergraduate researcher. Project: Dechlorination of PCE in groundwater.
- 2005 Kevin D'Egidio, Bioenvironmental Engineering undergraduate researcher. Project: Fate of PBDEs in wastewater treatment plants.
- 2004-2006 Jillian Thompson, Bioenvironmental Engineering undergraduate researcher. Project: Effect of heavy metals on reductive dechlorination.
- 2003-2006 David Berry, Bioresource Engineering undergraduate researcher. Project: Characterization of bioaerosols in occupational and controlled agricultural spaces. (co-advised with Professor Gediminas Mainelis). Rutgers Undergraduate Research Fellow. Currently an Assistant Professor at the University of Vienna, Vienna, Austria.
- 2002-2003 Christopher Hopp, Chemistry undergraduate researcher. Project: Effect of heavy metals on reductive dechlorination.

High School Student Researchers

- 2009 Jatin Khanna, Bioenergy production in landfills. Matriculated School of Engineering, Cornell University.
- 2007 Bryan Schwab, Anaerobic Digestion of Horse Waste. Matriculated Bioenvironmental Engineering, Rutgers University.
- 2006-2008 Yanting Wang, Anaerobic digestion optimization. Matriculated Cornell University.
- 2005 Stacy Ng, Polybrominated biphenyl ethers in sewage. Matriculated Cornell University.

Visiting Scientists

- 2015 Giovanni Ganendra, Ph.D. Candidate
Laboratory of Microbial Ecology and Technology (LABMET)
Ghent University, Ghent, Belgium
- 2014 Guangwei Yu, Ph.D., Lecturer
Department of Environmental Science and Engineering
College of Natural Resource and Environment
South China Agricultural University
Guangzhou, China
- 2014 Pin Gao, Ph.D., Assistant Professor
College of Environmental Science and Engineering
Donghua University
Shanghai, China
- 2011 Nengwu Zhu, Ph.D., Professor
School of Environment and Energy
South China University of Technology
Guangzhou, China