BRUCE ERNEST LOGAN CURRICULUM VITAE

[November 1, 2023]

Kappe Professor of Environmental Engineering
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EDUCATION

1986 Ph.D. in Environmental Engineering, University of California, Berkeley, CA.
1980 M.S. in Environmental Engineering, Rensselaer Polytechnic Institute, Troy, NY.
1979 B.S. in Chemical Engineering, Rensselaer Polytechnic Institute, Troy, NY.

EXPERIENCE

1997- present
- Kappe Professor of Environmental Engineering, Department of Civil and Environmental Engineering (since 1997)
- Evan Pugh University Professor in Engineering, Penn State University (since 2012)
- Evan Pugh University Professor in Engineering, Penn State University (since 2012)
- Director, Institutes of Energy & Environment (2022-present);
- Director, Consortium for Integrated Energy Systems (CIES) (2019-present);
- Director, Hydrogen Energy (H_2E) Center (2002-present);
- Associate Director, Institutes of Energy & Environment (2019-2022);
- Courtesy Appointment, Professor of Chemical Engineering (2005-2023);
- Courtesy Appointment, Professor of Mechanical Engineering (2010-2020)
- Joint Faculty, Penn State Institutes of Energy and the Environment (IEE);
- Affiliate, Center for Environmental Chemistry and Geochemistry (CECG);
- Faculty Associate, Materials Research Institute (MRI).

2012 – present Visiting Professor (2007-2019), and Chaired Foreign Professor; Harbin Institute of Technology (HIT), Harbin, China.

2009 – present Visiting Professor, Dalian University of Technology (DUT), Dalian, China.

2012 – present Master, Beijing DeTao Masters Academy, Beijing, China.

2014 – present Visiting Professor, Nankai University, Tianjin, China.

2012 – present Distinguished Visiting Professor, 2016-2018, 2019-2022; Visiting Professor, 2012-2015; Tsinghua University, Beijing, China.

2004 - 2016 Visiting Professor, School of Civil Engineering & Geosciences, Newcastle University, Newcastle upon Tyne, UK.

2008 - 2014 KAUST Global Research Partner, and Investigator; King Abdullah University of Science and Technology (KAUST), Saudi Arabia.

2012 - 2013 Visiting Professor, International Francqui Chair, Ghent University, Belgium.

2010 - 2011 Visiting Academic, Faculty of Engineering, Architecture & Information Technology, University of Queensland, Brisbane, Australia.

1986 - 1997 Professor (1997), Associate Professor (1992-1997), Assistant Professor (1986-1992), Dept. of Chemical and Environmental Engineering; Investigator, Center for Toxicology (1993-1997), University of Arizona, Tucson, AZ.

1982 - 1986 Research Assistant or Graduate Teaching Assistant, Department of Civil and Environmental Engineering, University of California, Berkeley, CA.

1980 - 1982 Hazardous Waste Specialist and Waste Treatment Engineer, Environmental Engineering Division, Stone and Webster Engineering Corporation, Boston, MA.

1978, 1979 Engineering Aide, Environmental Specialists Branch, U.S. Nuclear Regulatory Commission, Washington, D.C. (Summers)

1977 Engineering Aide, Pandullo Quirk Associates, Wayne, NJ. (Summer)

PROFESSIONAL HONORS, AWARDS, and REGISTRATIONS

Environmental Sciences Leader Award (2023), Research.com, with citations ranking in environmental science of #4 in the US and #8 in the world.

Roe Fund for a Just and Sustainable Future Award (2022), for development of the course "*Energy Use, Climate Change, and Our Engineered Infrastructure*", Sustainability Institute, Penn State.

Identified as top 1% all citations author by Clarivate Analytics Highly Cited Researchers list (2022) (9th time)

Fellow- International Society of Microbial Electrochemistry and Technology (ISMET) (2022)

Identified as top 1% all citations author by Clarivate Analytics Highly Cited Researchers list (2021) (8th time)

Identified as top 1% all citations author by Clarivate Analytics Highly Cited Researchers list (2020) (7th time)

AEESP Outstanding Publication Award (2020), for a "landmark environmental engineering and science paper that has withstood the test of time" (Microbial Fuel Cells: Methodology and Technology; *Environmental Science & Technology*, 2006).

Elected Foreign Member, Chinese Academy of Engineering (CAE) (2019)

Identified as top 1% all citations author by Clarivate Analytics Highly Cited Researchers list (2019)

Identified as top 1% all citations author by Clarivate Analytics Highly Cited Researchers list (2018)

Penn State Engineering Alumni Society (PSEAS) World Class Engineering Faculty Award (2017).

Identified as top 1% all citations author by Clarivate Analytics Highly Cited Researchers list (2017)

Identified as a top 1% of all citations author by Thompson Reuters (2016)

American Chemical Society (ACS) Award for Creative Advances in Environmental Science & Technology (2016)

Identified as a top 1% of all citations author by Thompson Reuters (2015)

Association of Environmental Engineering and Science (AEESP) Distinguished Lecturer (2014-2015)

Google Scholar h-index of $\geq$100 (2015)

Identified as a top 1% of all citations author by Thompson Reuters (2014)

Listed as one of "The World's Most Influential Scientific Minds: 2014", by Thomson Reuters (2014)

Member- National Academy of Engineering (Elected in 2013)

Fellow- American Association for the Advancement of Science (AAAS) (Elected in 2013)

Fellow- Association of Environmental Engineering and Science Professors (AEESP) (2013)

International Francqui Chair Professorship, Foundation Francqui-Stichting, Belgium (2012-2013); Ghent University (with Univeriteit Antwerpen, Université Catholique de Louvain)
Awarded a "Master" title from DeTao Masters Academy, Beijing, China (2012).
Evan Pugh Professorship from Penn State (2012)
Fellow- Water Environment Federation (WEF) (Elected in 2011)
Fellow- International Water Association (IWA) (Elected in 2011, term until 2016)
Environmental Science & Technology inaugural "Super Reviewer" Award (2011)
Environmental Science & Technology (2010), 2009 Best paper awards, Environmental Technology for "A new method for water desalination using microbial desalination cells" (Cao *et al*.)
Bioresource Technology (2010), Award for most cited paper during 2007 – 2010 by Kim et al. (2007).
National Water Research Institute (NWRI) Athalie Richardson Irvine Clarke Prize (2009) for excellence in water research.
Montgomery-Watson-Harza Consulting Engineers/AEESP Award (2009) as Advisor to Douglas Call for his Master's Thesis Award (first place).
National Hydrogen Association Award (2008), recognizing leadership and significant personal contributions in the promotion of hydrogen technologies.
Environmental Science & Technology (2007), 2006 Best paper awards, Environmental Technology (Runner-up), for "Microbial fuel cells: Methodology and technology" (Logan *et al*.)
Pollution Engineering Magazine (2007), for Microbial fuel cell research cited as "10 Top Pollution Technologies for 2007" (with John Regan).
Environmental Science & Technology (2007), Excellence in Review Award.
Public Works Magazine- Named a "Top 50 Trendsetter" for "Creating energy for wastewater" (2006)
Penn State Engineering Society (PSES) Premier Research Award (2006).
Frank Annuzio Award in "Alternative Energy Sources" (2005), Christopher Columbus Foundation.
Popular Mechanics Breakthrough Award (2005)- To "recognize people and innovations that help improve lives and expand possibilities in the realms of science, technology and exploration" (with H. Liu and S. Grot).
Paul L. Busch Award for "Innovation in Wastewater Treatment- Harvesting Energy From Wastewater Treatment" (2004), Water Environment Research Foundation (WERF).
Leverhulme Fellow, University of Newcastle upon Tyne, UK (2003).
Pennsylvania Water Environment Association (PWEA) Professional Research Award (2003) for "Outstanding Research".
Penn State Engineering Society (PSES) Outstanding Research Award (2002) for "Outstanding Engineering Research and Accomplishments in Advancing the Frontiers of Knowledge".
AEESP/Malcolm Pirnie Frontier of Research inaugural award (2000) for "Research on Fractal Science".
AEESP Distinguished Service Award (1999) for organizing the AEESP Research Frontiers Conference.
Semi-Finalist, Discover Magazine Awards for Technological Innovation (1999) for a "Water Treatment System for Perchlorate-Contaminated Water."
AEESP Distinguished Service Award (1998) for "Recognition of Service as AEESP President and Board Member".
Parsons Engineering Science/AEEP 1997, Advisor to Outstanding Doctoral Dissertation Award Recipient Dr. Xiao-Yan Li.
USANC Founders Award (1995) for the best paper in Water Research by a US author (Haldane and Logan, 1994)
Fulbright Scholar (1993) at the University of Konstanz, Germany.
Water Environment Federation's Biosolids Public Acceptance Task Force Award (1992) for "Formulating the Term "biosolids" and Helping to Promote its Beneficial Uses.
University of California Regents Fellowship (1982-1983)
Lewis J. Coonley Award in Chemical Engineering (1979), Rensselaer Polytechnic Institute, Troy, NY.
Rensselaer Polytechnic Institute Scholarship (1975-1979)
New York State Regents Scholarship (1975-1979)

Phi Lambda Upsilon - Chemical Honor Society (1979)
Engineer in Training (EIT) (1979)

AWARDS TO STUDENTS AND RESEARCH GROUP MEMBERS

Physics of Membrane Processess, 6th meeting, 2023, Best Presentation award to Rachel Taylor (advisor), for her presentation on "Modeling ion transport across reverse osmosis membranes during saltwater electrolysis".

International Society for Electrochemistry (ISE)–Elsevier Prize for Green Electrochemistry, 2022, to Ruggero Rossi. https://www.ise-online.org/

ISMET Innovation Best Paper Award, 2022, to Ruggero Rossi (Advisor), for the paper "Pilot scale microbial fuel cells using air cathodes for producing electricity while treating wastewater, published in *Water Research*.

Environmental Chemistry and Microbiology Student Symposium, 2022: Poster presentation, 1st place Undergraduate Section, to Joseph Nicholas (Advisor).

Environmental Chemistry and Microbiology Student Symposium, 2022: Poster presentation, Best Oral Presentation, 3rd place, to Joseph Nicholas (Advisor)

Postdoctoral Research Symposium at Penn State, 2022: Poster presentation, Best poster, 3rd place, based on audience evaluations, to Le Shi (Advisor).

Postdoctoral Research Symposium at Penn State, 2022: Poster presentation, Best poster, 3rd place, based on judges, to Bin Bian (Advisor).

Chemical Engineering Department, Penn State, 2022. Award for excellence in leadership and service, to Nicholas Cross (PhD Advisor).

Chemical Engineering Research Symposium at Penn State, 2017: Best technical presentation, to Mim Rahimi (PhD Advisor).

Environmental Chemistry and Microbiology Student Symposium, 2017: Poster presentation, 1st place (tie), Environmental Sciences, to Mim Rahimi (PhD Advisor)

Penn State Energy Days, Best poster Award (2016), to Taeyoung Kim (Postdoc Advisor).

Pennsylvania Water Environment Association Student Research Award (2016), to Yaoli Ye (Advisor)

Pennsylvania Water Environment Association Student Research Award (2015), to Wulin Yang (Advisor)

Paul V. Roberts/Association of Environmental Engineering Professors (AEESP) Outstanding Doctoral Dissertation Award to Roland Cusick (Advisor) (2014)

Pennsylvania Water Environment Association Student Research Award (2014), to Jenn Stager (Advisor)

Pennsylvania Water Environment Association Student Research Award (2014), to Max Wallack and Marta Hatzell (Advisor)

NA-ISMET Conference (2014) First place, Best oral presentation, day 2 to Marta Hatzell (Advisor).

NA-ISMET Conference (2014), Third place, Best oral presentation, day 1, Mike Siegert (Advisor).

NA-ISMET Conference (2014), Second place, Best poster, Xiaoyuan Zhang (Advisor).

NA-ISMET Conference (2014), Honorable mention, Best poster, Matthew Yates (Advisor).

Global Collaborative Research Conference (2014), to Noua Shehab (Co-advisor). Poster, First place in Biological and Environmental Science and Engineering Division; First place, People's choice.

W. Wesley Eckenfelder Graduate Research Award 2013, to Roland Cusick, for research that contributed to the knowledge pool of industrial wastewater management, by the American Academy of Environmental Engineers and Scientists (AAEES) and the Association of Environmental Engineering and Science Professors (AEESP).

PEO Scholar Award (2013–2014) to Marta Hatzell (Advisor)

Post Doc Research Exhibition, First place (2013), Geoff Geise (Co-advisor).

Dow Sustainability Innovation Challenge Award (SISCA) at Penn State, First place, to Team Cusick (Roland Cusick, Michael Parks, Marta Hatzell, Emily Greenaway), for the project "Sustainable improvement of drinking-water and sanitation in African slums using microbial electrochemical technologies and attention to self-efficacy within local communities." (Advisor).

Alumni Association Dissertation Award 2013, Penn State University, to Roland Cusick. (Advisor)

Graduate exhibition at Penn State, Engineering, Third place to Robert Davis
North American meeting of the International Society for Microbial Electrochemistry and Technologies. (NA-ISMET), 2012. Best Oral Presentation, Second place to Valerie Watson (Advisor).
Chinese Government Award for Outstanding Self-financed Students Abroad, 2012, to Fang Zhang (Advisor)
Honor of Excellent Ph.D. Graduate of Tsinghua University, 2012, to Xiaoyuan Zhang (Only one honoree in the School of Environment) (Co-advisor with Xia Huang at Tsinghua).
Excellent Doctoral Dissertation of Tsinghua University, 2012, to Xiaoyuan Zhang (One of two honorees in the School of Environment) (Co-advisor with Xia Huang at Tsinghua).
Environmental Chemistry Student Symposium, 2012: Oral presentation, 2nd place, Environmental Sciences, to Fang Zhang (Advisor)
Environmental Chemistry Student Symposium, 2012: Poster presentation, 2nd place, Environmental Engineering and Ecology, to LiJiao Ren (Co-advisor)
Alumni Association Dissertation Award 2011, Penn State University, to Douglas Call. (Advisor)
Dow Sustainability Challenge Award 2011, to Craig Werner (KAUST) (co-advisor, with Gary Amy, at KAUST)
Siemens Student Award, Middle East competition on "How to build sustainable cities in the desert" (2011), 2nd Place, Noura Shehab (KAUST), (co-advisor with Pascal Saikaly at KAUST)
National Science Foundation Graduate Fellowship (2011 – 2014) to Marta Hatzell (Advisor)
Tsinghua Top Grade Scholarship Award to Xiaoyuan Zhang (2011), given to only 6 of 22,000 graduate students at Tsinghua (Co-advisor with Xia Huang, at Tsinghua University)
Association of Environmental Engineering and Science Professors (AEESP) Conference, best Poster presentations (2011) to Rachel Wagner (Advisor)
Association of Environmental Engineering and Science Professors (AEESP) Conference, best Poster presentations (2011) to Douglas Call (Advisor)
American Chemical Society (ACS) Environmental Chemistry Award (2011) to Fang Zhang (Advisor)
Bunton Waller Fellowship (2011-2012) to Caroline Price (Advisor)
Oral presentation, 1st place (2011), Justine Mink, KAUST Research Symposium, KAUST (Co-Advisor)
Poster presentation, 1st place (2011), Noura Shehab, Winter Enrichment Program, KAUST (Co-Advisor)
Environmental Chemistry Student Symposium, 2011: Poster presentation, 2nd place, Environmental Engineering and Ecology section, to Matthew Yates (Advisor)
National Science Foundation Graduate Fellowship (2010 – 2013) to Matthew Yates (Advisor).
PEO Scholar Award (2010–2011) to Rachel Wagner (Advisor)
American Chemical Society (ACS) Environmental Chemistry Award (2010) to Douglas Call (Advisor)
Environmental Chemistry Student Symposium, 2010: Oral Presentation award: R. Wagner, First place, Engineering and Materials Science Division (Advisor).
Montgomery-Watson-Harza Consulting Engineers/AEESP Masters Thesis Award, First Place, (2009) to Douglas Call (Advisor).
Alumni Association Dissertation Award 2008, Penn State University, to Yi Zuo. (Advisor)
National Science Foundation Graduate Fellowship (2008-2011) to Valerie Watson (Advisor).
Environmental Chemistry Student Symposium, 2008: Overall Oral Presentation, First Place, D. Call (Advisor). Oral Presentation- Env. Engin. & Ecology, First Place, Y. Zuo (Advisor). Poster- Env. Engin. & Ecology, First Place, R. Wagner (Advisor).
Pennsylvania Water Environment Association, 2008: Podium presentation award: Y. Zuo (Advisor); Doug Call (Advisor).
Graduate (Physical and Engineering Sciences) Division of the Gamma Sigma Delta Research Exposition, Penn State University, Poster presentation award (First Place, 2008) to Farzaneh Rezaei (co-advisor).
American Society of Engineering Education (ASEE) National Defense Science and Engineering Graduate (NDSEG) Fellowship (2007) to Douglas Call (Advisor)
Ronald B. Linsky Fellowship (2007) to Douglas Call (Advisor)
National Science Foundation Graduate Fellowship (2007 - 2010) to Rachel Wagner (Advisor).

National Science Foundation Graduate Fellowship (2007 - 2010) to Douglas Call (Advisor).
Crossover 2007: Fields to Wheels. Poster presentation award, second place, to Farzaneh Rezaei. (Co-advisor).
Hydrogen Day at Penn State, 2006. Poster presentation awards to Yi Zuo (first place), Markus Coenen (third place) and V. Watson (honorable mention) (advisor).
Pennsylvania Water Environment Association 2006 Student Research Award to Yi Zuo (advisor)
Environmental Chemistry Symposium, 2005: First Place, Environmental Engineering Session, to M. Salerno (Co-Advisor).
Environmental Chemistry Symposium, 2005: Second Place, Environmental Engineering Session, to J.-R. Kim (Advisor).
Environmental Chemistry Symposium, 2005: Second Place, Best Overall Undergraduate Poster presentation to Katya Paramonova (Advisor).
Pennsylvania Water Environment Association 2005 Student Research Award to JungRae Kim (advisor)
Hydrogen Day at Penn State, 2004- Poster Presentation Awards to JungRae Kim (Third Place) Booki Min (honorable mention) (advisor)
ABASM, Clarion University, 2002. Award to L. Steinberg (Advisor), Award for overall graduate student presentation, second place.
Environmental Chemistry Symposium, Penn State University, 2002: Best Poster Session V Award to Y. Song (Advisor).
Environmental Chemistry Symposium, 2002: Best Undergraduate Poster Award to E. Watson (Advisor).
Environmental Chemistry Symposium, 2002: Second Place, Best Poster Session II Award to B. Min (Advisor).
ABASM Award to H. Zhang (Advisor), Second place in Environmental Microbiology Division, ABASM Fall Meeting, State College, PA, October 27-28, 2000.
Pennsylvania Water Environment Association 2000 Student Research Award to Jun Wu (advisor)
Pennsylvania Water Environment Association 2000 Student Research Award to Booki Min (advisor).
ACS 2000 Best Presentation Award to T. Camesano (advisor) at the 217th ACS National Meeting.
Pennsylvania Water Environment Association 1999 Student Research Awards to K. Kim (advisor)
Pennsylvania Water Environment Association 1999 Student Research Awards to T. Camesano (advisor)
Parsons Engineering Science/AEEP 1997, Outstanding Doctoral Dissertation Award to Dr. Xiao-Yan Li.

PROFESSIONAL MEMBERSHIPS

American Association for the Advancement of Science (AAAS) (since 1984)
American Chemical Society (ACS) (since 1986)
American Society for Engineering Education (ASEE) (1997-1998)
American Society for Limnology and Oceanography (ASLO) (1986 to 2003)
American Society for Microbiology (ASM) (since 1986)
American Society of Civil Engineers (ASCE) (since 1997)
Association of Environmental Engineering and Science Professors (AEESP) (Lifetime; joined 1986)
Fulbright Association (Lifetime member)
International Association for Hydrogen Energy (since 2009)
International Society for Microbial Electrochemistry & Technologies (since 2011)
International Water Association (IWA) (since 1986)
National Academy of Engineering (NAE) (since 2013)
Water Environment Federation (WEF) (since 1985)

PATENTS

Patents Issued

Logan, B.E., D. Call, M. Merrill, and S. Cheng. 2021. Cathodes for microbial electrolysis cells and microbial fuel cells. US Patent No. 10,978,713, issued April 13, 2021.

Zhang, F., J. Liu. W. Yang, and B.E. Logan. Ammonia-based thermoelectrochemical systems and methods. US Patent No. 10,431,842, issued October 1, 2019.

Logan, B.E., Y. Kim, and R.D. Cusick. Methods for hydrogen gas production. US Patent No. 9,546,426, issued January 17, 2017.

Kim, Y., B.E. Logan, and M. Hatzell. Capacitor circuit for arrays of power sources such as microbial fuel cells. US Patent No. 9,450,437, issued September 20, 2016.

Cusick, R.D., Y. Kim and B.E. Logan. Reverse electrodialysis supported microbial fuel cells and microbial electrolysis cells. US Patent No. 9,112,217, issued August 18, 2015.

Logan, B.E. Materials and configuration for scalable microbial fuel cells. US Patent No. 8,962,165, issued February 24, 2015.

Cheng, S. and B.E. Logan. Electromethanogenic reactor and processes for methane generation. US Patent No. 8,440,438, issued May 14, 2013.

Logan, B.E. Substrate-enhanced microbial fuel cells. U.S. Patent No. 8,277,984, issued October 2, 2012.

Logan, B.E. Electrohydrogenic reactor for hydrogen gas production. U.S. Patent No. 7,922,878 issued April 12, 2011.

Logan, B.E., S. Grot, T. Mallouk, and H. Liu. A bioelectrochemically assisted microbial reactor (BEAMR) that generates hydrogen gas and methods of generating gas. U.S. Patent No. 7,709,113 B2, issued May 4, 2010.

Logan, B.E., S. Grot, T. Mallouk, and H. Liu. A bioelectrochemically assisted microbial reactor (BEAMR) that generates hydrogen gas. U.S. Patent No. 7,491,453, issued February 17, 2009.

Logan, B.E. Method and apparatus for treating perchlorate-contaminated drinking water. US Patent No. 6,214,607, issued April 10, 2001.

Patents Pending

Logan, B.E., and L. Shi. 2023. Systems and methods relating to water electrolysis. US Patent Appl. 18/005,944, filed July 20, 2020, published 9/7/23.

Hall, D., S. Lvov, L. Shi, and B.E. Logan. 2021. All aqueous thermally-regenerative battery. Filed August 13, 2021, international publication WO 2022/036218 A1.

COURSES TAUGHT

At Penn State: Introduction to Water and Wastewater Treatment (CE 371)
Energy, Climate and Sustainability of our Infrastructure (CE497)
Environmental Transport Processes (CE 576)
Biological Wastewater Treatment (CE 572)
Environmental Engineering and Science Seminar (CE 597F)
Anaerobic Respiration Processes Seminar (CE 598A, Spring 2000)
Biological Hydrogen Production (CE 597G, Spring 2001)
Membrane Bioreactors (CE597K, Fall 2002)
Microbial Fuel Cells (CE592, Fall 2005)

At Arizona: Water Supply and Wastewater Systems; Introduction to Hazardous Waste Management; Environmental Transport Processes; Advanced Water and Wastewater Analysis Laboratory, Computer-Aided Design (CAD) of Environmental Processes; Hazardous Waste Treatment; Laboratory for Biological; Anaerobic Respiration Processes (Seminar); Chemical and Physical Limnology and Oceanography.

BOOKS

Logan, B.E. 2022. Daily energy use and carbon emissions. John Wiley & Sons, New York. ISBN: 978-1-119-83102-0

Logan, B.E. 2012. *Environmental Transport Processes*, 2nd Edition. John Wiley & Sons, New York.

Logan, B.E. 2008. Microbial fuel cells. John Wiley & Sons, New York.

Logan, B.E., B. Min, K. Kim, J. Miller, D. LaPoint, J. Batista, J. Liu, P.J. Evans, A. Chu, and S. Price 2004. *Bioreactor Systems for Treating Perchlorate-Contaminated Water: Bench- and Pilot-Scale Investigations*. American Water Works Association Research Foundation.

Logan, B.E. 1999. *Environmental Transport Processes*. John Wiley & Sons, New York.

Logan, B.E. 1999. *Solutions Manual, Environmental Transport Processes*. The Pennsylvania State University.

Logan, B.E. and F.C. Cannon. 1999. Environmental Engineering Research Frontiers: Proceedings of the AEESP Research Conference, August 1-3, The Pennsylvania State University, University Park, PA. Association of Environmental Engineering and Science Professors (AEESP), Champaign, IL.

CHAPTERS AND ARTICLES IN BOOKS

Logan, B.E. 2012. Energy sustainability of the water infrastructure. *In*: Water-energy interactions of water reuse, V. Lazarova, K.-H. Choo, and P. Cornel (eds.). IWA Publishing. Chapter 5, 75-84.

Logan, B.E. 2010. Materials for BES (Chapter 9). *In*: Bioelectrochemical systems: from extracellular electron transfer to biotechnological applications, K. Rabaey, L. Angenent, U Schröder, and Jürg Keller, ed. pp. 184-204.

Logan, B.E. 2005. Using atomic force microscopy to study factors affecting bioadhesion at molecular- to nano-scale levels. *In*: I.G. Droppo, G.G. Leppard, S.N. Liss and T.G. Milligan, Flocculation in natural and engineered environmental systems. CRC Press, Boca Raton. pp 339-350.

Evans, P., A. Chu, S. Liao, S. Price. B. Min and B.E. Logan. 2003. Pilot testing of a bioreactor for perchlorate-contaminated groundwater treatment. *In*: Remediation of of Chlorinated and Recalcitrant Compounds, A.R. Gavaskar and A.S.C. Chen. Battelle Press. (ISBN 1-57477). Published on CD-ROM, 5 pages.

Karanfil, T. and B.E. Logan. 2002. Gas Transfer: measurement of overall oxygen mass transfer coefficients in simulated engineered and natural systems. *In:* AEESP Laboratory Manual, S.E. Powers, ed. AEESP, Champaign, IL. Published on CD-ROM.

Logan, B.E., K. Kim and S. Price. 2001. Perchlorate degradation in bench- and pilot-scale ex-situ bioreactors. *In:* Bioremediation of Inorganic Compounds, A. Leeson, B. M. Peyton, J.L. Means, and V.S. Magar, eds. Battelle Press, Columbus, OH. 6(9):303-308.

Logan, B.E., H. Zhang, J. Wu, R. Unz and S.S. Koenigsberg. 2000. The potential for in situ perchlorate degradation. In: *Accelerated bioremediation of chlorinated compounds in groundwater*. S.S. Koenigsberg and C.H. Ward, eds. Regenesis, San Juan Capistrano, CA. pp. 85-90.

Logan, B.E. 2000. Evaluation of biological reactors to degrade perchlorate to levels suitable for drinking water. *In Perchlorate in the Environment*, E.T. Urbansky Ed. Plenum, 189-197.

Logan, B.E., H. Zhang, J. Wu, R. Unz and S.S. Koenigsberg. 2000. The potential for in situ perchlorate degradation. *In: Case studies in the remediation of chlorinated and recalcitrant compounds*. G.B. Wickramanayake, A.R. Gavaskar, J.T. Gibbs and J.L. Means, eds. Battelle Press, Columbus, OH. pp. 87-92.

Logan, B.E., T.A. Camesano, B. Rogers, and Y. Fang. 1999. Enhancing bacterial transport to improve subsurface bioaugmentation. Proc. Fifth International Symposium of In-situ and On-site Bioremediation, April 19-22, San Diego, CA. 5(2):231-236.

Logan, B.E., K. Kim, P. Mulvaney, J. Miller, and R. Unz. 1999 Biological treatment of perchlorate contaminated waters. In: Bioremediation of Metals and Inorganic Compounds. A. Leeson and B.C. Alleman, Eds. Proc. Fifth International Symposium of In-situ and On-site Bioremediation, April 19-22, San Diego, CA. 5(4):147-151.

TOTAL JOURNAL CITATIONS

Google Scholar (6-12-23): h-index=163, >110,000 citations, more than 550 journal publications.
Orchid ID: 0000-0001-7478-8070

JOURNAL PUBLICATIONS

2023 Baek, G., and B.E. Logan. 2023. A comprehensive analysis of key factors influencing methane production from CO_2 using microbial methanogenesis cells. *Water Res*. 245:120657.

Cross, N.R., M.J. Rau, S.N. Lvov, C.A. Gorski, B.E. Logan, and D.M. Hall. 2023. System efficiency and power assessment of the all-aqueous copper thermally regenerative ammonia battery. *Appl. Energy*. 339:120959.

Cross, N.R., H. Vazquez-Sanchez, M.J. Rau, S.N. Lvov, M.A. Hickner, C.A. Gorski, S.S. Nagaraja, S.M. Sarathy, B.E. Logan, and D.M. Hall, 2023. Alternative membranes cost-effectively manage ion transport and increase performance in thermally regenerative batteries. *Electrochim. Acta.* 467: 143090.

Rossi, R., J. Nicolas, and B.E. Logan. 2023. Using nickel-molybdenum cathode catalysts for efficient hydrogen gas production in microbial electrolysis cells. *J. Power Sources*. 560: 232594.

Rossi, R. R. Taylor, and B.E. Logan. 2023. Increasing the electrolyte salinity to improve the performance of anion exchange membrane water electrolyzers. *ACS Sus. Chem. Eng.* 11:8573−8579.

Taylor, R., L. Shi, X. Zhou, R. Rossi, C. Picioreanu, and B.E. Logan. 2023. Electrochemical and hydraulic analysis of thin-film composite and cellulose triacetate membranes for seawater electrolysis applications. *J. Membrane Sci.* 679:121692.

Yi, K., W. Yang, and B.E. Logan. 2023. Defect free rolling phase inversion activated carbon air cathodes for scale-up electrochemical applications. *Chem. Eng. J*. 454:140411.

Zhou. X., L. Shi, R.F. Taylor, C. Xie, B. Bian, C. Picioreanu, and B.E. Logan. 2023. Relative insignificance of polyamide layer selectivity for seawater electrolysis applications. *Environ. Sci. Technol*. 57:14569−14578.

2022 Amirdehi, A.M., L. Gong, N. Khodaparastasgarabad, B.E. Logan, and J. Greener. 2022. Hydrodynamic interventions and measurement protocols to quantify and mitigate power overshoot in microbial fuel cells using microfluidics. *Electrochim Acta*. 405:139771

Baek, G., R. Rossi, P.E. Saikaly, and B.E. Logan. 2022. High-rate microbial electrosynthesis using a zero-gap flow cell and vapor-fed anode design. *Water Res.* 219:118597.

Baek, G., L. Shi, R. Rossi, and B.E. Logan. 2022. Using copper-based biocathodes to improve carbon dioxide conversion efficiency into methane in microbial methanogenesis cells. *Chem. Eng J.* 435:135076.

Cross, N.R, M.J. Rau, S.N. Lvov, C.A. Gorski, B.E. Logan, and D.M. Hall. 2022. Power and energy capacity tradeoffs in an all-aqueous copper thermally regenerative ammonia battery. *J. Power Sources*. 531:231339.

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1994 Logan, B.E. 1994. Computer aided design of trickling filters. In: Proc. ASCE National Conf. Environ. Eng., Boulder, CO, July 11-13, J.N. Ryan and M. Edwards eds. pp. 678-685.

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1987 Arnold, R.G. and B.E. Logan. 1987. Computer simulation of Palos Verdes sediment profiles.

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1981 Logan, B.E. and C. Kleinstreuer. 1981. A dynamic computer simulation model for impact assessment of fish impingement. In: Issues Associated with Impact Assessment. L. D. Jensen, Editor, E. A. Communications, MD.

1980 Logan, B.E. 1980. Theoretical analysis of fish population dynamics and computer simulation of impingement mortalities at freshwater lakes. M.S. Thesis, Rensselaer Polytechnic Institute, Troy, New York.

Logan, B.E. and M. T. Masnik. 1980. Impingement dynamics and age and growth of selected species at Lake Dardanelle, a Southcentral Reservoir, NUREG 0601, U.S. Nuclear Reg. Comm., Washington, D.C.

PRESENTATIONS- *Invited*

2022 Logan, B.E. 2022. Microbial electrotechnologies for converting CO_2 into natural gas and chemicals. *Invited Plenary*, CORC Carbon Forum, Copenhagen, Denmark, December 13, 2022.

Logan, B.E. 2022. Achieving net zero emissions requires an understanding of your own carbon emissions. *Invited seminar*, University of Copenhagen, Copenhagen, Denmark, December 12, 2022.

Logan, B.E. 2022. Achieving Net Zero Requires a Better Understanding of Your Own Carbon Emissions. *Invited Plenary*, HanYang University, Seoul, Korea, December 7, 2022.

Logan, B.E. 2022. New Materials and Climate Solutions for Energy & Environment (And how seed grants help). *Invited talk*, Millennium café, Penn State University, November 15.

Logan, B.E. 2022. Innovations in green hydrogen production using novel water electrolyzer and microbial electrolysis cell materials and configurations. *Invited Plenary*, Korea Institute of Energy Research (KIER) Conference, Jeju, South Korea, October 21.

Logan, B.E. 2022. Achieving unprecedented current and power densities in microbial electrochemical technologies using zero-gap and vapor phase electrolytes. *Invited keynote*, ISMET8 meeting, Chania, Crete, Greece, September 21.

Logan, B.E. 2022. Green hydrogen production using biomass in next generation microbial electrolysis cells and impaired water in novel water electrolyzer systems. *Invited Plenary*, 23rd World Hydrogen Energy Conference (WHEC), Istanbul, Turkey, June 27.

Logan, B.E. 2022. People, policy, and momentum for energy use and climate change. *Invited seminar*, Earth Talks Seminar Series, Penn State University, April 25. (Virtual).

Logan, B.E. 2022. Research and Careers in Environmental Engineering, Environmentors Webinar Series, *Invited talk*. April 13, 2022. (Virtual).

Logan, B.E. 2022. Innovations in green hydrogen using novel water electrolyzer and microbial electrolysis cell materials and configurations. *Invited seminar*, University of Illinois, Urbana-Champaign, March 20.

Logan, B.E. 2022. Evaluating our own energy use enables better assessment of the challenges in decarbonizing our energy infrastructure and reducing greenhouse gas emissions to address climate change. GloBal Environmental Science SummitT (BEST), organized by Harbin Institute of Technology, China. *Invited International Webinar*. February 24 (Virtual). (Active viewing by 9000+ people).

Logan, B.E. 2022. Why I wrote a book on Energy Use and Carbon Emissions? To address the challenges of slowing climate change. *Invited Talk*, Kappe Seminar Series, Penn State University, January 12.

2021 Logan, B.E. 2021. Engineering Research Visioning Alliance (ERVA) workshop on climate change research priorities. *Invited presentation*, December 7, 2021. (Virtual)

Logan, B.E. 2021. Energy use, carbon emissions, and climate change: Viewed through the lens of D and C units. *Invited class lecture*, CE100, Penn State University, October 12.

Logan, B.E. 2021. Paul L Busch Laureates Panel, *Invited participant,* Water Environment Federation seminar series. September 6.

Logan, B.E. 2021. Pathways to green hydrogen using water electrolyzers and microbial electrolysis cells. *Invited seminar*, King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia. September 26.

Logan, B.E. 2021. Decarbonizing the US, *Invited guest*, Digging Deeper, WPSU, Penn State University, recorded August 25.

Logan, B.E. 2021. Direct electrical power generation using microorganisms in microbial fuel cells: limits and applications. *Invited keynote*, IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM), July 14. (Virtual)

Logan, B.E. 2021. The importance of H_2 gas for climate, energy storage, transportation, and the stability of the electrical grid. *Invited Keynote*, Solar Turbines – Penn State Bi-Annual Center of Excellence Meeting, May 27. (Virtual)

Logan, B.E. 2021. Electricity generation using microbial fuel cells to continuously treat used waters, and the water-energy-food-climate nexus. *Invited seminar*, Leibniz Institute of freshwater ecology and inland fisheries, Stechlin, Germany, May 20. (Virtual)

Logan, B.E. 2021. Advice on how to develop your career and your own research profile & Writing Technical Papers. *Invited Workshop Presentation*, Leibniz Institute of Freshwater Ecology and Inland Fisheries, Stechlin, Germany, May 20. (Virtual)

Logan, B.E. 2021. Stability of intercalation-type battery electrodes for continuous flow desalination and other applications. *Invited Keynote*, CDI & ED Conference, Altanta, GA, May 12. (Virtual)

Logan, B.E. 2021. You need to learn more about your daily energy use and carbon emissions to better understand the challenges of slowing climate change. *Invited Keynote*, College of Engineering Research Symposium (CERS), Penn State, University Park, April 14.

Logan, B.E. 2021. Learn more about your daily energy use and carbon emissions to better understand the challenges of slowing climate change. *Invited seminar*. Department of Civil & Environmental Engineering, UC Davis, CA, March 22. (Virtual)

Logan, B.E. 2021. My energy use and CO_2 emissions. *Invited Seminar*, Evan Pugh Professors meeting, Penn State, University Park, PA, February 16, 2021. (Virtual)

Logan, B.E. 2021. You need to learn more about your daily energy use and carbon emissions to better understand the challenges of slowing climate change. *Invited seminar*, Civil & Environmental Engineering, Penn State, University Park, January 27. (Virtual)

Logan, B.E. 2021. You need to learn more about your daily energy use and carbon emissions to better understand the challenges of slowing climate change. *Invited Lecture*, iFAST: The International Forum on Advanced Environmental Sciences and Technology, Beijing, China, January 20. (Virtual)

Logan, B.E. 2021. My energy use and CO_2 emissions. *Invited Seminar*, Millennium Science Café, Penn State, University Park, PA, January 19, 2021. (Virtual)

2020 Logan, B.E. 2020. A new approach using reverse osmosis membranes for green hydrogen gas production with seawater in water electrolyzers. *Invited seminar*, University of California, Los Angeles, CA, November 10 (via Zoom).

Logan, B.E. 2020. New applications for reverse osmosis membranes in. *Invited talk*, American Membrane Technology Associateion (AMTA) Annual Conference, October 22 (via Zoom).

2019 Logan, B.E. 2019. Materials and configurations for improved desalination performance using battery Electrode deionization (BDI). *Invited flash talk*, US Egypt Joint Symposium, Cairo, Egypt, November 21.

Logan, B.E. 2019. Materials and configurations for improved desalination performance using battery electrode deionization (BDI). *Invited poster*. US Egypt Joint Symposium, Cairo, Egypt, November 21.

Logan, B.E. 2019. Scaling up microbial fuel cells to continuously treat wastewaters, and selective ammonium removal using battery electrode deionization. *Invited Seminar*, KAUST, Thuwal, Saudi Arabia, November 19.

Logan, B.E. 2019. Electroactive microorganisms in bioelectrochemical systems. *Invited Plenary Presentation*, Annual Conference of the Chinese Association of Microbial Ecology, Changsha, China, October 29.

Logan, B.E. 2019. Advice on choosing research topics and writing technical papers. *Invited Workshop Presenation*, Annual Conference of the Chinese Association of Microbial Ecology, Changsha, China, October 29.

Logan, B.E. 2019. Scaling up microbial fuel cells to continuously treat wastewaters, and selective ammonium removal using battery electrode deionization. *Invited Seminar,* Laval University, Quebec, Canada, October 7.

Logan, B.E. 2019. Advice on choosing research topics and writing technical papers: For early career and new faculty. *Invited Seminar*, Laval University, Quebec, Canada, October 7

Logan, B.E. 2019. Energy sustainability of the water infrastructure through energy extraction from used water. *Invited, "Master Lecture",* Water Environment Federation Technical Exhibition and Conference (WEFTEC), Organized by WEF and AEESP, Chicago, IL, September 23.

Logan, B.E. "Environmental Electrochemistry & Energy". *Invited seminar*, Harbin Institute of Technology (HIT), Harbin, China, September 12.

Logan, B.E. 2019. "Desalination and Selective Ion Removal using Battery Electrode Deionization (BDI)". *Invited lecture*, 10th National Conference on Environmental Chemistry (NCEC), Nankai, China, August 15-19th.

Logan, B.E. 2019. Improving the performance of battery electrode deionization. *Invited speaker*, The 4th International Conference on Capacitive Deionization and Electrosorption, Beijing, China, May 21.

Logan, B.E. 2019. Advice on choosing research topics and writing technical papers. *Invited Seminar*, KAUST, Thuwal, Saudi Arabia, April 15.

Logan, B.E. 2019. Scaling up microbial fuel cells to continuously treat wastewaters, and selective ammonium removal using battery electrode deionization. *Invited Seminar*, Dalian University of Technology (DUT), Dalian, China, March 5.

Logan, B.E. 2019. Publishing Your Best Research in Environmental Science & Technology (ES&T) and ES&T Letters: Insights into the Manuscript Evaluation and Review Process. *Invited Seminar*, Dalian University of Technology (DUT), Dalian, China, March 6.

Logan, B.E. 2019. Bio-hydrogen production: HMFCs and MECs. *Invited Keynote*, Workshop on Microbial fuel cells. Tecnológico de Monterrey, Monterrey, MX, February 8.

Logan, B.E. 2019. Electrochemistry and analysis of the performance of microbial electrochemical technologies. *Invited Seminar*, Workshop on Microbial fuel cells. Tecnológico de Monterrey, Monterrey, MX, February 8.

Logan, B.E. 2019. Global Energy Transitions: from fossil fuels to bio-energy (bioelectricity and bio-hydrogen). Current situation and future trends. *Invited Keynote*, Workshop on Microbial fuel cells. Tecnológico de Monterrey, Monterrey, MX, February 7.

Logan, B.E. 2019. Advanced and efficient materials for anodes, cathodes and membrane separators in MFCs and MECs, and electrode packing in reactors. *Invited Seminar*, Workshop on Microbial fuel cells. Tecnológico de Monterrey, Monterrey, MX, February 7.

Logan, B.E. 2019. MFCs technologies for wastewater treatment: Scaling up and treatment efficiencies. *Invited Seminar*, Workshop on Microbial fuel cells. Tecnológico de Monterrey, Monterrey, MX, February 7.

2018 Logan, B.E. 2018. Scaling up microbial fuel cells to continuously treat wastewaters, and selective ammonium removal using the electrochemical process of battery electrode deionization. *Invited Plenary Talk*, International Research Center of Pollutant Removal and Energy Recovery (IRCPRER) Meeting, Harbin Institute of Technology, Harbin, China, December 13.

Logan, B. E. 2018. Extracting resources from water: Electricity generation using microbial fuel cells, natural or engineered salinity gradients, and waste heat. *Invited Lecture*, Shanghai Jiao Tong University, Shanghai, China, December 11.

Logan, B.E. 2018. Publishing your best research in *ES&T* and *ES&T Letters*. I*nvited Lecture*, Shanghai Jiao Tong University, Shanghai, China, December 11.

Logan, B.E. 2018. Scaling up microbial fuel cells and performance of an 85 L reactor. *Invited speaker*, ESTCP-SERDP joint session on wastewater treatment technologies. Washington DC, November 27.

Logan, B.E. 2018. Extracting energy from water: Electricity generation from wastewaters, using microbial fuel cells, and from natural or engineered salinity gradients. *Invited Seminar,* Massachusetts Institute of Technology (MIT), Cambridge, MA, November 9.

Logan, B.E. 2018. Advanced technologies for water treatment, desalination, energy, and resource recovery. I*nvited Lecture*, Distinguished Scholar Seminar Series, SunYat Sen University, Guangzhou, China, October 16.

Logan, B.E. 2018. Publishing your best research in *ES&T* and *ES&T Letters*. I*nvited Lecture*, SunYat Sen University, Guangzhou, China, October 16.

Logan, B.E. 2018. Advanced technologies for water treatment, desalination, energy, and resource recovery. I*nvited Lecture*, Distinguished Scholar Seminar Series on Environmental Sciences and Engineering, PKU, Peking University, Beijing, China, September 25.

Logan, B.E. 2018. Publishing your best research in *ES&T* and *ES&T Letters*: Insights into the manuscript evaluation and review process. I*nvited Lecture*, Distinguished Scholar Seminar Series on Environmental Sciences and Engineering, PKU, Peking University, Beijing, China, September 25.

Logan, B.E. 2018. Advanced technologies for water treatment and resource recovery. I*nvited Plenary Lecture*, 4th International Conference on Environmental Pollution and Health. Tianjin, China, May 18-20.

Logan, B.E. 2018. Advice on choosing research topics and writing technical papers: For early career and new faculty. *Invited seminar,* Nankai University, Tianjin, China, May 18.

Logan, B.E. 2018. Overview on MFCs and MECs technologies for sustainable energy and water infrastructure: Scaling up MFCs and limits in performance of MFCs and MECs. *Invited Keynote*, MeotRR Workshop, Newcastle University, Newcastle upon Tyne, UK, May 9.

Logan, B.E. 2018. Using expertise in environmental chemistry to advance technologies for electricity generation using renewable biomass, salinity gradient, and waste heat energy sources, and Publishing in *ES&T* and *ES&T Letters*. *Invited seminar.* Tsinghua University, Beijing, China, March 29.

Logan, B.E. 2018. Using expertise in environmental chemistry to advance technologies for electricity generation using renewable biomass, salinity gradient, and waste heat energy sources, and Publishing in *ES&T* and *ES&T Letters*. *Invited seminar.* Chinese Academy of Science, Beijing, March 28.

Logan, B.E. 2018. Scaling up microbial fuel cells and practical limits in power production. *Invited seminar*, University of Science and Technology of China, Hefei, China, March 26.

Logan, B.E. 2018. Converting salinity gradient or waste heat energy into electricity. *Invited seminar*, University of Science and Technology of China, Hefei, China, March 26.

Logan, B.E. 2018. Publishing your best research in *Environmental Science & Technology* (*ES&T*) and *ES&T Letters*: Insights into the manuscript evaluation and review process. *Invited seminar*. University of Science and Technology of China, Hefei, China, March 27.

Logan, B.E. 2018. Publishing your best research in *Environmental Science & Technology* (*ES&T*) and *ES&T Letters*: Insights into the manuscript evaluation and review process. *Invited seminar*. Workshop on research, Jinan University, China, February 28.

Logan, B.E. 2018. Converting salinity gradient or waste heat energy into electricity. *Invited seminar*, University of Hong Kong, China, February 27.

Logan, B.E. 2017. Publishing your best research in *Environmental Science & Technology* (*ES&T*) and *ES&T Letters*: Insights into the manuscript evaluation and review process. *Invited seminar*, University of Hong Kong, China, February 27.

Logan, B.E. 2018. Treatment of low-strength wastewater (MFC effluent) using anaerobic or aerobic fluidized bed membrane bioreactors. *Invited seminar*, University of Hong Kong, China, February 26.

Logan, B.E. 2018. Scaling up bioelectrochemical systems and their limits for biomass conversion into biofuels and chemicals. *Invited seminar*, National Renewable Energy Laboratory (NREL), Golden, CO, February 8.

Logan, B.E. 2018. Publishing your best research in *Environmental Science & Technology* (*ES&T*) and *ES&T Letters*: Insights into the manuscript evaluation and review process. *Invited seminar*. Oakland University, Rochester, MI, February 2.

Logan, B.E. 2018. Converting salinity gradient or waste heat energy into electricity. *Invited seminar*, Oakland University, Rochester, MI, February 2.

2017 Logan, B.E. 2017. Using expertise in environmental chemistry to advance technologies for electricity generation using renewable biomass, salinity gradient, and waste heat energy sources. *Invited plenary*, 9th National Conference on Environmental Chemistry (9th NCEC), Hangzhou, China, Oct. 20.

Logan, B.E. and K.-Y. Kim. 2017. Coupling microbial fuel cells and anaerobic fluidized bed membrane bioreactors for effective and energy efficient wastewater treatment. *Invited keynote*, The 15th IWA World Conference on Anaerobic Digestion, Beijing, China, October 19.

Logan, B.E. 2017. Scaling up microbial fuel cells and practical limits in power production. *Invited seminar*, Harbin Institute of Technology (HIT), Harbin, China, August 28.

Logan, B.E. 2017. Treatment of low-strength wastewaters using microbial fuel cells and anaerobic fluidized bed membrane bioreactors. *Invited seminar*, University of California, Riverside, May 19, 2017.

Logan, B.E. 2017. Treatment of low-strength wastewaters using anaerobic or aerobic fluidized bed membrane bioreactors. *Invited seminar*, Tsinghua University, Beijing, China, May 12.

Logan, B.E. 2017. Microbial fuel cell technologies for renewable power production from waste biomass. *Invited seminar*, Winthrop University, SC, April 14.

Logan, B.E. 2017. Converting salinity gradient or waste heat energy into electricity. *Invited seminar*, University of California, Berkeley, CA, April 7.

Logan, B.E. 2017. Using microbial electrochemical technologies coupled to anaerobic fluidized bed membrane bioreactors for recovery of water and energy from wastewater. *Invited keynote,* Conference on "Wastewater – from a pollutant requiring treatment to a valuable resource", KAUST, Saudi Arabia, March 28.

Logan, B.E. 2017. Scaling up microbial fuel cells (MFCs) and using anaerobic fluidized bed membrane bioreactors (AFMBRs) for wastewater treatment. *Invited seminar*. Huazhong University of Science and Technology (HUST), China, February 28.

Logan, B.E. 2017. New opportunities for renewable electricity generation using salinity gradient and waste heat energy. *Invited seminar*. Huazhong University of Science and Technology (HUST), China, February 27.

Logan, B.E. 2017. Publishing your best research in *Environmental Science & Technology* (*ES&T*) and *ES&T Letters*: Insights into the manuscript evaluation and review process. *Invited seminar*. Huazhong University of Science and Technology (HUST), China, February 27.

Logan, B.E. 2017. Publishing your best research in *Environmental Science & Technology* (*ES&T*) and *ES&T Letters*: Insights into the manuscript evaluation and review process. *Invited seminar.* Newcastle University, UK, February 9.

2016 Logan, B.E. 2016. Progress in scaling up microbial fuel cells for wastewater treatment. Invited seminar, Dalian University of Technology, Dalian, China, November 10, 2016.

Logan, B.E. 2016. Opportunities for microbial electrochemical technologies and thermal regenerative batteries to provide sustainable solutions for the water-energy nexus. *Invited talk*, 4th Joint Energy Workshop, Dalian University of Technology, Dalian, China, November 9-10.

Logan, B.E. 2016. Estimating the maximum possible rates for microbial electrosynthesis: Lessons learned from MxCs. *Invited talk*, NRL/ARPA-E Microbial Electrosynthesis Workshop,

Washington DC, November 3-4.

Logan, B.E. 2016. Microbial electrolysis cells (MECs) and electromethanogenesis. *Invited talk*, Workshop on Electricity Driven Bioproduction, Ghent University, Ghent, Belgium, October 21.

Logan, B.E., W. Yang and K.-Y. Kim. 2016. Cathode design, fabrication, and benchmarking for improved evaluation of the performance of microbial fuel cells. *Invited talk*, North American International Society of Microbial Electrochemistry and Technologies (NA-ISMET), Stanford University, Palo Alto, October 5-7.

Logan, B.E. 2016. Progress in scaling up microbial fuel cells for wastewater treatment. *Invited talk*, European International Society of Microbial Electrochemistry and Technologies (EU-ISMET), Rome, Italy, Sept 26–28.

Logan, B.E., W. Yang and K.-Y. Kim. 2016. The Importance of cathode design, fabrication and packing density for the long-term performance of microbial fuel cells. *Invited Keynote*, Asia Pacific International Society of Microbial Electrochemistry and Technologies (AP-ISMET), BEXCO, Busan, South Korea, August 31–September 2.

Logan, B.E. 2016. Salinity gradient energy and thermal batteries. *Invited Seminar*, Tsinghua University, Beijing, China, May 11.

Logan, B.E. 2016. Publishing your best research in Environmental Science & Technology and Environmental Science & Technology Letters, *Invited Seminar*, Tsinghua University, Beijing, China, May 10.

Logan, B.E. 2016. Treatment of low-strength wastewaters using anaerobic or aerobic fluidized bed membrane bioreactors. *Invited seminar*, Harbin Institute of Technology (HIT), Harbin, China, May 9.

Logan, B.E. 2016. Treatment of low-strength wastewaters using anaerobic or aerobic fluidized bed membrane bioreactors. *Invited seminar*, King Abdulla University of Science & Technology, Thuwal, Saudi Arabia, April 17.

Logan, B.E. 2016. Electricity generation and removal of copper from wastewater using waste heat. *Invited talk*. Newcastle University, Newcastle upon Tyne, UK, April 5.

Logan, B.E. 2016. Microbial electrochemical technologies at the nexus of food, energy, water and climate change. *Invited Talk*, for the "ACS Award for Creative Advances in Environmental Science and Technology", in the special session "Environmental Science & Technology at 50". American Chemical Society Meeting, San Deigo, CA, March 16.

Logan, B.E. 2016. Microbial fuel cells for renewable power generation and biofuels production: 3-Materials used in MFC electrodes, electrode spacing, and reactor design and electrochemistry; 4-Electricity and biofuels generation from waste heat (and other sources). *Invited seminar*s, University of Naples, Parthenope, Italy, February 9.

Logan, B.E. 2016. Microbial fuel cells for renewable power generation and biofuels production: 1-Using microbial fuel cells (MFCs) for wastewater treatment; and 2- Exoelectrogenic and electrophic microorganisms in MECs and MMCs, and design of MECs. *Invited seminars*, University of Naples, Parthenope, Italy, February 8.

Logan, B.E. 2016. Microbial fuel cell technologies for renewable power and biofuels production from waste biomass. *Invited seminar*, Indiana University of Pennsylvania, Indiana, PA, February 1.

Logan, B.E. 2016. Electricity and biofuels generation from waste heat (and other sources). *Invited seminar*, Fuji Film Manufacturing, Tilburg, Germany, January 22.

2015 Yang, W. and B.E. Logan. 2015. Consideration of cathode specific surface area and hydrodynamics in scaling up microbial fuel cells. Bioelektrochemische Systeme - Von der Forschung Richtung Anwendung. *Invited talk*, Germany, November 25.

Logan, B.E. 2015. Using exoelectrogenic and electrotrophic microorganisms for direct electricity, biofuels or chemical production. *Invited Keynote*. 4th DGIST Global Innovation Festival (DGIF), Daegu, Korea, November 25.

Logan, B.E. 2015. Exoelectrogenic and electrotrophic biofilms in bioelectrochemical systems. *Invited talk*, ASM Biofilms Conference, Chicago, IL, October 27.

Logan, B.E. 2015. Energy generation from water: Just add salt. *Invited Seminar,* Engineering Seminar Series, St. Francis University, Loretto, PA, October 23.

Logan, B.E. 2015. Energy generation from water: Just add salt. *Invited Seminar,* Indiana University Bloomington, IN, October 14.

Logan, B.E. 2015. Consideration of cathode specific surface area and hydrodynamics in scaling up microbial fuel cells. *Invited Plenary*, 5th International Society of Microbial Electrochemistry and Technologies (ISMET), Tempe, AZ, October 1-4.

Logan, B.E. 2015. Hydrogen and biogas production using microbial electrolysis cells. Invited talk: Special session on Biomass and Beyond: Challenges and Opportunities for Advanced Biofuels from Wet-Waste Feedstocks. Bioenergy 2015: Opportunities in a Changing Energy Landscape, Washington DC, June 24.

Logan, B.E. 2015. Microbial fuel cells that run on spit, waste biomass, and virtually any source of biodegradable organic matter. *Invited Lecture*, National Academies Symposium on Novel Power Sources, Washington DC, June 10.

Logan, B.E. 2015. Microbial fuel cell technologies for renewable power and biofuels production from waste biomass. *Invited Lecture*- AEESP Distinguished Lecture Series, as part of the Biological and Environmental Science & Engineering (BESE) Distinguished Lecture Series at KAUST, King Abdulla University of Science and Technology, Thuwal, Saudi Arabia, April 27.

Logan, B.E. 2015. Energy generation from water: Just add salt. *Invited Lecture*- AEESP Distinguished Lecture Series, University of Connecticutt, Storrs, CT, April 17.

Logan, B.E. 2015. Microbial fuel cell technologies for renewable power and biofuels production from waste biomass. *Invited Lecture*- AEESP Distinguished Lecture Series, University of Michigan, Ann Arbor, MI, April 15.

Logan, B.E. 2015. Energy generation from water: Just add salt. *Invited Seminar*, Tsinghua University, Beijing, China, April 2.

Logan, B.E. 2015. Energy generation from water: Just add salt. *Invited seminar*, Dalian University of Technology, Dalian, China, April 1.

Logan, B.E. 2015. Microbial fuel cell technologies for renewable power and biofuels production from waste biomass. *Invited seminar*, Dalian University of Technology, Dalian, China, March 31.

Logan, B.E. 2015. MxCs: Can they scale? *Invited presentation*, Workshop on "Hydrogen, Hydrocarbons, and Bioproduct Precursors from Wastewaters", National Renewable Energy Laboratory Offices, Washington, DC, March 18-19.

Logan, B.E. 2015. Microbial fuel cell technologies for renewable power and biofuels production from waste biomass. *Invited*- AEESP Distinguished Lecture Series, University of Iowa, Iowa Cit, IA, March 6.

Logan, B.E. 2015. Microbial fuel cell technologies for renewable power and biofuels production from waste biomass. *Invited*- AEESP Distinguished Lecture Series, Northwestern University, Evanston, IL, March 4.

Logan, B.E. 2015. Microbial fuel cell technologies for renewable power and biofuels production from waste biomass. *Invited*- AEESP Distinguished Lecture Series, University of Central Florida, Orlando, FL, February 27.

Logan, B.E. 2015. Microbial fuel cell technologies for renewable power and biofuels production from waste biomass. *Invited*- AEESP Distinguished Lecture Series, University of Texas, Austin, TX, February 20.

Logan, B.E. 2015. Energy generation from water: Just add salt. *Invited*- AEESP Distinguished Lecture Series, Drexel University, Philadelphia, PA, February 11.

Logan, B.E. 2015. Energy generation from water: Just add salt. *Invited*- AEESP Distinguished Lecture Series, University of North Carolina, Chapel Hill, NC, February 6.

Logan, B.E. 2015. Microbial fuel cell technologies for renewable power and biofuels production from waste biomass. *Invited*- Lecture, North Carolina State University, Raleigh, NC, February 5.

Logan, B.E. 2015. Energy generation from water: Just add salt. *Invited*- AEESP Distinguished Lecture Series, Georgia Tech, Atlanta, GA, February 4.

Logan, B.E. 2015. Microbial fuel cell technologies for renewable power and biofuels production from waste biomass. *Invited*- AEESP Distinguished Lecture Series. Clarkson University, Potsdam, New York, January 29.

Logan, B.E. 2015. Microbial fuel cell technologies for renewable power and biofuels production from waste biomass. *Invited*- AEESP Distinguished Lecture Series. Stanford University, Palo Alto, CA, January 23.

2014 Logan, B.E. 2014. Microbial fuel cell technologies for renewable power and biofuels production from waste biomass. *Invited*- AEESP Distinguished Lecture Series. University of Colorado, Boulder, CO, November 5.

Logan, B.E. 2014. Microbial fuel cell technologies for renewable power and biofuels production from waste biomass. *Invited*- Clifford Randell Distinguished Lecture Series, Virginia Polytechnic Institute, Blacksburgh, VA, November 14.

Logan, B.E. 2014. Microbial fuel cell technologies for renewable power and biofuels production from waste biomass. *Invited*- AEESP Distinguished Lecture Series. Howard University, Washington D.C, November 13.

Logan, B.E. 2014. Energy and water: Using reverse electrodialysis and capacitive mixing to extract energy from salinity gradients (or waste heat). *Invited talk*, Clarke Prize Conference on Research and Innovations in Urban Water Sustainability. Huntington Beach, CA, November 7.

Logan, B.E. 2014. Energy generation from water: Just add salt. *Invited Lecture,* University of Southern California, Los Angeles, CA, November 6.

Logan, B.E. 2014. Microbial fuel cell technologies for renewable power and biofuels production from waste biomass. *Invited*- AEESP Distinguished Lecture Series. University of Southern California, Los Angeles, CA, November 5.

Logan, B.E. 2014. Writing papers and choosing research topics.. *Invited Seminar,* Nankai University, Tianjin, China. October 13.

Logan, B.E. 2014. Microbial fuel cell technologies for renewable power and biofuels production from waste biomass. *Invited*- AEESP Distinguished Lecture Series. Nankai University, Tianjin, China. October 13.

Logan, B.E. 2014. Energy generation from water: Just add salt. *Invited Seminar,* Zhejiang University, Hongzhou, China, October 9.

Logan, B.E. 2014. Microbial fuel cell technologies for renewable power and biofuels production from waste biomass. *Invited Seminar,* Zhejiang University, Hongzhou, China, October 9.

Logan, B.E. 2014. Writing papers and choosing research topics. *Invited Seminar,* Zhejiang University, Hongzhou, China, October 8.

Logan, B. E. 2014. Increasing energy generation through capacitive mixing processes through surface modifications to improve capacitive materials, and the use of ionic fields to enhance electrode charging. *Invited Keynote*, 2nd International Conference on Salinity Gradient Energy, Leeuwarden, The Netherlands, September 10-12.

Logan, B.E. 2014. Effective wastewater treatment using microbial fuel cells and anaerobic fluidized membrane bioreactors (MFC-AFMBRs). *Invited Keynote*, 2nd EU-ISMET Conference, Alcala, Spain, Septeber 3-5.

Logan, B.E. 2014. Green and blue energy production using microbial fuel cell technologies and salinity gradients. *Invited Keynote*, Session on "Environmental Chemistry: 100 Years of Scientific Contribution for Safer and Sustainable Environment", American Chemical Society Meeting, San Francisco, CA, August 11.

Logan, B.E. 2014. Analysis of exoelectrogenic and electrotrophic biofilms in microbial electrochemical technologies. *Invited Keynote*, IWA Leading-Edge Conference on Water and

Wastewater Technologies, Abu Dhabi, UAE, May 26-30.

Logan, B.E. 2014. Microbial fuel cell and reverse electrodialysis technologies for renewable power generation from biomass and salinity gradients. *Invited seminar*, Texas A&M, College Station, TX, April 30.

Logan, B.E. 2014. Green and blue energy production using microbial fuel cell technologies and salinity gradients. *Invited Plenay Presentation*, Bioenergy symposium, University of Hong Kong, April 17.

Logan, B.E. 2014. Renewable power generation from salinity gradients and biomass. *Invited Seminar*, Harbin Institute of Technology, Harbin, China, April 16.

Logan, B.E. 2014. Effective wastewater treatment using microbial fuel cells and anaerobic fluidized membrane bioreactors (MFC-AFMBRs). *Invited Seminar*, Harbin Institute of Technology, Harbin, China, April 15.

Logan, B.E. 2014. Renewable energy production using electroactive microorganisms, wastewaters, and a touch of salt. *Invited talk*, Evan Pugh Professors Luncheon, Penn State Univeristy, University Park, PA, April 8.

Logan, B.E. 2014. Microbial electrochemical technologies for energy production, nutrient recovery, and desalination. *Invited talk*. GCR Symposium, King Abdullah University of Science & Technology, Saudi Arabia, March 26– 27.

Logan, B.E. 2014. Microbial fuel cell and reverse electrodialysis technologies for renewable power generation from biomass and salinity gradients. *Invited Keynote*, 2nd Waterloo Conference on Sustainable technologies to treat organic wastes and wastewaters: the recovery of value-added products, University of Waterloo, Waterloo, Canada, February 19, 2014.

Logan, B.E. 2014. Microbial fuel cell and reverse electrodialysis technologies for renewable power generation from biomass and salinity gradients. *Invited seminar*, Princeton University, Princeton, NJ, January 6.

2013 Logan, B.E. 2013. Microbial fuel cell and reverse electrodialysis technologies for renewable power generation from biomass and salinity gradients. *Invited seminar*, University Catholique de Louvain, Belgium, December 4.

Logan, B.E. 2013. Microbial fuel cell and reverse electrodialysis technologies for renewable power generation from biomass and salinity gradients. *Invited seminar*, Univeriteit Antwerpen, Belgium, December 2.

Logan, B.E. 2013. Using exoelectrogenic and electrotrophic microorganisms with different microbial electrochemical technologies for electricity and biofuels production. *Invited seminar*, Instituto de Tecnologia Química e Biológica, Universidade Nova de Lisboa (ITQB-UNL), Portugal, November 29, 2013.

Logan, B.E. 2013. Factors affecting the performance of muti-electrode microbial fuel cells. *Invited talk*, Francqui Workshop on Microbial Fuel Cell Technologies, Ghent University, Belgium, November 22.

Logan, B.E. 2013. Energy production and pollution control using microbial fuel cell technologies. *Invited Keynote*, International Conference on Environmental Simulation and Pollution Control, Tsinghua University, China, November 7.

Logan, B.E. 2013. Microbial fuel cell and reverse electrodialysis technologies for renewable power generation from biomass and salinity gradients. International Francqui Chair Inaugural Lecture, Ghent University, Belgium, October 16.

Logan, B.E. A Birds Eye View: An overview of where we are, and what the future holds for larger-scale applications of microbial electrochemical technologies, *Invited Plenary*. Pres. 4th International Microbial Fuel Cell Conference, MFC 4, Cairnes, Australia, September 1-4.

Logan, B.E. and V. Lanas. 2013. Examination of brush anode sizes and packing densities on microbial fuel cell performance. *Invited Talk*, Pres. 4th International Microbial Fuel Cell Conference, MFC 4, Cairns, AU, September 1-4.

Logan, B.E. 2013. Energy from water: Microbial fuel cell technologies meet salinity gradient energy. *Invited talk,* Yale Energy Science Institute Symposium, Yale University, New Haven, CT, April 26.

Logan, B.E. 2013. Energy from water: Microbial fuel cell technologies meet salinity gradient energy. *Invited seminar*, Ohio State University, Columbus, OH, April 12.

Logan, B.E. 2013. Microbial desalination cells (MDCs): Desalinating sea/brackish water while producing energy. Invited talk, 2013 AMTA/AWWA MTC Pre-conference workshop on low- and renewable energy trends in seawater/brackish water desalination, San Antonio, TX, February 25.

Logan, B.E. 2013. Extracting electrical energy from water. Scholarship and Research Ethics Brownbag Series, Office for Research Protections. Penn State University, February 20.

Logan, B.E. 2013. Energy from water: Microbial fuel cell technologies meet salinity gradient energy. *Invited seminar*, University of Houston, Houston, TX, February 14.

Logan, B.E. 2013. Energy from water: Microbial fuel cell technologies meet salinity gradient energy. *Invited seminar*, University of California, Santa Barbara, January 30.

Logan, B.E. 2013. Energy from water: Microbial fuel cell technologies meet salinity gradient energy. *Invited seminar*, Center for Environmental Implications of Nanotechnology (CEINT), Duke University, Durham, NC, January 24.

Logan, B.E. 2013. Designing microbial fuel cells for wastewater treatment. *Invited keynote*, Pacific Asia International Society of Microbial Electrochemical Technologies (PA-ISMET), Harbin Institute of Technology, China, January 14.

2012 Logan, B.E. 2012. Advice on choosing research topics and writing technical papers. *Invited talk*. Tsinghua University, Beijing, China, November 29.

Logan, B.E. 2012. Materials and designs of microbial fuel cells that can be used for wastewater treatment today! (And tomorrow…). *Invited talk*. Harbin Institute of Technology, Harbin, China, November 28.

Logan, B.E. 2012. Advice on choosing research topics and writing technical papers. *Invited talk*. Harbin Institute of Technology, Harbin, China, November 28.

Logan, B.E. 2012. Exoelectrogenic bacteria that drive bioelectricity production in different types of microbial electrochemical technologies. *Invited talk.* Dept. Plant Pathology and Environmental Microbiology, Penn State University, November 12.

Logan, B.E. 2012. Microbial electrochemical technologies (METs) meet salinity gradient energy. *Invited talk*, Clarke Prize Conference, Newport Beach, CA, November 2.

Logan, B.E. 2012. Microbial fuel cells meet salinity gradient energy. *Invited talk*, Science Writers Workshop, CASW New Horizongs in Science, Raleigh, North Carolina, October 29.

Logan, B.E. 2012. Microbial fuel cells meet salinity gradient energy. *Invited seminar*. Water Desalination and Reuse Center Seminar Series, KAUST, Saudi Arabia, October 20.

Logan, B.E. 2012. Producing methane from electrical current generated using solar, wind or osmotic energy sources using methanogenic microorganisms. *Invited talk*. GCEP 10th Annual Research Symposium, Stanford, CA, October 11.

Logan, B.E. 2012. Materials and designs of microbial fuel cells that can be used for wastewater treatment today! (And tomorrow…). *Invited Keynote*, North American International Society of Microbial Electrochemical Technologies (NA-ISMET), Cornell University, Ithaca, NY, October 9.

Logan, B.E. 2012. Design and performance of microbial fuel cells for wastewater treatment. *Invited Talk*. Water Environment Federation Techical Meeting (WEFTEC), New Orleans, October 1.

Logan, B.E. 2012. Renewable energy production from biomass, heat, or salinity gradients using microbial fuel cells and osmotic energy systems. *Invited Talk*, Energy Conversion Meeting, University of Freiburg, July 13.

Logan, B.E. 2012. Microbial desalination cells (MDCs): Desalinating sea/brackish water while treating wastewater and producing energy. *Invited talk*, SIWW Workshop Clean, Green and Sustainable: Lower-Energy Desalination and Membrane Regeneration, Singapore, July 1.

Logan, B.E. 2012. Microbial electrochemical technologies (METs) meet salinity gradient energy. *Invited talk*, Dalian University of Technology, Dalian, China, March 22.

Logan, B.E. 2012. Microbial electrochemical technologies (METs) meet salinity gradient energy. *Invited talk*,Tsinghua University, Beijing, China, March 20.

Logan, B.E. 2012. Bioelectrochemical systems for energy production and the generation of other value-added products. *Invited seminar*, Boston College, MA, March 13.

Logan, B.E. 2012. Bioelectrochemical systems for energy production and the generation of other value-added products. *Invited seminar*, Cambrian Innovations, Boston, MA, March 12.

Logan, B.E. 2012. Microbial electrochemical technologies for the production of electrical power, biofuels, and other value added products. *Invited talk*, Center for Electrochemistry at the University of Texas at Austin, Texas, February 11-12.

Logan, B.E. 2012. Bioelectrochemical systems for energy production and the generation of other value-added products. *Invited seminar*, John McClanahan Henske Distinguished Lecture in Chemical/Environmental Engineering, Yale University, February 8.

Logan, B.E. 2012. Bioelectrochemical technologies for addressing the water-energy nexus. *Invited talk*, KAUST Winter Enrichment Program (WEP), Saudi Arabia, February 21-11.

Logan, B.E. 2012. Bioelectrochemical systems for energy production and the generation of other value-added products. *Invited talk*, Rotary Club of State College Downtown, State College, PA, January 12.

Logan, B.E. 2012. Bioelectrochemical systems for energy production and the generation of other value-added products. *Invited lecture*, McDonough High School, Baltimore MDC, January 5.

2011 Logan, B.E. 2011. Bioelectrochemical systems for energy production and the generation of other value-added products. *Invited talk*, State College Evening Rotary Club, State College, PA, December 6.

Logan, B.E. 2011. Bioelectrochemical systems for energy production and the generation of other value-added products. Invited seminar, EME Energy Colloqium, December 5.

Logan, B.E. 2011. Recent advances in the development of microbial fuel cells (MFCs) and new types of MxCs for energy production and other applications. *Invited seminar*, Tsinghua University, Beijing, China, November 17.

Logan, B.E. 2011. Recent advances in the development of microbial fuel cells (MFCs) and new types of MxCs for energy production and other applications. *Invited seminar*, Harbin Institute of Technology, Harbin, China, November 15.

Logan, B.E. 2011. Recent advances in the development of microbial fuel cells (MFCs) and new types of MxCs for energy production and other applications. *Invited seminar*, Dalian University of Technology, Dalian, China, November 14.

Logan, B.E. 2011. How to write and publish a high quality paper in a top journal. *Invited seminar*, Dalian University of Technology, Dalian, China, November 14.

Logan, B.E. 2011. Things to do in an MxC study. *Invited talk*, Bioelectrochemical systems workshop, Penn State University, University Park, PA, September 14-15.

Logan, B.E. 2011. Celebrating past milestones in MFCs. *Invited Keynote*, A celebration of 100 years of microbial fuel cells, Newcastle University, Newcastle upon Tyne, UK, September 9.

Logan, B.E. 2011. Microbial fuel cells and other bioelectrochemical systems for energy production, value added products, and bioremediation. *Invited talk*, Microbial Fuel Cell for In-situ Remediation Symposium, Chevron Energy Technology Company, San Ramon, CA, August 29.

Logan, B.E. 2011. Microbial fuel cells and other bioelectrochemical systems for energy production and other value added products. *Invited seminar*, MRSEC REU/RET summer program seminar series, Penn State, July 21.

Logan, B.E. 2011. Recent advances in the development of microbia fuel cells (MFCs) and new

types of MxCs for energy production and other applications. *Invited presentation*, 3rd International Microbial Fuel Cell Conference, WETSUS, Leuuwarden, The Netherlands, June 6-8.

Logan, B.E. 2011. Microbial fuel cells and other bioelectrochemical systems for energy production and other value added products. *Invited seminar*. University of Freiburg, Germany, May 18.

Logan, B.E. 2011. Recent advances in microbial fuel cell and related MxC technologies. *Invited presentation,* Tsinghua University, China, April 1.

Logan, B.E. 2011. Recent advances in microbial fuel cell and related MxC technologies. *Invited seminar*, Harbin Institute of Technology, China, March 31.

Logan, B.E. 2011. How to write and publish a high quality paper in a top journal. *Invited seminar*, Harbin Institute of Technology, China, March 30.

Logan, B.E. 2011. Design of microbial fuel cells and other bioelectrochemical systems for production of electricity, biofuels and other value-added products. *Invited seminar*, Harbin Institute of Technology, China, March 29.

Logan, B.E. 2011. Designing bioelectrochemical reactors for energy production and the generation of other value-added products. *Invited seminar*, Rensselaer Polytechnic Institute, Troy, NY, February 16.

Logan, B.E. 2011. Recent advances in microbial fuel cell and related MxC technologies. *Invited seminar*, University of Newcastle, UK, January 28.

Logan, B.E. 2011. Development of bioelectrochemical systems for energy production and other value-added products. *Invited seminar*, VITO, Belgium, January 26.

2010 Logan, B.E. 2010. Bioelectrochemical hydrogen gas production using microbial electrolysis cells. *Invited keynote*, Bioenergy and Biofuels: Current Development and Perspectives Workshop, Feng Chia University, Taichung, Taiwan, November 17-19, 2010

Logan, B.E. 2010. Biohydrogen generation from renewable biomass sources using microbial electrolysis cells (MECs). *Invited keynote*, 2010 Asian Bio-Hydrogen Symposium and APEC Advanced Bio-Hydrogen Technology Conference, Feng Chia University, Taichung, Taiwan, November 15-17, 2010

Logan, B.E. 2010. New trends in MFC technologies. *Invited presentation*, Tsinghua University, Beijing, China, October 12.

Logan, B.E. 2010. Bioelectrochemical hydrogen gas production using microbial electrolysis cells. *Invited presentation*, Dalian University of Technology, Dalian, China, October 11.

Logan, B.E. 2010. Bioelectrochemical hydrogen gas production using microbial electrolysis cells. *Invited seminar*, MATGAS Seminar series, Campus UAB, Bellaterra (Barcelona), Spain, September 28.

Logan, B.E. 2010. Turning a wastewater treatment plant into a power plant using microbial fuel technologies. *Invited keynote*, Virginia Water Environment Association Education seminar, Richmond, VA, May 6.

Logan, B.E. Biofuels production using microbial fuel cell technologies. *Invited presentation*, ISUP 2010, Bruges, Belgium, April 20 (by teleconference due to air traffic restrictions due to the eruption of a volcano in Iceland).

Logan, B.E. Bioenergy production using microbial fuel cell technologies. *Invited keynote,* Symposium on Bioenergy and Bioproducts fromWastewater, Brisbane, Austrailia, March 29.

Logan, B.E. 2010. Development of microbial fuel cell technologies for renewable energy production. *Invited plenary*, Institute of Biological Engineering Annual Conference, Boston, MA, March 4-6.

Logan, B.E. 2010. Bioenergy production using microbial fuel cell technologies. *Invited seminar*. MIT Energy Initiative (MITEI) Seminar, Massachusets Institute of Technology, Cambridge, MA, March 2.

Logan, B.E. 2010. Working towards energy sustainability of the water infrastructure using microbial fuel cell technologies. *Invited seminar*, City College of New York (CCNY), New York City, February 23.

Logan, B.E. 2010. Not science fiction: using microbes to make electricity and clean water. *Invited lecture*, Penn State Lectures on the Frontiers of Science, University Park, January 23.

Logan, B.E. 2010. Bioenergy production using microbial fuel cell technologies. *Invited seminar*. Stanford University, Palo Alto, CA, January 15.

2009 Logan, B.E. 2009. Microbial fuel cells—how far have we come? *Invited talk,* 5th Annual WERF Research Forum. Webinar, December 8.

Logan, B.E. 2009. Scaling up microbial fuel cells and microbial electrolysis cells—from the lab to the field. *Invited plenary*, 2nd International Symposium in China, Tsinghua University, Beijing, China, November 13.

Logan, B.E. 2009. Advances in microbial fuel cell designs and materials. *Invited seminar*, Harbin Institute of Technology, China, November 10.

Logan, B.E. 2009. MxC technologies for hydrogen production in microbial electrolysis cells (MECs) and water treatment using microbial desalination cells (MDCs). *Invited seminar*, Harbin Institute of Technology, China, November 11.

Logan, B.E. 2009. Energy sustainability of the water infrastructure using microbial fuel cell technologies. *Invited talk*, 16th Clarke Prize Lecture, Fountain Valley, CA, July 9.

Logan, B.E. 2009. Microbial fuel cell technologies. *Invited Keynote*, IGEMers UK meeting, University of Edinburgh, Scotland, UK, June 23.

Logan, B.E. 2009. Energy production through synthetic biology using microbial fuel cell technologies. *Invited talk*, Bioinformatics Group, University of Edinburgh, Scotland, UK, June 22.

Logan, B.E., S. Cheng, D. Xing, V. Watson, D.F. Call, P.A. Selembo, R. Cusick, and G. Rader. 2009. Recent advances in the design and operation of microbial fuel and microbial electrolysis

cells. I*nvited keynote*, 2nd International Microbial Fuel Cell Symposium, Gwanju, Korea, June 10-12.

Logan, B.E. 2009. Energy production using microbial fuel cell technologies. *Invited Keynote*, MFC Korean Workshop on microbial fuel cells, Pusan University, Busan, Korea, June 9.

Logan, B.E. 2009. Direct electricity or hydrogen generation from wastewater and other waste biomass using microbial fuel cell technologies. *Invited keynote*, Pennsylvania Association of Environmental Professionals (PAEP), State College, PA, May 13.

Logan, B.E. 2009. Recent advances in microbial fuel cells and microbial electrolysis cells. *Invited seminar*, Peking University, Beijing, China, April 15.

Logan, B.E. 2009. Recent advances in microbial fuel cells and microbial electrolysis cells. *Invited seminar*, Tsinghua University, Beijing, China, April 14.

Logan, B.E. 2009. Opportunities for bioenergy production using microbial fuel cell technologies. *Invited seminar*, Dalian University of Technology, Dalian, China, April 13.

Logan, B.E. 2009. Challenges and opportunities for bioenergy production using microbial fuel cell technologies. *Invited seminar*, Lehigh University, Bethlehem, PA, March 20.

Logan, B.E. 2009. Hydrogen gas production at high yields by electrohydrogenesis using microbial electrolysis cells. Pres. at the Clean Hydrogen- Possibilities for the future workshop, National Research Council Canada, Ottowa, Canada, January 19.

2008 Logan, B.E. 2008. Successes and challenges in microbial fuel cell development and applications. *Invited plenary*, Workshop on "From fundamental to microbial power plants: Electrochemically active biofilms", Dourdan, France, November 19-21.

Logan, B.E. 2008. Advice on how to give a good powerpoint presentation. *Invited seminar*, Tsinghua University, China, November 6.

Logan, B.E. 2008. Materials and architectures for microbial fuel cells (MFCs) and microbial electrolysis cells (MECs). *Invited seminar*, Tsinghua University, China, November 5.

Logan, B.E. 2008. Materials and architectures for microbial fuel cells (MFCs) and microbial electrolysis cells (MECs). *Invited plenary*, The First International Symposium on Microbial Fuel Cells in China, Harbin Institute of Technology, China, November 3.

Logan, B.E. 2008. Challenges and opportunities for bioenergy production using microbial fuel cell technologies. *Invited seminar*, Cornell University, Ithaca, NY, October 9.

Logan, B.E. 2008. Direct electricity or hydrogen generation from wastewater and other waste biomass using microbial fuel cell technologies. *Invited lecture*, Engineering Science and Mechanics Design Class, Penn State University, September 25.

Logan, B.E. 2008. A new method of hydrogen production from biomass using microbial electrolysis cells. *Invited panel presentation*, NHA Hydrogen from Renewables Forum, Lakewood, CO, September 23-24.

Logan, B.E. 2008. Direct electricity or hydrogen generation by exoelectrogenic bacteria using microbial fuel cell technologies for wastewater treatment. *Invited talk*, ASI Croucher Conference, Hong Kong, China, June 24.

Logan, B.E. 2008. Bioenergy production using microbial fuel cell technologies. *Invited seminar*, Department of Civil Engineering, University of Hong Kong, China, June 24.

Logan, B.E. 2008. Bioelectricity or biohydrogen production using microbial fuel cell technologies. *Invited seminar*, University of Maryland Biotechnology Institute, Baltimore, MD, March 19.

Logan, B.E. 2008. Direct and sustainable bioenergy production from biomass using microbial fuel cell technologies. *Invited talk*, Fulbright Academy of Science & Technology 2008 Annual Conference: Energy & Innovation, Boston, MA, February 14-17, 2008.

Logan, B.E. 2008. Direct electricity or hydrogen generation by exoelectrogenic bacteria using microbial fuel cell technologies. *Invited seminar,* University of Pennsylvania, Philadelphia PA, February 21.

Logan, B.E. 2008. Bioenergy production using microbial fuel cell technologies. *Invited seminar*, Department of Geography, Penn State University, University Park, PA, February 1.

Logan, B.E. 2008. Direct electricity or hydrogen generation by exoelectrogenic bacteria using microbial fuel cell technologies. *Invited seminar,* University of Oklahoma, Norman, OK, January 7.

2007 Logan, B.E. 2007. High-yield hydrogen or electricity generation from biomass using microbial fuel cell technologies. *Invited Seminar*, Hawaii Natural Energy Institute, University of Hawaii at Manoa, HI, December 11.

Logan, B.E. 2007. Direct electricity or hydrogen generation from biomass by exoelectrogenic bacteria using microbial fuel cell technologies. *Invited Seminar*, Arizona State University, Tempe, AZ, November 29.

Logan, B.E. 2007. Simultaneous electricity or hydrogen generation and wastewater treatment by exoelectrogenic bacteria using microbial fuel cell technologies. *Invited talk*, Environmental Forum, Tsinghua University, China, November 8.

Logan, B.E. 2007. High-yield hydrogen or electricity production using exoelectrogenic bacteria and microbial fuel cell technologies. *Invited talk*, Harbin Institute of Technology, Harbin, China, November 6.

Logan, B.E. Increasing the performance of hydrogen production in microbial electrolysis cells. *Invited talk*, Biohydrogen seminar, WETSUS, The Netherlands, UK.

Logan, B.E. 2007. High-yield electricity or hydrogen generation using bacteria and microbial fuel cell technologies. *Invited Seminar,* University of Edinburgh, Scotland, UK, October 23.

Logan, B.E. 2007. Direct electricity or hydrogen generation from biomass by exoelectrogenic bacteria using microbial fuel cell technologies. *Invited seminar*, University of Newcastle, UK, October 22.

Logan, B.E. 2007. Electricity or hydrogen production using microbial fuel cells. *Invited talk*,

Crossover 2007: Fields to Wheels, Penn State University, September 4-5.

Logan, B.E. 2007. Electricity or hydrogen generation from biomass using microbial fuel cell technologies. *Invited Keynote*, Fuel Cell Science, Engineering and Technology Conference, ASME, New York City, June 18-20.

Logan, B.E. 2007. Electricity or hydrogen production using microbial fuel cells. *Invited talk*, New England Biolabs, Ipswich, MA, June 12.

Logan, B.E. 2007. Simultaneous wastewater treatment and electricity or hydrogen generation by exoelectrogenic bacteria using microbial fuel cell technologies. *Invited keynote*, International Water Association Leading Edge Technologies Conference, Singapore, June 4-6.

Logan, B.E. 2007. Direct electricity or hydrogen generation from biomass by exoelectrogenic bacteria using microbial fuel cell technologies. *Invited talk*, BIO, Boston, MA, May 6-7.

Logan, B.E. 2007. Electricity or hydrogen generation by exoelectrogenic bacteria using microbial fuel cell technologies. *Invited seminar*, Department of Civil and Environmental Engineering, Michigan State University, Lansing, MI, April 16.

Logan, B.E. 2007. Research on technologies for the hydrogen economy. *Invited plenary talk*, Energy Center Hydrogen Initiative (ICHI-II) Symposium, Purdue University, Lafayette, IN, April 12-13.

Logan, B.E. 2007. Electricity and hydrogen generation by exoelectrogenic bacteria using microbial fuel cell technologies. *Invited seminar*, Kamaishi seminar series, Laboratory of Applied Microbiology, Marine Biotechnology Institute, Iwate, Japan, January 30.

Logan, B.E. 2007. The potential for full scale microbial fuel cell systems based on new materials and recent advances in system architectures. *Invited keynote*, NEDO Symposium on Microbial Electricity Generation: Current Science and Engineering. University of Tokyo, Japan, January 29.

2006 Logan, B.E. 2006. Electricity generation by exoelectrogenic bacteria using microbial fuel cells. *Invited seminar*, Department of Civil and Environmental Engineering, University of Delaware, Newark, November 17.

Logan, B.E. 2006. Electricity or hydrogen generation by exoelectrogenic bacteria using microbial fuel cell technologies. *Invited seminar*, Department of Civil and Environmental Engineering, University of California, Berkeley, October 27.

Logan, B.E. 2006. Bioenegy recovery from wastewater using microbial fuel cell technologies. *Invited talk*, Unilever Corporation, San Francisco, CA, October 26.

Logan, B.E. 2006. Electricity generation by exoelectrogenic bacteria using microbial fuel cells. *Invited seminar,* Department of Civil and Environmental Engineering, Rensselaer Polytechnic Institute, Troy, NY, October 20.

Logan, B.E. 2006. Electricity generation by exoelectrogenic bacteria using microbial fuel cells. *Invited keynote,* New York State Biology and Chemistry Teachers, Albany, New York, October 19.

Logan, B.E. 2006. Electricity generation and biohydrogen production using microbial fuel

technologies. *Invited seminar*, Department of Chemical Engineering, Penn State University, PA, October 14.

Logan, B.E. 2006. Electricity generation by exoelectrogens in microbial fuel cells. *Invited seminar,* Bioenergy Research Group, CICY, Meridia, Mexico, September 21.

Logan, B.E. 2006. Overcoming the fermentation barrier for biohydrogen production. *Invited seminar,* Bioenergy Research Group, CICY, Meridia, Mexico, September 21.

Logan, B.E. 2006. Microbial fuel cell system architecture and bacterial communities. *Invited talk*, Workshop on Microbial Fuel Cells. WETSUS, Leeuwarden, The Netherlands, July 25.

Logan, B.E. 2006. Particle adhesion: From fractal coagulation dynamics to nanoscale adhesion measurements and bioenergy production. *Invited talk*, Alfred Wegener Institute for Marine and Polar Research, Bremerhaven, Germany, July 19.

Logan, B.E. 2006. Bioadhesion examined at molecular and nano-scale levels. *Invited talk*, Institute for Chemistry and Biology of the Marine Environment (ICBM), University of Oldenburg, Germany, July 18.

Logan, B.E. 2006. Using microbial fuel cells for electricity generation and hydrogen production. *Invited talk*, Leibniz Institute of Freshwater Ecology and Inland Fisheries, Fuerstenberg, Germany, July 13.

Logan, B. E. 2006. Bio-electricity generation and biohydrogen production using microbial fuel cell technologies. *Invited Talk,* Université Claude Bernard Lyon, Lyon, France, June 14.

Logan, B.E. 2006. Direct electricity or hydrogen generation using bacteria and biodegradable organic matter in microbial fuel cells. *Invited seminar*, University of Tennessee, Knoxville, TN, May 19.

Logan, B.E. 2006. Challenges and opportunities for electricity generation and biohydrogen production using microbial fuel technologies. *Invited seminar,* Oak Ridge national Laboratory, May 18.

Logan, B.E. 2006. Direct electricity or hydrogen generation using bacteria and biodegradable organic matter in microbial fuel cells. *Invited seminar*, Stanford University, Palo Alto, CA, May 5

Logan, B.E. 2006. Challenges and opportunities for electricity generation and biohydrogen production using microbial fuel technologies. *Invited seminar*, Lawrence Livermore National Laboratory, Pleasanton, CA, May 4.

Logan, B.E. 2006. BioEnegy recovery from waste biomass using microbial fuel cell technologies. *Invited speaker*, CH2M Hill Awards Ceremony, Auburn University, AL, April 26.

Logan, B.E. 2006. Future fuel? On the road to a hydrogen economy. *Invited speaker*, PSU Research Unplugged Seminar series, State College, PA, April 5.

Logan, B.E. 2006. Direct electricity or hydrogen generation using bacteria and biodegradable organic matter in microbial fuel cells. *Invited seminar*, University of Notre Dame, South Bend, IN, March 23.

Logan, B.E. 2006. Using AFM to study bioadhesion at molecular- to nano-scale levels. *Invited talk*, University of Notre Dame, South Bend, IN, March 23.

Logan, B.E. 2006. Particle dynamics evaluated across scales: From fractal coagulation dynamics to nanoscale adhesion measurements. *Invited seminar*, Environmental Fluid Dynamics Series, Massachusetts Institute of Technology, Cambridge, MA, February 23.

Logan, B.E. 2006. Challenges and opportunities for biohydrogen and electricity generation using microbial fuel cell based technologies. *Invited Plenary Address*, Genomes to Life Meeting, DOE-BER Genomics meeting, Bethesda, MD, February 12-15.

Logan, B.E. 2006. Biotechnology innovations for renewable energy: direct bioelectricity generation and novel biohydrogen generation technologies. *Invited speaker*, Energy for a Sustainable and Secure Future, National Council for Science and the Environment 6th National Conference on Science, Policy and the Environment, Washington, D.C., January 26-27.

Logan, B.E. 2006. Leaping past the fermentation barrier using a bioelectrochemically assisted microbial reactor (BEAMR) process. *Invited Keynote Address*, International Bio-hydrogen Production Technology Forum, Harbin University, China, January 13-15.

2005 Logan, B.E. 2005. Biological electricity generation and hydrogen production using renewable substrates and wastewaters. *Invited Seminar*, The Johns Hopkins University, October 4.

Logan, B.E. 2005. Biological electricity generation and hydrogen production using from biomass and waste materials. *Invited talk*, Dupont Corporation, Wilmington, DE, Sept 23.

Logan, B.E. 2005. Increased power densities of microbial fuel cells using air cathodes. *Invited talk*, Workshop of Biotechnology for Electricity Generation, Ghent, Belgium, Sept 16-17.

Logan, B.E. 2005. Biological electricity generation and hydrogen production using renewable substrates and wastewaters. *Invited Seminar*, University of Queensland, Brisbane, Australia, May 11.

Logan, B.E. 2005. Direct generation of electricity with bacteria and simultaneous wastewater treatment using microbial fuel cell technology. *Invited Keynote Address*, Australian Water Association Conference, Brisbane, Australia, May 10.

Logan, B.E. 2005. Biological electricity generation and hydrogen production using renewable substrates and wastewaters. *Invited seminar*, University of Pittsburgh, April 25.

Logan, B.E. 2005. Microbial fuel cell for wastewater treatment: Current knowledge and future prospects. *Invited seminar*, University of Newcastle upon Tyne, England, April 1.

Logan, B.E. 2005. Biological electricity generation and hydrogen production using renewable substrates and wastewaters. *Invited seminar*, Indiana University, Bloomington, IN, February 17.

Logan, B.E. 2005. Biophysical aspects of bacterial adhesion examined using atomic force microscopy. *Invited talk*, 1st International Symposium on "Delivery of Functionality in Complex Food Systems: Physically inspired approaches from nanoscale to microscale". Nestle Research Center, Lausanne, Switzerland, January 27-29.

2004 Logan, B.E. 2004. Renewable energy through biological electricity generation and biohydrogen production. *Invited seminar*, Pratt School of Engineering, Duke University, Durham, NC, December 8.

Logan, B.E. 2004. Technical challenges and needs in the development of a global hydrogen economy. *Invited seminar*, Department of Chemical and Biological Engineering, Northwestern University, IL, November 18.

Logan, B.E. 2004. Direct generation of electricity using bacteria in microbial fuel cells. *Invited seminar*, University of Michigan, November 12.

Logan, B.E. 2004. Biological electricity generation and biological hydrogen production using wastewaters. *Invited seminar*, Department of Civil and Environmental Engineering, Cornell University, September 23.

Logan, B.E. 2004. Bio-Energy from wastewater treatment. *Invited talk*, Novartis Corp. Energy Workshop, Newark, NJ, September 8.

Logan, B.E. 2004. Simultaneous wastewater treatment and biological electricity generation. *Invited keynote address*, 10th Congress on Anaerobic Digestion (AD10) on Anaerobic Bioconversion—Answer for Sustainability, Montreal, Canada, 29-August to 2 September.

Logan, B.E. 2004. Biohydrogen production and direct electricity generation in microbial fuel cells. *Invited talk*, National Renewable Energy Laboratory, Golden, CO, June 3.

Logan, B.E. 2004. Green Energy Biotechnology: biohydrogen production and direct electricity generation in microbial fuel cells. *Invited talk*, University of California, Riverside, CA, April 25.

Logan, B.E. 2004. The potential for wastewater treatment using microbial fuel cells. *Invited panel participant and presenter*, First World Conference on Industrial Biotechnology and Bioprocessing, Orlando, FL, April 23.

Logan, B.E. 2004. Green energy production from wastes using bacteria. *Invited talk*, Advisory Committee Environmental Research and Education Committee meeting, National Science Foundation, Washington D.C., April 15.

Logan, B.E. 2004. Biological hydrogen and electricity production from food processing wastewaters. *Invited talk*, Gerber Products Company, MI, March 30.

Logan, B.E. 2004. Using atomic force microscopy to study bioadhesion at molecular- to nano-scale levels. *Invited talk*, University of Virginia, Charlottesville, VA, March 25.

Logan, B.E. 2004. Green and sustainable energy from biological hydrogen production and microbial fuel cells. *Invited talk*, Rutgers, State University of New Jersey, February 27.

2003 Logan, B.E. 2003. Green and sustainable energy from biological hydrogen production and microbial fuel cells. *Invited talk*, Microbiology Workshop, University of Ghent, Belgium, December 5.

Van Ginkel, S. and B.E. Logan. 2003. Complete resource recovery and waste elimination - turning

food processing waste into electricity using a fast, two-phased, fermentation system. *Invited talk.* Renewable Bioenergy Conference, Minneapolis, MN, Nov. 16-18.

Logan, B.E. 2003. Sustainable and renewable energy: Microbial fuel cells and biological hydrogen production. *Invited seminar*, University of Newcastle upon Tyne, Nov. 14.

Logan, B.E. 2003. Using atomic force microscopy to study bioadhesion at molecular- to nano-scale levels. *Invited talk*, University of Groningen, The Netherlands, September 23.

Logan, B.E. 2003. Using atomic force microscopy to study bioadhesion at molecular- to nano-scale levels. *Invited talk*, Workshop on Flocculation in Natural and Engineered Systems, Canada Centre for Inland Waters, Burlington, Ontario, September 5-6.

Logan, B.E. 2003. Pres. How to get tenure and develop your own research identity. *Invited seminar*, FAME workshop at AEESP meeting, Minneapolis, MN, August 11.

Logan, B.E. 2003. A green and sustainable energy system built upon biological hydrogen production. *Invited Keynote speaker*, Pres. 225th American Chemical Society Annual Meeting, New Orleans, LA, March 25.

Logan, B.E. 2003. Molecular scale analysis of bioadhesion for improving bioremediation and energy production. *Invited seminar*, Environmental Institute Distinguished Lecture Series in Environmental Science, Technology, and Policy, Carnegie Mellon University, February 17.

2002 Logan, B.E. 2002. Using atomic force microscopy to study molecular-scale factors that affect bacterial adhesion. *Invited Keynote*, Microbial ecology: technologies for studying microorganisms in diverse environments, Proctor and Gamble, Cincinnati, OH, November 6.

Logan, B.E. 2002. Environmental nanotechnology. *Invited talk*, Pres. Pennsylvania Nanotechnology 2002 Conference, Harrisburg, PA, October 3-4.

Logan, B.E. Logan, S. Van Ginkel, S.-E. Oh, B. Min, and J. Xu. 2002. Biological hydrogen production and a bio-fuel cell coupled for energy production. *Invited Lecture*, Workshop on Bio-fuel Cells, Washington, DC, June 30 to July 2.

Logan, B.E. 2002. Particle dynamics in environmental systems. *Invited lectures*, University of Girona, Spain, June 14 – 28.

2001 Logan, B.E. 2001. Molecular-scale analysis of bacterial adhesion using atomic force microscopy. *Invited talk*, PPG Industries, Monroeville, PA, September 12.

Logan, B.E. 2001. Fractal Coagulation Processes. *Invited seminar*, Great Lakes Program, The State University of New York, Buffalo, NY, April 27.

Logan, B.E. 2001. Molecular-scale analysis of bioadhesion examined using atomic force microscopy. *Invited seminar*, University of Michigan, April 13.

Logan, B.E. 2001. Molecular-scale analysis of interaction forces between bacteria and surfaces measured using atomic force microscopy. *Invited seminar*, Princeton University, April 2.

2000 Logan, B.E. 2000. Environmental Engineering and Science Research Frontiers. *Invited talk*, Dept.

of Agriculture and Biosystems Engineering, The Pennsylvania State University, October 30.

Logan, B.E. 2000. Molecular-scale analysis of bacteria and interaction forces measured using atomic force microscopy. *Invited seminar*, University of Minnesota, Minneapolis, November 3.

Logan, B.E. 2000. Fractal Coagulation Processes. *Invited Keynote Lecture*, Special Symposium on Surfactants, Polymers and Colloids in the Aquatic Environment, ACS Meeting, Washington DC, August 20-25.

Logan, B.E. 2000. Analysis of bacterial surface topography and bacterial adhesion to soil particles using atomic force microscopy (AFM). *Invited seminar,* Environmental Science Graduate Program seminar series on "Contaminated Systems and Human Response" and the Environmental Surface Science Initiative. The Ohio State University, Columbus, OH, April 14.

Logan, B.E. 2000. Analysis of bacterial surface topography and bacterial adhesion to soil particles using atomic force microscopy (AFM). *Invited seminar,* Yale University, New Haven, CN, March 29.

Logan, B.E., K. Kim, J. Miller and D. LaPoint. 2000. Designing systems to biologically treat perchlorate-contaminated waters. *Invited talk*, AWWA Inorganics Conference, Albuquerque, NM, February 28.

Logan, B.E. 2000. Examining colloid properties of adhesion at macro- to atomic-scales. *Invited Keynote Lecture*, Third Environmental Chemistry Symposium, The Pennsylvania State University, University Park, PA, February 26.

1999 Logan, B.E. 1999. Using atomic scale measurements to understand factors affecting bacterial transport in porous media. *Invited Seminar*, Dept. of Geography and Environmental Engineering, The Johns Hopkins University, Baltimore, MD, November 30.

Logan, B.E. 1999. Using atomic scale measurements to probe factors affecting bacterial adhesion. *Invited seminar,* Xerox Seminar on Materials, Materials Research Laboratory, The Pennsylvania State University, University Park, PA, November 10.

Logan, B.E. 1999. Biological degradation of perchlorate-contaminated drinking water. *Invited Seminar*, Northwestern University, Evanston, IL, November 17.

Logan, B.E. 1999. Coagulation rates of biological and inorganic fractal aggregates in environmental systems and engineered reactors. *Invited Seminar*, Distinguished Seminar Series, Dept. Chemical Engineering and Applied Chemistry, University of Toronto, Ontario, Canada, March 24.

Logan, B.E. 1999. Modeling and optimizing the performance of nitrifying trickling filters. *Invited speaker*, Symposium on Fundamentals, Modeling and Applications of Nitrification and Denitrification. Virginia Tech., Roanke, VA, March 28-31.

1998 Logan, B.E. 1998. Microbiological treatment of perchlorate contaminated ground water. *Invited speaker*, The Southwest focused ground water conference: Discussing the issue of MTBE and perchlorate in the ground water. National Ground Water Association, Anaheim, CA, June 3-4.

Logan, B.E. 1998. Fractal aggregate coagulation dynamics. *Invited Seminar*, University of

Connecticut, Department of Marine Sciences, Groton, CT, November 6.

Logan, B.E. 1998. Enhancing bacterial transport in soil aquifers for bioremediation via bioaugmentation. *Invited Seminar*, Dept. Civil and Environmental Engineering, University of Delaware, Newark, DE, April 17.

1997 Logan, B.E. 1997. Growth kinetics of chlorate-respiring microorganisms (CRMs). *Invited Lecture*, Symposium on Biological and Chemical Reduction of Perchlorate and Chlorate. U.S. EPA, National Risk Management Research Laboratory, December 5, Cincinnati, OH.

Logan, B.E. 1997. Enhancing bacterial transport in soil aquifers for bioremediation via bioaugmentation. *Invited Seminar*, Dept. Chemical Engineering, Michigan State University, Lansing, MI, November 14.

1996 Logan, B.E. 1996. Micro- and nano-scale engineering of colloid transport. *Invited Talk*. Gordon Research Conference in Environmental Sciences: Water. New Hampton School, N.H., June 23-28.

1995 Logan, B.E. 1995. Characterizing the properties of biological aggregates formed in chaotic environments using fractal geometry. *Invited Talk*, Joint Meeting of the Society for General Microbiology and American Society for Microbiology, September 12 to 13, University of Aberdeen, Scotland, UK.

1994 Logan, B.E. 1994. The headspace biochemical oxygen demand (HBOD) test: a new approach for measuring BOD. *Invited Talk*, 17th Annual EPA Conference on Analysis of Pollutants in the Environment, May 3-5, Norfolk, VA.

Logan, B.E. 1994. Coagulation in different fluid mechanical environments determined using fractal mathematics. *Invited seminar.* Dept. of Mechanical and Aerospace Engineering, Arizona State University, Phoenix, AZ, March 4.

Logan, B.E. 1994. Coagulation in different fluid mechanical environments determined using fractal mathematics. *Invited seminar.* Texas A&M, College Station, January 21.

1993 Logan, B.E. 1993. Microbial degradation of macromolecules. *Invited seminar*, University of Constance, Konstanz, Germany.

1992 Logan, B.E. 1992. Coagulation models based on fractal geometry. *Invited seminar*, Illinois Institute of Technology, February 25.

Logan, B.E. 1992. Using fractal geometry to characterize the properties of aggregates formed in marine systems. *Invited talk*, ASLO Meetings, Feb. 8-14, Santa Fe, NM.

1991 Logan, B.E. 1991. Characterizing aggregates formed in chaotic environments using coagulation models based on fractal geometry. *Invited seminar* at California Institute of Technology, November 20.

Logan, B.E. 1991. Using fractal geometry to characterize the morphology and properties of aggregates formed in marine systems. *Invited seminar* at the University of Southern California November 19.

Logan, B.E. 1991. Using fractal geometry to characterize the morphology and properties of

aggregates formed in marine systems. *Invited seminar* at the Center for Environmental and Estuarine Studies, Chesapeake Biological Laboratory, The University of Maryland, October 9.

Logan, B.E. 1991. Fractal dimensions of aggregates formed in natural systems. *Invited talk* presented at the IAGLR '91 Great Lakes Program, Buffalo N.Y., June 2-6, 1991.

1988 Logan, B.E. and A.L. Alldredge. 1988. The potential for increased nutrient uptake by flocculating diatoms. *Invited talk*, AGU-ASLO Joint Meeting, Dec. 5-9, San Francisco, CA.

Logan, B.E. 1988. Bio-hydrodynamics of marine snow. *Invited seminar* at Scripps Inst. of Oceanography, April 7, 1988, San Diego, CA.

Logan, B.E. 1987. Advantages to microbes of attached growth in marine systems. *Invited seminar* at U.C. Santa Barbara, April 23, 1987, Santa Barbara, CA.

PRESENTATIONS- Contributed

2022 Logan, B.E. 2022. Environmental Engineers should lead in learning more about our daily energy use and carbon emissions to better understand the challenges of slowing climate change. AEESP Conference, St. Louis, Missouri, June 28-30.

Kang, M., P. Choos, B.E. Logan, A. Padmakumar Renuka, and P. Soares, P. (2022). Partner with Nature: Renewable Energy Art and Design. European Conference on Renewable Energy System, Istanbul, Turkey, May 8. [online]

Soares, P, M. Kang, M. and P. Choo. 2022. Renewable Energy Art and Design: A Framework for Solar Energy Education. European Conference on Renewable Energy System, Istanbul, Turkey. [online]

Kang, M, P. Choo, B.E. Logan, A. Padmakumar Renuka, and P. Soares. 2022. Renewable Energy Art and Design. Exhibion at the Woskob Family Gallery, July 14-17,2022),

2021 Logan, B.E. and R. Rossi. 2021. Novel microbial electrolysis cell design with asymmetric feed to manage the ion transport across the membrane. Pres. International Society of Microbial Electrochemistry and Technologies, North American Meeting (NA-ISMET), University of Southern California, Los Angeles, November 17.

Rossi, R. and B.E. Logan. 2021. Long-term, pilot-scale (850 L) test results for a single microbial fuel cell with air cathodes producing electricity while treating wastewater. Poster Pres. International Society of Microbial Electrochemistry and Technologies, North American Meeting (NA-ISMET), University of Southern California, Los Angeles, November 18.

Baek, G., P.E. Saikaly, and B.E. Logan. 2021. Comparing improvements using microbial electrolysis cell electrodes in anaerobic digestion with those due to increased surface area. Poster Pres. International Society of Microbial Electrochemistry and Technologies, North American Meeting (NA-ISMET), University of Southern California, Los Angeles, November 18.

Logan, B.E. 2021. CIES Discussions 3: Is climate change the same (or different) than other global challenges, and can we achieve energy justice for all?. Penn State University, November 10. (Virtual)

Logan, B.E. 2021. CIES Discussions 2: How fast can the US decarbonize its energy infrastructure.

Penn State University, October 14. (Virtual)

Springer, R., N.R. Cross, S.N. Lvov, B.E. Logan, C.A. Gorski, and D.M. Hall. 2021. A high performance all-aqueous thermally regenerative ammonia battery. Pres. Fall Electrochemistry Society Meeting, October 10-14. (Virtual)

Cross, N.R., R.E. Springer, S.N. Lvov, B.E. Logan, M.J. Rau, and D.M. Hall. 2021. A Numerical investigation of the all-aqueous copper thermally regenerative ammonia battery. Pres. Fall Electrochemistry Society Meeting, October 10-14. (Virtual)

Taylor, R, L. Shi, and B.E. Logan. 2021. Characterizing thin-film composite membranes for hydrogen production via electrolysis. Poster pres. Materials Day, Penn State University, October 12. (Virtual)

Logan, B.E. 2021. CIES Discussions 1: Overview of the Consortium for Integrated Energy Systems (CIES). Penn State University, September 15. (Virtual)

Cross, N., D.H. Hall, S.N. Lvov, B.E. Logan, and M.J. Rau. 2021. The impact of fiber arrangement on mass transfer in porous Ag-TRAB electrodes. Pres. Spring Electrochemistry Society Meeting, May 30-June 3. (Virtual)

Shi, L., and B.E. Logan. 2021. Metal-ion depletion impacts stability and performance of battery electrode deionization. Pres. CDI & ED Conference, Altanta, GA, May 12. (Virtual)

Rossi, R. and B.E. Logan. 2021. Pilot-scale microbial fuel cell for energy generation from wastewater. Pres. 29th Meeting of the International Society of Electrochemistry, April 19. (Virtual)

Cross, N., D.H. Hall, S.N. Lvov, B.E. Logan, and M.J. Rau. 2021. The impact of fiber arrangement on mass transfer in porous Ag-TRAB electrodes. Pres. College of Engineering Research Symposium (CERS), Penn State, University Park, April 14.

2019 Logan, B.E., M. Son, E. Kolvek, and C.A. Gorksi. 2019. Capturing nitrogen in wastewater by using ammonium-selective electrodes in the battery electrode deionization (BDI) process. Pres. 2019 AEESP Research and Education Conference, Arizona State University, May 14–16.

Kim, K.-Y. and B.E. Logan. 2019. Nickel powder blended activated carbon cathodes for hydrogen production in microbial electrolysis cells (MECs). Poster Pres. 2019 AEESP Research and Education Conference, Arizona State University, May 14–16.

Son, M., W. Yang, S.S. Bucs, M.F. Nava-Ocampo, J.S. Vrouwenvelder, and B.E. Logan. 2019. Sacrificial protective layer for fouling control in reverse osmosis desalination. Pres. North American Membrane Society (NAMS) Conference, Pittsburgh, May 11-15.

2018 Geitner, M., M. Son, B. Xiong, W. Yang, D. Velegol, B.E. Logan, M. Kumar. 2018. Reactive membranes for the degradation of emerging wastewater contaminants. Pres. AIChE Meeting, Pittsburgh PA, November 1.

Rossi, R., D. Jones, J. Myung, E. Zikmund, W. Yang, Y. Alvarez-Gallego, D. Pant, and B.E. Logan. 2018. Performance of a multi-panel air cathode in electrochemical and microbial fuel cell tests using an 85 liter reactor. Poster pres. North American International Society of Microbial Electrochemistry and Technologies, Univesity of Wisconsin, WI, October 10-12.

Geitner, M., M. Son, B. Xiong, W. Yang, D. Velegol, B.E. Logan, M. Kumar. 2018. Reactive membranes for the degradation of emerging wastewater contaminants. Poster pres. Gordon Research Conference, Membranes: Materials and Processes, Colby-Sawyer College, New London, NH, August 12-17.

Gorski, C.A., J. Forutnato, T. Kim, and B.E. Logan. 2017. Electrochemical characterization of manganese oxide electrodes for water desalination and renewable energy production. Pres. American Chemical Society Meeting, New Orleans, LA, March 19-22.

2017 Logan, B.E. 2017. Using concentration flow cells with faradaic reactions for desalination or energy production from salinity differences. CDI & E Conference, Seoul, Korea, July 4-7.

Fortunato, J., X. Zhu, M. Rahimi, and C.A. Gorski. A flavin-based pH flow battery that recharges with waste heat or CO_2 emissions. Poster pres. at the 232nd Electrochemical Society (ECS) National Meeting, National Harbor, MD, October 1-6.

Gorski, C.A., T. Kim and B.E. Logan. 2017. High electrical power densities from salinity gradients by combining electrode and Donnan potentials in a single electrochemical cell. Pres. at the 232nd Electrochemical Society (ECS) National Meeting, National Harbor, MD, October 1-6.

Kim, T., C.A. Gorksi, and B.E. Logan. 2017. Water desalination by pseudocapacitive deionization. Pres. at the 232nd Electrochemical Society (ECS) National Meeting, National Harbor, MD, October 1-6.

Rahimi, M., T. Kim, C.A. Gorski, and B.E. Logan. 2017. A fully regenerable thermal silver ammonia battery to convert low-grade waste heat to electricity. Pres. at the 232nd Electrochemical Society (ECS) National Meeting, National Harbor, MD, October 1-6.

Zhu, X., B.E. Logan, T. Kim, M. Rahimi, and C.A. Gorski. 2017. Integrating reverse-electrodialysis stacks with flow batteries to achieve improved energy recovery from salinity gradients and energy storage. Pres. at the 232nd Electrochemical Society (ECS) National Meeting, National Harbor, MD, October 1-6.

Logan, B.E., E. Zikmund, J. Myung, D. Jones, K.-Y. Kim, and W. Yang 2017. Addressing ohmic resistance and the challenges of evaluating very large cathodes. Pres. 6th International meeting of the International Society for Microbial Electrochemistry and Technologies. Lisbon, Portugal, October 6.

Kim, K.-Y. and B.E. Logan. 2017. Dynamic flow and the use of inexpensive nickel-added activated carbon cathodes to achieve cost-effective hydrogen production in microbial electrolysis cells. Poster pres. 6th International meeting of the International Society for Microbial Electrochemistry and Technologies. Lisbon, Portugal, October 6.

Logan, B.E. 2017. Using concentration flow cells with faradaic reactions for desalination or energy production from salinity differences. CDI & E Conference, Seoul, Korea, July 4-7.

Logan, B.E., T. Kim, M. Rahimi, and C.A. Gorski. 2017. Using concentration flow cells with faradaic reactions for energy production from salinity differences or desalination. Pres. Association of Environmental Engineering and Science Professor (AEESP) Meeting, June 22.

Kim, K.-Y. and B.E. Logan. Evaluation of alternative cathode materials for hydrogen production in Microbial electrolysis cells (MECs). Poster pres. Association of Environmental Engineering and Science Professor (AEESP) Meeting, June 20-22.

Yilmazel, Y.D., X. Zhu, K.Y. Kim, D. Holmes, and B.E. Logan. 2017. Electrical current generation in microbial electrolysis cells at hyperthermophilic temperatures. Poster pres. Association of Environmental Engineering and Science Professor (AEESP) Meeting, June 20-22.

Zikmund, E., and B.E. Logan. 2017. Comparison of hydrogen production for two different types of anodes in microbial electrolysis cells with high salinity anolyte and catholyte. Pres. Pennsylvania Water environment Association (PAWEA), Pocono Manor, PA, June 4-7.

Rahimi, M., T. Kim, C.A. Gorski, and B.E. Logan. 2017. A fully regenerable thermal silver ammonia battery to convert low-grade waste heat to electricity. Poster pres. at the ECMSS meeting, University Park, PA, April 21-22.

Kim, T., B.E Logan, and C.A. Gorski. 2017. Unprecedented high electrical power production from salinity gradients using an electrochemical system. Poster Pres. Penn State Energy Days, University Park, PA, April 14.

2016 Martinez, C.M., X. Zhu and B.E. Logan. 2016. Role of immobilized AQDS as redox mediators in the simultaneous azo dye reduction and electricity generation in a MFC. Poster Pres. Research Penn State, University Park, PA, Oct 5.

Ye, Y., N. LaBarge, K-Y Kim, P. Hong, P.E. Saikaly, and B.E. Logan. 2016. An aerated and fluidized bed membrane bioreactor for effective wastewater treatment with low membrane fouling. Pres. Pennsylvania Water Environment Associate PennTec Conference, University Park, PA, June 7.

Kim, Y., B.E. Logan, and C.A. Gorski. 2016. Electricity production from CO_2 and air in an entropic energy flow cell. Poster pres. Energy Days, Penn State University, University Park, PA, May 19-20.

2015 Ananda Rao, H, K.P. Katuri, B.E. Logan, and P.E. Saikaly. 2015. Effect of set anode potentials on the performance and syntrophic propionate oxidation in microbial electrolysis cells fed with high substrate concentration. Poster Pres. 5th International Society of Microbial Electrochemistry and Technologies (ISMET), Tempe, AZ, October 1-4.

Kim, K-Y., W. Yang and B.E. Logan. 2015. Power generation and domestic wastewater treatment using microbial fuel cell and anaerobic fluidized membrane bioreactor (MFC-AFMBR) system under different hydraulic retention times. Pres. 5th International Society of Microbial Electrochemistry and Technologies (ISMET), Tempe, AZ, October 1-4.

Shehab, Noura, J. Ortizmedina, K. Katuri, G.L. Amy, B.E. Logan, H. Ananda Rao, and P.E. Saikaly. 2015. Exploring the brine pool in the Red Sea as a source of exoelectrogenic communities. Pres. 5th International Society of Microbial Electrochemistry and Technologies (ISMET), Tempe, AZ, October 1-4.

Sun, Dan, S. Cheng, A. Wang, F. Li, B.E. Logan, K. Cen. Temporal-spatial changes in viabilities and electrochemical properties of anode biofilms. Pres. 5th International Society of Microbial Electrochemistry and Technologies (ISMET), Tempe, AZ, October 1-4

Yang, W., K-Y. Kim, D.W. Jones, and B.E. Logan. 2015. Hydrophobic polyvinylidene fluoride (PVDF) membrane as a novel diffusion layer in activated carbon air cathode for microbial fuel cells. Pres. 5th International Society of Microbial Electrochemistry and Technologies (ISMET), Tempe, AZ, October 1-4

Yilmazel, Y.D. and B.E. Logan. 2015. Enhanced "electromethanogenesis" by enrichment and isolation of hydrogenotrophic methanogens. Poster Pres. 5th International Society of Microbial Electrochemistry and Technologies (ISMET), Tempe, AZ, October 1-4

Zhang, X., W. He, W. Yang, J. Liu, P. Liang, X. Huang, and B.E. Logan. 2015. Diffusion layer characteristics for increasing performance of activated carbon air-cathodes in microbial fuel cells. Pres. 5th International Society of Microbial Electrochemistry and Technologies (ISMET), Tempe, AZ, October 1-4

Kim, K.-Y., W. Yang, and B.E. Logan. 2015. Impact of brush anode configuration on HRT and domestic wastewater treatment efficiency using microbial fuel cells. Pres. AEESP Conference at Yale University, New Haven, CT, June 16.

Zhang, X., W. He, R. Zhang, Q. Wang, P. Liang, X. Huang, B.E. Logan, and T.-P. Fellinger. 2015. Nitrogen doped carbon aerogels as highly effective oxygen reduction catalysts for air-cathodes in Microbial fuel cells. Pres. AEESP Conference at Yale University, New Haven, CT, June 16.

Zhang, F., B.E. Logan, N. LaBarge, W. Yang, and J. Liu. 2015. Electricity production from low-grade thermal energy. Pres. AEESP Conference at Yale University, New Haven, CT, June 15.

Yang, W., V. Watson, and B.E. Logan. 2015. Enhanced oxygen reduction reaction (ORR) of activated carbon with anthraquinone-2-sulfonic acid (AQS). Poster Pres. AEESP Conference at Yale University, New Haven, CT, June 15.

Yilmazel, Y., and B.E. Logan. 2015. Enrichment of electrothrophic microorganisms for enhanced electrosynthesis of acetate and methane in microbial electrolysis cells. Poster Pres. AEESP Conference at Yale University, New Haven, CT, June 15.

Zhang, X., W. He, L. Ren, J. Stager, P.J. Evans, and B.E. Logan. 2015. COD removal characteristics in air-cathode microbial fuel cells. Poster Pres. AEESP Conference at Yale University, New Haven, CT, June 15.

Zhu, X., We. He, and B.E. Logan. 2015. Reducing pumping energy by using different flow rates of high and low concentration solutions in reverse electrodialysis cells. Poster Pres. AEESP Conference at Yale University, New Haven, CT, June 15.

Watson, V and B.E. Logan. 2015. Hydrogen production from continuous flow bioelectrochemical systems treating fermentation wastewater. Poster pres. DOE AMR meeting, Crystal City, VA, June 11.

Bogosh, M., P. Evans, P. Richards, T. Nguyen, E. Engin Guven, M. Young, C. Torres, and B.E. Logan. 2015. Life cycle environmental and cost assessment comparison of microbial electrochemical cells and conventional technologies for wastewater treatment at forward operating bases. Pres. Water and Energy Conference 2015, Washington DC, June 8.

Yang, W. F. Zhang, J. Liu, and B.E. Logan. 2015. A cascading activated carbon air cathode design

for improved electrochemical performance with variable water pressures. Poster pres. 18th Annual Environmental Chemistry and Microbiology Student Symposium (ECMSS), Penn State University, April 24.

2014 Shehab, N.A., J. Medina, K. Katuri, G.L. Amy, B.E. Logan, and P.E. Saikaly. 2014. Exploring the brine pool in the Red Sea as a source of exoelectrogenic communities. Poster Pres. 2nd EU-ISMET meeting, Alcala, Spain, September 3-5.

Logan, B.E. 2014. Top 10 microbial electrochemical technology inventions and discoveries. Pres. 4th NA-ISMET Conference, Penn State University, University Park, PA, May 13-15.

Hatzell, M.C., R.D. Cusick, and B.E. Logan. 2014. Harvesting microbial fuel cell ionic currents for enhanced energy generation through capacitive mixing. Pres. 4th NA-ISMET Conference, Penn State University, University Park, PA, May 13-15. [*First place, Oral presentation, Day 2.*]

Siegert, M., M.D. Yates, and B.E. Logan. 2014. Cathodes of microbial electrolysis cells (MEC) support preferential growth of methanogens. Pres. 4th NA-ISMET Conference, Penn State University, University Park, PA, May 13-15. [*Third place, Oral presentation, Day 1.*]

Zhang, X. and B.E. Logan. 2014. Improved activated carbon based air-cathodes for microbial fuel cells by chemical and physical modifications. Poster pres. 4th NA-ISMET Conference, Penn State University, University Park, PA, May 13-15. [*Second Place, Poster presentation*]

Yates, M.D. M. Siegert, and B.E. Logan. 2014. Sustained cathodic hydrogen production using *Geobacter sulfurreducens* and *Methanosarcina barkeri*. Poster pres. 4th NA-ISMET Conference, Penn State University, University Park, PA, May 13-15. [*Honorable mention, Poster presentations*]

Catania, C., H. Yan, X. Chen, H. Hou, B.E. Logan, and G. Bazan. 2014. Enhancement of microbial fuel cell performance with membrane intercalating conjugated oligoelectrolytes (COEs). Poster pres. 4th NA-ISMET Conference, Penn State University, University Park, PA, May 13-15. [*Honorable mention, Poster presentations*]

Spormann, A.M., S.T. Lohner, J.S. Duetzmann, B.E. Logan, and J. Leigh. 2014. Hydrogenase-independent uptake and metabolism of electrons by the Archaeon *Methanococcus maripaludis*. Pres. 4th NA-ISMET Conference, Penn State University, University Park, PA, May 13-15.

Geise, G.M., H.J. Cassady, M.A. Hickner, and B.E. Logan. 2014. Ionic resistance and permselectivity of ion exchange membranes. Poster pres. 4th NA-ISMET Conference, Penn State University, University Park, PA, May 13-15.

Stager, J., X. Zhang, and B.E. Logan. 2014. Applications of a larger-scale MFC for wastewater treatment and power production. Poster pres. 4th NA-ISMET Conference, Penn State University, University Park, PA, May 13-15.

Ullery, M.L. and B.E. Logan. 2014. Comparison of complex and ideal effluents in different bench scale microbial electrolysis cell architectures. Poster pres. 4th NA-ISMET Conference, Penn State University, University Park, PA, May 13-15.

Wallack, M.J., M.C. Hatzell, and B.E. Logan. 2014. Anion exchange resin in a microbial reverse electrodialysis cell (MREC) reduces nitrogen crossover. Poster pres. 4th NA-ISMET Conference, Penn State University, University Park, PA, May 13-15.

Watson, V. M.C. Hatzell, and B.E. Logan. 2014. Hydrogen production from fermentation effluent using a continuous flow microbial reverse-electrodialysis electrolysis cell. Poster pres. 4th NA-ISMET Conference, Penn State University, University Park, PA, May 13-15.

Yang, W., F. Zhang, W. He, J. Liu, M.A. Hickner, and B.E. Logan. 2014. Poly(vinylidene fluoride-co-hexafluoropropylene) phase inversion coating as a diffusion layer to enhance the cathode performance in microbial fuel cells. Poster pres. 4th NA-ISMET Conference, Penn State University, University Park, PA, May 13-15.

Zhang, F., J. Liu, I. Ivanov, M.C. Hatzell, Y. Ahn, and B.E. Logan. 2014. Reference and counter electrode positions affect electrochemical characterization of bioanodes in different bioelectrochemical systems. Poster pres. 4th NA-ISMET Conference, Penn State University, University Park, PA, May 13-15.

Cusick, R.D., F. Zhang, M.C. Hatzell, and B.E. Logan. 2014. Quantifying specific resistances at multiple interphases in microbial reverse electrodialysis cells using multichannel electrochemical impedance. Pres. Workshop on "Electrochemical and spectroscopic analysis of microbial electrochemical technologies." Penn State University, University Park, PA, May 13-15.

Zhang, F., J. Liu, I. Ivanov, M.C. Hatzell, Y. Ahn, and B.E. Logan. 2014. Reference and counter electrode positions affect electrochemical characterization of bioanodes in different bioelectrochemical systems. Pres. Workshop on "Electrochemical and spectroscopic analysis of microbial electrochemical technologies." Penn State University, University Park, PA, May 13-15.

Ullery, M. and B.E. Logan. 2014. Comparison of complex and ideal substrate performance in high-thoughput and bench scale microbial electrolysis cells (MECs). Poster pres. PSIEE Bar charts and Barbeque meeting. Penn State, University Park, PA, March 29.

Stager, J., X. Zhang, and B.E. Logan. 2014. Applications of a larger-scale MFC for wastewater treatment and power production. Poster pres. PSIEE Bar charts and Barbeque meeting. Penn State, University Park, PA, March 29.

Ullery, M. and B.E. Logan. 2014. Comparison of complex and ideal substrate performance in high-thoughput and bench scale microbial electrolysis cells (MECs). Poster pres. Environmental Chemistry and Microbiology Student Symposium. Penn State, University Park, PA, March 29.

Stager, J., X. Zhang, and B.E. Logan. 2014. Applications of a larger-scale MFC for wastewater treatment and power production. Poster pres. Environmental Chemistry and Microbiology Student Symposium. Penn State, University Park, PA, March 29.

Shehab, N., P.Saikaly, G.L. Amy and B.E. Logan. 2014. Poster pres. GCR Symposium, King Abdullah University of Science & Technology, Saudi Arabia, March 26– 27. *(First place, Biological and Environmental Science and Engineering Division; First place overall, People's Choice).*

Zhang, X., X. Xia, I. Ivanov, X. Huang and B.E. Logan. 2014. Improving activated carbon based air-cathode performance for microbial fuel cell by blending carbon black. Pres. 247th ACS National Meeting, Dallas, TX, March 18.

Siegert, M., M.D. Yates, D.F Call, and B.E. Logan. 2014. Cathodes of microbial electrolysis cells

(MEC) support preferential growth of methanogens. Pittsburgh Bacterial Meeting, Duquesne University, Pittsburgh, PA, March 8.

2013 Hatzell, M.C., R.D. Cusick, and B.E. Logan. 2013. Harvesting microbial fuel cell ionic current to augment power densities from apacitive mixing. Paper pres. 224th Electrochemical Society (ECS) Meeting, San Francisco, CA, October 29.

Zhu, X. M.C. Hatzell, and B.E. Logan. 2013. Microbial reverse-electrodialysis electrolysis chemical-production cell for H_2 production and CO_2 sequestration. Paper pres. 224th Electrochemical Society (ECS) Meeting, San Francisco, CA, October 30.

Shehab, N., B.E. Logan, G.L. Amy and P.E. Saikaly. 2013. Microbial electrodeionization cell stack for sustainable desalination, wastewater treatment and energy recovery. Pres. 86th Annual Water Environment Federation Technical Exhibition & Conference (WEFTEC), Chicago, IL, October 5-9.

Geise, G.M., B.E. Logan, and M.A. Hickner. 2013. Ion transport in anion exchange membranes for power generation applications. Post. Pres. Post Doc Conference, Penn State, University Park, PA, September 12. (*Awarded First Prize*).

Anandaorao, H., E. Gorron, K. Katuri, B.E. Logan, and P.E. Saikaly. 2013. Syntrophic interactions facilitate hydrogen production in MECs fed with propionate. Pres. 4th International Microbial Fuel Cell Conference, Cairns, AU, September 1-4.

Shehab, N.A., B.E. Logan, G.L. Amy, and P.E Saikaly. 2013. Microbial electrode ionization cell stack, air-cathode for sustainable desalination. Pres. 4th International Microbial Fuel Cell Conference, Cairns, AU, September 1-4.

Sun, D., A. Wang, and B.E. Logan. 2013. *Geobacter* sp. SD-1 with enhanced electrochemical activity isolated from bioelectrochemical systems. Pres. 4th International Microbial Fuel Cell Conference, Cairns, AU, September 1-4.

Werner, C.M., C. Hoppe-Jones, P.E. Saikaly, B.E. Logan, and G.L. Amy. 2013. Attenuation of trace organic compounds in bioelectrochemical systems at set anode potentials. Pres. Pres. 4th International Microbial Fuel Cell Conference, Cairns, AU, September 1-4.

Xia, X., F. Zhang, X. Zhang, B.E. Logan, and X. Huang. 2013. High performance and stable air-cathode catalysts using transition metal modified activated carbon in microbial fuel cells. Pres. 4th International Microbial Fuel Cell Conference, Cairns, AU, September 1-4.

Geisse, G.M., M.A. Hickner, and B.E. Logan. 2013. Ion transport in anion exchange membranes for water purification and power generation applications. Pres. Gordon Conference on Membranes.

Cusick, R.D., and B.E. Logan. 2013. Electrochemical investigation of symbiotic power production in microbial reverse electrodialysis cells. Poster Pres. Association of Environmental Engineering & Science Professors (AEESP), Golden, CO, July 15.

Yates, M.D. R.D. Cusick, and B.E. Logan. 2013. Exoelectrogenic template for the production of a catalytically active mesoporous structure on a graphite electrode. Pres. Association of Environmental Engineering & Science Professors (AEESP), Golden, CO, July 15.

Zhang, X., X. Xia, X Huang, and B.E. Logan. 2013. Improving activated carbon cathode

performance for microbial fuel cell by blending carbon black. Poster Pres. Association of Environmental Engineering & Science Professors (AEESP), Golden, CO, July 15.

Ren, L., M. Siegert, I. Ivanov, J.M. Pisciotta, F. Zhang, and B.E. Logan. 2013. Treatability studies on refinery wastewaters using microbial electrolysis cells (MECs) toward power production in microbial fuel cells (MFCs). Pres. Second International Symposium on Bioremediation and Sustainable Environmental Technologies Jacksonville, FL, June 10–13.

Logan, B.E., R.D. Cusick, I. Ivanov, M. Hatzell, and F. Zhang. 2013. Capturing salinity gradient energy using thermolytic solutions in reverse electrodialysis stacks and catholyte solutions. Pres. IWA Leading Edge Technologies (LET) Conference, Bordeaux, France, June 2-6.

Malaeb, L., K. Katuri, M. Husnul, S. Nunes, B.E. Logan, and P.E. Saikaly. Conductive UF membrane as biocathode in air-cathode MFCs. Pres. IWA Leading Edge Technologies (LET) Conference, Bordeaux, France, June 2-6.

Pisciotta, J.M, Z. Zaybak and B.E. Logan. 2013. Electroautotrophic metabolism of Desulfobacterium autotrophicum and Rhodococcus opacus. Poster pres. 113th meeting of the Association for Microbiology (ASM), Denver, CO, May 18-21.

Zaybak, Z., J.M. Pisciotta, J.C. Tokash, and B.E. Logan. 2013. Anaerobic biocathodes for electrofuel and chemical production. Poster pres. 113th meeting of the Association for Microbiology (ASM), Denver, CO, May 18-21.

Ren, L., M. Siegert, I. Ivanov, J.M. Pisciotta, and B.E. Logan. 2013. Treatability studies on different refinery wastewaters using high-throughput microbial electrolysis cells (MECs). Poster Pres. CERS, Penn State, April 2.

Zhang, F., G. Chen, M.A. Hickner, and B.E. Logan. 2013. Anti-flooding poly(dimethylsiloxane) (PDMS) catalyst binder for air cathode microbial fuel cells. Pres. Pacific Asia International Society of Microbial Electrochemical Technologies (PA-ISMET), Harbin Institute of Technology, China, January 14

2012 Ahn, Y. and B.E. Logan. 2012. Improvement of microbial fuel cell performance using a saline catholyte solution. Poster Pres. NA-ISMET Conference, Ithaca, NY, October 8-10.

Call, D.F. and B.E. Logan. 2012. Alternate charging-discharging of CO_2-consuming biocathodes derived from methanogen-rich sediment. Poster Pres. NA-ISMET Conference, Ithaca, NY, October 8-10.

Cusick, R.D, and B.E. Logan. 2012. Electrochemical investigation of symbiotic power generation in microbial reverse electrodialysis cells. Pres. NA-ISMET Conference, Ithaca, NY, October 8-10.

Davis, R.J., and B.E. Logan. 2012. Bench scaled voltage enhanced stacked microbial electrolysis and desalination cell with electrolyte recycle. Poster Pres. NA-ISMET Conference, Ithaca, NY, October 8-10.

Hatzell, M., Y. Kim, and B.E. Logan. 2012. Increasing energy recoveries from coupled MFC-MEC systems. 2012. Poster Pres. NA-ISMET Conference, Ithaca, NY, October 8-10.

Ivanov, I. G. Chen, M. Hickner, and B.E. Logan. 2012. Catalysts and binders for HER in

ammonium bicarbonate. NA-ISMET Conference, Ithaca, NY, October 8-10.

Jones, D. and B.E. Logan. 2012. Experiences in running a demonstration project for more than one year of 2.0 and 1.6-liter MFCs powering a fan. Poster Pres. NA-ISMET Conference, Ithaca, NY, October 8-10.

Lanas, V., and B.E. Logan. 2012. Examination of brush anode sizes and packing densities on microbial fuel cell performance. Poster Pres. NA-ISMET Conference, Ithaca, NY, October 8-10.

Mink, J., B.E. Logan, and M. Hussein. 2012. Carbon based nanomaterials for micro-sized microbial fuel cells. Poster Pres. NA-ISMET Conference, Ithaca, NY, October 8-10.

Nam, J.-Y., R.D. Cusick, Y. Kim, and B.E. Logan. 2012. Hydrogen generation in microbial reverse-electrodialysis electrolysis cells using a thermolytic saline solution. Poster Pres. NA-ISMET Conference, Ithaca, NY, October 8-10.

Ren, L., J.C. Tokash, J.M. Regan, and B.E. Logan. 2012. Current generation in microbial electrolysis cells with addition of amorphous ferric hydroxide, Tween 80, or DNA. Poster Pres. NA-ISMET Conference, Ithaca, NY, October 8-10.

Shehab, N. Saikaly, P. Amy, G. and B.E. Logan. 2012. Bacterial community structure associated with the anode of sediment microbial fuel cells from the Red Sea and Tampa Bay sediment: revealed by 16s rRNA gene pyrosequencing. Poster Pres. NA-ISMET Conference, Ithaca, NY, October 8-10.

Siegert, M., D.F. Call, and B.E. Logan. 2012. Oxygen scavengers in methanogenic microbial electrolysis cells. Poster Pres. NA-ISMET Conference, Ithaca, NY, October 8-10.

Siegert, M, F. Zhang, Z. Zaybak, J. Pisciotta, and B.E. Logan. 2012. Dark electrotrophic carbon fixation by cyanobacteria. Poster Pres. NA-ISMET Conference, Ithaca, NY, October 8-10.

Watson, V.J., and B.E. Logan. 2012. Performance and characterization of activated carbon powders for air cathode MFCs. Pres. NA-ISMET Conference, Ithaca, NY, October 8-10. *Best Oral Presentation, Second Place.*

Zhang, F., X. Xia, Y. Luo, D. Sun, D.F. Call, and B.E. Logan. Improving startup performance with carbon mesh anodes in separator electrode assembly microbial fuel cells. Poster Pres. NA-ISMET Conference, Ithaca, NY, October 8-10.

Zhu, Z., M.D. Yates, and B.E. Logan. 2012. Potential regulation on extracellular electron transfer processes of *Geobacter sulfurreducens*. Poster Pres. NA-ISMET Conference, Ithaca, NY, October 8-10.

Yates, M.D., X. Zhu, and B.E. Logan. 2012. Performance of bio-electrochemical systems pre-enriched with *G. sulfurreducens*. Pres. NA-ISMET Conference, Ithaca, NY, October 8-10.

Werner, C.M., B.E. Logna, P.E. Saikaly, and G.L. Amy. 2012. Wastewater treatment, energy recovery and indirect desalination using an air-cathode microbial osmotic fuel cell. Pres. EU-ISMET Conference, Ghent, Belgium, September 25-27.

Yates, M.D., X. Zhu, and B.E. Logan. 2012. Pre-enrichment with *Geobacter sulfurreducens* to

enhance performance of microbial electrolysis cells. Poster Pres. International Society of Microbial Ecology (ISME), Coppenhagen, Denmark, August 19-24.

Siegert, M., D.F. Call, and B.E. Logan. 2012. Oxygen scavangers and enhancing electromethanogenesis in microbial electrolysis cells (MEC). Poster Pres. International Society of Microbial Ecology (ISME), Coppenhagen, Denmark, August 19-24.

Shehab, N., P.E. Saikaly, G. Amy and B.E. Logan. 2012. Bacterial community structure associated with the anode of sediment microbial fuel cells from the Red Sea and Tampa Bay sediments: revealed by 16S rRNA gene pyrosequencing. Poster Pres. International Society of Microbial Ecology (ISME), Coppenhagen, Denmark, August 19-24.

Zhu, X., J.C. Tokash, Y. Hong, and B.E. Logan. 2012. Influence of anode potentials on power overshoot in microbial fuel cells. Pres. 244th American Chemical Society (ACS) meeting, Philadelphia, PA, August 21.

Call, D.F., and B.E. Logan. 2012. Scaling-up microbial fuel cell technologies: From lab to the field. Society for Industrial Microbiology and Biotechnology (SIMB) Annual Meeting, Washington, DC. August 16. (*Invited*, but presented by DFC).

Yan, F., L. Ren, and B.E. Logan. 2012. Electricity generation from fermentation solution of primary sludge using air-cathode microbial fuel cells. Poster Pres. 15th Environmental Chemistry Student Symposium, Penn State, University Park, PA, March 30 – 31.

Zhang, F., G. Chen, M. Hickner, and B.E. Logan. 2012. Novel anti-flooding cathodes constructed using poly(dimethylsiloxane) (PDMS) binder for microbial fuel cells. Pres. 15th Environmental Chemistry Student Symposium, Penn State, University Park, PA, March 30 – 31. (*Awarded 2nd Place, Environmental Science*).

Ren, L., J. Tokash, J.M. Regan, and B.E. Logan. 2012. Increased current density and self assembled porous structure on cathode in microbial electrolysis cell by ferric hydroxide addition. Poster pres. 15th Environmental Chemistry Student Symposium, Penn State, University Park, PA, March 30 – 31. (*Poster awarded 2nd Place, Environmental Engineering & Ecology*).

Cusick, R., Y. Kim and B.E. Logan. 2012. Energy capture from thermolytic solutions in microbial reverse-electrodialysis cells. Pres. 15th Environmental Chemistry Student Symposium, Penn State, University Park, PA, March 30 – 31.

Wei, B. J. Tokash, F. Zhang, and B.E. Logan. 2012. Electrochemical analysis of separators used in single-chamber, air-cathode microbial fuel cells. Poster pres. 15th Environmental Chemistry Student Symposium, Penn State, University Park, PA, March 30 – 31.

Hatzell, M., Y. Kim and B.E. Logan. 2012. Increasing energy recoveries from MFC/MEC coupled systems. Poster pres. 15th Environmental Chemistry Student Symposium, Penn State, University Park, PA, March 30 – 31.

Yates, M.D. and B.E. Logan. Pre-enrichment with *Geobacter sulfurreducens* to enhance the performance of microbial electrolysis cells. Poster pres. 15th Environmental Chemistry Student Symposium, Penn State, University Park, PA, March 30 – 31.

Zayback, Z. and B.E. Logan. 2012. Methods for start-up of CO_2-fixing and biofuel producing

biocathodes in bioelectrochemical systems. Pres. 15th Environmental Chemistry Student Symposium, Penn State, University Park, PA, March 30 – 31.

Pisciotta, J.M., Z. Zaybak, D. F. Call, J-Y Nam, and B.E. Logan. 2012. Marine sediment seeded biocathodes for gas phase CO_2 removal. Pittsburg Microbiology Meeting, Duquesne University, March 3.

Zaybak, Z. and B.E. Logan. 2012. Pre-Enrichment method for establishment of CO_2-fixing and organic chemicals producing biocathodes in bioelectrochemical systems (BESs). Pittsburgh Microbiology Meeting, Duquesne University, March 3.

Pisciotta, J.M., and B.E. Logan. 2012. Biocathodes. Rhodobacter as a microbial platform for algae hydrocarbon electro-fuels production. ARPA-E Energy Innovation Summit. Washington, DC. February 27-29.

2011 Pisciotta, J.M., and B.E. Logan. 2011. Marine sediment seeded biocathodes for gas phase CO_2 removal. International Electrofuels Conference. Society for Biological Engineering. Providence, RI. November 6-9.

Call, D.F., R.D. Cusick, and B.E. Logan. 2011. A scalable microbial electrolysis cell for renewable hydrogen production from wastewater. Poster pres. Association of Environmental Engineering and Science Professors (AEESP) Biannual conference, Tampa, FL, July 10-12. (Award, Best Poster Presentations)

Wagner, R.C., S. Porter-Gill, and B.E. Logan. 2011. A latex immobilization layer for isolation of exoelectrogenic microbes. Poster pres. Association of Environmental Engineering and Science Professors (AEESP) Biannual conference, Tampa, FL, July 10-12. (Award, Best Poster Presentations)

Kim, Y. and and B.E. Logan. 2011. Electrodialysis desalination powered by microbial fuel cells. Pres. Association of Environmental Engineering and Science Professors (AEESP) Biannual conference, Tampa, FL, July 10-12.

Yates, M.D., P.D. Kiely, D.F. Call, and B.E. Logan. 2011. Convergent development of bacterial communities in microbial fuel cells. Poster pres. Association of Environmental Engineering and Science Professors (AEESP) Biannual conference, Tampa, FL, July 10-12.

2011 Shehab, N., P.E. Saikaly, G.L. Amy and B.E. Logan. 2011. Effect of oxygen intrusion on the anodic microbial communities in air-cathode MFCs. Pres. 3rd Microbial Fuel Cell Symposium, Leuuwarden, The Netherlands, June 6-8.

Nam, J-Y. and B.E. Logan. 2011. Comparison of microbial electrolysis cells at set anode potentials with boosted potentials. Pres. 3rd Microbial Fuel Cell Symposium, Leuuwarden, The Netherlands, June 6-8.

Cusick, R. and B.E. Logan. 2011. Energy efficient phosphate recovery as struvite within a microbial electrolysis cell. Pres. 3rd Microbial Fuel Cell Symposium, Leuuwarden, The Netherlands, June 6-8.

Zhang, F. and B.E. Logan. 2011. Long Term Performance of Microbial Fuel Cells Using Activated Carbon Cathodes Pres. 3rd Microbial Fuel Cell Symposium, Leuuwarden, The Netherlands, June 6-

8.

Zhang, X., X. Huang, S. Cheng, P. Liang and B.E. Logan. 2011. Nylon separator characteristics in air-cathode microbial fuel cells. Pres. 3rd Microbial Fuel Cell Symposium, Leuuwarden, The Netherlands, June 6-8.

Call, D.F., and B.E. Logan. 2011. Conducting large-scale bioelectrochemical research using small-scale microbial electrolysis cells. Poster pres. 3rd Microbial Fuel Cell Symposium, Leuuwarden, The Netherlands, June 6-8.

Werner, C.M., G.L. Amy, and B.E. Logan. 2011. Testing the robustness of microbial fuel cells to micropollutants using ibuprofen as a model compound. Poster pres. 3rd Microbial Fuel Cell Symposium, Leuuwarden, The Netherlands, June 6-8.

Yates, M.D., P.D. Kiely, D.F. Call, and B.E. Logan. 2011. Convergent development of microbial communities in microbial fuel cells. Poster pres. 13th annual Environmental Chemistry Symposium at Penn State, April 8-9.

Cusick, R. and B.E. Logan. 2011. Energy efficient phosphate recovery as struvite in microbial electrolysis cells. Poster pres. 13th annual Environmental Chemistry Symposium at Penn State, April 8-9.

Zhang, F. and B.E. Logan. 2011. Long term test of activated carbon cathodes in microbial fuel cells (MFCs). Pres. 13th annual Environmental Chemistry Symposium at Penn State, April 8-9.

Call, D.F. and B.E. Logan. 2011. Conducting high throughput bioelectrochemical research using small-scale microbial electrolysis cells. Poster pres. 13th annual Environmental Chemistry Symposium at Penn State, April 8-9.

Sun, D., D.F. Call, P.D. Kiely, A. Wang and B.E. Logan. 2011. Performance and microbial community shift in formic MFC from anode potential setting mode to normal MFC mode. Poster pres. 13th annual Environmental Chemistry Symposium at Penn State, April 8-9.

Wagner, R.C., S. Porter-Gill, and B.E. Logan. 2011. A latex immobilization layer for isolation of exoelectrogenic microbes. Poster pres. 13th annual Environmental Chemistry Symposium at Penn State, April 8-9.

Werner, C., G.L. Amy and B.E. Logan. 2011. Testing the robustness of microbial fuel cells to micropollutants. Poster pres. Winter Enrichment Program (WEP), KAUST, Saudi Arabia, January 22-29.

Shehab, N., P.E. Saikaly, G.L. Amy and B.E. Logan. 2011. Microbial ecology of microbial fuel cells. Poster pres. Winter Enrichment Program (WEP), KAUST, Saudi Arabia, January 22-29.

2010 Logan, B.E, R. Cusick, M.D. Merrill, S. Cheng, B. Bryan, and D.S. Parker. 2010. Scaling up hydrogen production in microbial electrolysis cells- laboratory and field tests. Pres. IWA Leading Edge Technologies (LET), Phoenix, AZ, June 1-4.

Call, D.F., P.D. Kiely, R. Cusick, M.D. Yates, P.A. Selembo, J.M. Regan, and B.E. Logan. 2010. Identifying Exoelectrogenic Bacteria in Bioelectrochemical Systems using Fluorescent In Situ Hybridization (FISH). Poster pres. IWA Leading Edge Technologies (LET), Phoenix, AZ, June 1-4.

Logan, B.E., R. Cusick, M. D. Merrill, S. Cheng, B. Bryan, D. S. Parker. 2010. Laboratory and field tests using microbial electrolysis cells for hydrogen production from agricultural and domestic wastewaters. Pres. American Chemical Society Meeting, San Francisco, CA, March 21-25.

Zhang, F., T. Saito, S. Cheng, M. A. Hickner, B. E. Logan. 2010. Microbial fuel cell cathodes with poly(dimethylsiloxane) diffusion layers constructed around stainless steel mesh current collectors. Pres. American Chemical Society Meeting, San Francisco, CA, March 21-25.

Saito, T., T. H. Roberts, M. A. Hickner, B. E. Logan. 2010. Structure-property relationship of polymeric cathode binders in microbial fuel cells. Pres. American Chemical Society Meeting, San Francisco, CA, March 21-25.

Feng, Y., Q. Yang, X. Wang, B.E. Logan. 2010. Treatment of carbon fiber brush anodes for improving power generation in air-cathode microbial fuel cells. Pres. American Chemical Society Meeting, San Francisco, CA, March 21-25.

Kiely, P.D., G. Rader, J.M. Regan, B.E. Logan. 2010. Community analysis and long-term performance of microbial fuel cells fed individual fermentation endproducts. Pres. American Chemical Society Meeting, San Francisco, CA, March 21-25.

Mehanna, M.A., T. Saito, J. Yang, M. Hickner, X. Cao, X. Huang, and B.E. Logan. 2010. From an air-cathode microbial fuel cell (MFC) to an air-cathode microbial desalination cell (MDC). Pres. American Chemical Society Meeting, San Francisco, CA, March 21-25.

2009 Selembo, P.A., J.M. Perez, W.A. Lloyd and BE Logan. Hydrogen production from glycerol: Fermentors vs microbial electrolysis cells. Poster pres. AOCS, International Congress on Biodiesel, Munich, Germany, November 15-17, 2009.

Zhang, X., S. Cheng, X. Wang, X. Huang, and B.E. Logan. 2009. Fiber glass as separator enhancing the performance of air-cathode single-chamber microbial fuel cells. Pres. 3rd National Ph.D. Candidates Academic Conference (China) New Theories and New Technologies in Environmental Science and Engineering, Tsinghua University, Beijing, October 22-24.

Cheng, S, D. Xing, and B.E. Logan. 2009. Methane generation from CO_2 through bioelectrochemical catalysis. Pres. 238th ACS National Meeting, Washington, DC, August 16-20.

Zhang, X., X.Wang, S. Cheng , X. Huang, and B.E. Logan. 2009. Unlaminated carbon as separator in air-cathode single-chamber microbial fuel cells. Pres. 238th ACS National Meeting, Washington, DC, August 16-20.

Call, D., R.C. Wagner and B.E. Logan. *Geobacter* and mixed culture hydrogen production in a Microbial Electrolysis Cell. Poster Pres. 238th ACS National Meeting, Washington, DC, August 16-20.

Saito, T., M.D. Merrill, V.J. Watson, M.A. Hickner, and B.E. Logan. 2009. New polymeric cathode binders for microbial fuel cells (MFCs). Pres. 238th ACS National Meeting, Washington, DC, August 16-20.

Logan, B.E. 2009. Bioenergy production using microbial fuel cell technologies. Pres. Association of Environmental Engineering and Science Professors (AEESP) conference, Iowa City, IA, July 26-

28.

Selembo, P., M. Merrill, and B.E. Logan. 2009. Stainless steel and nickel cathodes in microbial electrolysis cells. Poster pres. Association of Environmental Engineering and Science Professors (AEESP) biaunnual conference, Iowa City, IA, July 26-28.

Watson, V. and B.E. Logan. 2009. Power production from microbial fuel cells inoculated with *Shewanella oneidensis* MR-1 or domestic wastewater. BioEnergy Bridge Meeting, Penn State University, July 15.

Merrill, M, and B.E. Logan. 2009. Electrolyte effects on hydrogen evolution and solution resistance in microbial electrolysis cells. International Microbial Fuel Cell Symposium, Gwanju, Korea, June 10-12.

Cheng, S. and B.E. Logan. 2009. Effect of configuration and solution conditions on power generation of air cathode microbial fuel cells (MFCs). International Microbial Fuel Cell Symposium, Gwanju, Korea, June 10-12.

Kiely, P.D., E. Lalaurette, G. Radar, and B.E. Logan. 2009. The conversion of cellulose fermentation end products to hydrogen using a defined microbial consortia and a microbial electrolysis cell. International Microbial Fuel Cell Symposium, Gwanju, Korea, June 10-12.

Ishii, S., Y. Sekiguchi, B.E. Logan, K.H. Nealson, and Y.A. Gorby. 2009. Comparison of electrode reducing properties of Geobacter sulfurreducens and an enriched consortium in an air-cathode microbial fuel cell. Pres. 2nd International Microbial Fuel Cell Symposium, Gwanju, Korea, June 10-12.

Merrill, M., B.E. Logan, and M. Janik. 2009. The parabolic free energy relationships of the hydrogen evolution reaction. Pres. 215th Electrochemical Society Meeting, San Francisco, May 24-29.

Rezaei, F., T. Richard, and B.E. Logan. 2009. Effect the particle size on MFC maximum power generation, power longevity, and Coulombic efficiency. Poster pres. 31st Symposium on Biotechnology for Fuels and Chemicals, San Francisco, CA, May 3-6.

Selembo, P. J. Perez, and B.E. Logan. 2009. Hydrogen production from glycerol by fermentation or by electrohydrogenesis using microbial electrolysis cells. Pres. NHA Annual Conference and Hydrogen Expo, Columbia, SC, March 30 – April 2.

Merrill, M., and B.E. Logan. 2009. Electrolyte effects in microbial electrolysis cells. Pres. NHA Annual Conference and Hydrogen Expo, Columbia, SC, March 30 – April 2.

Cheng, S. E. Lalaurette, and B.E. Logan. 2009. Hydrogen production from cellulose and its fermentation end products using microbial electrolysis cell. Pres. NHA Annual Conference and Hydrogen Expo, Columbia, SC, March 30 – April 2.

2008 Call, D. and B.E. Logan. 2008. High efficiency hydrogen gas production using microbial electrolysis cells (MECs). Pres. H2 Expo, Hamburg, Germany, October 23.

Logan, B.E., and S. Cheng. 2008. Evaluation of catalysts and membranes for high yield biohydrogen production via electrohydrogenesis in microbial electrolysis cells (MECs). Pres.

International Water Association (IWA) World Conference and Exhibition, Vienna, Austria, September 12.

Feng, Y., H. Wang, B.E. Logan, X. Wang, and N. Ren. 2008. Treatment of corn-stover washing solution using air-cathode single chamber bottle-microbial fuel cell. Pres. International Water Association (IWA) World Conference and Exhibition, Vienna, Austria, September 12.

Zuo, Y., Call, D., and B.E. Logan. 2008. Hydrophobic membranes for improved power production in microbial fuel cells (MFCs). Poster pres. International Water Association (IWA) World Conference and Exhibition, Vienna, Austria, September 12.

Lalaurette, E. and B.E. Logan. 2008. How to produce hydrogen from cellulose fermentation products using different mixed cultures in microbial electrolysis cells. Pres. ACS Annual Meeting, Philadelphia, PA, August 21.

Cheng, S. and B.E. Logan. 2008. "Bioenergy generation from cellulose in single-chamber microbial fuel cells (MFCs). Pres. ACS Annual Meeting, Philadelphia, PA, August 21.

Logan, B.E. 2008. Improving the rates of hydrogen production by electrohydrogenesis in microbial electrolysis cells (MECs). Pres. 6th Leading Edge Technologies (LET) Conference, International Water Association, Zurich, Switzerland, June 3.

Call, D. and B.E. Logan. 2008. High efficiency hydrogen gas production from wastewater using a microbial electrolysis cell. Pres. Pennsylvania Water Environment Association, PennTec Annual Conference, Penn State University, June 2. [Award to DC]

Zuo, Y., and B.E. Logan. 2008. Tubular membrane cathodes for scalable power generation in microbial fuel cells. Pres. Pennsylvania Water Environment Association, PennTec Annual Conference, Penn State University, June 2. [Award to YZ]

Wagner, R. and B.E. Logan. 2008. Hydrogen production from swine wastewater. Poster pres. Pennsylvania Water Environment Association, PennTec Annual Conference, Penn State University, June 2. [Award to RW]

Feng, Y., H. Wang, X. Wang, H. Li, and B.E. Logan. 2008. Electricity production from corn stover using single-chamber air-cathode MFCs. 1st International Microbial Fuel Cell Symposium, Penn State University, May 29.

Wang, A., S. Cheng, B.E. Logan, J. Zhou and J. Tiedje. 2008. From fermentation waste to H_2: GeoChip-based analysis of microbial community structure and functions in microbial fuel cells. 1st International Microbial Fuel Cell Symposium, Penn State University, May 28.

Logan, B.E. 2008. Energy sustainability of the water infrastructure. Plenary talk, 1st International Microbial Fuel Cell Symposium, Penn State University, May 27.

Xing, D., J.M. Regan, and B.E. Logan. 2008. High power generation by a photosynthetic bacterium in single chamber air-cathode MFCs. Pres. 1st International Microbial Fuel Cell Symposium, Penn State University, May 27-29.

Call, D. and B.E. Logan. 2008. High efficiency hydrogen production in a microbial electrolysis cell (MEC) lacking a membrane. Pres. 1st International Microbial Fuel Cell Symposium, Penn State

University, May 27-29.

Zuo, Y., D. Xing, J.M. Regan, and B.E. Logan. 2008. An exoelectrogenic bacterium Ochrobactrum anthropi YZ-1 isolated using a U-tube microbial fuel cell. Pres. 1st International Microbial Fuel Cell Symposium, Penn State University, May 27-29.

Cheng, S., D. Xing, Y. Zuo, and B.E. Logan. 2008. Electricity generation from cellulose in a single-chamber air cathode microbial fuel cell (MFC). Pres. 1st International Microbial Fuel Cell Symposium, Penn State University, May 27-29.

Ahn, Y. and B.E. Logan. 2008. Low solids production using microbial fuel cells for power generation and domestic wastewater treatment. Pres. 1st International Microbial Fuel Cell Symposium, Penn State University, May 27-29.

Lalaurette, E. and B.E. Logan. 2008. Hydrogen Production from cellulose fermentation products using microbial electrolysis cells: Poster pres. 1st International Microbial Fuel Cell Symposium, Penn State University, May 27-29.

Ahn, Y., J. Choi, J. Bae, and B.E. Logan. 2008. Microbial fuel cell coupling biohydrogen fermentation of food waste to energy harvesting. Poster pres. 1st International Microbial Fuel Cell Symposium, Penn State University, May 27-29.

Wagner, R.C., J.M. Regan, D. Call, S.-E. Oh, Y. Zuo, and B.E. Logan. 2008. Hydrogen production from swine wastewater. Poster at 11th annual Environmental Chemistry Symposium at Penn State, March 28-29.

Huang, L. and B.E. Logan. 2008. Improvement of electricity production using xylose in graphite fiber brush anode and air cathode microbial fuel cells. Poster pres. 1st International Microbial Fuel Cell Symposium, Penn State University, May 27-29.

Wagner, R.C., J.M. Regan, D. Call, S.-E. Oh, Y. Zuo, and B.E. 2008. Logan Hydrogen production from swine wastewater. Poster pres. 1st International Microbial Fuel Cell Symposium, Penn State University, May 27-29.

Watson, V. and B.E. Logan. 2008. Power production by *Shewanella oneidensis* MR-1 compared to a mixed culture in four different batch microbial fuel cell configurations. Poster pres. 1st International Microbial Fuel Cell Symposium, Penn State University, May 27-29.

Call, D. and B.E. Logan. 2008. High efficiency hydrogen production using microbial electrolysis cell. Poster pres. 5th Annual College of Engineering Research Symposium, Penn State, April 1.

Watson, V., and B.E. Logan. 2008. Comparison of power production in four types of microbial fuel cells (MFCs). Poster at 11th annual Environmental Chemistry Symposium at Penn State, March 28-29.

Call, D. and B.E. Logan. 2008. Renewable hydrogen production using a membrane-free microbial electrolysis cell (MEC). Pres 11th annual Environmental Chemistry Symposium at Penn State, March 28-29.

Wang, A., B.E. Logan, J. Zhou, and J. Tiedje. 2008. From fermentation waste to H_2: GeoChip-based analysis of microbial community structure and functions in bio-electrochemically assisted

microbial reactor. Pres. 213th Electrochemical Society Meeting, Phoenix, AZ, May 21.

Rezaei, F, T.L. Richard, and B.E. Logan. 2008. Isolating cellulolytic bacteria for electricity generation in MFC fed with cellulose. Penn State University, March 19. (*Awarded First Place*).

Rezaei, F., D. Xing, J.M. Regan, T.L. Richard, and B.E. Logan, 2008. Enzymatic hydrolysis of cellulose coupled with electricity generation in a microbial fuel cell. Institute of Biological Engineering (IBE) 2008 Annual Conference. Chapel Hill, NC, March 6-9.

Oh, S.-E., J.-R. Kim, and B.E. Logan. 2008. Effects of applied voltages and oxygen concentrations at the anode on power of a microbial fuel cell. Poster presentation at the ASLO meeting, Orlando, FL, March 3.

2007 Rezaei, F., T.L. Richard, and B.E. Logan. 2007. Enzymatic hydrolysis of cellulose coupled with electricity generation in an MFC to increase the power output. Poster presentation at Crossover 2007: Fields to Wheels, Penn State University, September 4-5. (*Awarded second place*.)

Logan, B.E., S. Cheng, V. Watson. Progress and challenges in scale up of electrogenic reactors such as microbial fuel cells. *Keynote talk*, in the "Fuel Cell Technology: Biofuel Cells, Enzymatic and Microbial Fuel Cells" session at the 234th annual meeting of the American Chemical Society, Boston, MA, August 21-22.

Zuo, Y., S. Cheng, D.F. Call, and B.E. Logan. 2007. Scalable tubular membrane cathodes for microbial fuel cell applications. Presented in the "Fuel Cell Technology: Biofuel Cells, Enzymatic and Microbial Fuel Cells" session at the 234th annual meeting of the American Chemical Society, Boston, MA, August 21-22.

Cheng, S. and B.E. Logan. 2007. High hydrogen yield from renewable resources using an improved BEAMR system. Presented in the "Fuel Cell Technology: Biofuel Cells, Enzymatic and Microbial Fuel Cells" session at the 234th annual meeting of the American Chemical Society, Boston, MA, August 21-22.

Call, D. and B.E. Logan. 2007. Hydrogen production using membrane electrode assemblies (MEAs) in a bio-electrochemically assisted reactor. Poster presented at 10th annual Annual Environmental Symposium at Penn State, April 13-14.

Rezaei, F., T.L. Richard, and B.E. Logan. 2006. Enzymatic hydrolysis of cellulose for electricity generation in a microbial fuel cell. Poster presented at 29th Symposium on Biotechnology of Fuels and chemicals, Denver, CO, March 30-April 1.

Call, D. and B.E. Logan. 2007. Hydrogen production using membrane electrode assemblies (MEAs) in a bio-electrochemically assisted reactor. Poster presented at 10th annual Annual Environmental Symposium at Penn State, April 13-14.

Zuo, Y., S. Cheng, D. Call, and B.E. Logan. 2007. Tubular membrane cathodes for scalable power generation in microbial fuel cells. Poster presented at 10th annual Annual Environmental Symposium at Penn State, April 13-14.

Rezaei, F., T.L. Richard, and B.E. Logan. 2006. Enzymatic hydrolysis of cellulose for electricity generation in a microbial fuel cell. Poster presented at 10th annual Annual Environmental Symposium at Penn State, April 13-14.

Logan, B.E., and J. M. Regan. 2007. Hydrogen and electricity production using microbial fuel cell-based technologies. Pres. National Hydrogen Association Meeting, San Antonio, TX, March 21.

2006 Wagner, R., D. Call and B.E. Logan. 2006. PSU outreach in the alternative energy field for H_2 Day. Poster presented at Hydrogen Day at Penn State, University Park, PA, November 14.

Rezaei, F., T.L. Richard, and B.E. Logan. 2006. Substrate-enhanced microbial fuel cell for improved power generation from sediment. Poster presented at Hydrogen Day at Penn State, University Park, PA, November 14.

Zuo, Y., and B.E. Logan. 2006. Harvesting electricity from corn stover hydrolysates by using microbial fuel cells. Poster presented at Hydrogen Day at Penn State, University Park, PA, November 14. *[Awarded first place]*

Watson, V., G. Estadt, and B.E. Logan. 2006. Increased power production using brush anodes in bottle air-cathode MFCs. Poster presented at Hydrogen Day at Penn State, University Park, PA, November 14. *[Honorable mention]*

Coenen, M., and B.E. Logan. 2006. Isolation of fermentative bacteria (inoculation in MFC, gas-content, voltage production). Poster presented at Hydrogen Day at Penn State, University Park, PA, November 14. *[Awarded third place]*

Selembo, P., B.E. Logan and J. Perez. 2006. From biodiesel to microbial fuel cells: closing the energy gap. Poster presented at Hydrogen Day at Penn State, University Park, PA, November 14.

Cheng, S. and B.E. Logan. 2006. Increasing power generation of microbial fuel cells through anode surface treatment. Poster presented at Hydrogen Day at Penn State, University Park, PA, November 14.

Winslow, C. and B.E. Logan. 2006. Predicting humic acid adsorption using atomic force microscopy (AFM) force spectral analysis. Poster pres. GCA Conference, Philadelphia, PA, October 25.

Zuo, Y., P.-C. Maness, and B.E. Logan. Electricity production from corn stover biomass wastewaters. Poster Pres. PennTec, 78th Annual Technical Conference and Exhibition, State College, PA, July 16-19. *(Student research award recipient)*

Logan, B.E. 2006. Using algae and other biomass for H_2 production in a modified microbial fuel cell process: a bioelectrochemically assisted microbial reactor. 16th World Hydrogen Energy Conference, Lyon, France, June 15.

Logan, B.E., J. Heilmann, and H. Liu. 2006. Biohydrogen hydrogen production by electrochemically assisted organic matter electrolysis. Pres. National Hydrogen Association Annual Conference, Long Beach, CA, March 14.

2005 Logan, B.E., B. Min, J.-R. Kim, S.-U. Oh, and H. Liu. 2005. Microbial power: electricity generation from domestic and agricultural wastewaters using microbial fuel cells. WEFTEC, Washington D.C., October 31.

Logan, B.E., H. Liu, J. Heilmann, S.-E. Oh, S. Cheng, and S. Grot. 2005. Electricity generation and

hydrogen production using different types of microbial fuel cell technologies. 230th ACS National Meeting, in Washington, DC, Aug 28-Sept 1.

Oh, S.E., J.R. Kim, B. Min and B.E. Logan. 2005. Electricity generation from food and animal wastewaters using microbial fuel cells. 230th ACS National Meeting, in Washington, DC, Aug 28-Sept 1.

Logan, B.E., S.-E. Oh, H. Liu, J. Heilmann, S. Cheng, and S. Grot. 2005. Comparison of electricity production using water- versus air-cathode microbial fuel cell technologies. 230th ACS National Meeting, in Washington, DC, Aug 28-Sept 1.

Cheng, S., H. Liu and B.E. Logan. 2005. Increasing power generation in a continuous flow MFC by advective flow through the anode and reduced electrode spacing. 230th ACS National Meeting, in Washington, DC, Aug 28-Sept 1.

Kim, J.-R., B. Min and B.E. Logan. 2005. Acclimating a microbial fuel cell (MFC) for electricity generation using organics in wastewater. Pres. Pennsylvania Water Environment Association (PWEA) Annual Conference, Seven Springs Mountain Resort, Champion, PA. [*PWEA Student Research Award*].

Kim, J.-R. B.E. Logan, S.H. Jung, and J.M. Regan. 2005. Development of microbial fuel cell (MFC) using ethanol as substrate for electricity generation. Poster Pres. 8th Annual Environmental Symposium at Penn State, April 1-2. *[Received 2nd place, Environmental Engineering Session]*

Salerno, M., B.E. Logan and D. Velegol. 2005. Biomolecules and colloid deposition – A model for bacterial adhesion. Poster Pres. 8th Annual Environmental Symposium at Penn State, April 1-2. *[Received 1st place, Environmental Engineering Session]*

Kwon, K.D, Rodriguez, V., Kubicki, J.D, and Logan. 2005. Interactions of biopolymers with mineral surfaces: force measurements and molecular modeling. Poster Pres. 8th Annual Environmental Symposium at Penn State, April 1-2. *[Received 1st place, Best Overall Poster presentation]*

Paramonova, K., and B.E. Logan. 2005. Measurement and analysis of bacterial removal by granular activated carbon. Poster Pres. 8th Annual Environmental Symposium at Penn State, April 1-2. *[Received 2nd place, Best Overall Undergraduate Poster presentation]*

Kwon, K.D, Rodriguez, V., Kubicki, J.D, and Logan, B.E. 2005. Interactions of biopolymers with mineral surfaces: AFM force measurements and *ab initio* calculations. Pres. 229th ACS meeting, Anaheim, CA, March 13-17.

2004 Logan, B.E. 2004. Hydrogen and electricity generation from wastewaters. Pres. Pennsylvania Fuel Cell Consortium, Penn State University, October 25.

Logan, B.E. 2004. Harvesting energy from wastewater. Pres. Hydrogen Day at Penn State, October 25.

Kim, J.-R. and B.E. Logan. 2004, Effective enrichment procedures to acclimate a microbial fuel cell for electricity generation. Poster pres. Hydrogen Day at Penn State, October 25 (Third Place).

Min, B., S. Oh, H. Liu, S. Cheng, and B.E. Logan. 2004. Electricity generation from animal

wastewater using a microbial fuel cell. Poster pres. Hydrogen Day at Penn State, October 25 (Honorable mention).

Liu, H., and B.E. Logan 2004. Electricity generation in single chamber microbial fuel cells. Poster pres. Hydrogen Day at Penn State, October 25.

Zhang, H., M.A. Bruns, and B.E. Logan. 2004. Biohydrogen production from a trickling filter reactor. Poster pres. Hydrogen Day at Penn State, October 25.

Park, W., B.E. Logan and I.S. Kim. 2004. Enhancement of hydrogen evolution with decrease in green house gas emission through CO_2 control in hydrogen fermentation. Poster pres. Hydrogen Day at Penn State, October 25.

Luo, Y., H. Zhang, M. Salerno, B.E. Logan, and M.A. Bruns. 2004. Isolation of dominant hydrogen-producers from continuously fed bioreactors. Poster pres. Hydrogen Day at Penn State, October 25.

Cheng, S. and B.E. Logan. 2004. Optimizing Pt-air cathodes for microbial fuel cells. Poster pres. Hydrogen Day at Penn State, October 25.

Bruns, M.A., S.-E. Oh, B. Min, B.E. Logan and P. Iyer. 2004. Microbial fuel cells generate electricity from swine wastewater. Poster Pres. CrossOver 2004, Penn State University, University Park, Oct. 20-21.

Logan, B.E. 2004. Harvesting energy from wastewater treatment. Acceptance speech for Paul L. Busch Award, Water Environment Federation Technical Conference, New Orleans, LA, October 4.

Logan, B.E., H. Liu, S.-E. Oh, and B. Min. 2004. Electricity from domestic wastewater can be harvested in microbial fuel cells. Pres. Water Environment Federation Technical Conference, New Orleans, LA, October 4.

Logan, B.E., S.Van Ginkel, S. Oh, H. Liu and B. Min. 2004. Bioenergy recovery through biological hydrogen production and electricity generation in microbial fuel cells. Poster pres. 10th Congress on Anaerobic Digestion (AD10) on Anaerobic Bioconversion—Answer for Sustainability, Montreal, Canada, 29-August to 2 September.

Logan, B.E. 2004. Potential for wastewater treatment systems based on microbial fuel cells and biological hydrogen production. Pres. 228th American Chemical Society Annual Meeting, Philadelphia, PA, August 22-27.

Zhang, H., and B.E. Logan. 2004. Biological hydrogen production from an unsaturated, packed-bed bioreactor. Pres. 228th American Chemical Society Annual Meeting, Philadelphia, PA, August 22-27.

Liu, H., and B.E. Logan. 2004. Electricity production using an air-cathode single chamber microbial fuel cell (MFC) in the absence and presence of a proton exchange membrane. Pres. 228th American Chemical Society Annual Meeting, Philadelphia, PA, August 22-27.

Oh, S.-E., B. Min, J.-R. Kim, H. Liu and B.E. Logan. Characterization of design factors affecting power output in a microbial fuel cell. Pres. 228th American Chemical Society Annual Meeting, Philadelphia, PA, August 22-27.

Kim, J., B. Min and B.E. Logan. 2004. Development of a procedure to rapidly acclimate a microbial fuel cell (MFC) for electricity production. Pres. 228th American Chemical Society Annual Meeting, Philadelphia, PA, August 22-27.

Min, B. and B.E. Logan 2004. Electricity production in salt bridge and membrane microbial fuel cells. Pres. 228th American Chemical Society Annual Meeting, Philadelphia, PA, August 22-27.

Van Ginkel, S., and B.E. Logan. 2004. Maximization of H_2 yields by lowering H_2 inhibition. Pres. 228th American Chemical Society Annual Meeting, Philadelphia, PA, August 22-27.

Cheng, S.-A., H. Liu and B.E. Logan. 2004. Optimization of air cathode used in one-chamber microbial fuel cells. Pres. 228th American Chemical Society Annual Meeting, Philadelphia, PA, August 22-27.

Regan, J., S.-E. Oh, and B.E. Logan. 2004. Biological hydrogen from livestock wastewaters. Pres. 228th American Chemical Society Annual Meeting, Philadelphia, PA, August 22-27.

Evans, P.J., B. Min and B.E. Logan. Downstream processing of perchlorate-contaminated groundwater following biotreatment. Poster Pres. Groundwater Resources Association of California (GRA) Symposium- Perchlorate in California's Groundwater, Glendale, CA, August 4.

Pouliot, J., and B.E. Logan. 2004. The Effect of Metal Oxides on Bacterial Adhesion. Pres. 78th Colloids and Surfaces Symposium, Yale University, CT, June 20-24.

Salerno, M. and B.E. Logan. 2004. Addition of Hydrophobic Silane Molecules to SiO2 Increases the Adhesion of Bacteria. Pres. 78th Colloids and Surfaces Symposium, Yale University, CT, June 20-24.

Cho, Y., and B.E. Logan. 2004. The role of polysaccharide in bacterial adhesion using atomic force microscopy. Pres. 78th Colloids and Surfaces Symposium, Yale University, CT, June 20-24.

Paramanova, E., and B.E. Logan. 2004. Measurement and analysis of microbial sticking coefficients for water treatment materials. Pres. 78th Colloids and Surfaces Symposium, Yale University, CT, June 20-24.

Evans, P., S. Price, B. Min and B.E. Logan. 2004. Biotreatment and downstream processing of perchlorate-contaminated groundwater. Pres. NGWA Conference on MTBE and Perchlorate, Costa Mesa, CA, June 3-4.

Bruns, M.A., P. Iyer, H. Zhang, S.W. Van Ginkel, and B.E. Logan. 2004. Molecular analysis of bacterial populations in hydrogen-producing bioreactors. Poster Pres. American Society for Microbiology Conference, New Orleans, LA, May 23-27.

Logan, B.E., S. Van Ginkel, S. Oh, H. Liu and B. Min. 2004. Biohydrogen production can be made more economical by linking it with methane production or direct electricity generation in microbial fuel cells. Pres. National Hydrogen Association Annual Meeting, Los Angeles, CA, April 25-28.

Liu, H., R. Ramnarayanan, and B.E. Logan. 2004. Production of electricity during wastewater treatment using a single chamber microbial fuel cell. Poster Pres. 3rd Annual Materials Day, Penn State University, University Park, PA, April 15.

Min, B. and B.E. Logan. 2004. Electricity generation using salt bridge and membrane microbial fuel cell. Poster Pres. Seventh Environmental Chemistry Symposium, Penn State University, University Park, March 20. *Received First Place Award, Session V.*

Van Ginkel, S. and B.E. Logan. 2004. Biological hydrogen production using food processing wastewaters. Poster Pres. Seventh Environmental Chemistry Symposium, Penn State University, University Park, March 20.

Paramanova, E., and B.E. Logan. 2004. Measurement and analysis of microbial sticking coefficients for water treatment materials. Pres. Seventh Environmental Chemistry Symposium, Penn State University, University Park, March 20.

Salerno, M., B.E. Logan and D. Vellegol. 2004. Addition of hydrophobic silane molecules to SiO_2 increases the adhesion of bacteria. Pres. Seventh Environmental Chemistry Symposium, Penn State University, University Park, March 20.

2003 Logan, B.E., S. Van Ginkel, and S. Oh. 2003. Biological hydrogen production from Industrial wastewaters using continuous flow and membrane bioreactors. Pres. Society for Industrial Microbiology (SIM) Annual Meeting, Minneapolis, MN, August 10-14.

Xu, J., P. Shrader, B.E. Logan, M. Guiltinan, and J. Regan. 2003. Genetic engineering of *Clostridium acetobutylicum* for enhancing hydrogen production. Pres. Society for Industrial Microbiology (SIM) Annual Meeting, Minneapolis, MN, August 10-14.

Evans, P., S. Price, B. Min and B.E. Logan. Biotreatment and downstream processing of perchlorate-contaminated groundwater. Pres. Seventh International Symposium on In Situ and On-site Bioremediation, Orlando, FL, June 2-5.

Steinberg, L, J. Trimble, and B.E. Logan. 2003. The chlorate reductase of *Pseudomonas* sp. PDA is a different enzyme from (per)chlorate reductase of *Dechlorosoma* sp. KJ. Poster Pres. 103rd American Society for Microbiology Conference, Washington, DC, May 18-23.

Xu, J., J. Trimble, L. Steinberg, and B.E. Logan. 2003. Perchlorate and nitrate reduction by *Dechlorosoma* sp. KJ and Pseudomonas sp. PDA. Poster Pres. 103rd American Society for Microbiology Conference, Washington, DC, May 18-23.

Song, Y. and B.E. Logan. 2003. Inhibitor studies of dissimilative perchlorate reduction by *Dechlorosoma* sp. KJ. Poster Pres. 103rd American Society for Microbiology Conference, Washington, DC, May 18-23. *(YS received an award- travel grant.)*

Zhang, H., M.A.Bruns, J. Regan, B. Min, and B.E. Logan. 2003. Development of a microbial community in a pilot-scale perchlorate-reducing bioreactor. Poster Pres. 103rd American Society for Microbiology Conference, Washington, DC, May 18-23.

Iyer, P.P., S.W. Van Ginkel, B.E. Logan, M.A. Bruns. 2003. Characterization of hydrogen-producing microbial populations by ribosomal intergenic spacer analysis. Poster Pres. 103rd American Society for Microbiology Conference, Washington, DC, May 18-23.

Salerno, M., E. Watson, D. Velegol, and B.E. Logan. 2003. The importance of bacterial and surface-contact properties on bacterial adhesion: the effects of hydrophobicity, surface charge and

steric effects. Pres. 225th American Chemical Society Annual Meeting, New Orleans, LA, March 24.

Li, B. and B.E. Logan. 2003. Analysis of the role of surface charge and hydrophobicity in the initial adhesion of bacteria to glass surfaces. Pres. 225th American Chemical Society Annual Meeting, New Orleans, LA, March 24.

Li, X. and B.E. Logan. 2003. Measuring bacterial adhesion using atomic force microscopy. Pres. 225th American Chemical Society Annual Meeting, New Orleans, LA, March 24.

Steinberg, L. and B.E. Logan. 2003. The chlorate reductase of Pseudomonas sp. PDA is a different enzyme from (per)chlorate reductase of Dechlorosoma sp. KJ". Pres. Sixth Environmental Chemistry Symposium, Penn State University, University Park, March 22. *LS received Best Overall Student Presentation and Best Presentation in the Biogeochemistry section.*

Song, Y. and B.E. Logan. 2003. Inhibitor studies of dissimilative perchlorate reduction by *Dechlorasoma* sp. KJ. Biohydrogen production. Poster Pres. Sixth Environmental Chemistry Symposium, Penn State University, University Park, March 22. *YS received Second Place for her poster in the Environmental Engineering category*.

Schrader, P., Schrader, B.E. Logan, M. Guiltinan and J. Regan. 2003. Genetic Engineering of Clostridium acetobutylicum for Enhanced Production of Hydrogen Gas. Poster Pres. Sixth Environmental Chemistry Symposium, Penn State University, University Park, March 22. *PS received Second Place for his poster in the Environmental Engineering category*.

Van Ginkel, S. and B.E. Logan. 2003. Biohydrogen production. Poster Pres. Sixth Environmental Chemistry Symposium, Penn State University, University Park, March 22.

Zhang, H. and B.E. Logan. 2003. Biohydrogen production. Poster Pres. Sixth Environmental Chemistry Symposium, Penn State University, University Park, March 22.

Li, Xu, and B.E. Logan. 2003. Measuring Bacterial Adhesion using Atomic Force Microscope. Pres. Sixth Environmental Chemistry Symposium, Penn State University, University Park, March 22.

Van Ginkel, S.W., S. Oh, and B.E. Logan. 2003. Hydrogen production using anaerobic wastewater treatment processes. Poster Pres. Hydrogen Day, Penn State University, University Park, PA, February 5. *Award: Received honorable mention*.

Van Ginkel, S.W., S. Oh, and B.E. Logan. 2003. Turning Pennsylvannia's waste into energy. Poster Pres. Hydrogen Day, Penn State University, University Park, PA, February 5.

Oh, S. and B.E. Logan. 2003. Biological hydrogen production using a membrane bioreactor. Poster Pres. Hydrogen Day, Penn State University, University Park, PA, February 5.

Xu, J. P. Schrader, B.E. Logan, M. Guiltinan and J. Regan. 2003. Genetic Engineering of Clostridium acetobutylicum for Enhanced Production of Hydrogen Gas. Poster Pres. Hydrogen Day, Penn State University, University Park, PA, February 5.

Logan, B.E. 2003. The H2E Center at Penn State University. Poster Pres. Hydrogen Day, Penn State University, University Park, PA, February 5.

Logan, B.E. 2003. The COE Environmental Institute. Poster Pres. Hydrogen Day, Penn State University, University Park, PA, February 5.

2002 Steinberg, L, J. Trimble, and B.E. Logan. 2002. The chlorate reductase of *Pseudomonas* sp. PDA is a different enzyme from (per)chlorate reductase of Dechlorosoma sp. KJ. Pres. ABASM meeting, Clarion University, November 16. *(LS received award for second place, best graduate student presentation)*

Van Ginkel, S., and B.E. Logan. 2002. Taking H_2 production to its thermodynamic limits. Pres. ABASM meeting, Clarion University, November 16.

Song, Y., and B.E. Logan. 2002. Acetate-fed reactors and perchlorate biodegradation. Pres. Perchlorate Conference, Ontario, CA, October 16-18.

Logan, B.E., H. Zhang, and M.A. Bruns. 2002. Hydrogen (autotrophic) bioreactors. Pres. Perchlorate Conference, Ontario, CA, October 16-18.

Min, B., P.J. Evans, A. Chu, and B.E. Logan. 2002. Pilot study: Sand medium bioreactors. Pres. Perchlorate Conference, Ontario, CA, October 16-18.

Logan, B.E., B. Min, P. Evans, and A. Chu. 2002. Pilot study: Plastic medium bioreactors. Pres. Perchlorate Conference, Ontario, CA, October 16-18.

Evans, P., B. Min, A. Chu, S. Price, and B.E. Logan. 2002. Scale up and commercialization of the PSU-O4 fixed bed bioreactor technology. Pres. Perchlorate Conference, Ontario, CA, October 16-18.

Van Ginkel, S.W., S. Oh, and B.E. Logan. 2002. Hydrogen production using anaerobic wastewater treatment processes. Pres. 75th Water Environment Federation National Meeting, Chicago, IL, September 28 to October 2.

Logan, B.E., N. Clesceri, and J. Novak. 2002. How to get tenure and develop your own research group identity. Workshop at the AEESP/AAEE Conference, Toronto, Canada, August 10-14.

Logan, B.E. 2002. Using nanoscale (atomic force microscopy) and macroscale (column) measurements to understand bacterial adhesion and transport. Pres. AEESP/AAEE Conference, Toronto, Canada, August 10-14.

Xu, J. and B.E. Logan. 2002. Measurement of chlorite dismutase activity in perchlorate reducing bacteria. Poster pres. Society for Industrial Microbiology Annual Meeting, Philadelphia, PA, August 11-14.

Velegol, S.B., S.T. Pardi, and X. Li. 2002. AFM imaging artifacts due to bacterial cell height and AFM tip geometry. Pres. Colloids Conf., Ann Arbor, MI.

Evans, P., A. Chu, S. Liao, S. Price. B. Min and B.E. Logan. 2002. Pilot testing of a bioreactor for perchlorate-contaminated groundwater treatment. Pres. Third International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA, May 20-23.

Xu, J., J. Trimble, and B.E. Logan. 2002. Perchlorate reduction and denitrification pathways are

separate in perchlorate reducing bacteria. Poster pres. 102nd General Meeting, American Society for Microbiology, Salt Lake City, UT, May 19-23.

Zhang, H.J., M.A. Bruns and B.E. Logan. 2002. Perchlorate reduction by a novel autotrophic hydrogen-oxidizing bacterium. Poster pres. 102nd General Meeting, American Society for Microbiology, Salt Lake City, UT, May 19-23.

Song, Y. and B.E. Logan. 2002. Effect of O2 on perchlorate reduction and recovery of perchlorate degradation following O2 exposure. Poster pres. 102nd General Meeting, American Society for Microbiology, Salt Lake City, UT, May 19-23.

Logan, B.E., S.B. Velegol, X. Li, and S.T. Pardi. 2002. Analysis of molecules at elastic surfaces using atomic force microscopy. Poster pres. 224 ACS National Meeting, Orlando, FL, April 7-11.

Zhang, H.J., MA. Bruns, and B.E. Logan. 2002. Autotrophic perchlorate reduction by a hydrogen-oxidizing bacterium. Poster Pres. Seventeenth Annual Graduate Exhibition, The Pennsylvania State University, University Park, April 23.

Song, Y. and B.E. Logan. 2002. Effect of O_2 Exposure to Perchlorate Reduction by the Perchlorate-Respiring Bacterium *Dechlorosoma* sp. KJ. Poster Pres. Seventeenth Annual Graduate Exhibition, The Pennsylvania State University, University Park, PA, April 23.

Van Ginkel, S., and B.E. Logan. 2002. Continuous biohydrogen production from organic wastewater. Fifth Environmental Chemistry Symposium, Penn State University, University Park, March 23.

Pardi, S. and B.E. Logan. 2002. Changes that bind: immobilizing bacteria for AFM imaging. Fifth Environmental Chemistry Symposium, Penn State University, University Park, March 23.

Li, X., and B.E. Logan 2002. Measuring bacterial adhesion using colloid probe atomic force microscopy. Fifth Environmental Chemistry Symposium, Penn State University, University Park, March 23.

Song, Y. and B.E. Logan. 2002. Effect of O2 on perchlorate reduction and recovery of perchlorate degradation following O2 exposure. Fifth Environmental Chemistry Symposium, Penn State University, University Park, March 23. (*Award for Best Poster Session V*)

Min, B. and B.E. Logan. 2002. Pilot testing of a bioreactor for removing a low concentration of perchlorate from groundwater. Fifth Environmental Chemistry Symposium, Penn State University, University Park, March 23. (*Second Place, Best Poster Session II*)

Watson, E. and B.E. Logan. 2002. Study of the effects of LPS on bacterial transport through porous media. Fifth Environmental Chemistry Symposium, Penn State University, University Park, March 23. (*Award for Best Undergraduate Poster*)

2001 Zhang, H., M.A. Bruns, and B.E. Logan. 2001. Isolation and 16S rRNA analysis of a perchlorate-reducing bacterium that grows on CO_2 and H_2. ABASM Fall Meeting, Indiana, PA, November 9-10.

Van Ginkel, S. and B.E. Logan. 2001. Biological hydrogen production. ABASM Fall Meeting, Indiana, PA, November 9-10.

Xu, J., J. Trimble, and B.E. Logan. 2001. Perchlorate reduction and nitrate reduction are separate enzymatic pathways in *Dechlorosoma* sp. ABASM Fall Meeting, Indiana, PA, November 9-10.

Velegol, S.B., S. Pardi, and B.E. Logan. 2001. Molecular scale analysis of bacterial adhesion forces using atomic force microscopy Pres. 222nd ACS National Meeting, Chicago, Illinois, August 26-30.

Burks, G.A. and B.E. Logan. 2001. Direct measurement of bacterial adhesion to solid surfaces using bacteria with varying outer layer surface composition. Pres. 222nd ACS National Meeting, Chicago, Illinois, August 26-30.

Pardi, S.T. and B.E. Logan. 2001. Methods for bonding colloids to glass surfaces for their analysis using atomic force microscopy. Poster Pres. 75th ACS Colloid and Surface Science Symposium, Pittsburgh, Pennsylvania, June 10-13.

Logan, B.E., K. Kim and S. Price. 2001. Perchlorate degradation in bech- and pilot-scale ex-situ bioreactors. Pres. Sixth International Symposium on In Situ and On-site Bioremediation, June 3-7, San Diego, CA.

Song, Y. and B.E. Logan. 2001. Respiratory pathways used by perchlorate respiring microorganisms. Poster Pres. 101st AFM General Meeting, Orlando, Florida, May 20-24.

Zhang, H. R.F. Unz, and B.E. Logan. 2001. Growth Kinetics and Cell Yields of (Per)Chlorate-Reducing Bacteria. Poster Pres. 101st AFM General Meeting, Orlando, Florida, May 20-24.

Kubicki, J., D. Velegol, J. Chorover, M. Elimelech, and B.E. Logan. 2001. Molecular level analysis of macromolecule-surface interactions in bacterial adhesion. Pres. 221st ACS National Meeting, San Diego, April 1-5.

Zhang, H., B.E. Logan and R. Unz. 2001. Effect of electron acceptors on growth kinetics of perchlorate-reducing bacteria. Poster Pres Forth Environmental Chemistry Symposium, The Pennsylvania State University, University Park, PA, March 17. (Received *Honorable Mention*).

Song, Y. and B.E. Logan. 2001. Respiratory pathways used by perchlorate-respiring microorganisms. Pres. Forth Environmental Chemistry Symposium, The Pennsylvania State University, University Park, PA, March 17. (Received second place in Graduate Student Poster Presentations).

2000 Zhang, H. and B.E. Logan. 2000. Biodegradation kinetics of perchlorate reducing bacteria. ABASM Fall Meeting, State College, PA, October 27-28. (Received second prize, Environmental Microbiology Division).

Kim, K., D. LaPoint, J. Miller, R. Unz and B.E. Logan. 2000. Microbial reduction of perchlorate. Poster Pres. ABASM Fall Meeting, State College, PA, October 27-28.

Min, B. and B.E. Logan. 2000. Headspace BOD test. Poster Pres. ABASM Fall Meeting, State College, PA, October 27-28.

Song,Y. and B.E. Logan. Respiratory pathway used by perchlorate respiring microorganisms. Poster Pres. ABASM Fall Meeting, State College, PA, October 27-28.

Logan, B.E., D. Kohler, and B. Min. 2000. A new method to assess oxygen demand based on the HBOD probe. Pres. 73rd Annual WEFTEC Conference, October 14-18, Anaheim, CA.

Logan, B.E. and K.J. Shellenberger. 2000. Probing chemical-microbiological interactions using atomic force microscopy (AFM). Pres. ACS Annual Meeting, Washington DC, August 20-25.

Zhang, H., K. Kim and B.E. Logan. 2000. Microbial reduction of perchlorate by mixed versus pure cultures. Poster Pres. ACS Annual Meeting, Washington DC, August 20-25.

Britto, R., D. Cowan, A. Jacobs, M. Patel, M. Perlmutter, M. Craig, and B.E. Logan. 2000. Bioremediation of Perchlorate-Contaminated Soil and Groundwater at NWIRP McGregor. Pres. Perchlorate Treatment Technology Workshop, Air Force Pollution Prevention Conference, San Antonio, TX, August 22-24.

Logan, B.E., H. Zhang, J. Wu, and R. Unz. 2000. The potential for in situ perchlorate degradation. Pres. Perchlorate Treatment Technology Workshop, Air Force Pollution Prevention Conference, San Antonio, TX, August 22-24.

Logan, B.E., B. Min, D. Kohler, and J. Brown. 2000. Using an HBOD probe to measure oxygen demands of wastewaters. Pres. CSAWWA/WWOA/CWEA TAC 2000 Conference, August 8-10, Hunt Valley, MD.

Shellenberger, K.J. and B.E. Logan. 2000. Effect of surface roughness and charge heterogeneity on bacterial adhesion. Pres. 74th Colloid and Surface Science Symposium, Lehigh University, Bethlehem, PA, June 19-21.

Camesano, T.A. and B.E. Logan. 2000. Probing electrostatic interactions using atomic force microscopy and implications for bacterial adhesion. Pres. 74th Colloid and Surface Science Symposium, Lehigh University, Bethlehem, PA, June 19-21.

Perlmutter, M.W., R. Britto, J.D. Cowan, M.Craig, and B.E. Logan. 2000. Concept to pilot-scale: ex situ biotreatment of perchlorate-contaminated soil and groundwater. Pres. 93rd Annual Air and Waste Management Conference and Exhibition, Salt Lake City, June 18-22.

Kim, K., D. LaPoint, J. Miller, R. Unz and B.E. Logan. 2000. Microbial treatment of perchlorate contaminated water. Poster Pres. AWWA Conference, Denver, CO, June 11-15.

Min, B., D. Kohler, J. Brown and B.E. Logan. 2000. Using an HBOD probe to measure oxygen demands of wastewaters. Pres. 72nd Pennsylvania Water Environment Association Annual Conference, June 11-14, State College, PA.

Wu, J. and B.E. Logan. 2000. The abundance of (per)chlorate reducing bacteria in the natural environment. Pres. 72nd Pennsylvania Water Environment Association Annual Conference, June 11-14, State College, PA.

Logan, B.E., H. Zhang, J. Wu, and R. Unz. 2000. The potential for in situ perchlorate degradation. Pres. Second Inter. Conf. on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA, May 22-26.

Logan, B.E., K. Kim, J. Miller, D. LaPoint, and R. Unz. 2000. Sustained perchlorate degradation by

hydrogen- and acetate-oxidizing bioreactors. Poster Pres. Second Inter. Conf. on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA, May 22-26.

Britto, R., M Patel, M. Perlmutter and B.E. Logan. 2000. Fixed bed anaerobic bioremediation of perchlorate-contamianted groundwater. Pres. Second Inter. Conf. on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA, May 22-26.

Patel, M, M. Perlmutter, J. Winningham, and B.E. Logan. 2000. Anaerobic bioremediation of perchlorate-contaminated soil. Poster Pres. Second Inter. Conf. on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA, May 22-26.

Logan, B.E. and S.S. Koenigsberg. 2000. The potential for in situ perchlorate degradation. Pres. 26th Environmental Symposium & Exhibition, National Defense Industrial Association, Long Beach, CA, March 27-30.

Perlmutter, J. R. Britto, J.D. Cowan, A. Jacobs, M. Patel, M. Craig, and B.E. Logan. 2000. Bioremediation of perchlorate-contaminated groundwater at Naval weapons industrial reserve plant McGregor, Texas. Pres. 26th Environmental Symposium & Exhibition, National Defense Industrial Association, Long Beach, CA, March 27-30, pp. 792-797.

Wu, J and B.E. Logan. 2000. The abundance of (per)chlorate reducing bacteria in the natural environment and the application of chlorate reducing bacteria to degrade BTEX. Poster pres. Third Environmental Chemistry Symposium, The Pennsylvania State University, University Park, PA, February 26. (Received *Honorable Mention*).

1999 Logan, B.E. 1999. Using atomic force microscopy to understand factors affecting bacterial transport in porous media. *Invited Seminar*, Dept. of Civil and Environmental Engineering, Washington State University, Pullman, WA. November 15.

Camesano, T.A., A.A. DeSantis, J.C. Baygents, and B.E. Logan. 1999.Probing bacterial adhesion forces using atomic force microscopy. Pres. AIChE Annual Meeting, Dallas, TX, October 31-November 5.

Camesano, T.A., A.A. DeSantis, J.C. Baygents, and B.E. Logan. 1999. Measuring bacterial adhesion interaction forces using atomic force microscopy and implications for bacterial adhesion in porous media. Poster Pres. 218th ACS Meeting, New Orleans, LA, August 22-26.

Logan, B.E., K. Kim, J. Miller, P. Mulvaney, H. Zhang, and R. Unz. 1999. Factors affecting biodegradation of perchlorate contaminated waters. Pres. 218th ACS Meeting, New Orleans, LA, August 22-26.

Kim, K. and B.E. Logan. 1999. Microbial treatment of perchlorate contaminated water. Poster presented at Environmental Engineering Research Frontiers, AEESP Research Conference, The Pennsylvania State University, University Park, PA, August 1-3.

Camesano, T.A and B.E. Logan. 1999. Measuring bacterial interaction forces using atomic force microscopy and implications for bacterial adhesion in porous media. Poster presented at Environmental Engineering Research Frontiers, AEESP Research Conference, The Pennsylvania State University, University Park, PA, August 1-3.

Camesano, T.A., and B.E. Logan. 1999. Measuring and modeling bacterial adhesion to surfaces for

safe drinking water. Pres. 71st Annual Conference of the PWEA, Hershey, PA, June 6-9.

Mulvaney, P.T., R.F. Unz, and B.E. Logan. 1999. Reduction of perchlorate by axenic bacteria isolated from wastewater enrichments. Poster Pres. American Society for Microbiology, ASM 99th General Meeting, May 31, Chicago, IL.

Logan, B.E., K. Kim, P. Mulvaney, J. Miller, and R. Unz. 1999. Biological treatment of perchlorate contaminated waters. Pres. Fifth International Symposium of In-situ and On-site Bioremediation, April 19-22, San Diego, CA.

Logan, B.E., T.A. Camesano, B. Rogers, and Y. Fang. 1999. Enhancing bacterial transport to improve subsurface bioaugmentation. Poster Pres. Fifth International Symposium of In-situ and On-site Bioremediation, April 19-22, San Diego, CA.

Logan, B.E., K. Kim, P. Mulvaney, J. Miller, J. Wu, and R. Unz. 1999. Treatment of perchlorate contaminated waters using innovative reactor designs. Pres. Prechlorate Conference, March 18-19, Ontario, CA

Camesano, T.A., M.J. Natan, M.D. Musick, and B.E. Logan. 1999. Atomic force microscope phase-imaging and force measurements of adhesion-modified bacterial cells. Pres. American Chemical Society meeting, Anaheim, CA, March 21-25.

1998 DeSantis, A.A., T.A. Camesano, and B.E. Logan. 1998. Effect of fluid velocity and cell concentration on motile microbial migration in porous media. Extended Abstract, Proc. 217th ACS Meeting, Anaheim, CA, March 22-26.

DeSantis, A.A. and B.E. Logan. 1998. Investigation of motile microbial migration in porous media. Poster Pres. NIEHS/EPA Superfund meeting, Berkeley, CA, October 26-27.

Camesano, T.A. and B.E. Logan. 1998. Correlating bacteria transport in porous media with adhesion forces. Poster Pres. NIEHS/EPA Superfund meeting, Berkeley, CA, October 26-27.

Camesano, T.A., M.D. Musick, M.J. Natan, and B.E. Logan. 1998. Probing bacterial cell morphology and adhesion forces with atomic force microscopy. Poster Pres. American Society for Microbiology, 98th Annual Meeting, Atlanta, GA, May 17-21.

Unice, K. and B.E. Logan. 1998. Modeling attachment and dispersion of colloids in porous media: relating column breakthrough curves to internal measurements of colloid capture. Poster presented at American Association for the Advancement of Science (AAAS) Annual Meeting, February 12-17, 1998, Philadelphia, PA. *(Received Honorable Mention).*

Camesano, T.A. and B.E. Logan. 1998. Transport and Attachment of Bacteria in Porous Media: Blocking and Filter Ripening. Poster presented at American Association for the Advancement of Science (AAAS) Annual Meeting, February 12-17, 1998, Philadelphia, PA. *(Received Honorable Mention).*

1997 Confer, D.R. and B.E. Logan. 1997. A conceptual model describing macromolecule degradation by suspended cultures and biofilms. Pres. 2nd International Conference on Microorganisms in Activated Sludge and Biofilm Processes, July 21-23, Berkeley CA.

1996 Camesano, T.A. and B.E. Logan. 1996. Enhanced bacterial transport through the manipulation of

flow velocity and ionic strength in natural sediments. Pres. AGU Annual Meeting, December 15-18, San Francisco, CA.

Logan, B.E. and R. Patnaik. 1996. A non-dilution BOD test based on analysis using a gas chromatograph: the GC-HBOD test. Pres. WEFTEC '96, the 69th Annual WEF Conference, October 5-9, Dallas, TX.

Li, X. and B.E. Logan. 1996. Poster: Settling velocities and collision frequencies of aggregates. Gordon Research Conference in Environmental Sciences: Water. New Hampton School, N.H., June 23-28.

Camesano, T.A. and B.E. Logan. 1996. The effect of ultra pure water flushing on bacterial transport in natural sediments. Pres. Great Plains Rocky Mountain Hazardous Substance Annual Meeting, Albuquerque, NM, May 21-23.

Logan, B.E., K.L. Ogden, J.C. Baygents, Y. Sun, T.A. Martin, J.R. Glynn and R.G. Arnold. 1996. Microbial and chemical determinant of bacterial mobility in porous media. Pres. 96th ASM meeting, New Orleans, May 19-23.

Patnaik, R. and B.E. Logan. 1996. A non-dilution BOD test based on analysis using a gas chromatograph: the GC-HBOD test. Pres. Arizona Water Pollution Control Federation Meeting, Tucson, AZ, May 2.

Jackson, G.A., R. Maffione, D.K. Costello, A.L. Alldredge, B.E. Logan, and H.G. Dam. Particle size spectra, from 1μm to 1 cm, at Monterey Bay as determined by multiple instruments. Pres. 1996 Ocean Sciences Meeting, AGU, February 12-16, San Diego.

Logan, B.E. 1996. A method to characterize marine colloid distributions using batch ultrafiltration cells. Pres. 1996 Ocean Sciences Meeting, AGU, February 12-16, San Diego.

Li, X. and B.E. Logan. 1996. Settling velocities and collision frequencies of aggregates. Pres. 1996 Ocean Sciences Meeting, AGU, February 12-16, San Diego.

1995 Jewett, D.G., B.E. Logan, R.G. Arnold, and R.C. Bales. 1995. Bacterial transport through variably saturated quartz sand columns. Pres. Geological Society of America (GSA)108th Annual Meeting, New Orleans, LA, Abstracts with Programs, p. A-103

Martin, T.A., Y. Sun, O. Albinger, B.E. Logan, K.L. Ogden, J.C. Baygents, R.G. Arnold. 1995. Factors affecting bacterial transport through aquifer material for the bioremediation of hazardous wastes. Presented at the 1995 Pacific Basin Conference on Hazardous Waste, May 7-12, 1995, Edmonton, Alberta, Canada.

Johnson, W.P., M.J. Martin, M.J. Gross, and B.E. Logan. 1995. Facilitation of bacterial transport through porous media by changes in solution and surface properties. Pres. ACS Symposium on Colloidal and Interfacial Phenomena in Aquatic Systems, April 2-7, Anaheim, CA.

1994 Logan, B.E. 1994. Computer aided design of trickling filters. Pres. ASCE National Conf. Environ. Eng., Boulder, CO, July 11-13.

Logan, B.E., K. Blue, W. Johnson, and R.G. Arnold. 1994. The influence of multiple collisions and slow desorption on bacterial sticking coefficients and dispersion in porous media. Pres. Hazardous

Waste Remediation Conference, June 8-10, Bozeman, MT.

Albinger, O., B.E. Logan, B. Biesemeyer, and R.G. Arnold. 1994. The influence of intra-strain heterogeneity in mono-clonal populations of bacteria on biocolloid transport through porous media. Poster Presented at The Hazardous Waste Remediation Conference, June 8-10, Bozeman, MT.

Logan, B.E., K. Blue and R.G. Arnold. 1994. Slow desorption of bacteria from surfaces produces overestimation of sticking efficiencies. ACS Meeting, Colloidal Processes: Physical and chemical processes controlling contaminant mobility in aquatic environments, San Diego, March 13-16.

Logan, B.E. 1994. Aggregate formation in different fluid mechanical environments analyzed using fractal geometry. Pres. ASLO meeting, February 21, San Diego, CA.

Li, X. and B.E. Logan. 1994. Profiles of particle size distributions and fractal dimensions in Monterey Bay, California. Poster pres. ASLO meeting, February 21, San Diego, CA.

1993 Gross, M.J., R.G. Arnold, B.E. Logan, D.G. Jewett, and O. Albinger. 1993. MARK: a new method for estimating bacterial transport in porous media. Poster Pres. at NIEHS Conf. on Biodegradation: Its Role in Reducing Toxicity and Exposure to Environmental Contaminants, Research Triangle Park, NC, April 26-28.

Jewett, D.G., B.E. Logan, R.G. Arnold, and R.C. Bales. 1993. Quantifying bacterial transport parameters via column experiments: a sensitivity analysis. Poster Pres. at NIEHS Conf. on Biodegradation: Its Role in Reducing Toxicity and Exposure to Environmental Contaminants, Research Triangle Park, NC, April 26-28.

Gross, M.J., R.G. Arnold, B.E. Logan, D.G. Jewett, and O. Albinger. 1993. MARK: a new method for estimating bacterial transport in porous media. Pres. US-Mexico Conf. on Fate, Transport and Interactions of Metals, Tucson, AZ, April 13-16.

Jewett, D.G., B.E. Logan, R.G. Arnold, and R.C. Bales. 1993. Quantifying bacterial transport parameters via column experiments: a sensitivity analysis. Pres. US-Mexico Conf. on Fate, Transport and Interactions of Metals, Tucson, AZ, April 13-16.

Confer, D. and B.E. Logan. 1993. Biodegradation of a model macromolecule (dextran) in continuous culture. Poster Pres. Water Environment Federation Meeting, Los Angeles, CA, October 4-7.

1992 Jewett, D.G., B.E. Logan, R.G. Arnold, and R.C. Bales. 1992. Error analysis of collision efficiency and quantification of column study results. Poster Pres. AGU Meeting, San Francisco, CA, Dec. 7-11.

Logan, B.E. 1992. The HBOD test: a new method for determining biochemical oxygen demand. Pres. Water Environment Federation 65th Annual Conference. New Orleans, LA, Sep. 20-24.

Hilbert, T., B.E. Logan, and R.G. Arnold. 1992. A method to evaluate parameters that affect bacterial transport in porous media. Pres. 68th Annual Meeting, Southwestern and Rocky Mountain Association, American Association for the Advancement of Science, May 17-21.

Jewett, D.G. , R. G. Arnold, R.C. Bales, C.P. Gerba, and B.E. Logan. 1992. Laboratory determination of quantitative descriptors of bacteria and microsphere transport through porous

media. Pres. 68th Annual Meeting, Southwestern and Rocky Mountain Association, American Association for the Advancement of Science, May 17-21.

Logan, B.E., G.M. Haldane and D.R. Confer. 1992. Biodegradation of model macromolecules (proteins and dextrans) in wastewaters. Poster pres. 16th Biennial IAWPRC International Conference, Water Quality '92, Washington, D.C., May 24-30.

Passow, U, B.E. Logan, and A.L. Alldredge. 1992. Assessing the stickiness of several diatom species. Poster, ASLO Meetings, Feb. 8-14, Santa Fe, NM.

1991 Logan, B.E. and B.C. Alleman. Design and use of rotating test tube reactors to study degradation of pentachlorophenol by white rot fungi. Presented at the 91st Annual Meeting, American Society for Microbiology, May 5-9, Dallas, TX.

1990 Alleman, B.C., B.E. Logan, R.L. Gilbertson, and G.L. Amy. 1990. Degradation of pentachlorophenol by selected species of white rot fungi. Presented at Annual Conference of the Water Pollution Control Federation, October 7-11, Washington D.C.
Logan, B.E., D.S. Parker, and R.G. Arnold. 1990. O_2 limitations in CH_4- and NH_4-Utilizing Biofilms. Presented at ASCE Conference in Environmental Engineering, April 8-11, Washington D.C.

Logan, B.E. and D.B. Wilkinson. 1990. Increased microbial uptake with fluid motion. Presented at AGU-ASLO Meetings, February 16, New Orleans, LA.

Wilkinson, D.B. and B.E. Logan. 1990. Fractal nature of marine snow and other biological aggregates. Presented at AGU-ASLO Meetings, February 16, New Orleans, LA.

1988 Logan, B.E., A. Steele, and R.G. Arnold. 1988. Computer simulation of DDT distribution in Palos Verdes Shelf sediments: predicting the fate of sediment contaminants. Pres. at the Meeting of the NRC Committee on Contaminated Marine Sediments, May 31- June 2, 1988, Tampa, FL.

Logan, B.E. 1988. Advective flow through permeable aggregates. Ocean Sciences Meeting, ASLO, January 18-22, New Orleans, LA.

Arnold, R.G., and B.E. Logan. 1987. Computer Simulation of Palos Verdes Sediment Profiles. Presented at the Sediment Dynamics Workshop, Oct. 19-21, Los Angeles, CA.

1987 Logan, B.E., S.W. Hermanowicz and D.S. Parker. 1987. A fundamental model for trickling filter process design. Presented at the 59th Wat. Pollut. Control Fed. Meet., October 6-9, 1986, Los Angeles, CA.

1985 Logan, B.E. 1985. Advective flow through microbial aggregates. West Coast Water Chemistry Workshop Conference, April 20-21, Stanford University, CA.

1984 Hunt, J.R., and B.E. Logan. 1984. Bioflocculation as a microbial response to substrate limitations. Presented at the 188th Meeting of the American Chemical Society, Division of Microbial and Biochemical Technology, Philadelphia, PA.

1980 Logan, B.E., and C. Kleinstreuer. 1980. A dynamic computer simulation model for impact assessment of fish impingement. Presented at the 5th National Workshop on Entrainment and Impingement, May 5-7, 1988, San Francisco, CA.

STUDENTS

Ph.D. Students (32 total: 28 graduated, 4 ongoing)

In progress

- Rachel Taylor (2020-present). Using RO membranes in water electrolyzers.
- Chenghan Xie (2022-present). Improving the performance of RO membranes in water electrolyers.
- Amir Akbari (2022-present). Electrochemical nutrient Recovery
- Arash Emdadi (2022-present). Electromembranes for resource recovery.

2023 Cross, Nicholas. Characterization and development of the all-aqueous thermally regenerative ammonia battery. (degree in Chemical Engineering).

2017 Rahimi, Mohammad (Mim). Thermally regenerative ammonia batteries for converting low-grade waste heat to electricity. (degree in Cheimcal Engineering).

Ye, Yaoli. 2017. The effect of buffer charge and buffer retention on bioelectrochemical systems and post-treatment for microbial fuel cell effluent with fluidized membrane bioreactors.

2016 Yang, Wulin. 2016. Development and optimization of activated carbon air cathode towards scale up applications of microbial fuel cells.

2014 Hatzell, Marta. 2014. Energy generation from natural and synthetic salinity gradients through reverse electrodialysis and capacitive mixing. (degree in Mechanical and Nuclar Engineering). (*NSF Fellow, 2011-2014*).

Yates, Matthew. 2014. Sustainable resource recovery and energy conversion processes using microbial electrochemical technologies.

Ren, Lijiao. 2014. Examination of bioelectrochemical systems with different configurations for wastewater treatment.

2013 Cusick, Roland. 2013. Nutrient and heat recovery from waste streams using microbial electrochemical technologies. (*Received an Alumni Association Dissertation Award, 2013, from Penn State University*).

Watson, Valerie. 2013. Characterization and performance of activated carbon catalysts and polymer membrane layers for microbial fuel cell cathodes and an analysis of power overshoot. (*NSF Fellow*, 2008-11).

2012 Wagner, Rachel. 2012. Methane production and methanogenic communities in microbial electrolysis cells, anodic potential influence on microbial fuel cells, and a method to entrap microbes on an electrode. (*NSF Fellow*, 2007-10).

Zhang, Fang. Development of novel cathode materials and optimization of electrode performance towards scaling-up applications of microbial fuel cells.

2011 Call, Douglas. 2011. Development of a scalable microbial electrolysis cell and investigations of exoelectrogenic pure and mixed communities. (*NSF Fellow,* 2008-11). (*Received an Alumni Association Dissertation Award, 2011, from Penn State University*).

2009 Selembo, Priscilla. 2009. Microbial electrolysis cells: Hydrogen production from glycerol and alternative cathode materials. (co-advised; Chemical Engineering).

2008 Zuo, Yi. 2008. Novel electrochemical material applications and exoelectrogenic bacteria isolation from microbial fuel cells (MFCs). (*Received an Alumni Association Dissertation Award, 2008, from Penn State University*).

Rezaei, Farzaneh. Electricity from biomass using microbial fuel cells. (co-advised; Ag&Biosystems Engineering).

2006 Kim, Jung-Rae. 2006. Development of microbial fuel cells (MFCs) using efficient acclimation and various substrates.

2005 Min, Booki. 2005. Perchlorate remediation using packed-bed bioreactors and electricity generation

in microbial fuel cells (MFCs).
Salerno, Mike. 2005. Hydrophobic and electrostatic factors in microbial adhesion. (In Chemical Engineering; Co-advised with D. Velegol, Chemical Engineering)
Van Ginkel, Stephen. 2005. Optimization of hydrogen production from food processing wastewaters.
Zhang, Husen. 2005. Analysis of microbial communities and design of bioreactors used for perchlorate remediation and biohydrogen production. (Co-advised with M.A Bruns)
2004 Song, Yanguang. 2004. Analysis of respiratory enzymes used by perchlorate-respiring bacteria.
2000 Camesano, Terri. 2000. An investigation of bacterial interaction forces and bacterial adhesion to porous media.
Fang, Yan. 2000. Effect of air sparging and blocking on colloidal transport in porous media. (Co-advised)
1996 Li, Xiaoyan 1996. Coagulation between fractal aggregates and small particles and fractal properties of marine particles. (*Received the Parsons Engineering Science/AEEP 1997 Outstanding Doctoral Dissertation Award*.)
Confer, David R. 1996. Degradation of model macromolecules (proteins and polysaccharides) in wastewaters.
1995 Jewett, David G. 1995. Bacterial transport in variably saturated porous media.
1992 Jiang, Qing 1992. Fractal structure of aggregates induced by shear motion.
1991 Alleman, Bruce C. 1991. Degradation of pentachlorophenol by selected species of white rot fungi.

M.S. Students (65 graduated)
2020 Fonseca, Emmanuel. Improving microbial electrolysis stability using flow-through brush electrodes and monitoring anode potentials relative to theoretical minima.
Lawson, Kathryn. Cathode/catholyte impacts on power density and anode performance in microbial fuel cells.
2019 Cario, Ben. 2019. Evaluating the impact of substrate composition, reactor configuration, and operating conditions on the performance of bioelectrochemical systems treating fermentation effluents.
2017 Zikmund, Emily. 2017. Anode and electrolyte selection to improve hydrogen recovery in microbial electrolysis cells.
2016 LaBarge, Nicole L. 2016. Effects of acclimation methods on anaerobic fluidized bed membrane bioreactors and methanogenic microbial electrolysis cells.
2015 Stager, Jennifer. 2015. Impact of anode-separator configurations and cathode materials on microbial fuel cell performance.
Wallack, Maxwell. 2015. Reducing nitrogen crossover in microbial reverse electrodialysis fuel cells by using ion exchange resin.
2014 Hoskins, Daniel. 2014. Salinity effects on polyvinyl alcohol separators and the use of spray-on separarators in air-cathode microbial fuel cells.
Ullery, Mark. 2014. Screening and acclimation methods for accomplishing treatment and energy recovery from wastewater in microbial electrolysis cells.
2013 Lanas, Vanessa. 2013. Examination of brush anode sizes and packing densities on microbial fuel cell performance.
Davis, Robert. 2013. Increasing desalination by mitigating anolyte pH imbalance using catholyte effluent addition in a multi-anode, bench-scale microbial desalination cell.
2012 Zaybak, Zehra. 2012. Start-up methods for the development of carbon dioxide fixing and biofuel producing biocathodes in bioelectrochemical systems.
Wei, Bin. 2012. Electrochemical studies of separators and activated carbon cathodes in single chamber, air-cathode microbial fuel cells.
2011 Hayes, Sarah. 2011. Performance of membrane and electrode assembly microbial fuel cells using activated carbon cathodes with various diffusion layers.

Hutchinson, Adam. 2011. Effect of carbon fiber brush anode surface area on single chamber MFC start up time and internal resistance.

Yates, Matthew. Bacteria in MFCs (*NSF Fellow,* 2010-2013). Convergent development of microbial communities in microbial fuel cells.

2010 Ambler, Jack. 2010. Redox conditions in MFCs. Stainless steel 304 and bicarbonate buffer performance in a microbial electrolysis cell using a new method for gas characterization.

Cusick, Roland. 2010. A comparison of energy recovered from MFCs and MECs fed winery and domestic wastewater and the performance of a pilot-scale continuous flow MEC fed winery wastewater.

Rader, Geoffrey. 2010. Effect of long-term operation on MFC performance and the performance of a scale-up continuous flow MEC with an examination of methods to decrease CH_4 production.

Zhang, Fang. 2010. Novel cathode materials for microbial fuel cells.

Zhang, Yimin. 2010. The use and optimization of stainless steel mesh cathodes in microbial electrolysis cells.

2009 Winslow, Charles. 2009. Bacterial adhesion to metal oxide surfaces in the presence of natural organic matter.

Watson, Valerie. 2009. *Shewanella oneidensis* MR-1 compared to mixed cultures for electricity production in four different microbial fuel cell configurations.

2008 Call, Douglas. 2008. Hydrogen production in a microbial electrolysis cell lacking a membrane. (*Recieved the Montgomery-Watson-Harza Consulting Engineers/AEESP Masters Thesis Award, First Place, 2009*)

Lalaurette, Elodie. 2008. Hydrogen production from cellulose fermentation end products using microbial electrolysis cells.

2005 Heilman, Jenna. Microbial fuel cells: Proteinaceous substrates and hydrogen production using domestic wastewater.

Pouliott, Jill. 2005. Using colloid force microscopy to understand bacterial adhesion.

Paramonova, Ekatarina. 2005. Measurement and analysis of bacterial removal by granular activated carbon.

2004 Cho, Yunchul. 2004. Using atomic force microscopy to understand the role of polysaccharides in bacterial adhesion

2003 Li, Xu. 2003. Bacterial adhesion measured using colloid probe AFM.

Steinberg, Lisa. 2003. Enzymes used by (per)chlorate respiring bacteria.

2002 Pardi, Shaun. 2002. Investigation of bacterial extracellular polymeric substances utilizing an atomic force microscope with newly developed deflection curve acquisition and analysis protocol

2001 Min, Booki. 2000. HBOD measurements using a new HBOD probe.

2000 LaPoint, Dina M. 2000. Factors affecting perchlorate removal rates in autotrophic packed bed reactors.

Zhang, Husen 2000. Pure culture kinetics and cell yields of (per)chlorate reducing bacteria.

Shellenberger, Karl. 2000. The effect of surface roughness and charge heterogeneity on bacterial adhesion.

Wu, Jun 2000. The abundance and growth of (per)chlorate reducing bacteria using different substrates

1999 Kim, Kijung 1999. Microbial treatment of perchlorate-contaminated water

DeSantis, Amanda 1999. An investigation of the effect of motility and cell concentration on the migration of bacteria through porous media.

Miller, Joel. 1999. Bioreduction of perchlorate under hydrogen-oxidizing conditions.

Mulvaney, Peter 1999. Perchlorate and chlorate reduction by axenic cultures (Primary Advisor: Unz)

1998 Unice, Kenny 1998. Quantifying and evaluating dispersion in bacterial transport through porous media

1997 Olsen, Shari 1997. Consortium and pure culture kinetics of chlorate reducing microorganisms.

Camesano, Terri 1997. Enhancing bacterial transport in porous media by manipulation of flow velocity, cell concentration and solution ionic strength.
Rogers, Brock 1997. Bacterial transport through NAPL-contaminated porous media.
1996 Haldane, Greg 1996. The biodegradation of large and small molecular weight carbohydrates.
Wagenseller, Gretchen 1996. Molecular size distributions of soluble biochemical oxygen demand and dissolved organic carbon in in trickling filter wastewaters.
Bliven, Adam 1996. Chlorate respiring bacteria: isolation, identification, and effects on environmentally significant substrates.
Patnaik, Rabi 1996. Oxygen demand tests and mixed-culture bioreactor studies using chlorate (ClO_3^-) as an electron acceptor.
Li, Qun 1996. Effects of surfactants, soil types and microbial strains on bacterial transport.
1995 Johnson, Clifford 1995. Settling velocities of fractal aggregates.
Martin, Mike 1995. Using a single diameter to represent grain size distributions for modeling bacterial transport in porous media.
1994 Aiken, Brian S. 1994. The effect of ammonium lignosulphonates on growth, lignin peroxidase enzyme expression, and PCP degradation by white rot fungi.
Fleury, Robert C. 1994. Thymidine and leucine incorporation as indicators of bacterial activity and the kinetics of glucose uptake.
Blue, Karen 1994. Modeling the effects of slow desorption on bacterial transport in porous media.
1993 Gross, Mark 1993. Effects of selected chemical treatments on bacterial transport through porous media.
1992 Kilps, John 1992. Fractal aggregates generated in different fluid mechanical environments
Hilbert, Tom 1992. Screening bacteria for adhesion in porous media.
1991 Vogel, Catherine 1991. Biodegradation of aromatic compounds in the presence of secondary substrates.
Confer, David R.1991. Effect of fluid shear on biodegradation of macromolecules.
1989 Wilkinson, Daniel 1989. Fractal nature of biological aggregates.
1988 Miller, Stanley 1988. Mass separation techniques for the design of fixed film bioreactors.
Phillips, David 1988. Acclimation of mixed cultures for phenol biodegradation.

M.Eng Students (non thesis) (3 total)
2019 Fogarty, Jacob
2019 Khanal, Sishir
2013 Price, Caroline

Postdoctoral Researchers and Research Scientists (47 total, 45 completed, 2 ongoing)
In progress: Bian, Bin. 2022-present.
Yu, Najiaowa. 2023-present
Zhou, Xuechen. 2022-present
2022 Rossi, Ruggero. 2017-2022. Scaling up MECs (Research Assistant Professor).
Shi, Le. 2019-2022. Electrochemical desalination.
2021 Baek, Gahyun. 2020-2021. Microbial electrolysis cells and anaerobic digestion.
Bi, Xiangyu. 2021. Battery electrode deionization.
Rossi, Ruggero. 2017-2021.Scaling up MFCs.
2019 Son, Moon. 2017-present. Electroactive membranes for desalination.
Yang, Wulin. 2016-present. MFC Cathodes and reactive membranes.
2018 Kim, Young-Keol. 2014-2018. Scaling up MECs and MFCs.
Kim, TaeYoung. 2015-2018. Capacitive mixing batteries
2017 Myung, Jaewook. 2016-2017. Scaling up MFCs.
2016 Zhu, Xiupeng. 2011-2016. Electrochemical analysis of MFCs.
Watson, Valerie. 2013-2016. Scaling up MECs.

Yilmazel, Yasemin. 2014-2016. Electromethanogenesis.
2015 Liu, Jia. 2013-2015. Novel types of bioelectrochemical reactors.
2014 Zhang, Fang. 2012-2014. Cathodes for MFCs and thermal batteries.
Ahn, Yongtae. 2010-2014. Continuous flow MFCs and wastewater treatment.
Geisse, Geoff. 2012-2014. Membranes in MFCs, MECs, and MRCs.
Hou, Huijie. 2012-2014. Power maximization in MFCs.
Siegert, Michael. 2012-2014. Treatability studies and electromethanogenesis.
Zhang, Xiaoyuan. 2012-2014. Scaling up MFCs.
2013 Chen, Guang. 2010-2013. Polymers used in MFCs.
Ivanoff, Ivan. 2012-2013. Catalysts for MECs.
2012 Kim, Younggy. 2010-2012. Development of MRCs.
Call, Douglas. 2011-2012. Electromethanogenic reactors.
Tokash, Justin. 2010-2012. Electrochemical modeling of MFCs and MECs.
Nam, Joo-Youn. 2010-2012. New architectures for MFCs.
Pisciotta, John. 2010-2012. Microbial electrosynthesis.
2011 Hong, Yiying. 2009 – 2010. Chemistry of MFCs.
2010 Keily, Patrick, 2008-2010. Microbial communities in MFCs.
Saito, Tomonori. 2008-2010. Polymer binders for MFCs.
Mehanna, Maha, 2009-2010. Microbial desalination cells.
Cheng, Shaoan. 2004-2010. Materials for MFCs.
Merrill, Matt. 2007-2010. Electrochemistry of MECs.
2009 Xing, Defeng. 2006-2009. Molecular biology of microbial fuel cells.
2006 Oh, Sang-Eun, 2002-2006. Biohydrogen and electricity production.
Ma, Huilian. 2005-2006. Bacterial adhesion to surfaces using macroscale and AFM tests.
2005 Liu, Hong. 2003-2005. Electricity production in microbial fuel cells.
Vadillo-Rodriguez, Virginia. 2004-2005. Using AFM to study microbial adhesion.
Xu, Lichong. 2004-2005. Bioadhesion analysis using AFM.
2004 Trimble, John. 2001-2004 (summers only). Biohydrogen production
2003 Xu, Jianlin. 2001-2003. Respiratory enzymes used for perchlorate degradation.
Li, Baikun. 2002-2003. Bacterial adhesion to float glass and fiber surfaces.
2001 Burks, Glenn. 2001. Bacterial adhesion.
Velegol, Stephanie. 2001. Atomic force microscopy.
1995 Johnson, William. 1994-1995. Bacterial transport.

Visiting Scholars (47 completed)
2020 Greener, Jesse (Associate Professor, Laval University, Quebec, Canada). 1/16/20-3/30/20
Mendoza, Erika (Sonora Technical University, Mexico), Fulbrighter. 8/1/19 to 1/31/20
2019 Rios, Fabian (Universidad Industrial de Santander, Columbia), Fulbrighter. 8/8/19-12/30/20
Wang, Xu (Wuhan University), 3/22/18 to 6/21/19
Santiago, Sanneri (PhD student, University of Puerto Rico, Mayaguez Campus).
2017 Cotterill, Sarah (PhD, University of Newcastle), Fulbrighter, 8/18/17 – 12/21/17.
Huang, Liping (Dalian University, China; Associate Professor). 9/1/17-2/1/18.
2016 Artan Onat, Tuba (Prof., Nigde University, Turkey), 6/1/16 – 8/31/16
Martinez, Claudia (PhD, Instituto Potosino de Investigación Científica y Tecnológica, IPICYT, Mexico), 3/1/16 – 12/1/16.
Rossi, Ruggero (PhD, University of Bologna), 5/2/16 – 10/31/16
Ren, Patrick (PhD, Tsingua University), 9/15/15 – 9/15/16
Rivaland, Caroline (Univ. French West Indies), 9/15/15 – 2/15/16
Tian, Yushi (PhD, Harbin Institute of Technology), 10/10/14 – 10/9/16
2015 Szymona, Karolina (Warsaw University of Life Sciences), 7/6/15 – 9/6/15
He, Weihua (Harbin Institute of Technology), 2/1/13 – 2/1/15

Wu, Shijia (Tsinghua University), 9/1/14 – 9/1/15
2014 Sido, Alexander (University of Freiburg, Germany)
2013 Luo, Xi (Tsinghua University), 8/10/12 – 8/23/13
Li, Xiu-Fen (Jiangnin University), 8/1/12 – 7/31/13
2012 Ribot, Edgar (Automomous University of Barcelona), 8/22/11 – 1/31/12
Xia, Xue (Tsinghua University, China). 8/22/11 – 9/10/12
Fei, Yang (Southeast University of China) 9-15-11 – 8-31-12
Sun, Dan (Harbin Institute of Technology, China). 3/10/10-1/31/12.
Mink, Justine. KAUST. Summer 2012
Anandarao, Hari. KAUST. Summer 2012.
2011 Tencar, Alberto (Milan Technical Institute, Italy). 1-7-11 to 7-31-11
Yang, Qiao (Harbin Institute of Technology, China). 3/10/10-1/31/11.
2010 Liu, Guangli (Sun-Yat Sen University, China). 10/09-9/10.
Werner, Craig- KAUST 7/10 – 10/10
Chehab, Noura- KAUST 6/10 – 8/10
Riojas, Jhonathan- KAUST 6/10 – 8/10
2009 Zhang, Xiaoyuan (Graduate researcher, Tsinghua University). 9/08 – 9/09
Wang, Xin (Graduate researcher, Harbin Institute of Technology). 9/08-9/09
Wang, Xi (Graduate researcher, University of Hong Kong). 2/1/09-6/31/09
2008 Liu, YongDi. (East China Univ Sci and Technology, China). Microbial fuel cells. 11/07-5/08.
Huang, Liping. (Dalian University, China; Associate Professor). 6/07-5/08
Ahn, Young-Ho. (Yeungnam University, Korea). Microbial fuel cells. 7/07-5/08
Velasquez-Orta, Sharon (University of Newcastle, UK). 5/08-8/08.
2007 Kim, HonKeung (Kongju National University, Korea; Professor). Wastewater treatment (10/06-12/07)
Feng, Yujie (Harbin Institute of Technology, China; Professor). Microbial fuel cells. 10/06-10/07.
Nam, Joo-Youn (KAIST, Korea; student) Microbial fuel cells. 2-4/07.
Ishii, Shunichi (Marine Biology Institute, Japan; student). Microbial fuel cells. 1-2/07.
2006 Coenen, Markus (University of Brausweig, Germany: diplome student). Biological hydrogen production. 8-12/06.
Wu, Eileen (University of Newcastle, UK; graduate student). Biofuel cells. 10/06-2/07.
2005 Stein, Neinke (The Netherlands). Microbial fuel cells. (11/05-2/06).
2004 Park, Wooshin (KAIST, Korea: graduate student). Biological hydrogen production. 6-11/04.
2003 Zhang, Jian-jun (University of Hong Kong, China; graduate student). Physical characterization of biological aggregates produced in a biohydrogen reactor. 2-5/03.
2001 Oh, Sangeun (KAIST, Korea; graduate student). Biological perchlorate reduction. 8-10/01.
1999 Serra, Teresa (University of Girona, Spain: graduate student). Coagulation between particles and fractal biological aggregates. 1-5/99.

Undergraduate researchers (since 1997) (23 completed)
2023 Fisher, Matthew
2022 Nicolas, Joseph
2021 Hyung, Gihoon. (2021)
2020 Kolvek, Eric (2018-2020)
Grube, Alyssa (2019-2020)
2019 Shelby Hall
Elizabeth (Elli) Grube
2016 Kelly Kowalski
2015 Zach Schoener, Sumit Pareek
2014 Danielle Stenko; Scott Berman
2010 Sikandar Porter Gill; Daniel Slotcavage

2009 Tim Roberts (with Mike Hickner)
2008 Harrison Zeff
2007 Harrison Zeff, Eric Zeikle
2006 Garett Estadt, Joshua Middaugh, Jeff Carey, Aaron Redding.
2005 Erica Zerfoss, Garett Estadt, Joshua Middaugh
2004 Erica Zerfoss
2003 Katherine Houeruf, Megan Hamilton, Courtney Calhoun, Erica Zerfoss
2002 David Salabsky, Ben Lindenmuth, Ekatarina Watson, Amy Kuhn, Jason Imes
2001 Elizabeth Marcantonio
2000 David Kohler, Shannon Gority, Adrienne Elkin
1999 Neal Uspal, Angela Bagley
1998 Katherine Becker

Researchers advised or co-advised at other universities (10 completed)
2020. Wu, Jing. Harbin Institute of Technology, China.
Lv, Miao. Harbin Institute of Technology, China.
2019 Ragab, Ala'a. King Abdulla University of Science and Technology (KAUST), Saudi Arabia.
Yang, Lishan. Harbin Institute of Technology, China.
Song, Xiangru. Harbin Institute of Technology, China.
2017 He, Weihua. Harbin Institute of Technology, China.
Luan, Yunbo. Harbin Institute of Technology, China.
2016 Anandarao, Hari. King Abdulla University of Science and Technology (KAUST), Saudi Arabia.
2015 Shehab, Noura. King Abdulla University of Science and Technology (KAUST), Saudi Arabia.
2014 Werner, Craig. King Abdulla University of Science and Technology (KAUST), Saudi Arabia.
Mink, Justine. King Abdulla University of Science and Technology (KAUST), Saudi Arabia.
2013 Yang, Qiao. Harbin Institute of Technology, China.
Qu, Youpeng. Harbin Institute of Technology, China.

SERVICE TO THE UNIVERSITY AND THE PROFESSION

- Advisory Committees, Board of Directors

- Novo Nordisk Foundation CO_2 Research Center (NNF CORC), Advisory Board (2022-2025)
- Naval Research Laboratory External Review Committee for BioMolecular Materials, Chemistry of Materials S&T Program, July 10-11, 2018.
- RED Heat-to-Power Project, The Netherlands. Advisory Board Member (2015- 2018)
- National Science Foundation (NSF) Advisory Committees
  - Environmental Research and Education (NSF-AC/ERE)
    - First term: 2002-2005; Second term: 2010-2014
    - Chair (Second term): 2013-2014
  - Engineering Directorate: 2010- 2014
- National Science Foundation (NSF) External Evaluation Committees
  - Chair, Committee of Visitors (COV) for Chemical, Bioengineering, Environmental, & Transport Systems (CBET) Division (2012)
- Environmental Science & Technology Advisory Board (American Chemical Society): 2007-2012
- Emefcy LLC. Board of Directors (2010-2016).
- Cambrian Innovations (formerly IntAct Labs): Board of Directors, 2009-2014.
- National Hydrogen Association (NHA) Board Activities
  - Board of Directors (2005-2010)
  - Executive Committee of the Board of Directors (2006-2009)
- Hydrogen Education Foundation (HEF)

- Board of Directors (2006-2008)
- Secretary (2006-2008)
- Association of Environmental Engineering Professors (AEESP):
- Board of Directors (1995-1998)
- President (1997-1998), Past-President (1999-1998), and Vice President (1996-1997)

Societies and Professional Organizations

- International Society for Microbial Electrochemistry and Technology (ISMET)
- President, Board Member, and founding member: 2011-2013
- Committee to assist regional and international conferences (2013-present)
- Chinese Environmental Scholars & Professionals
- Honorary advisor (2009-present)
- National Hydrogen Association (NHA)
- Nomination Committee (2005, 2007)
- University working group committee (2005-2007)
- National Conference Planning Committee (2003-2006)
- Education and Outreach Committee (2003-2005)
- Association of Environmental Engineering Professors (AEESP):
- AEESP Fellows Selection Committee (2014-2018)
- ACS/AEESP Special Session Organizing Committee. (Chair 2002- 2004; member 2002-2008)
- Strategic Planning Committee (2002)
- Long Range Planning Committee (2001 – 2002)
- AEESP liason to the American Chemical Society (2001-2003)
- Nominating committee (1999-2001; Chair: 1999)
- Latin American Initiatives (1996-1997)
- Long Range Planning Committee (Chair, 1993-1995, 1996-1997)
- Syllabus Committee (Chair, 1993-1996)
- Workshop and Conference Review Committee (1994-1995)
- Water Environment Federation
- BOD Task Force (1996 to present)
- Design Manual Reviewer:
- Water Environment Federation's Design of Municipal Wastewater Treatment Plants, MOP 8, (1996-1997)
- Water Environment Federation's Manual of Practice: Aerobic Fixed Film Wastewater Treatment Systems (1992-1994)
- Water Environment Federation's Design of Municipal Wastewater Treatment Plants (1991)
- American Society for Microbiology (ASM):
- Public and Science Affairs Board, Committee on Environmental Microbiology (2004-2016)
- Waters Review Committee (2007-2009)

Conferences and Workshops

- Conferences Organized: Conference Chair

- Energy Days, Penn State, Penn State University, May 25-26, 2022. Co-chair with Lara Fowler.
- Grand Challenges and Opportunities in Environmental Engineering and Science in the 21st Century, Yale University, June 13, 2015. Co-chair with Bill Cooper.
- Third North American meeting of the International Society for Microbial Electrochemistry and Technologies (NA-ISMET), May 2014, Penn State. Co-chairs: B.E. Logan, J.M. Regan.
- First International Symposium on Microbial Fuel Cells, May 27-29, 2008, Penn State University. (Conference Chairs: B.E. Logan, J.M. Regan)
- Hydrogen Day at Penn State:
- November 14, 2006 (Conference Chair)

- October 25, 2004 (Conference Chair)
- February 5, 2003 (Conference Chair)

- National Hydrogen Association Board of Directors Retreat, July 17-18, 2007, Penn State (Chair)
- AEESP Research and Education Conference, Penn State University, (1998) (Conference chairs: B.E. Logan, F. Cannon)

- Conferences Organized: Organizing, Scientific, Programming Committee

- 17th World Congress on Anaerobic Digestion Conference, Ann Arbor, MI, June 19-22. (Scientific committee)
- Capacitive Deionization and Electrosorption (CDI&E) Conference, Virtual, May 12-13. (Organizing committee, 2020-2021).
- Energy Days, Penn State University/Virtual, May 19-20. (Co-chair, Organizing Committee).
- European International International Society for Microbial Electrochemistry and Technology (EU-ISMET), Girona, Spain, September 14th-16th, 2021 (Scientific Advisory Committee, 2019-2021)
- The 16th IAW World Congress on Anaerobic Digestion, Delft, Netherlands, June 23-27, 2019 (Scientific Advisory Committee. (2018-2019).
- European International International Society for Microbial Electrochemistry and Technology (EU-ISMET), Newcastle, UK, September 12-14, 2016. (Scientific Advisory Committee, 2016-2018).
- International Conference on Environmental Pollution and Health, Nakai University, Tianjin, China, May 18-20 (Organizing committee).
- World Congress on Anaerobic Digestion, International Water Association (IWA), International Advisory Committee, October 17-20, Beijing, China
- International International Society for Microbial Electrochemistry and Technology (ISMET), University of Lisboa, Lisbon, Portugal. October 3-6, 2017.
- North America International International Society for Microbial Electrochemistry and Technology (NA-ISMET), Stanford University, Palo Alto, CA, October 5-7, 2016. (Scientific Advisory Committee).
- European International International Society for Microbial Electrochemistry and Technology (EU-ISMET), Rome, Italy, September 26-28, 2016. (Scientific Advisory Committee).
- Asia Pacific International International Society for Microbial Electrochemistry and Technology (AP-ISMET), Busan, South Korea, Aug. 31-Sep.2, 2016. (Scientific Advisory Committee).
- International Society for Microbial Electrochemistry and Technologies (ISMET) 5th International Meeting, October 1-4, 2015, Tempe, AZ (Scientific Advisory Committee).
- Second International Conference on Salinity Gradient Energy, September 10-12, 2014, Leeuwarden, The Netherlands (Scientific Advisory Committee).
- Francqui Workshop on Microbial Fuel Cells, Ghent, Belgium, November 22 (Scientific Advisory Committee).
- North American International Society of Microbial Electrochemical Technologies (NA-ISMET), Cornell University, Ithaca, NY, October 8-10, 2012 (Scientific Advisory Committee and Organizing Committee)
- The 2011 (11th) International Conference on Clean Energy (ICCE), November 2-5, Feng Chia University, Taichung, Taiwan (International Advisory Board Member).
- Third International Microbial Fuel Cell Conference, June 6-8, 2011, Leuuwarden, The Netherlands (Scientific Advisory Committee)
- The 2010 Asian Bio-Hydrogen Symposium and APEC Advanced Bio-Hydrogen Technology Conference, November 15-20, 2010, Feng Chia University, Taichung, Taiwan, (International Organizing Committee)
- Second International Microbial Fuel Cell Conference, June 10-12, 2009, Gwangju, Korea (Program Committee)

- International Symposium on Microbial Fuel Cells, November 3-4, 2008, Harbin Institute of Technology, China (Organizing Committee)
- Bioenergy - I: From Concept to Commercial Processes, March 5-10, 2006, Tomar, Portugal (Organizing Committee)
- AEEP/AAEE Joint Education Conference, University of Maine, Orano (1996) (Organizing Committee)

-Conference Sessions Organized:

- Creating and exploiting salinity gradients. C.A Gorski, M. Mauter, and B.E. Logan. 252nd American Chemical Society National Meeting and Exposition, Philadelphia, PA, August 21-25 (2016)
- ES&T at 50, D. Sedlak, B.E. Logan. 250th American Chemical Society Meeting and Exposition, San Diego, CA, March 16 (2015).
- Energy Sustainability of the Water Infrastructure using Microbial Fuel Cell Technologies, American Chemical Society National Meeting and Exposition, San Francisco, CA, March 21-25 (2010)
- Bioelectricity or Biohydrogen Production, Crossover 2007: Fields to Wheels, Penn State University, September 4-5 (2007).
- Fuel Cell Technology: Biofuel Cells, Enzymatic and Microbial Microbial Fuel Cells, American Chemical Society, Boston, MA, August 19-23 (2007)
- Bioenergy production, American Chemical Society, Philadelphia, PA, August 22-26 (2004).
- Microbial Hydrogen Production, Society for Industrial Microbiology, Minneapolis, MN, August 11-14 (2003).
- Microbial Adhesion, 225th American Chemical Society Annual Meeting, New Orleans, LA, March 24 (2003)
- Biological Perchlorate Reduction, The Perchlorate Conference, Ontario California, October 16-18. (2002)
- How to get tenure and develop your own research group identity, AEESP/AAEE Conference, Toronto, Canada) (2001)
- Analysis of Environmental Phenomena at Molecular Scales, American Chemical Society Annual Conference, Chicago, IL (2001)

- Conference Session Chairs:

- North American International Society of Microbial Electrochemical Technologies (NA-ISMET), Cornell University, Ithaca, NY, October 8-10, 2012, Session 3.
- Bioelectricity or Biohydrogen Production, Crossover 2007: Fields to Wheels, Penn State University, September 4-5, 2007.
- Fuel Cell Technology: Biofuel Cells, Enzymatic and Microbial Fuel Cells, American Chemical Society, Boston, MA, August 19-23 (2007)
- Bioenergy production", American Chemical Society, Philadelphia, PA, August 22-26 (2004).
- Fundamental Studies of Microbial Adhesion, American Chemical Society 78th Colloids and Surfaces Symposium, Yale University, CT, June 20-24 (2004).
- Education and Training, National Hydrogen Association 15th Annual meeting, Los Angeles, CA, April 26-29 (2004).
- Microbial Hydrogen Production, Society for Industrial Microbiology, Minneapolis, MN, August 11-14 (2003).
- Microbial Adhesion, 225th American Chemical Society Annual Meeting, New Orleans, LA, March 24 (2003)
- Biological Perchlorate Reduction, The Perchlorate Conference, Ontario California, October 16-18 (2002).
- Getting Tenure, AEESP/AAEE Conference, Toronto, Canada (2001)

- Analysis of Environmental Phenomena at Molecular Scales, American Chemical Society Annual Conference, Chicago, IL (2001).
- Perchlorate remediation, Battelle Conference, In situ and on site Bioremediation, San Diego (2001)
- Bioprocessing, Joint ASM/SGM Meeting, University of Aberdeen, Scotland (1995)
- Wastewater treatment, International Association of Water Quality Meeting, Washington DC (1993)

Journal Editorial and Advisory Board Activities

- Editor, Environmental Science & Technology Letters (2013-2019)
- Editorial Advisory Board, Frontiers in Environmental Science & Engineering (FESE) (2012-present)
- Associate Editor, Environmental Science & Technology (2012 to 2013)
- Associate Editor, Bioresource Technology (2010-2013)
- Associate Editor, Environmental Engineering Science (1997-2013).
- Associate Editor, ASCE Journal of Environmental Engineering (2000-2003).
- Guest Editor (with DJ Lee), Special issue, Bioresource Technology (2010)
- Guest Editor, Focus issue, Environmental Science & Technology (2006)
- Ad-hoc Committee on Energy & Environment (Environmental Science & Technology, 2008; Chair)

Journal Reviewer

ACS Applied Materials Interface Science
ACS Nano
ACS Sustainable Chemistry and Engineering
Advances in Environmental Research (AER)
Advances in Space Research
Analytical Chemistry
Antoine van Leeuwenhoek Journal of Microbiology
Applied Biochemistry and Biotechnology
Applied Catalysis B: Environmental
Applied and Environmental Microbiology (ASM)
Applied Hydrogeology
Applied Microbiology and Biotechnology
Biochemical Engineering Journal
Bioelectrochemistry
Biodegradation
Bioinspiration & Biomimetics
Biomedical Engineering Online
Biophysics Journal
Bioremediation Journal
Bioresource Technology
Biosensors & Bioelectronics
Biotechnology and Bioengineering
Biotechnology Journal
Biotechnology Progress
Canadian Journal of Chemical Engineering
Canadian Journal of Water Pollution Control Federation
Chemical & Biochemical Engineering Journal
Chemical & Biochemical Engineering Quarterly
Chemical Engineering Reviews

Chemical Engineering Society
Chemosphere
ChemElectroChem
ChemPhysChem
ChemSusChem
Colloids and Surfaces A. Physicochemical and Engineering Aspects
Colloids and Surfaces B: Biointerfaces
Crit. Rev. Environ. Sci. Technol.
Deep-Sea Research I
Deep-Sea Research II
Desalination
Desalination and Water Treatment
EES Catalysis
Electrochemistry Communications
Electrochimica Acta
Energies
Energy & Environmental Science
Energy & Fuels
Environmental Engineering Science (EES)
Environmental Microbiology
Environmental Pollution
Environmental Science and Pollution Research (ESPR)
Environmental Science and Technology (ES&T)
Environmental Science: Water Research and Technology
Environmental Technology
Enzymes and Microbial Technology
EOS
Estuarine, Coastal and Shelf Science
Extremophiles
FEMS Microbiology Letters
FEMS Microbial Ecology
Fuel Cells
Geochimica et Cosmochimica Acta
Hazardous Wastes and Hazardous Materials Journal
Hydrological Processes
Industrial and Engineering Chemistry
International J. Energy Research
International J. Hydrogen Association
International J. Phytoremediation
J. Air and Waste Management Association
J. American Water Works Association (JAWWA)
J. Applied Chemistry
J. Applied Microbiology
J. Applied Polymer Science
J. Applied Space Research
J. Biotechnology
J. Chemical Technology and Biotechnology
J. Cleaner Production
J. Colloid and Interface Science (JCIS)
J. Environmental Engineering ASCE (JEE)
J. Environmental Quality

J. Environmental Management
J. Environmental Monitoring
J. Geophysical Research
J. Hazardous Materials
J. Industrial Microbiology & Biotechnology (JIM&B)
J. ISME
J. Micromechanics and Microengineering
J. Microscopy
J. Netherlands Research
J. Physical Chemistry
J. Power sources
Journal of Professional Issues in Engineering Education and Practice
Langmuir
Limnology and Oceanography (L&O)
Marine Biology
Marine Chemistry
Microbiological Research
Microbiology
Nano Letters
Nanotechnology
Nature
Nature Biotechnology
Nature Reviews Microbiology
Nature Scientific Reports
Oceanography and Marine Biology Reviews
Proceedings of the National Academy of Science (PNAS)
Process Biochemistry
Soil Biochemistry
Soil Biology and Biochemistry
Trends in Biotechnology
Water Environment Research
Water Research
Water Resources Research
Water Science and Technology

Penn State University

- **University Activities**
  - Institutes of the Environment (IEE), Associate Director (2019-present)
  - Search Committee, Chair, CIES Faculty (2019-2020)
  - Energy 2100 Steering Committee, Chair (2019-2021)
  - Evan Pugh Professor Evaluation Committee for the University, Member. (2019 – 2020)
  - Search Committee, Vice President for Research (2017-2018)
  - Director, Hydrogen Energy (H_2E) Center (2002-present)
  - Institutes of the Environment Advisory Committee (2004-present)
  - Faculty Scholar Medal Selection Committee (2013-2016)
  - Committee on Renewables, Nuclear and Other Novel Energy Resources (2015-2016)
  - Sustainability Institute Review Task Force (2015)
  - PSIEE Co-funded faculty review committee (2014)
  - Global Engagement Network (GEN) Committees:
    - Tsinghua GEN Coordinating Committee (2012-present)
    - Petrobras GEN Coordinating Committee (2012-present)

- Environmental Advisory Board Member, Penn State Harrisburg (1997-2009)
- Search Committee, Chemistry department (2008-2009; 2009-2010)
- Vice President for Research (VPR) Promotion Review Committee (2004- 2006)
- Environmental Consortium Advisory Committee (2002-2004)
- Search Committee, Director of the Environmental Consortium (EC) (2001)
- Steering Committee, Biogeochemical Research Initiative in Education (1999-2004)
- Environmental Sciences Strategic Initiative, College of Engineering Representative (1998-1999)
- Steering Committee, Center for Environmental Chemistry and Geochemistry, College of Engineering Representative (1998-2000)
- Board member of Fulbright Association, Central Pennsylvania Chapter (1998-current).

- **College Activities**
  - Director, Engineering Energy & Environmental Institute (E^3I) (2009-present)
  - Search Committee (Chair): Associate Director for Research and Infrastructure (2014)
  - Review committee for Diefenderder Professorship and Art Glenn Professorship applicants, Department of Mechanical and Nuclear Engineering (2010 – 2011)
  - Director, Engineering Environmental Institute (EEI) (2005-2009)
  - Director, College of Engineering (COE) Environmental Institute (2000-2005)
  - Penn State Engineering Society (PSES Award Selection Committee (2006-2007; 2008-2009; 2009-2010; 2010-2011)
  - COE Energy Task Group (2007-2008)
  - Chemical Engineering Professorships and Chairs Committee (2005)
  - Promotion and Tenure Committee, College of Engineering (2000-2002; Chair, 2001-2002)
  - Search committee, Faculty position in Agriculture and Biosystems Engineering (2002-2004)
  - Environmental Consortium Ad hoc Committee (1999)

- Department of Civil & Environmental Engineering Activities
- Mentoring Committee, Member, 2017-2021
- Promotion and Tenure Committee
  - Member, 2019-2021, 2016-2018, 2014-2016, 2005-2009, 1998-2000.
  - Chair, 2007-08; 2008-09
- Department Head Search Committee (2015)
- Faculty Advisory Committee (2004-2013, 2015-2018)
- Coordinator for Environmental Engineering Program (1997-2003)
- Executive Committee, Environmental Engineering Representative (1997-2000)
- Advisory Committee, Environmental Engineering Representative (2000-2003)
- Search committees- Chaired
  - Department of Civil Engineering, Environmental and Water Resources (EWR) (Chair: 2010-2011)
  - PSIEE co-funded position in Membranes for Energy, Civil & Environmental Engineering and Chemical Engineering (Chair: 2009-2010)
  - Environmental Microtechnology Faculty Position (Chair; 2000)
- Search committees- Member
  - Department Head, 2014-2015
  - Environmental and Water Resources Facilty positions (2011-2012)
  - Department Head (2004-2005)
  - Hydrosystems Faculty Position (2000)
- Kappe Lecture in CEE and Chemistry: 2016-2017
- Environmental Engineering Seminar Series Coordinator (1997-current)
- Workload Committee (Chair, 2003; member, 2001-2003)
- Climate Committee (2001- 2003)

- Curriculum committee (1998-1999)
- Graduate studies / Recruitment Committee (1998- 2003)
- PhD Rules and Regulations Ad Hoc Committee Chair (1998)
- Graduate studies / Recruitment (1998- 1999)
- Ad hoc committee to MS and PhD Requirements for Environmental Engineering Graduate Students (1997-1998)

University of Arizona Committees

- Five Year Review of Chemical and Environmental Engineering Department Head (1996)
- Engineering and Mines Ad Hoc Budgetary Committee (1993)
- Engineering and Mines Ad Hoc Undergraduate Education Committee (1993)
- Executive Committee, Superfund Basic Research and Training program (1996-1999)
- Biotechnology Advisory Board (1989-current)
- Biotechnology Director Search Committee (1992 - 1993)
- Biotechnology Training Grant Steering Committee (1993)
- Small Grants Review Committee (1988; Chair 1989-1991);
- Graduate Council Exam Representative (1988)
- Environmental Engineering Graduate Admissions Committee (Member, 1986-present; Chairman, 1992- 1994)
- Faculty Search Committee (1994-1995; 1996-1997)
- Safety Committee (Chairman, 1995-1997)
- Undergraduate Curriculum Committee (1993-1997)
- Department Reorganization Committee (1992-1994)

FUNDED RESEARCH- Ongoing

Accelerating technology development of microbial electrosynthesis to convert CO_2 to natural gas (methane) at scale. Aarhus University (Novo Nordisk Foundation). January 1, 2023-December 31, 2025. $350,419.

Novel microbial electrolysis cell design for efficient hydrogen generation from wastewaters. (PI: Logan). US Department of Energy. September 15, 2021 – September 14, 2025. $1,250,000 ($250,000 cost share).

Enabling hydrogen gas production from seawater using electrolytes contained by reverse osmosis membranes. (PI: Logan, Co-PIs C.A. Gorski, M Hickner). National Science Foundation, September 1, 2020 – August 31, 2023. $300,000.

Phase II IUCRC at The Pennsylvania State University: Center for Membrane Science, Engineering and Technology (MAST), National Science Foundation. PI: A.L. Zydney; co-PIs: M. Kumar, B.E. Logan, E.D. Gomez, M.A. Hickner. February 1, 2019 – January 31, 2024. $500,000.

Water and Nutrient recycling: A decision tool and synergistic innovative technology. (PI: Logan). USDA NIFA (University of Arkansas). August 1, 2021 – July 31, 2023. $411,819.

FUNDED RESEARCH- Completed

Development of an All-Aqueous Thermally Regenerative Redox Flow Battery to Support Fossil Fuel Assets. (PI: Derek Hall, co-PIs Lvov, Rau, Logan). US Department of Energy. January 1, 2021 – December 31, 2022). $312,881.

Course development: Energy Use, Climate Change, and Our Engineered Infrastructure. (PI: Logan). Roe Fund for a Just and Sustainable Future, Sustainability Institute, Penn State University, May 10, 2022 – June 30, 2023. $4,500.

Materials and configurations for improved desalination performance using battery electrode deionization (BDI). (PI: Logan, co-PI C.A. Gorski). Collaborative Research Grants: U.S. – Egypt S&T Joint Fund Cycle 19, administered by the US National Academies of Science. August 1, 2019 – July 30, 2022. $194,128.

Energy 2100: Ensuring a carbon-neutral, global energy economy. (PI: Logan). Strategic Initiative funds, Penn State University. $250,000. July 1, 2018 – June 30, 2021.

Hybrid microbial fuel cell-biofiltration system for energy neutral wastewater treatment. (PI: Logan). Environmental Security Technology Certification Program, through the U.S. Army Engineering Research and Development Center, June 15, 2016 – June 14, 2021. $571,821.

Low energy CO_2 conversion and utilization in steel industry. (PI: Logan). K1-MET, October 1, 2020 – March 31, 2021. $23,698.

Renewable Energy Art and Design. (PI: Mihyu Kang; co-PI: Logan). Seed grant from Institutes of Energy & Environment (IEE). $30,000. April 1, 2020 – August 31, 2021.

SusChem: Manganese oxide supercapacitor charging/discharging mechanisms to capture energy using capacitive mixing (CapMix). (PI: C.A. Gorski; co-PI: Logan). National Science Foundation. September 1, 2016 – August 31, 2020. $330,000.

Greener desalination technologies by reducing RO membrane biofouling and developing alternative low-energy technologies. King Abdullah University of Science and Technology (KAUST). (PI: Logan). July 1, 2018 - June 30, 2019. $250,000.

Utilizing hydrotropes to increase flow battery storage densities. PI: C.A. Gorski, co-PIs: R. Hickey, B.E. Logan. Institutes of Energy and Environment, Seed grant. March 1, 2018 – December 31, 2018. $25,000.

Configurations and materials to improve hydrogen gas production in microbial electrolysis cells. (PI: Logan). National Renewable Energy Laboratory, Golden, CO. December 1, 2015 – January 15, 2019.

Resource Recovery from Wastewater with Bioelectrochemical Systems (PI: Ian Head, University of Newcastle). Resource Recovery from Waste Programme, Natural Environment Research Council (NERC), UK.

Improving RO desalination and new desalination approaches. King Abdullah University of Science and Technology (KAUST). (PI: Logan). July 1, 2017 - June 30, 2018. $250,000.

Removal of nutrients from anaerobic wastewaters. King Abdullah University of Science and Technology (KAUST). (PI: Logan). July 1, 2016-June 30, 2017. $100,000.

MRI-PSIEE Seed: pH-Gradient Flow batteries for generating electricity from waste CO_2 streams. Materials Research Institute Seed Grant Program. (PI: Gorski, co-PI Logan). June 1, 2016-May 31, 2017. $10,000.

Energy sustainable wastewater treatment systems for forward operating bases based on microbial fuel cells. (PI: Logan). Strategic Environmental Research and Development Program (SERDP). July 18, 2012 – December 31, 2016. $1,010,617

Capturing Electrical current via mechanisms used for interspecies electron transfer to produce methane (PIs: Spormann, Logan). Global Climate and Energy Project (GCEP), Stanford University. September 1, 2012 to August 31, 2016. $2,001,436 total (25% to Logan, $487,847)

Development of microaerobic fluidized membrane bioreactors to improve the effectiveness of wastewater treatment using microbial fuel cells. King Abdullah University of Science and Technology (KAUST). (PI: Logan). July 1, 2015-June 30, 2016. $209,000.

EAGER: SusChem: Enhanced electricity production from engineered salinity gradients using capacitive mixing. (PIs: Logan, Gorski). National Science Foundation. March 20, 2015-March 19, 2016. $130,000 total (60% to Logan, $78,000).

Configurations and materials to improve hydrogen gas production in microbial electrolysis cells. (PI: Logan). National Renewable Energy Laboratory, Golden, CO. December 1, 2014 –November 31, 2015. $150,000

Bioelectrochemical integration of waste heat recovery, waste-to-energy conversion, and waste-to-chemical conversion with industrial gas and chemical manufacturing processes (Subcontract, Logan). Air Products and Chemicals Inc. (via Department of Energy). September 1, 2012 – January 1, 2015. $326,691 to Penn State.

Electrochemically Assisted Microbial Fermentation of Acetate. (PI: Logan). National Renewable Energy Laboratory, Golden, CO. January 1, 2013 – September 30, 2014. $125,000.

Energy sustainability for water infrastructure and agriculture (PI: Logan). Global Research Partnerships (GRP) Award from the King Abdullah University of Science and Technology (KAUST), Saudia Arabia. May 1, 2008 – September 30, 2014. $10,000,000.

Support for the North American International Society for Microbial Electrochemical Technologies meetings. US Army Research Office. (PIs: L. Angenent and B.E. Logan). September 15, 2012 – September 14, 2014. $30,525.

A novel pilot-scale application for bio-hydrogen fermentation of starch wastewater industry and synthesize of new materials for chemical storage of hydrogen. USDA-Egypt Joint Science and Technology Program. August 1, 2011 to May 15, 2014. $119,498.

BioEnergy Production. (PI: Logan). Frank Annuzio Award in Alternative Energy Sources. $25,000.

Evaluation of refinery and other oily wastewaters for power production in microbial fuel cells. Chevron. May 1, 2012 – June 30, 2013. $90,000.

Interspecies electron transfer in biotechnology. PIs: D.J. Batstone and K. Rabaey. Collaborators: B.E. Logan, C. Picioreanu, and A.J. Stams. Australian Research Council, 2009-2013. (No direct funding to Penn State)

Motility as a means to understand prokaryotic function in the biosphere. PI: J.G. Mitchell; with A. Ball, R. Lal, B.E. Logan, R. Stocker. Australian Researc Councl, 2010-2013. (No direct funding to Penn State)

Microbial electrolysis cell for hydrogen gas production. (PI: Logan). National Renewable Energy Laboratory, Golden, CO. March 1, 2012 – February 28, 2013. $60,000.

REU Site: Chemical Energy Storage and Conversion. National Science Foundation. (PI: M.J. Janik; B.E. Logan included as senior personnel). May 1, 2010 – April 30, 2013, $270,113.

Treatability of different industrial wastewaters evaluated using microbial electrolysis cells. (PI: Logan). Air Products and Chemicals, Inc., March 1, 2012 – June 31, 2012. Unrestricted grant, $20,000

Electrochemical modeling and EIS evaluation of microbial electrolysis cells-2. Air Products and Chemicals, Inc., March 1, 2011 – February 28. 2012. $60,000.

Development of *Rhodobacter* as a versatile platform for fuels production. (PI: W Curtis; with J. Chapelle, B.E. Logan). ArpaE, June 2010 – May 2012. $1,500,000 (15%).

Hydrogen production in tubular cathodes. National Renewable Energy Laboratory, Golden, CO. April 1, 2010 - June 31, 2011. $76,767.

Scaling up microbial fuel cells. Siemens Corporation. June 7, 2010 to September 30, 2011. $100,000.

Electrochemical modeling and EIS evaluation of microbial electrolysis cells. Air Products and Chemicals, Inc., March 1, 2010 – February 28. 2011. $60,000.

Harvesting energy from wastewater treatment. (PI: Logan). Paul L. Busch Award, Water Environment Research Foundation (WERF). November 1, 2004 to December 31, 2009. $100,000.

Analysis of bench-scale microbial electrolysis cells. National Renewable Energy Laboratory, Golden, CO. August 1, 2009- March 31, 2010. $40,000.

Evaluation of hydrogen production from a food industry wastewater stream in bench- and pilot-scale microbial electrolysis tests. Air Products and Chemicals, Inc., March 1, 2009 – February 28. 2010. $55,000.

Microbial fuel cell architectures for a new wastewater treatment system. (PI: Logan), National Science Foundation. September 1, 2007 to August 31, 2010. $250,000.

Electrochemically assisted microbial fermentation of acetate. (PI: Logan). National Renewable Energy Laboratory, Golden, CO. August 2007-January 2009. $130,000.

Evaluation of MFCs for animal wastewater treatment. (PI Logan). Agrakey Solutions, October 2, 2008 to May 31, 2009.

Microbial electrolysis cell architectures and feedstock tests (PI: Logan), Air Products and Chemicals, Inc., March 1, 2008 – February 28. 2009. $110,984

Isolation and analysis of novel electrochemically active bacteria for enhanced power generation in microbial fuel cells (PIs: B.E. Logan and J.M. Regan). Air Force Office of Scientific Research. June 1, 2006 to April 30, 2009. $386,552.

Microbial fuel cell symposium. (PI: B.E. Logan, J.M. Regan). National Science Foundation. March 1, 2008- December 31, 2008. $60,000.

Travel support to microbial fuel cell symposium attendees. (B.E. Logan). Office of Naval Research. March 1, 2008 – December 31, 2008. $4990.

Improving power generation in microbial fuel cells. (PI: Logan), National Science Foundation. November 15, 2004- October 31, 2008. $509,342.

Testing and evaluation of system materials for creating a scalable bioelectrochemically assisted microbial reactor (BEAMR). (PI: Logan), Air Products and Chemicals, Inc. March 1, 2007 to February 28, 2008. $110,219.

High yield hydrogen production from waste biomass. (PI: Logan), Air Products. March 1, 2006 to February 28, 2007. $60,000.

Treatability study of American Eagle paper effluent stream for use as feedstock for microbial fuel cell operations. (PIs: B.E. Logan and T.L. Richard). American Eagle Paper Mills. August 1, 2007 to December 31, 2007. $7,500.

In Situ Bioremediation of Perchlorate in Vadose Zone Soil using Gaseous Electron Donors (PI: P.J. Evans, CDM; PSU PIs: R. Brennan, B.E. Logan). ESTCP. January 2005 to December 2007. $90,000 PSU subcontract ($750,000 project total).

EMSI- Center for Environmental Kinetics Analysis (CEKA). (PI: Sue Brantley. Personnel: W. Burgos, B. Dempsey, P. Heaney, J. Kubicki, B. Logan, M. Maroto-Valer, C. Martine, K. Merz, K. Mueller, K. Osseo-Asare and M. Tien). National Science Foundation. September 1, 2004 – August 31, 2009. $6,750,000.

Novel microbial hydrogen production from biomass containing wastewater. (PI: Logan). Subcontract to Ion Power for an SBIR (Department of Energy, Topic: Biological solutions for reducing atmospheric carbon dioxide and producing fuels). March – September, 2007. $30,000.

Bacterial adhesion to uncoated and coated glass surfaces analyzed using batch adhesion tests and AFM. PPG Inc., May 1, 2005 to August 31, 2006. $78,362.

Coupled processes for bioenergy production: biological hydrogen linked with microbial fuel cells. (PIs: Regan, Logan, Guiltinen), US Department of Agriculture, Sept. 2003 to August, 2006). $790,798.

Molecular level analysis of macromolecule-surface interactions in bacterial adhesion. (Co PIs: Velegol, Kubicki, Chorover, Elimelech), National Science Foundation. September 15, 2000 to September 14, 2005. $2,562,537.

Demonstration of an operational hydrogen fueling station. (PIs: J. Anstrom, Z. Rado, B.E. Logan). Pennsylvania DEP and Pennsylvania DCED. April 1, 2004 to June 30, 2005. $487,656 (cash) and $846,744 (match).

Biological hydrogen production as a sustainable green technology for pollution prevention. (Co PI: M.A. Bruns). National Science Foundation, January 15, 2002 to January 14, 2005. $375,000

The Biogeochemical Research Initiative for Education (BRIE). (PIs: Brantley, Freeman, Brenchley). National Science Foundation. July 1, 1999 - June 31, 2007. $2,699,997

Isolation and characterization of microbes selected for in wastewater microbial fuel cells. (PIs: M. Tien, J. Regan, B. Logan). Research Initiation Grant, Co-funded by the Center for Environmental Chemistry and Geochemistry and the Hydrogen Energy Center. June 2004 to June 2005. $14,000.

Measurement and analysis of microbial sticking coefficient for water treatment materials. Proctor and Gamble. June 1, 2003 – December 31, 2004. $94,100.

SGER: Determination of the potential for direct generation of electricity from wastewater using a microbial fuel cell. (PIs: Logan, Mallouk). National Science Foundation. June 1, 2003 – May 31, 2004. $86,937.

Interaction of bacteria with uncoated and coated surfaces- Phase 2. PPG, Inc. May 2003 to August, 2004. $66,214.

Respiratory enzymes used for perchlorate reduction. National Science Foundation. September 15, 2000 - August 14, 2004. $399,984.

Biofuel Cell research. (PIs: B.E. Logan, J. Regan, G. Ferry and M. Pishko). PSU Life Sciences

Consortium Seed Grant Program, July 1, 2003 to June 30, 2004, $60,000.

Interaction of bacteria with uncoated and coated surfaces- Phase 1. PPG, Inc. January 16, 2002 to January 15, 2003. $64,648.

Development of a test to measure bacterial sticking coefficients for activated carbon. Proctor and Gamble. January 1, 2003 – December 31, 2004. $10,000.

A complete pilot-scale reactor for treating perchlorate-contaminated drinking water. American Water Works Association Research Foundation (AWWARF): Phase 3. November 15, 2002 to May 31, 2003. $100,000

ACS-PRF-Travel Grant: Molecular Level Aspects of Bacterial Adhesion, Transport, and Biofilm formation. PIs: D. Velegol, B.E. Logan, and J. Kubicki. January to April, 2003. $5900.

Genetic Engineering of *Clostridium acetobutylicum* for Enhanced Production of Hydrogen Gas for Use as a Clean Fuel Source. (PIs: J. Regan, M. Guiltinan, B.E. Logan). PSU Life Sciences Consortium Seed Grant Program, July 1, 2002 to June 30, 2002, $42,500.

Biological hydrogen production in a bioreactor. US Filter Corp., July 15, 2002 to July 14, 2003. $50,000.

Research Opportunity Award (ROA) for Visiting Scholars to work on an existing NSF Project. National Science Foundation, March 26, 2001 to August 14, 2003. $28,137.

Field testing a bioreactor system to treat low-concentration perchlorate-contaminated water. American Water Works Association Research Foundation (AWWARF): Phase 2. November 15, 2000 to November 14, 2002. $450,000

Corporate Gift: In support of the H_2E Center. Regenesis Corp., September 28, 2000 – December 2001. $10,000.

Association of Environmental Engineering and Science Professors Research Frontiers Conference, July 31-August 3, 1999 at Pennsylvania State University. (Co-PI: Cannon). National Science Foundation. April 1, 1999 - March 31, 2000. $30,000.

Application of bioreactor systems to low-concentration perchlorate-contaminated water: Phase 1. American Water Works Association Research Foundation (AWWARF). November 15, 1998-November 14, 2000 $422,000.

Corporate Gift: Testing the Regenesis HRC for Use in Perchlorate Remediation Regenesis Corp., May 14, 1999. $12,000.

Biodegradation of Subsurface Pollutants by Chlorate-Respiring Microorganisms, (PI: Logan, Co-PI: Unz) National Science Foundation. March 1, 1998 - February 28, 2001. $379,414.

Environmental Engineering Frontiers Workshop National Science Foundation. September 1997 - August 1999. $24,250.

Bacterial Transport in Saturated, Unsaturated, and Air-Sparged Porous Media. National Institute of Environmental Health Sciences. March 1995- February 2000. $618,995.

Renovation of the University of Arizona Environmental Engineering Bioprocessing Laboratory. National Science Foundation, Academic Research and Infrastructure (ARI) Program and the University of Arizona, December 1996- February 1998. $320,000

Cell Culture and Bioprocessing Core. (Co-PI: D. Carter). National Institute of Environmental Health Sciences, March 1995- February 2000. $393,672

Use of a Novel Electron Acceptor for Stimulating Bioremediation. National Science Foundation, May 1994- June 1995. $50,000

Using Fractal Geometry to Study Phytoplankton Blooms and Coagulation Events. Office of Naval Research, December 1994- November 1996. $92,104

The Use of Air Sparging to Remediate Contaminated Soils. University of Arizona Foundation and the Office of the Vice President for Research, June 1994-May 1995. $4,000

Transport of Biocolloids in the Subsurface. (Co-PI: C.P. Gerba, R.C. Bales, R.G. Arnold). National Institute of Environmental Health Sciences, Mar. 1992- Feb. 1995. $445,248.

Characterization of Aggregates and Coagulation Processes Using Fractal Geometry. Office of Naval Research, December 1990- November 1994. $403,330

Transport of subsurface biocolloids in porous media. (Co-PI: R.C. Bales, R.G. Arnold and C.P. Gerba).

Department of Energy, October 1991 - December 1994. $300,000.

Physical and Optical Characterization of (Bio) Particles: Coagulation, Growth and Adhesion. (Co-PI: G.L. Amy and R.G. Arnold). National Science Foundation, Engineering Research Equipment Grant, June 1990. $65,333

In-situ Bioremediation via Sequential Treatments. (Co-PI: R.G. Arnold). National Institute of Environmental Health Sciences, Mar. 1990- Feb. 1992. $103,932

Biodegradation of Macromolecules in Complex Wastewaters. National Science Foundation, March 1990-August 1993. $285,162

Aerobic Biodegradation of Chlorinated Aromatics. ITT Rayonier Inc., September 1988 - December 1990. $65,000

Bioremediation of Groundwater, Equipment and Supplies Grant. United States Air Force, January 1988-December 1988. $6,300

Effects of Fluid Environment on Uptake Kinetics. Office of Naval Research, July 1988 - July 1990. $125,000

Factors Affecting Uptake Kinetics of Microorganisms in Permeable Aggregates. American Chemical Society, Petroleum Research Fund, September 1987- September 1989. $18,000

Corporate Gift: Mass Separation Techniques for Computer Aided Design of Trickling Filters. B.S. Flocor Ltd., March 1987- August 1988. $14,000

Separation Techniques for the Design of Fixed Film Bioreactors. University of Arizona Foundation and the Office of the Vice President for Research, November 1986 - November 1987. $4,945