

**LISA ALVAREZ-COHEN**  
Fred and Claire Sauer Professor  
Civil and Environmental Engineering Department  
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**EDUCATION:**

*Ph.D., Environmental Engineering and Science* 1991  
Stanford University, Palo Alto, CA  
*Thesis Research:* Cometabolic Biotransformation of Trichloroethylene and Chloroform by Methanotrophs:  
Experimental Studies and Modeling of Toxicity and Sorption Effects

*M.S., Environmental Engineering and Science* 1985  
Stanford University, Palo Alto, CA

*B.A., Engineering and Applied Science* 1984  
Harvard College, Cambridge, MA

**EMPLOYMENT HISTORY:**

*Fred and Claire Sauer Professor, Environmental Engineering* 7/00 - present  
University of California, Berkeley, CA  
Teaching duties include graduate and undergraduate courses in environmental microbiology, environmental biological processes, and environmental engineering. Current research areas include microbial ecology of bioremediation communities, bioleaching communities and anaerobic wastewater treatment communities. Targeted environmental contaminants include chlorinated solvents, 1,4-dioxane, perfluorinated compounds, NDMA, and PBDEs. Focus on integration of genomic, transcriptomic, proteomic and isotopic analyses to study interactions within microbial communities.

*Chair of the Civil and Environmental Engineering Dept.* 7/07 – 7/12  
University of California, Berkeley, CA

*Assistant/Associate Professor, Environmental Engineering* 7/91 – 6/00  
University of California, Berkeley, CA

*Faculty Scientist, Ecology Dept., Earth Sciences Division* 8/92 - present  
Lawrence Berkeley National Laboratory, Berkeley, CA

*President's Post-Doctoral Research Fellow* 1/91 - 12/91  
University of California, Berkeley, CA

*Research Assistant/Teaching Assistant* 1/86 - 12/90  
Stanford University, Palo Alto, CA

*Environmental Engineer* 6/85 - 9/85  
Brown and Caldwell Consulting Engineers, Pleasant Hill, CA

*Laboratory Assistant* 10/83 - 8/84  
Harvard University, Atmospheric Chemistry Lab., Cambridge, MA

*Research Intern* 6/83 - 9/83  
Brookhaven National Laboratory, Upton, NY

## HONORS AND AWARDS:

- ASCE Simon W. Freese Environmental Engineering Award 2014
- Honorary Professor, Tongji University, Shanghai, P.R. of China 2013
- Elected to the National Academy of Engineering 2010
- Named one of “6 Scientists on the Cutting Edge of Energy and Environmental Research” by USNews and World Report 2009
- Advisor to winner of CH2M Hill/AEESP Outstanding Doctoral Dissertation Award 2008
- Environmental Science and Technology Excellence in Review Award 2006
- Association of Environmental Engineering and Science Professors Distinguished Service Award 2003
- Elected Fellow of the American Academy of Microbiology 2002
- Awarded the Fred and Claire Sauer Chair in Environmental Engineering 2001
- National Science Foundation Young Investigator Award 1994-1999
- W. M. Keck Foundation Award for Engineering Teaching Excellence 1994
- Advisor to one undergraduate and three graduate student winners of Water Environment Federation Student Paper Competition and graduate winner of the American Society of Civil Engineers Student Essay Competition 1994, 1998
- Voted “Most Entertaining Lecturer” and “Most Enthusiastic Professor” by Berkeley Undergraduate Chapter of the American Society of Civil Engineers 1993, 1996
- Department of Energy Environmental Restoration and Waste Management Junior Faculty Award 1992-1994
- Association of Environmental Engineering Professors Doctoral Thesis Award 1992
- University of California President's Post-Doctoral Fellowship 1991
- Switzer Foundation Graduate Scholarship 1989-1991
- AWWA Larson Aquatic Research Support Scholarship 1989
- American Chemical Society Graduate Student Award in Environmental Chemistry 1989
- National Science Foundation Predoctoral Fellowship 1985-1988

## PROFESSIONAL ACTIVITIES:

Member of the Nominating Committee and Liaison to NRC committees, National Academy of Engineering (2014-present)

Member of the Board of Scientific Councilors, National Center for Environmental Health/Agency for Toxic Substances and Disease Registry, US Centers for Disease Control and Prevention (2012-present)

Member of the National Research Council Committee on Subsurface Characterization, Modeling, Monitoring, and Remediation of Fractured Rocks (2012-present)

Chair (previous member, and vice chair) of the Division 4 Peer Committee, National Academy of Engineering (2011-2014)

Co-chair of the Indo-American Frontiers of Engineering symposium of the National Academies (2011-present)

Presidential Appointee to the Corporation Visiting Committee for the Civil and Environmental Engineering Department at the Massachusetts Institute of Technology (2009-present).

Editorial Advisory Board for *Environmental Science & Technology* (2008-present)

Associate Editor, *Environmental Engineering Science* (1997-present)

Member of the National Research Council Water Science and Technology Board (2010-2013)  
Member of the External Review Committee, Civil and Environmental Engineering Dept.,  
University of Illinois, Urbana Champaign (2011-2013).  
Member of Search Committee for Editor-in-Chief of new ACS journal Green Chemistry and  
Sustainable Engineering (2011-2012)  
Chair of the American Academy of Microbiology William A. Hinton Research Training Award  
Committee (2007-2011, member from 2004-2007)  
Member of the School Advisory Committee of the College of Engineering, Nanyang  
Technological University, Singapore (2009-2010)  
Participant in American Academy of Microbiology colloquium on Large-Scale Sequencing,  
Washington DC, (2008).  
Session Chair for Bioaugmentation session at the International Conference on Remediation of  
Chlorinated and Recalcitrant Compounds, Monterey, CA (2008).  
Member of the National Research Council Water Science and Technology Board Committee on  
Water Resources Activities at the U. S. Geological Survey (2006-2009)  
Member of the National Research Council Board on Life Sciences Committee on Metagenomics:  
Challenges and Functional Applications (2005-2007)  
Member of the National Research Council Board of Geosciences Committee to Assess the  
Performance of Surface and Subsurface Engineered Barriers (2005-2007)  
Member of the National Science Foundation Advisory Committee for GPRA Performance  
Assessment (2005-2007)  
Member of the Engineering Directorate Advisory Board, National Science Foundation (2003-06)  
Vice-Chair of the Advisory Board for Collaborative Large-scale Environmental Analysis  
Network for Environmental Research (CLEANER), an NSF initiative (2005-2007).  
Member of the National Research Council/National Academy of Sciences Committee on Source  
Removal of Contaminants in the Subsurface (2002-2005)  
Elected Chief Information Officer of the Association of Environmental Engineering and Science  
Professors (AEESP) Board of Directors (1999-2003)  
Member of the AEESP Awards Committee, Distinguished Lecturer Committee, Textbook  
Review Committee, Chair Liaison Committee (various dates, 1997- 2005)  
Keynote Speaker at Association of Environmental Engineering and Science Professors and  
American Association of Engineering Education Joint Conference on Integrated  
Environmental Teaching, Research and Practice: Linking Engineering and Science to  
Address Complex Problems. Toronto, Canada (2002).  
Session Chair for NIEHS-sponsored conference on "Bioremediation and Biodegradation: Current  
Advances in Reducing Toxicity, Exposure and Environmental Consequences", Asilomar  
Conference Center, Pacific Grove, California (2002).  
Member of the U.S. Environmental Protection Agency Science Advisory Board Ecological  
Processes and Effects Committee (1997 - 2000)  
Pacific Northwest National Laboratory Review Committee, US Department of Energy (2000)  
Session Chair for MTBE Bioremediation session at the Second International Conference on  
Remediation of Chlorinated and Recalcitrant Compounds (2000).  
Member of the World Bank's World Commission on Water in the 21<sup>st</sup> Century Biotechnology  
Panel (1999).  
Session Chair for Natural Attenuation session at the First International Conference on  
Remediation of Chlorinated and Recalcitrant Compounds (1998).

Member of U.S. Air Force Expert Panel on Cometabolism of Chlorinated Solvents (1997-1998)  
Participant and Invited Speaker to Gordon Conference on Applied and Environmental Microbiology (1997)  
Participant in National Academy of Engineering Symposium on Frontiers of Engineering (1996)  
Member of the National Research Council/ National Academy of Sciences Water Science and Technology Board Committee on USGS Water Resources Research (1993-1996).  
Member of The National Research Council/ National Academy of Sciences Committee on *In Situ* Bioremediation (1992-1993).  
Co-convenor of Seminar Session on Innovations in Biological Treatment of Wastes for 1994 American Society for Microbiology Annual Meeting.  
Interviewer for Switzer Foundation Environmental Scholarships.  
Peer Review for Archival Journals: *Environmental Science and Technology*, *Applied and Environmental Microbiology*, *ISME Journal*, *Environmental Microbiology*, *mBIO*, *Journal of Bacteriology*, *Biodegradation*, *Water Research*, *Biotechnology and Bioengineering*, *Water Resources Research*, *Environmental Engineering Science*, *FEMS Microbial Letters*, *Annals of Microbiology*, *Bioremediation Journal*, *Water Environment Research*, *Canadian J. of Microbiology*, *Chemical Engineering Science*, *Journal of Contaminant Hydrology*, *Groundwater Monitoring and Remediation*, *Hazardous Waste and Hazardous Materials*, *J. of Industrial Microbiology*, *Industrial and Engineering Chemistry*, *Journal of Chemical Technology and Biotechnology*, *Journal of Hazardous Materials*, *Bioprocess Engineering*, *Water, Air and Soil Pollution*.  
Proposal or Panel Review for: National Science Foundation; Environmental Protection Agency; National Academy of Engineering Ford Foundation Fellowships; Department of Energy NABIR program and Genes to Life program; Department of Defense Environmental Security Program; Army Research Office; University of California Water Resources Center; Office of Solid Waste Research, University of Illinois at Urbana-Champaign.

#### **FUNDED RESEARCH:**

*Metabolic Interactions Supporting Effective TCE Bioremediation under Various Biogeochemical Conditions* NIH NIEHS 1R01ES024255-01, 8/14-5/18.  
*Systems-Level Predictions of Electron Flows in TCE-Dechlorinating, Dehalococcoides Containing Microbial Communities Using Modeling and Emerging Molecular Biology Tools*, National Science Foundation, CBET-1336709, 1/14-12/16.  
*Meta-Omics of Microbial Communities Involved in Bioremediation*, NIEHS Superfund Basic Research Program, ES04705-19, 4/11-3/16.  
*Re-Inventing America's Urban Water Infrastructure* (with Richard Luthy (PI) and David Sedlak (co-PI)) National Science Foundation Engineering Research Center, 6/11-5/16.  
*Rare Earth Alternative Processing* (w/ Fiona Doyle and Matt Francis) Siemens, Inc., 5/11-12/13.  
*Characterization of the Fate and Biotransformation of Fluorochemicals in AFFF-Contaminated Groundwater at Fire/Crash Testing Military Sites*, (with Jennifer Field at Oregon State and David Sedlak at UC Berkeley) Strategic Environmental Research and Development Program, ER-2128, 3/11-12/14.  
*Innovative Tools to Measure Transformation of Contaminants*. Chevron Energy Technology Company, 8/07-12/13.  
*Application of Microarrays and qPCR to Identify Phylogenetic and Functional Biomarkers Diagnostic of Microbial Communities that Biodegrade Chlorinated Solvents to Ethene* (with

Gary Anderson and Eoin Brodie at LBNL and Steve Zinder at Cornell) Strategic Environmental Research and Development Program, ER-1587, 4/07-3/12.

*Molecular Studies of 1,4-Dioxane-utilizing Bacterium Pseudonocardia Dioxanivorans*, (with Rebecca Perales at UC Davis and Yinjie Tang at Washington University) Strategic Environmental Research and Development Program, ER-1417C, 7/08-6/11.

*454-Based Eco-transcriptomics to Identify Key Microbial Consortia Essential for Dehalococcoides-Mediated Bioremediation of Chlorinated Pollutants*. (with Eoin Brodie at LBNL) DOE Joint Genome Institute Laboratory Sequencing Program, 9/07-12/10.

*Whole Genome Sequencing of Pseudonocardia dioxanivorans CB1190, a 1,4-Dioxane-Utilizing and Nitrogen-Fixing Actinomycete*. DOE Joint Genome Institute Community Sequencing Program, 7/07-12/10.

*Application of Comparative Genomics, Transcriptomics and Proteomics to Optimize Microbial Reductive Dehalogenation* (with Gary Anderson at LBNL) NIEHS Superfund Basic Research Program, ES04705-19, 4/06-3/11.

*Anaerobic Microbial Debromination of Polybrominated Diphenyl Ethers (PBDEs)*. UC Center for Water Resources, 7/06-6/08.

*Cloning & Evolving the Propane Monooxygenase of Rhodococcus sp. RRI for N-Nitrosodimethylamine Degradation and Green Chemistry* (with Thomas Wood at Texas A&M), NIEHS Superfund Basic Research Program Supplement, ES04705, 10/06-9/07.

*Quantifying Gene Expression to Predict and Optimize Reductive Dechlorination by Dehalococcoides spp.* National Science Foundation, BES- 05-04244, 5/05-4/09.

*Oxygenase-Catalyzed Biodegradation of Emerging Water Contaminants: 1,4-Dioxane and N-Nitrosodimethylamine* Strategic Environmental Research and Development Program, ER-1417, 4/05-3/09.

*Diagnostic Tools for Performance Evaluation of Innovative In-Situ Remediation Technologies at Chlorinated Solvent Contaminated Sites* (with Michael Kavenaugh at Malcolm Pirnie and others) Environmental Security Technology Certification Program, 8/03-8/07.

*Development of Tools for Monitoring in situ Bioremediation* (with Mark Conrad at LBNL) NIEHS Superfund Basic Research Program, ES04705, 4/00-3/06.

*Application of Real-Time PCR with Reverse Transcription for Quantification of Specific Microbial Activity in Complex Communities*, Lawrence Berkeley National Laboratory LDRD, LBNL 6702844, 11/02-10/05.

*Investigation of NDMA Fate and Transport* (with David Sedlak in Env. Engineering and others) WaterReuse Research Foundation, W1267, 5/03-4/05.

*Molecular and Physiological Characterization of Anaerobic Microbial Communities that Reductively Dechlorinate Ethenes*, National Science Foundation, BES-01-04740, 8/01-7/05.

*Bioremediation of Mixed Vapor Phase Contaminants from Soils and Groundwater*, USEPA, 7/01-6/03.

*Investigation of the Use of Stable Isotope Measurements as a Tool for Monitoring in-situ Bioremediation*, UC Toxic Substances Research and Teaching Program, 7/99-6/01.

*Biodegradation and Impact of Fuel Oxygenates on the Bioattenuation of BTEX Compounds in Pollutant Mixtures*, UC Toxic Substances Research and Teaching Program, 7/98-6/00.

*Microbial Degradation of Hazardous Contaminant Mixtures* National Science Foundation, BES 94-57246, 6/94-7/00.

*Thermally Enhanced Remediation of Subsurface Contamination* (with Kent Udell in Mechanical Engineering) NIEHS Superfund Basic Research Program, 4/92-3/00.

*Natural Attenuation of Chlorinated Hydrocarbons at Alameda Point*, (with Kent Udell in Mechanical Engineering and Yoram Rubin in Env. Eng.) U.S. Dept. of Navy, 1/97-10/99.  
*Field Evaluation of Intrinsic Bioremediation at Alameda Naval Air Station*, (with James Hunt in Env. Engineering) U.S. Dept. of Navy, 10/95-9/98.  
*Biodegradation of Polynuclear Aromatic Hydrocarbons by Thermophilic Bacteria*, UC Toxic Substances Research and Teaching Program, 6/97-5/98.  
*Evaluating In Situ Bioremediation* Chevron Research and Technology Co., 10/94-2/97.  
*Biological Transformation of Polynuclear Aromatic Hydrocarbons* Chevron Research and Technology Co., 10/94-2/97.  
*Biotransformation of Gas-Phase Halogenated Solvents in Unsaturated Porous Media* (with James Hunt in Civil Engineering, Mary Firestone in Soil Science) NIEHS, 4/92-3/96.  
*In Situ Reduction of Acid Rock Drainage* (with James Hunt in Env. Engineering, Fiona Doyle in Mineral Science Engineering) UC Toxics Substances Research, 8/94-7/95.  
*A Comparison of Product Toxicity from the Cometabolic Transformation of Halogenated Organics by Several Monooxygenase Cultures*, Department of Energy, 9/92-9/94.

#### **UNIVERSITY SERVICE (selected):**

*Chair, Graduate Council*, UC Berkeley Academic Senate, 7/14-present (member 7/13-6/14).  
*Chair, Faculty Search Committee*, Civil and Environmental Engineering Dept., 7/14-present.  
*Divisional Council*, UC Berkeley Academic Senate, 7/14-present.  
*Space and Capital Improvements Committee*, UC Berkeley Campus, 7/14-present.  
*Chair, Faculty Search Committee*, Civil and Environmental Engineering Dept., 7/13-3/14.  
*Executive Vice Chancellor & Provost Search Committee*, UC Berkeley Campus, 8/13-2/14.  
*Dean Search Committee*, UC Berkeley College of Chemistry, 10/12-3/13.  
*Chair, Civil and Environmental Engineering Dept.*, 7/07-7/12.  
*M.Eng. Executive Steering Committee, College of Engineering*, 12/11-7/12.  
*Search Committee for QB3 Director*, UC Berkeley Campus, 6/09-12/09.  
*Search Committee for Pacific Earthquake Engineering Research Center Director*, College of Engineering, 5/08-9/08.  
*Chair of the Faculty of the College of Engineering*, 4/06-9/07.  
*Dean Search Committee*, UC Berkeley College of Engineering, 2007  
*Chair, Dean Appraisal Committee*, UC Berkeley Campus, 2007  
*Vice Chair for Academic Instruction*, Civil and Environmental Engineering Dept., 7/06-7/07.  
*ERSO Advisory Board*, College of Engineering, 6/05-6/09.  
*Vice Provost Search Committee*, UC Campus, 2006  
*Chair, Graduate Admissions*, Civil Engineering Dept., 1/05-6/06.  
*Advisory Committee for the Institute for Environmental Science and Engineering*, UC Berkeley Campus, 7/00-present.  
*Steering Committee for the UC Berkeley Superfund Basic Research Program*, UC Berkeley Campus, 3/01-present.  
*Ad Hoc Tenure or Promotion Review Committees*, UC Berkeley Campus, 1999, 2001, 2004, 2005, 2006, 2007, 2008,  
*Society of Women Engineers*, Faculty Advisor, UC Berkeley Chapter, 6/99-7/07  
*Chair, University Committee on Educational Policy*, UC Systemwide, 7/01-7/04.  
*Academic Planning Council*, UC Office of the President, 7/03-7/04.  
*Academic Council of the Systemwide Senate*, UC Systemwide, 7/03-7/04.

*Assembly of the Systemwide Faculty Senate*, UC Systemwide, 7/03-7/04.  
*UC in Washington DC Oversight Committee* UC Systemwide, 7/02-3/04.  
*Universitywide Workload Implementation Task Force* UC Systemwide, 7/03-7/04.  
*Universitywide Task Force on AP Exams* UC Systemwide, 1/03-6/05.  
*Steering Committee for Budget Planning*, UC Berkeley Campus, 10/02-8/03.  
*Task Force for USA Patriot Act*, UC Berkeley Campus, 10/02-8/03.  
*Chair, Committee on Educational Policy*, UC Berkeley Academic Senate, 7/00-8/03.  
*Divisional Council*, UC Berkeley Academic Senate, 7/01-8/03.  
*Space and Capital Improvements Committee*, UC Berkeley Campus, 7/00-8/03.  
*Registration and Enrollment Policy Committee*, UC Berkeley Campus, 11/01-8/03.  
*Universitywide Task Force on Faculty Instructional Activities* UC Systemwide, 10/02-7/03.  
*Strategic Planning Committee*, UC Berkeley Campus, 4/01-9/02.  
*Education Financing Model Steering Committee*, UC Systemwide, 10/01-9/02.  
*Steering Committee for the Western Association of Schools and Colleges Accreditation Process*,  
 UC Berkeley Campus, 9/01-9/02.  
*Chair, Environmental Engineering and Energy and Resources Committee*, UC Berkeley College  
 of Engineering, 7/96-7/04 (Chair in 2003-7/04 only)  
*Chair, Search Committee for Director of the Institute for Environmental Science and  
 Engineering*, UC Berkeley Campus, 11/01-2/02.  
*Committee on Enrollment Growth*, UC Berkeley Campus, 1/01-7/01.  
*Graduate Admissions and Affirmative Action Officer*, Civil Engineering Department, 6/99-7/01.  
*Task Force on Lower Division Curriculum*, UC Berkeley College of Engineering, 12/00-6/01  
*Dean Search Committee*, UC Berkeley College of Engineering, 1/00-7/00  
*Chair, Hazardous Waste Management Committee*, UC Berkeley Campus, 7/97-6/00  
*Environmental Health and Safety Policy Committee*, UC Berkeley Campus, 7/98-6/00  
*Undergraduate Admissions Coordination Board*, UC Berkeley Campus, 7/95-6/96  
*Advisory Committee for the Environmental Engineering and Health Sciences Laboratory*, UC  
 Berkeley Campus, 7/92-6/96.

#### **PATENT:**

#5,139,682 -- Zeolite Enhanced Organic Biotransformation, with P. L. McCarty.

#### **TEXTBOOK**

Nazaroff, W. W., and L. Alvarez-Cohen. 2001. *Environmental Engineering Science*, 690 pg. textbook, John Wiley and Sons, Collegiate Division, ISBN 0-471-14494-0.

#### **PEER REVIEWED PUBLICATIONS:**

1. **Men, Y., E. C. Seth, S. Yi, T. S. Crofts, R. H. Allen, M. E. Taga, and L. Alvarez-Cohen.** 2014. "Identification of specific corrinoids reveals corrinoid modification in dechlorinating microbial communities under different enrichment conditions", *Environmental Microbiology*, in press.
2. Zhuang, W.Q., S. Yi, M. Bill, **V. Brisson, X. Feng, Y. Men**, M. E. Conrad, Y.J. Tang, and L. Alvarez-Cohen. 2014. "The incomplete Wood-Ljungdahl pathway enables an unconventional one carbon metabolism in *Dehalococcoides mccartyi*", *PNAS*, **111** (17): 6419-6424. doi:10.1073/pnas.1321542111.

3. **Men, Y., E. C. Seth**, Shan Yi, R. H. Allen, M. E. Taga, and L. Alvarez-Cohen. 2014. "Sustainable growth of *Dehalococcoides mccartyi* 195 by corrinoid salvaging and remodeling in defined lactate-fermenting consortia", *Applied and Environmental Microbiology*, **80** (7): 2133-2141. DOI: 10.1128/AEM.03477-13.
4. Mason, O. U., N. M. Scott, A. Gonzalez, A. Robbins-Pianka, J. Bælum, J. Kimbrel, N. J. Bouskill, E. Prestat, S. Borglin, D. C. Joyner, D. Jurelevicius, W. T. Stringfellow, L. Alvarez-Cohen, T. C. Hazen, R. Knight, J. Gilbert and J. K. Jansson. 2014. "Metagenomics reveals sediment microbial community response to Deepwater Horizon oil spill", *International Society for Microbial Ecology Journal*, **8** (7): 1464-1475. DOI:10.1038/ismej.2013.254
5. **Sales, C.M.**, A. Grostern, J. Parales, R. E. Parales, and L. Alvarez-Cohen. 2013. "Oxidation of the cyclic ethers dioxane and tetrahydrofuran by a monooxygenase in *Pseudonocardia dioxanivorans* CB1190", *Applied and Environmental Microbiology*, **79** (24): 7702-7708. DOI: 10.1128/AEM.02418-13
6. **Harding, K. C., P. K.H. Lee**, M. Bill, T. Buscheck, M. E. Conrad, and L. Alvarez-Cohen. 2013. "Effects of Varying Growth Conditions on Stable Carbon Isotope Fractionation of TCE by tceA-containing *Dehalococcoides mccartyi* strains", *Environmental Science and Technology*, **47** (21): 12342-12350. DOI: 10.1021/es402617q
7. **Men, Y., P. K. H. Lee, K. Harding** and L. Alvarez-Cohen, 2013. "Characterization of four TCE-dechlorinating microbial enrichments grown with different cobalamin stress and methanogenic activities", *Applied Microbiology and Biotechnology*, **97** (14): 6439-6450. DOI: 10.1007/s00253-013-4896-8
8. Grostern, A. and L. Alvarez-Cohen. 2013. "RubisCO-based CO<sub>2</sub> fixation and C<sub>1</sub> metabolism in a species of *Pseudonocardia*", *Environmental Microbiology*, **15** (11): 3040-3053. DOI: 10.1111/1462-2920.12144
9. **Lee, P. K. H., D. Cheng, K. A. West**, L. Alvarez-Cohen and J. Z. He. 2013. "Isolation of two new *Dehalococcoides mccartyi* strains with dissimilar TCE dechlorination functions and their comparative genomics via microarray", *Environmental Microbiology*, **15** (8): 2293-2305. DOI: 10.1111/1462-2920.12099
10. **West, K. A., P.K.H. Lee, D. R. Johnson**, S. H. Zinder and L. Alvarez-Cohen. 2013. "Global Gene Expression of *Dehalococcoides* within a Robust Dynamic TCE-Dechlorinating Community under Conditions of Periodic Substrate Supply", *Biotechnology and Bioengineering*, **110** (5): 1333-1341. DOI:10.1002/bit.24819.
11. **Mahendra, S.**, A. Grostern, A., and L. Alvarez-Cohen. 2013. "The impact of chlorinated solvent co-contaminants on the biodegradation kinetics of 1,4-dioxane", *Chemosphere*, **91** (1): 88-92. DOI: 10.1016/j.chemosphere.2012.10.104
12. Yi, S., **E. C. Seth, Y. Men**, R. H. Allen, L. Alvarez-Cohen, and M. E. Taga. 2012. "Versatility in corrinoid salvaging and remodeling pathways supports the corrinoid-dependent metabolism of *Dehalococcoides*", *Applied and Environmental Microbiology*, **78** (21): 7745-7752 DOI: 10.1128/AEM.02150-12.
13. Grostern, A., **C. M. Sales**, W. Q. Zhuang, **O. Erbilgin**, and L. Alvarez-Cohen. 2012. "Glyoxylate metabolism is a key feature of the metabolic degradation of 1,4-dioxane by *Pseudonocardia dioxanivorans* strain CB1190", *Applied and Environmental Microbiology*, **78** (9): 3298-3308. DOI: 10.1128/AEM.00067-12
14. **Brisson, V. L., K.A. West, P. K. H. Lee**, S. G. Tringe, E.L. Brodie and L. Alvarez-Cohen, 2012. "Metagenomic Analysis of a Stable Trichloroethene Degrading Microbial



- Community”, *International Society for Microbial Ecology Journal*, **6** (9): 1702-1714. DOI: 10.1038/ismej.2012.15
15. **Lee, P. K. H.**, B. D. Dill, N. C. VerBerkmoes, T. S. Louie, M. Shah, G. L. Andersen, S. H. Zinder, and L. Alvarez-Cohen. 2012. “Global Transcriptomic and Proteomic Responses of *Dehalococcoides ethenogenes* Strain 195 to Nitrogen Limitation”, *Applied and Environmental Microbiology*, **78** (5): 1424-1436. DOI: 10.1128/AEM.06792-11.
  16. **Men, Y.**, H. Feil, N. C. VerBerkmoes, **D. R. Johnson, P. K. H. Lee, K. A. West**, S. H. Zinder, G. L. Andersen, and L. Alvarez-Cohen. 2012. “Sustainable syntrophic growth of *Dehalococcoides ethenogenes* with *Desulfovibrio vulgaris* Hildenborough and *Methanobacterium congolense*”, *International Society for Microbial Ecology Journal*, **6** (2): 410-421. doi:10.1038/ismej.2011.111
  17. **Lee, P. K. H.**, F. Warnecke, E. L. Brodie, T. W. Macbeth, M. E. Conrad, G. L. Andersen, and L. Alvarez-Cohen. 2012. “Phylogenetic Microarray Analysis of a Microbial Community Performing Reductive Dechlorination in a TCE-contaminated Site”, *Environmental Science and Technology*, **46** (2) 1044-1054. DOI 10.1021/es203005k
  18. Zhuang, W.Q., S. Yi, **X. Feng**, S. H. Zinder, Y.J. Tang, and L. Alvarez-Cohen. 2011. “Selective Utilization of Exogenous Amino Acids by *Dehalococcoides ethenogenes* strain 195 and the Effects on Growth and Dechlorination Activity”, *Applied and Environmental Microbiology*, **77** (21): 7797-7803. DOI: 10.1128/AEM.05676-11
  19. **Sales, C.M., S. Mahendra**, A. Grostern, R. E. Parales, L. Goodwin, T. Woyke, M. Nolan, A. Lapidus, O. Chertkov, G. Ovchinnikova, A. Szcyrba, and L. Alvarez-Cohen. 2011. “Genome sequence of 1,4-dioxane degrading *Pseudonocardia dioxanivorans* strain CB1190”, *Journal of Bacteriology*, **193** (17): 4549-4550. DOI: 10.1128/JB.00415-11
  20. **Lee, P. K. H.**, D. Cheng, P. Hu, **K. A. West**, G. J. Dick, E. L. Brodie, G. L. Andersen, S. H. Zinder, J. Z. He, and L. Alvarez-Cohen. 2011. “Comparative genomics of two newly isolated *Dehalococcoides* strains and an enrichment using a genus microarray”, *International Society for Microbial Ecology Journal*, **5** (6): 1014–1024. doi:10.1038/ismej.2010.202
  21. **Robrock, K.R.**, W. W. Mohn, L.D. Eltis and L. Alvarez-Cohen. 2011. “Biphenyl and Ethylbenzene Dioxygenases of *Rhodococcus jostii* RHA1 Transform Polybrominated Diphenyl Ethers”, *Biotechnology and Bioengineering*, **108** (2): 313-321. DOI: 10.1002/bit.22952
  22. Tang, K. H., **X. Feng**, W. Q. Zhuang, L. Alvarez-Cohen, R. E. Blankenship, Y. J. Tang. 2010. “Carbon Flow of *Heliobacterium Modesticaldum* is More Related to *Clostridia* than to the Green Sulfur Bacteria”, *Journal of Biological Chemistry*, **285** (45): 35104-35112. 10.1074/jbc.M110.163303
  23. Xia, S., L. Duan, Y. Song, J. Li, Y. M. Piceno, G. L. Andersen, L. Alvarez-Cohen, I. Moreno-Andrade, C.-L. Huang, S. W. Hermanowicz. 2010. “Bacterial community structure in wastewater treatment”, *Environmental Science and Technology*, **44** (19): 7391-7396.
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#### **SELECTED PRESENTATIONS, PROCEEDINGS, REPORTS:**

1. Alvarez-Cohen, L. 2014. "Never Say Never in Microbiology: Biodegradation of Emerging Groundwater Contaminants", 15<sup>th</sup> International Symposium for Microbial Ecology, Seoul, Korea. *Invited Speaker*.
2. Alvarez-Cohen, L. 2014. "Material Exchanges that Enable And Support Sustainable Anaerobic Bioprocessing In Microbial Communities", International Water Association 2014 Science Summit for Urban Water. Harbin, China. *Invited Speaker*.
3. Alvarez-Cohen, L. 2014. "Microbial Communities Involved with Anaerobic Bioremediation", Tongji University, Shanghai, China. *Invited Speaker*.
4. Alvarez-Cohen, L. 2014. "The Material Exchanges in Microbial Communities that Support in situ Bioremediation", Tsinghua University, Beijing, China. *Invited Speaker*.
5. Alvarez-Cohen, L. 2014. "Bioremediation then and now: where we've been and where we're going", Groundwater Resources Association Emerging Contaminants Symposium, Concord, CA. *Invited Speaker*.
6. Polasko A., X. Mao, L. Alvarez-Cohen. 2014. "Effects of Sulfate and Sulfide on Dechlorination by *Dehalococcoides mccartyi* 195 alone and in co-culture with *Desulfovibrio vulgaris* Hildenborough". American Geophysical Union annual meeting, San Francisco, CA.
7. Men, Y., Yu, K., Bælum, J., Tremblay, J., Prestat, E., Stenuit, B., Tringe, S.G., Jansson, J., Zhang, T., and L. Alvarez-Cohen. 2014 "Using meta-omic tools to investigate ecological roles of supportive microorganisms in *Dehalococcoides*-containing microbial communities", 15<sup>th</sup> International Symposium for Microbial Ecology, Seoul, Korea.
8. Men, Y., E. C. Seth, S. Yi, T. S. Crofts, R. H. Allen, M. E. Taga, and L. Alvarez-Cohen. 2014. "Deciphering corrinoid salvaging in *Dehalococcoides mccartyi*-containing microbial communities". Friedrich Schiller University, Jena, Germany.
9. Alvarez-Cohen, L. 2014. "Bioremediation then and now: where we've been and where we're going", Groundwater Resources Association Emerging Contaminants Symposium, Concord, CA. *Invited Speaker*.
10. Men, Y., Tu, Q., Wu, L.Y., Zhou, A., Zhou, J. and L. Alvarez-Cohen. 2014. "SNP detection in syntrophic co-cultures of *Dehalococcoides mccartyi* 195 and *Desulfovibrio vulgaris* Hildenborough", 114th General Meeting, American Society for Microbiology, Boston, MA.
11. Yi, S., Houtz, E.F., Harding, K.C., Field, J., Sedlak, D. L. and L. Alvarez-Cohen. 2014. "Anaerobic Biotransformation of 6:2 Fluorotelomer Thioamidosulfonate in Aqueous Film-Forming Foams". California Groundwater Resources Association Symposium on Groundwater Contaminants, Concord, CA.
12. Harding, K., Houtz, E.F., Yi, S., Sedlak, D. L. and L. Alvarez-Cohen. 2014. "Aerobic biotransformation of 6:2 fluorotelomer thioamidosulfonate in aqueous film-forming foams". California Groundwater Resources Association Symposium on Groundwater Contaminants, Concord, CA.
13. Zhuang W.-Q., Yi S., Markus, B., Conrad M.E., Tang Y.J. and L. Alvarez-Cohen. 2013. "The incomplete Wood-Ljungdahl pathway of *Dehalococcoides mccartyi* enables an unconventional C1 metabolism important for mutualistic reductive dehalogenation." The 26th Annual Meeting of the Superfund Research Program. Baton Rouge, LA.
14. Zhuang W.-Q., Gui Q., Yi S., You L., Tang Y.J., Wall J.D. and L. Alvarez-Cohen. 2013. "Identification of in vivo functions of two R-type metabolic synthases from *Dehalococcoides mccartyi* 195 using *Desulfovibrio vulgaris* Hildenborough as a host." 113th General Meeting, American Society for Microbiology, Denver, CO.

15. Men Y., Seth E.C., Taga M.E., Allen R.H. and L. Alvarez-Cohen. 2013. "Corrinoid salvaging and remodeling by *Dehalococcoides mccartyi* strain 195 in a defined consortium containing corrinoid-producer *Pelosinus fermentans* strain R7." 113th General Meeting, American Society for Microbiology, Denver, CO.
16. Stenuit B., Tremblay J., Mao X., Men Y., Tringe S.G. and L. Alvarez-Cohen. 2013. "Molecular systems synecology of TCE-dechlorinating microbial communities using stable isotope probing combined with Illumina sequencing techniques." Joint Genome Institute (JGI) Genomics of Energy & Environment Meeting. 8th Annual DOE JGI User Meeting. Walnut Creek, CA.
17. Alvarez-Cohen, L. 2013. "Systems Levels Approaches to Characterize Chlorinated Solvent Degrading Communities", The Feng Lecture, University of Massachusetts, Amherst MA. *Invited Speaker.*
18. Mao X., Stenuit B., Polasko A. and L. Alvarez-Cohen. 2013. "Structure and global gene expression of *Dehalococcoides mccartyi* in a TCE dechlorinating community within a completely mixed flow reactor." The 26th Annual Meeting of the Superfund Research Program. Baton Rouge, LA.
19. Men Y., Tremblay J., Prestat E., Baelum J., Stenuit B., Tringe S.G., Jansson, J.R. and L. Alvarez-Cohen 2013. "Metagenomic and metatranscriptomic analysis on TCE-dechlorinating microbial communities enriched under different exogenous cobalamin conditions." Joint Genome Institute (JGI) Genomics of Energy & Environment Meeting. 8th Annual DOE JGI User Meeting. Walnut Creek, CA.
20. Alvarez-Cohen, L. 2013. "Life lessons from -omics based research in bioremediation", VI Symposium of Applied Microbiology, Rio Claro, Sao Paulo, Brazil. *Invited Keynote Speaker.*
21. Alvarez-Cohen, L. 2013. "From Individuals to Community: A Molecular-Based Systems Approach to Optimizing Bioremediation", 113<sup>th</sup> General Meeting, American Society for Microbiology, Denver CO. *Invited Speaker.*
22. Alvarez-Cohen, L. 2013. "Bioremediation then and now: where we've been and where we're going", RemTec Annual National Conference, Westminster CO. *Invited Speaker.*
23. Alvarez-Cohen, L. 2013. "Systems Levels Approaches to Understanding Bioremediation", The Ryckman Lecture, Washington University, St. Louis MO. *Invited Speaker.*
24. Alvarez-Cohen, L. 2012. "From Individuals to Community: A Molecular-Based Systems Approach to Understanding Bioremediation", Superfund Research Program 25<sup>th</sup> Anniversary Celebration, NIEHS, Raleigh NC. *Invited Speaker.*
25. Men, Y. EC Seth, S Yi, RH Allen, ME Taga, and L Alvarez-Cohen. 2012 "The production and interspecies transfer of corrinoids in dechlorinating microbial communities containing *Dehalococcoides*", Superfund Research Program 25<sup>th</sup> Anniversary Celebration, NIEHS, Raleigh NC.
26. Stenuit, B, Tremblay, J, Mao, X, Men, Y, Tringe, SG and L Alvarez-Cohen. 2012. "Insights into the functional organization of TCE-dechlorinating microbial communities using stable isotope probing combined with targeted Illumina sequencing of multiplex 16S rRNA amplicon libraries", Superfund Research Program 25<sup>th</sup> Anniversary Celebration, NIEHS, Raleigh NC.
27. C. E. Devine, T. Buscheck, A. Gilpin, M. Lafferty, B. Stenuit, L. Alvarez-Cohen, P. Philp, T. Kuder. 2012. "Biodegradation of 1,4-Dioxane: Field and Laboratory Evaluation using



- Compound-Specific Isotope Analysis, Molecular Biological Tools and Microcosm Studies”. Battelle Annual Conference on Remediation of Chlorinated Compounds, Monterey, CA.
28. Alvarez-Cohen, L. 2012. “A Systems and Molecular-Based Approach to Bioremediation of Chlorinated Solvents”. University of Oklahoma, *Invited Speaker*.
  29. Stenuit, B, X.W. Mao, Y. Men and Lisa Alvarez-Cohen. 2012. “Identification of active fermenters and hidden microbial partnerships in TCE-dechlorinating microbial communities using DNA-based and RNA-based stable isotope probing”. 112<sup>th</sup> General Meeting, American Society for Microbiology, San Francisco, CA.
  30. Mao, XW and Lisa Alvarez-Cohen. 2012. “Effects of Acetate on the Growth and TCE Degradation of Syntrophic co-culture *Dehalococcoides ethenogens* 195 and *Syntrophomonas wolfei*”. 112<sup>th</sup> General Meeting, American Society for Microbiology, San Francisco, CA.
  31. Brisson, V. L., K.A. West, P. K. H. Lee, and L. Alvarez-Cohen. 2012. “Evaluation of Microarray Specificity for Detecting *Dehalococcoides* Genes”. 112<sup>th</sup> General Meeting, American Society for Microbiology, San Francisco, CA.
  32. Alvarez-Cohen, L. 2012. “From Individuals to Community: Application of Molecular Tools to Understand Environmental Microbial Communities Participating in Bioremediation”, Asia-Pacific Chemistry and Chemical Engineering Congress, Singapore. *Invited Keynote Speaker*.
  33. Alvarez-Cohen, L. 2012. “Plasticity in salvaging B<sub>12</sub> cofactors for reductive dechlorination by organohalide-respiring *Dehalococcoides*”, Indo-American Frontiers of Engineering symposium of the National Academies, Washington DC.
  34. Alvarez-Cohen, L. 2011. “Biodegradation of Emerging and Conventional Water Contaminants”, International Summit Forum for Urban Water, Harbin China. *Invited Speaker*.
  35. Harding, K.A., P.K.H. Lee, T. Buscheck, M. Bill, M. Conrad, and L. Alvarez-Cohen. 2012. “Enrichment Factors for the Carbon Isotope Fractionation of TCE by *Dehalococcoides* Under a Variety of Growth Conditions and Implications for Field Isotope Data”. Battelle Annual Conference on Remediation of Chlorinated Compounds, Monterey, CA.
  36. Alvarez-Cohen, L. 2011. “Environmental Microbiology: Microorganisms Rule the World and Eat Much of Our Junk”, University of Illinois Urbana Champaign Vern Snoeyink Distinguished Lecture. *Invited Speaker*.
  37. Alvarez-Cohen, L. 2011. “From Individuals to Community: A Systems Approach to Understanding Bioremediation of Chlorinated Solvents”, University of Illinois Urbana Champaign Civil and Environmental Engineering Department. *Invited Speaker*.
  38. Place, B. J., E. Houtz, D. Sedlak, L. Alvarez-Cohen and J. Field. 2011. Determination of the Fluorochemical Components of Aqueous Film Forming Foams (AFFF) Used in Military Firefighting”. Partners in Environmental Technology Symposium and Workshop, Washington DC.
  39. Men, Y., E. Dirks, S. Yi, S. H. Zinder, M. E. Taga, and L. Alvarez-Cohen. 2011. “The Effects of Cobalamin and Methanogenesis on TCE-dechlorinating Enrichments”. 111<sup>th</sup> General Meeting, American Society for Microbiology, New Orleans, LA.
  40. Mao, X, P. Pornwongthong and L. Alvarez-Cohen. 2011. “Syntrophic Degradation of TCE by co-culture *Dehalococcoides ethenogenes* 195 and *Syntrophomonas wolfei* with different electron donors”. 111<sup>th</sup> General Meeting, American Society for Microbiology, New Orleans, LA.
  41. Sales, C.M., A. Grostern, S. Mahendra, R.E. Parales and L. Alvarez-Cohen. 2011. The

- genome sequence of *Pseudonocardia dioxanivorans* strain CB1190. 111<sup>th</sup> General Meeting, American Society for Microbiology, New Orleans, LA.
42. Grostern, A., C.M. Sales, W. Zhuang, O. Erbilgin, R.E. Parales, S. Mahendra and L. Alvarez-Cohen. 2011. Towards a genetic and biochemical understanding of bacterial 1,4-dioxane metabolism. 111<sup>th</sup> General Meeting, American Society for Microbiology, New Orleans, LA.
  43. Zhuang, W., C.M. Sales, A. Grostern, X.Y. Feng, Y.J. Tang and L. Alvarez-Cohen. 2011. Demonstration of C2 compound assimilation pathways in *Pseudonocardia dioxanivorans* CB1190 by using <sup>13</sup>C isotopic tracer analysis. 111<sup>th</sup> General Meeting, American Society for Microbiology, New Orleans, LA.
  44. Alvarez-Cohen, L. 2010. "Application of advanced molecular tools to optimize bioremediation of environmental contaminants." Tongji University, Shanghai, China. *Invited Speaker*.
  45. Grostern, A., C.M. Sales, S. Mahendra, and L. Alvarez-Cohen, 2010. "Genome assembly of the 1,4-dioxane degrading *Pseudonocardia dioxanivorans* strain CB1190", 13<sup>th</sup> International Symposium for Microbial Ecology, Seattle, WA.
  46. Lee, P. K. H., D. Cheng, P. Hu, K. A. West, E. L. Brodie, G. L. Andersen, S. H. Zinder, J. He, and L. Alvarez-Cohen, 2010. "Querying the genomes of unsequenced *Dehalococcoides* strains via a genus-wide microarray", 13<sup>th</sup> International Symposium for Microbial Ecology, Seattle, WA.
  47. Grostern, A., C.M. Sales, S. Mahendra, and L. Alvarez-Cohen, 2010. "A Genome-enabled investigation of 1,4-dioxane metabolism by the bacterium *Pseudonocardia dioxanivorans* strain CB1190", Partners in Environmental Technology Symposium and Workshop, Washington DC.
  48. Mao, X.W., Men, Y., K. and L. Alvarez-Cohen, 2010. "Development of a chemostat reactor to study TCE dechlorination by *Dehalococcoides*", Partners in Environmental Technology Symposium and Workshop, Washington DC.
  49. Alvarez-Cohen, L., 2010. "Biodegradation of Fire Retardants", 110<sup>th</sup> general meeting of American Society for Microbiology, San Diego, CA. *Invited Speaker*.
  50. Harding, K., A. Nemir, K. A. West, M. Conrad, and L. Alvarez-Cohen, 2010. "Effects of Vinyl Chloride on the Differential Gene Expression and Stable Carbon Isotope Fractionation of *Dehalococcoides ethenogenes* strain 195", 110<sup>th</sup> general meeting of American Society for Microbiology, San Diego, CA.
  51. West, K. A., P. K. H. Lee, P. Hu, S. H. Zinder, G. L. Andersen, and L. Alvarez-Cohen, 2010. "Genome and Transcriptome Analyses of Unsequenced *Dehalococcoides* Strains in a Dechlorinating Enrichment Culture Using a Genus-Wide Microarray", 110<sup>th</sup> general meeting of American Society for Microbiology, San Diego, CA.
  52. Men-Y., K. Harding, S. Yi, W. Zhuang, G. L. Andersen, S. H. Zinder, M. E. Taga, and L. Alvarez-Cohen, 2010. "Identification of corrinoid-providing supportive microorganisms for *Dehalococcoides* in TCE-dechlorinating enrichment cultures by analytical and molecular tools", 110<sup>th</sup> general meeting of American Society for Microbiology, San Diego, CA.
  53. Yi, S., W. Q. Zhuang, X. Feng, S. H. Zinder, Y. J. Tang and L. Alvarez-Cohen, 2010. "Exogenous Amino Acid Utilization by *Dehalococcoides ethenogenes* strain 195", 110<sup>th</sup> general meeting of American Society for Microbiology, San Diego, CA.
  54. Sales, C. M., A. Grostern, S. Mahendra, and L. Alvarez-Cohen, 2010. "Identification of monooxygenases involved in 1,4-dioxane biodegradation by *Pseudonocardia dioxanivorans*

- strain CB1190”, 110<sup>th</sup> general meeting of American Society for Microbiology, San Diego, CA.
55. Alvarez-Cohen, L., 2009. “Molecular Approaches to Optimize the Biodegradation of NDMA and 1,4-Dioxane.”, Groundwater Resources Association Micropol & Ecohazard 2009 Conference, San Francisco, CA. *Invited Speaker.*
  56. Sales, C. M, J. O. Sharp, and L. Alvarez-Cohen, 2009. “Identification of genes involved in propane-enhanced biotransformation of N-Nitrosodimethylamine (NDMA) in two actinomycetes” 109<sup>th</sup> general meeting of American Society for Microbiology, Philadelphia, PA.
  57. Lee, P. K. H., N. C. VerBerkmoes, G. L. Anderson, S. H. Zinder and L. Alvarez-Cohen, 2009. “Transcriptomic and proteomic analyses of *Dehalococcoides ethenogenes* Strain 195 under nitrogen limitation” 109<sup>th</sup> general meeting of American Society for Microbiology, Philadelphia, PA.
  58. Yi, S., W. Zhuang, S. H. Zinder, J.D. Keasling, Y.J. Tang and L. Alvarez-Cohen, 2009. “Carbon Metabolism in “*Dehalococcoides ethenogenes*” strain 195”, 109<sup>th</sup> general meeting of American Society for Microbiology, Philadelphia, PA.
  59. Men, Y., K. Harding, H. Feil, G. L. Anderson, S. H. Zinder and L. Alvarez-Cohen, 2009. “Application of Molecular and Analytic Tools to Track Enrichment of Reductive Dechlorination Cultures from a TCE Contaminated Groundwater Site”, 109<sup>th</sup> general meeting of American Society for Microbiology, Philadelphia, PA.
  60. Alvarez-Cohen, L., 2008. “Academics as a Career for Environmental Engineers”, Invited Panelist, International Water Association Young Water Professionals International meeting, Berkeley, CA. *Invited Speaker.*
  61. Alvarez-Cohen, L., 2008. “Making the case for Civil and Environmental Engineering within the competitive Engineering Research Environment”, Invited Speaker and Panelist, American Society of Civil Engineering Annual Chairs meeting, Charlotte, NC. *Invited Speaker.*
  62. Alvarez-Cohen, L., 2008. “How Bioremediation can be Optimized using Cutting-Edge Molecular Tools”, California Department of Toxics Substances Control, Sacramento, CA. *Invited Speaker.*
  63. Alvarez-Cohen, L., 2008. “From Individuals to Community: Molecular Tools Shed Lights into the Environmentally Relevant Organisms”, Invited Seminar, University of Southern California, Los Angeles, CA. *Invited Speaker.*
  64. Alvarez-Cohen, L., 2008. “Combining Transcriptomics with Proteomics for Analysis of Microbial Isolates and Communities”, Tsinghua University, Beijing, China. *Invited Speaker.*
  65. Alvarez-Cohen, L., 2008. “Application of Cutting-Edge Molecular Tools to Optimizing Bioremediation”, Peking University, Beijing, China. *Invited Speaker.*
  66. Alvarez-Cohen, L., 2008. “Proteomics, Transcriptomics and Genomics applied to Optimize Bioremediation”, NIEHS Spirit Lecture, 20<sup>th</sup>, Raleigh, NC. *Invited Speaker.*
  67. Johnson, D. R., N. C. VerBerkmoes, S. H. Zinder and L. Alvarez-Cohen, 2008. “Absolute comparison of transcriptomic and proteomic data using normalized spectrum counts for protein abundance estimates”, 108<sup>th</sup> general meeting of American Society for Microbiology, Boston, MA.
  68. Sales, C.M., J. O. Sharp, and L. Alvarez-Cohen. Identifying the enzymes responsible for biodegradation of n-nitrosodimethylamine in different propanotroph strains”, 108<sup>th</sup> general meeting of American Society for Microbiology, Boston, MA.

69. Lee, P. K. H., E. L. Brodie, G. L. Andersen, T. W. Macbeth, K. S. Sorenson, R.L. Deeb and L. Alvarez-Cohen, 2008. "From Individuals to Community: Molecular Tools Shed Lights into the Environmentally Relevant Organisms", Battelle Annual Conference on Remediation of Chlorinated Compounds, Monterey, CA. *Invited Speaker*.
70. West, K. A., D. R. Johnson, E. L. Brodie, H. Feil, G. L. Andersen, S. H. Zinder and L. Alvarez-Cohen, 2008. "Molecular Tools Provide New Genomic and Transcriptomic Insights into *Dehalococcoides* spp", Battelle Annual Conference on Remediation of Chlorinated Compounds, Monterey, CA. *Invited Speaker*.
71. Alvarez-Cohen, L., 2007. "Application of Omics-Based Tools to Optimize Bioremediation", Superfund Basic Research Program, 20<sup>th</sup> Anniversary Conference, Raleigh, NC. *Invited Speaker*.
72. Robrock, K. and Alvarez-Cohen, L., 2007. "Aerobic Biodegradation of Polybrominated Biphenyl Ethers", Superfund Basic Research Program, 20<sup>th</sup> Anniversary Conference, Raleigh, NC.
73. Alvarez-Cohen, L., 2007. "Application of Molecular Tools and Microarrays to Optimize Bioremediation", Partners in Environmental Technology Symposium and Workshop, Washington DC. *Invited Speaker*.
74. Lee, Patrick K. H., Eoin L. Brodie, Tamzen W. Macbeth, Rula A. Deeb, Kent S. Sorenson, Jr., Gary L. Andersen, and Lisa Alvarez-Cohen. 2007. "A functional genomic approach to chlorinated ethene bioremediation", Annual Meeting of the American Geophysical Union, San Francisco, CA.
75. Feil, H., G. L. Andersen, E. L. Brodie, S. H. Zinder and L. Alvarez-Cohen, 2007. "Global transcriptomic analysis of *Dehalococcoides ethenogenes* 195 growing syntrophically with *Desulfovibrio* spp.", Partners in Environmental Technology Symposium and Workshop, Washington DC. P333
76. Sales, C.M., J. O. Sharp, J. LeBlanc, J. Le, W. W. Mohn, L. D. Eltis, T. K. Wood, L. Alvarez-Cohen. 2007 "Biodegradation of N-Nitrosodimethylamine by Bacterial Propane Monooxygenases", Partners in Environmental Technology Symposium and Workshop, Washington DC. P163
77. Mahendra, S., L. Alvarez-Cohen. 2007 "Effect of Chlorinated Solvents on 1,4-Dioxane Biodegradation", Partners in Environmental Technology Symposium and Workshop, Washington DC. P165
78. Alvarez-Cohen, L., 2007. "A Thousand Points of Light – Application of Molecular Tool and Microarrays to Optimize Bioremediation", Henske Distinguished Lecture in Chemical Engineering, Yale University, CT. *Invited Speaker*.
79. Alvarez-Cohen, L., 2007. "Optimizing Bioremediation using Molecular Tools and Microarrays", CEE Distinguished Lecture Series, University of Texas at Austin. *Invited Speaker*.
80. Sales, C.M., J. O. Sharp, J. LeBlanc, J. Liu, T.K. Wood, L.D. Eltis, W.W. Mohn and L. Alvarez-Cohen. 2007. "Identifying the Involvement of Propane Monooxygenase in the Biodegradation of n-Nitrosodimethylamine (NDMA) in *Rhodococcus* sp. RHA1", 107<sup>th</sup> general meeting of American Society for Microbiology, Toronto, Canada.
81. Robrock, K., P. Korytár and L. Alvarez-Cohen. 2008. "Anaerobic Microbial Degradation Pathways for Seven PBDE Congeners", 107<sup>th</sup> general meeting of American Society for Microbiology, Toronto, Canada.

82. He, J., P. K. H., Lee, V. F. Holmes, and L. Alvarez-Cohen, 2007. "Growth of *Dehalococcoides* species in an Autotrophic Consortium", 107<sup>th</sup> general meeting of American Society for Microbiology, Toronto, Canada.
83. Lee, P. K. H., T. W. Macbeth, K. S. Sorenson and L. Alvarez-Cohen, 2007. "Monitoring Reductase and 16S rRNA Genes and Transcripts of *Dehalococcoides* at a Trichloroethene Contaminated Field Site to Assess In-situ Bioremediation", 107<sup>th</sup> general meeting of American Society for Microbiology, Toronto, Canada.
84. Lee, P. K. H., E. L. Brodie, G. L. Andersen, T. W. Macbeth, K. S. Sorenson and L. Alvarez-Cohen, 2007. "Applying a High-Density Phylogenetic Microarray to Monitor the Dynamics of Microbial Populations at a Trichloroethene-Contaminated Field Site", 107<sup>th</sup> general meeting of American Society for Microbiology, Toronto, Canada.
85. West, K. A., D. R. Johnson, P. Hu, T. Z. DeSantis, E. L. Brodie, H. Feil, G. L. Andersen, S. H. Zinder and L. Alvarez-Cohen, 2007. "Comparative Genomics of *Dehalococcoides ethenogenes* 195 and a *Dehalococcoides*-Containing Enrichment Culture Using a Whole-Genome Microarray", 107<sup>th</sup> general meeting of American Society for Microbiology, Toronto, Canada.
86. Johnson, D. R., G. L. Andersen, S. H. Zinder and L. Alvarez-Cohen, 2007. "Temporal Transcriptomic Microarray Analysis of *Dehalococcoides ethenogenes* Strain 195 During the Transition from the Exponential to Stationary Growth Phases", 107<sup>th</sup> general meeting of American Society for Microbiology, Toronto, Canada.
87. Macbeth, T. W., M. H. Lee, K. S. Sorenson, P. K. H. Lee, L. Alvarez-Cohen, M. Annable, R. Deeb, and K. Lynch, 2007. "Performance Assessment of Enhanced Bioremediation of DNAPLs Using Innovative Techniques", 9<sup>th</sup> International In Situ and On-Site Bioremediation Symposium, Baltimore, MD.
88. Holmes, V. F., L. Alvarez-Cohen and W. Clayton, 2007. "Why *Dehalococcoides* 16S Isn't Enough to Predict Bioremediation of PCE or TCE", 9<sup>th</sup> International In Situ and On-Site Bioremediation Symposium, Baltimore, MD.
89. Alvarez-Cohen, L., 2007. "Microbial Communities and Pollution", 2007 AAAS Annual Meeting, San Francisco, CA. *Invited Speaker*.
90. Alvarez-Cohen, L., 2006. "Biodegradation of Emerging Contaminants N-nitrosomethylamine (NDMA) and 1,4-Dioxane", Partners in Environmental Technology Symposium and Workshop, Washington DC. *Invited Speaker*.
91. Alvarez-Cohen, L., 2006. "In situ Bioremediation – Bacteria Saving the World by Eating Much of our Junk", CITRIS Research Exchange Seminar, UC Berkeley. *Invited Speaker*.
92. Alvarez-Cohen, L., 2006. "Biodegradation of Emerging Water Contaminants", National University of Singapore, *Invited Speaker*.
93. Alvarez-Cohen, L., 2006. "Application of Molecular and Isotopic Tools to Optimize in situ Bioremediation", National Technical University of Singapore. *Invited Speaker*.
94. Alvarez-Cohen, L., 2006. "A Thousand Points of Light – Use of Microarrays and other Molecular Tools to Understand *Dehalococcoides*", Stanford University, CA. *Invited Speaker*.
95. Alvarez-Cohen, L., 2006. "Application of Molecular and Isotopic Tools to Optimize Reductive Dechlorination", Tsinghua University, PRC. *Invited Speaker*.
96. West, K., D. R. Johnson, J. He, P. K. H. Lee, T. Z. DeSantis, P. Hu, G. L. Andersen, S. H. Zinder, and L. Alvarez-Cohen, 2006. "Comparative Transcriptomics of *Dehalococcoides*

- ethenogenes* Strain 195 and *Dehalococcoides* sp. Strain BAV1” 106<sup>th</sup> general meeting of American Society for Microbiology, Orlando, FL.
97. Johnson, D. R., J. He, P. Hu, G. L. Andersen, S. H. Zinder and L. Alvarez-Cohen, 2006. “Whole-Genome Transcription Analysis of *Dehalococcoides ethenogenes* Strain 195 Reveals a Cobalamin (Vitamin B<sub>12</sub>) Regulon” 106<sup>th</sup> general meeting of American Society for Microbiology, Orlando, FL.
  98. Johnson, D. R., J. He, P. K. H. Lee, E. L. Brodie, P. Hu, G. L. Andersen, S. H. Zinder and L. Alvarez-Cohen, 2006. “Effect of Exposure to Cell-Free Spent Media From Different Reductive Dechlorinating Mixed Cultures on Whole-Genome Transcription in *Dehalococcoides ethenogenes* Strain 195” 106<sup>th</sup> general meeting of American Society for Microbiology, Orlando, FL.
  99. Robrock, K. R., J. He, P. Korytar, J. de Boer and L. Alvarez-Cohen, 2006. “Degradation of Polybrominated Diphenyl Ethers by *Dehalococcoides* species.” 106<sup>th</sup> general meeting of American Society for Microbiology, Orlando, FL.
  100. Lee, P. K. H., M. S. Conrad and L. Alvarez-Cohen, 2006. “Stable Carbon Isotope Fractionation of Chloroethenes by Dehalogenating isolates.” 106<sup>th</sup> general meeting of American Society for Microbiology, Orlando, FL.
  101. Mahendra, S., C. Petzold, E. Baidoo, J. D. Keasling and L. Alvarez-Cohen, 2006. “Identification of the Intermediates of in-vivo 1,4-Dioxane Oxidation by Monooxygenase Enzymes.” 106<sup>th</sup> general meeting of American Society for Microbiology, Orlando, FL.
  102. Sharp, J. O. and L. Alvarez-Cohen, 2006. “Propane Induces for NDMA Degradation in Axenic Cultures of *Rhodococcus* sp. RR1 as well as Soil Enrichments.” 106<sup>th</sup> general meeting of American Society for Microbiology, Orlando, FL.
  103. He, J.Z., V. Holmes, P. K.H. Lee and L. Alvarez-Cohen, 2006. “Optimizing Growth of *Dehalococcoides ethenogenes* Strain 195 in Defined Medium” 106<sup>th</sup> general meeting of American Society for Microbiology, Orlando, FL.
  104. Sharp, J. O., Mahendra, S., L. Alvarez-Cohen. 2005 “*Oxygenase-Catalyzed Biodegradation of Emerging Water Contaminants: 1,4-Dioxane and N-Nitrosodimethylamine*” Partners in Environmental Technology Symposium and Workshop, Washington DC.
  105. Kavanaugh, M. C., Deeb, R. A., Navon, D., Goldstein, K., Parker, B., Cherry, C., Sorenson, K., Macbeth, T., L. Alvarez-Cohen. 2005 “*Diagnostic Tools for Performance Evaluation of Innovative In-Situ Remediation Technologies at Chlorinated Solvent Contaminated Sites*” Partners in Environmental Technology Symposium and Workshop, Washington DC.
  106. Robrock, K. and L. Alvarez-Cohen, 2005. “Inhibition of Denitrification by the Antibacterial Triclosan”, 2005 TSR&TP Annual Conference, Sacramento, CA.
  107. Lee, P. K. H., D. R. Johnson, V. F. Holmes, J. He and L. Alvarez-Cohen. 2005. “Assessing tceA Gene Expression as an Indicator for Trichloroethylene Dechlorination Activity” 105<sup>th</sup> general meeting of American Society for Microbiology, Atlanta, GA.
  108. He, J., K. R. Robrock and L. Alvarez-Cohen. 2005 “Anaerobic Microbial Degradation of Polybrominated Diphenyl Ethers (PBDEs)” 105<sup>th</sup> general meeting of American Society for Microbiology, Atlanta, GA.
  109. Holmes, V. F., J. He and L. Alvarez-Cohen, 2005. “Cooperative Dechlorination of Trichloroethene to Ethene by Two or More *Dehalococcoides* spp.” 105<sup>th</sup> general meeting of American Society for Microbiology, Atlanta, GA.

110. Johnson, D. R., P. K. H. Lee, V. F. Holmes and L. Alvarez-Cohen, 2005. "Expression of the *tceA* Reductive Dehalogenase Gene in an Anaerobic Enrichment Culture" 105<sup>th</sup> general meeting of American Society for Microbiology, Atlanta, GA.
111. Mahendra, S. and L. Alvarez-Cohen, 2005. "Kinetics of 1,4-Dioxane Biodegradation by Monoxygenase-expressing Organisms". 105<sup>th</sup> general meeting of American Society for Microbiology, Atlanta, GA.
112. Sharp, J.O. and L. Alvarez-Cohen, 2005. "Biodegradation of the water contaminant N-nitrosodimethylamine (NDMA) by soil cultures" American Society of Limnology and Oceanography 2005 Aquatic Meeting. Salt Lake City, UT.
113. Sharp, J.O. and L. Alvarez-Cohen, 2004. "Tools for assessing N-nitrosodimethylamine (NDMA) biodegradation by monoxygenase enzymes". Superfund Basic Research Program Annual Meeting, Seattle, WA.
114. Holmes, V. F., He, J. Z., Johnson, D. R., and L. Alvarez-Cohen. 2004. "Assessing Reductive Dechlorination Potential by Quantifying Dehalococoides Reductase Genes". Superfund Basic Research Program Annual Meeting, Seattle, WA.
115. Alvarez-Cohen, L., 2004. "Addressing the Water Crisis", Sixth Annual Asian Leadership Conference, Singapore. *Invited Speaker*.
116. Robrock, K. and L. Alvarez-Cohen, 2004. "Effects of Triclosan on Environmental Microbial Communities", 2004 TSR&TP Annual Conference, San Diego, CA.
117. Holmes, V. F., and L. Alvarez-Cohen, 2004. "Growth and Dechlorination Activity of *Dehalococoides ethenogenes* 195 within Assembled Co- and Tri-Cultures". 104<sup>th</sup> general meeting of American Society for Microbiology, New Orleans, LA.
118. Johnson, D. R., Holmes, V. F., and L. Alvarez-Cohen, 2004. "Development of an Internal Reference Technique for the Quantification of mRNA by qPCR with Application to the *tceA* Reductive Dechlorination Gene". 104<sup>th</sup> general meeting of American Society for Microbiology, New Orleans, LA.
119. Sharp, J. O. and L. Alvarez-Cohen. 2004. "Tools for Assessing the Potential for Bacterial N-Nitrosodimethylamine (NDMA) Degradation", 104<sup>th</sup> general meeting of American Society for Microbiology, New Orleans, LA.
120. Alvarez-Cohen, L., 2004. "Biodegradation of Emerging Water Contaminants", University of Michigan, Ann Arbor, Michigan. *Invited Speaker*.
121. Alvarez-Cohen, L. and Mark Conrad, 2003. "The Application of Molecular and Isotopic Techniques to Track Reductively Dechlorinating Microbial Communities", US-Vietnam Scientific Workshop on Dioxin Screening, Remediation Methodologies and Site Characterization, Hanoi, Vietnam. *Invited Speaker*.
122. Mahendra, S. and L. Alvarez-Cohen, 2003. "Aerobic Biodegradation of 1,4-Dioxane", 103<sup>rd</sup> general meeting of American Society for Microbiology, Washington DC.
123. Rahm, B., Fortin, A., Holmes, V.F., Wu, C., Richardson R.E., and L. Alvarez-Cohen, 2003. "Application of Real-Time PCR to Quantify Reductive Dechlorination of TCE", 103<sup>rd</sup> general meeting of American Society for Microbiology, Washington DC.
124. Alvarez-Cohen, L. 2003. "Trichloroethylene (TCE) in Groundwater: Attacking the problem", UC Berkeley in Silicon Valley, Santa Clara, CA. *Invited Speaker*.
125. French, J., A. Rossi; T. Kirk; D. Blackwelder; K. Sorenson; B. Rahm; L. Alvarez-Cohen; S. Le; M. Pound and P. Tamashiro. 2003. "Phased in situ Biostimulation/Bioaugmentation Pilot Testing in a Coastal Aquifer", Seventh International Symposium on in situ and on-site Bioremediation, Orlando, FL.

126. Alvarez-Cohen, L. 2002. "Application of Molecular and Isotopic Techniques to Study Microbial Communities that Reductively Dechlorinate Trichloroethene", NIEHS Annual Research Conference. Tucson, Arizona. *Invited Speaker*.
127. Alvarez-Cohen, L. 2002. "Using New Technologies to Understand And Solve Environmental Problems", Association of Environmental Engineering and Science Professors and American Association of Engineering Education Joint Conference on Integrated Environmental Teaching, Research and Practice: Linking Engineering and Science to Address Complex Problems. Toronto, Canada. *Invited Keynote Speaker*.
128. Alvarez-Cohen, L. 2002. "Relevance of Graduate Education to Practice of Environmental Engineering" Association of Environmental Engineering and Science Professors and American Association of Engineering Education Joint Conference on Integrated Environmental Teaching, Research and Practice: Linking Engineering and Science to Address Complex Problems. Toronto, Canada. *Invited Panelist*.
129. Alvarez-Cohen, L., Chauhan, S, Rahm, B., Fortin, A., and Richardson R.E.. 2002. "Molecular characterization of microbial community structure and functional genes of cultures that reductively dehalogenate chlorinated ethenes", Conference on Bioremediation and Biodegradation: Current Advances in Reducing Toxicity, Exposure And Environmental Consequences. Asilomar Conference Center, Pacific Grove, California. *Invited speaker*.
130. Freeborn, R. A., V.K. Bhupathiraju, S. Chauhan, K. West, R. Richardson, T. Goulet, and L. Alvarez-Cohen. 2002. "Microbial Community Analysis of TCE-Dechlorinating Enrichments Using Various Electron Donors", Third International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA.
131. Chauhan, S., Bhupathiraju, V.K., West, K, Rahm, B, Sorenson, K., and L. Alvarez-Cohen. 2002. "Microbial Community Analysis of Two Field Sites Undergoing Enhanced TCE Degradation by Lactate Injection", 102nd general meeting of American Society for Microbiology, Salt Lake City, Utah.
132. Sharp, J. O. and L. Alvarez-Cohen. 2002. "Biodegradation of N-Nitrosodimethylamine by Monoxygenase Containing Bacteria", 102nd general meeting of American Society for Microbiology, Salt Lake City, Utah.
133. Sorenson, K S, R. L. Ely, J P. Martin, L. Alvarez-Cohen, and M.E. Kauffman. 2001. "Assessing Enhanced Anaerobic and Intrinsic Aerobic Biodegradation of Trichloroethene" Eos Trans. AGU, 82(47), Fall Meeting Suppl., Abstract B21B-04.
134. Alvarez-Cohen, L., R. Richardson, R. A. Freeborn, V. K. Bhupathiraju, . 2001. "Phylogenetic Characterization of Microbial Communities that Reductively Dechlorinate TCE", NIEHS Superfund Quad-University/EPA Region 9 Conference, Davis, California. *Invited paper*
135. Alvarez-Cohen, L. and R. Richardson. 2001. "Fifteen Minutes of Fame, Years of Infamy – MTBE in Gasoline", Lair of the Golden Bear Summer Camp Seminar Series, Pinehurst, CA. *3 Invited lectures*.
136. M. Laugier, K.H. Chu, and L. Alvarez-Cohen. 2001. "Bioremediation of Mixed Vapor Phase Contaminants in Unsaturated Soil Microcosms", 101st general meeting of American Society for Microbiology, Orlando, Florida.
137. R. E. Richardson, L. K. Jennings, and L. Alvarez-Cohen. 2001. "Variability in Ribosome Maintenance in Organisms with Different 16S rDNA Operon Copy Number", 101st general meeting of American Society for Microbiology, Orlando, Florida.



138. Freeborn, R. A., V. K. Bhupathiraju, R. E. Richardson, T. Goulet, and L. Alvarez-Cohen. 2001. "Comparison of Microbial Community Structure of TCE-Dechlorinating Enrichments Using Various Electron Donors", 101st general meeting of American Society for Microbiology, Orlando, Florida.
139. Chu, K. H., D. Song, M. E. Conrad, and L. Alvarez-Cohen. 2001. "Stable Carbon Isotopic Fractionation of Vinyl Chloride During Aerobic Biodegradation", 101st general meeting of American Society for Microbiology, Orlando, Florida.
140. Deeb, R. A., H-Y Yu, J. Sharp, M. C. Kavanaugh, and L. Alvarez-Cohen. 2001. "Subsurface Fate and Transport of Ethanol and its Potential Impact on BTEX Bioattenuation", The Sixth International Battelle Symposium on In Situ and On-Site Bioremediation, San Diego, CA.
141. Deeb, R. A., A. J. Stocking, L. Alvarez-Cohen, and M. C. Kavanaugh. 2000. "MTBE and TBA Biodegradation: A Current Review", Proceedings of the 2000 Petroleum Hydrocarbons Conference, National Groundwater Association and American Petroleum Institute.
142. Alvarez-Cohen, L. 2000. "Water Quality: Perception Versus Reality", Lair of the Golden Bear Summer Camp Seminar Series, Pinehurst, CA. *3 Invited lectures.*
143. Deeb, R. A., J.C. Spain, and L. Alvarez-Cohen. 2000 "Aerobic Metabolism of Gasoline Aromatics by Two *Rhodococcus ruber* strains", Annual meeting of the Society for Industrial Microbiology, San Diego CA. *Invited paper*
144. Richardson, R. E., V. K. Bhupathiraju, D. L. Song, T. Goulet, and L. Alvarez-Cohen. 2000 "Molecular Characterization of a TCE-Dechlorinating Anaerobic Mixed Culture", Annual Meeting of American Society for Microbiology, Anaheim, CA *Student award winner.*
145. Deeb, R. A., S. F. Nishino, J.C. Spain, H-Y Hu, K. M. Scow and L. Alvarez-Cohen. 2000 "MTBE and benzene biodegradation by a bacterial isolate via two independent monooxygenase-initiated pathways", American Chemical Society Annual Meeting, San Francisco, CA, *Preprints of Extended Abstracts, American Chemical Society* 40(1):280-282. *Invited paper*
146. Deeb, R. A., J. R. Hanson, K. M. Scow, and L. Alvarez-Cohen. 2000. "Substrate interactions during the biodegradation of MTBE and BTEX mixtures." Second International Conference: Remediation of Chlorinated and Other Recalcitrant Compounds, Monterey, CA.
147. Chu, K. H., D. Song, M. E. Conrad, and L. Alvarez-Cohen. 2000. "Fractionation of stable carbon isotopes during the biodegradation of chlorinated solvents." Second International Conference: Remediation of Chlorinated and Other Recalcitrant Compounds, Monterey, CA.
148. Templeton, A. S., K.-H. Chu, L. Alvarez-Cohen, and M. E. Conrad. 1999. "Metabolic controls on the carbon-isotope fractionations expressed by methane -oxidizing bacteria", *Geol. Soc. Am., Abst. with Prog.* 31, no. 7, A392.
149. Alvarez-Cohen, L. 1999. "The Role of Biotechnology in Assuring Future Water Supplies", Dialogue Series on Climate, Biotechnology and Water Security, Swaminathan Research Foundation, Chennai, India. *Invited lecture and committee report.*
150. Song, D. L., Alvarez-Cohen, L., Conrad, M. E., and K. Sorenson. 1999. "Monitoring Of Enhanced In-Situ Bioremediation of Trichloroethylene Using Stable Carbon Isotopes", ASM Specialty Meeting on Subsurface Microbiology, Vail CO.
151. Deeb, R. A., Hanson, J., Scow, K., and L. Alvarez-Cohen. 1999. "Biodegradability and Impact of Fuel Oxygenates on the Bioattenuation of BTEX Compounds In Pollutant Mixtures" UC Toxic Substances Research Program, Santa Barbara, CA.

152. Deeb, R. A., Spain, J. C., and L. Alvarez-Cohen. 1999. "Mineralization of Benzene, Toluene, Ethylbenzene, m-Xylene and p-Xylene by two Rhodococcus Species" Annual Meeting of American Society for Microbiology, Chicago, IL *Student award winner*.
153. Richardson, R., James, C. A., and L. Alvarez-Cohen. 1999. "Bacterial Rebound in Soils Following Steam Injection: Stimulating PAH Degraders," The Fifth International Battelle Symposium on In Situ and On-Site Bioremediation, San Diego, CA.
154. Deeb, R. A., Spain, J.C., and L. Alvarez-Cohen. 1999. "Mineralization of BTEX Compounds and MTBE in Pollutant Mixtures by Enriched and Pure Microbial Cultures," The Fifth International Battelle Symposium on In Situ and On-Site Bioremediation, San Diego, CA.
155. Alvarez-Cohen, L. 1998. "Kinetics of Aerobic Cometabolic Biodegradation of Chlorinated Solvents", Seventh Biocatalysis and Bioprocessing Conference, Iowa City, IA. *Invited Lecture*
156. Bhupathiraju, V.K. and L. Alvarez-Cohen, 1998 "Developing A Tool For Evaluating In-Situ Bioremediation Under Anaerobic Conditions" Annual Meeting of American Society for Microbiology, Atlanta, GA.
157. Alvarez-Cohen, L., M. E. Conrad, A. Templeton, K. S. Udell, P. F. Daley, and V. K. Bhupathiraju. 1998. "Stable and Radioisotopes for Monitoring Intrinsic Bioremediation of Chlorinated Solvents" The First International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA.
158. Alvarez-Cohen, L., V. K. Bhupathiraju, M. E. Conrad, P. F. Daley, H. N. Holman, J. R. Hunt, P. Krauter, M. MacDonald and K. Udell. 1998. Intrinsic Bioremediation, Sites 13 and 3, Alameda Point, Alameda, California. Treatability Study Report, Submitted to the Department of the Navy (contract # N62474-94-D-7430).
159. Chu, K. H., and L. Alvarez-Cohen. 1998. "Degradation of Chlorinated Solvents by Nitrogen-Fixing and Nitrate-Supplied Methane Oxidizers in Unsaturated Columns", The First International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA.
160. Chu, K. H. and L. Alvarez-Cohen. 1998. "Effects of nitrogen source on the nature of toxicity due to aeration and TCE oxidation in methane oxidizing bacteria." UC Toxic Substances Research and Teaching Program: 11th Annual Research Symposium. Berkeley, CA.
161. Alvarez-Cohen, L. 1997. "Modeling the Cometabolic Degradation of Chlorinated Organics", Gordon Conference on Applied and Environmental Engineering, Newport R.I. *Invited Lecture*
162. Deeb, R. and L. Alvarez-Cohen. 1997. "The Mineralization of BTEX Mixtures by Environmental Cultures", The Fourth International Battelle Symposium on In Situ and On-Site Bioremediation, New Orleans, Louisiana.
163. Bhupathiraju, V.K., L. Alvarez-Cohen, M.E. Conrad, A. Templeton, P. F. Daley, M. Hernandez, H-Y Holman, J. R. Hunt and P. Krauter. 1997. "Innovative Techniques for Assessment of Intrinsic Bioremediation at Alameda Naval Air Station", 4th International Battelle Symposium on In Situ and On-Site Bioremediation, New Orleans, LA.
164. Chu, K. H., and L. Alvarez-Cohen. 1997. "TCE Product Toxicity and Internal Energy-Storage Effects on Methanotrophs", The Fourth International Battelle Symposium on In Situ and On-Site Bioremediation, New Orleans, Louisiana.

165. Chu, K. H. and L. Alvarez-Cohen. 1997. "Solvent degradation by methane-oxidizing microorganisms grown on different nitrogen sources in unsaturated bioreactors." UC Toxic Substances Research & Teaching Program: 10<sup>th</sup> Annual Research Symp., San Diego, CA.
166. Conrad, M. E., A. S. Templeton, P. F. Daley, and L. Alvarez-Cohen. 1996. "Coupled Methanogenesis And Methane Oxidation Of Petroleum Hydrocarbons" Geological Society of America Annual Meeting, Denver CO. Abs. No. 51259
167. Alvarez-Cohen, L. 1996. "Methods for Evaluating In Situ Bioremediation in the Field", Petroleum Environment Research Foundation Annual Meeting, San Francisco, CA. *Invited Lecture.*
168. Alvarez-Cohen, L. 1996. "Degradation of Chlorinated Organics by Oxygenase Expressing Cultures", Stanford University, Palo Alto CA. *Invited Lecture.*
169. Chang, H-L., and L. Alvarez-Cohen. 1995. "Modeling Cometabolic Biodegradation of Chlorinated Organics" American Chemical Society Annual Meeting, Atlanta Georgia.
170. Alvarez-Cohen, L. 1995. "Biological Destruction of Chlorinated Organics", Annual Meeting of American Society for Microbiology, Washington DC. *Invited Lecture.*
171. Alvarez-Cohen, L. 1995. "Aerobic Degradation of Hazardous Contaminants", University of North Carolina, Chapel Hill. *Invited Lecture.*
172. Deeb, R., and L. Alvarez-Cohen. 1994. "Thermally Enhanced Bioremediation of a Gasoline Contaminated Aquifer Using Toluene Oxidizing Bacteria", pp. 400-407. In J. Ryan and M. Edwards (eds.) Critical Issues in Water and Wastewater Treatment, American Society of Civil Engineers, New York, NY. First Place Winner ASCE Graduate Student Essay Competition.
173. Avila, G., and L. Alvarez-Cohen. 1994. "Biodegradation of Trichloroethylene in a Two-Stage Reactor" Proc. Water Environment Federation Annual Meeting, Chicago Illinois. First Place Winner WEF Undergraduate Student Paper Competition.
174. Chang, H-L., and L. Alvarez-Cohen. 1994. "Modeling Product Toxicity and Competitive Inhibition of Cometabolic Degradation of Chlorinated Organics" Proc. Water Environment Federation Annual Meeting, Chicago Illinois. Third Place Winner Ph.D. category WEF Student Paper Competition.
175. Deeb, R., and L. Alvarez-Cohen. 1994. "Biodegradation of BTEX Compounds: Temperature and Mixture Effects" Proc. Water Environment Federation Annual Meeting, Chicago Illinois. Second Place Winner M.S. category WEF Student Paper Competition.
176. Chang, H-L., and L. Alvarez-Cohen. 1994. "Biological Treatment of Chlorinated Organics by Four Aerobic Cultures" Annual Meeting of the American Institute of Chemical Engineers, San Francisco, CA.
177. Chu, K. H., and L. Alvarez-Cohen. 1994. "The Effects of Nitrogen Sources on TCE Degradation, Energy Storage, and Growth of Methane Oxidizing Bacteria" Annual Meeting of the American Institute of Chemical Engineers, San Francisco, CA.
178. Alvarez-Cohen, L. 1993. "Biological Aspects of *In Situ* Remediation" Proceedings of the Nineteenth Biennial Groundwater Conference, Sacramento, CA. *Invited Lecture and Paper*
179. Alvarez-Cohen, L. 1992. "Applications of Bioremediation Processes Involving Methanotrophs" 7th International Symposium on Microbial Growth on C<sub>1</sub>-Compounds, Warwick, England. *Invited Lecture and Paper*

180. Alvarez-Cohen, L. 1992. "Basic Principles of Bioremediation Processes with Emphasis on In-situ Applications", International Solar Energy Conference, American Society of Mechanical Engineering, Maui, Hawaii. *Invited Lecture*
181. Alvarez-Cohen, L, and P. L. McCarty, 1991. "Optimization of a Two-Stage Reactor Design for the Cometabolic Transformation of Halogenated Organics Alone and in Mixtures", Water Pollution Control Federation Annual Conference, Toronto, Canada.
182. Alvarez-Cohen, L., and P.L. McCarty, 1991. "Product toxicity of Chloroform and Trichloroethylene Transformation by Methanotrophic Resting Cells", Annual Meeting of American Society for Microbiology, Dallas, Texas.
183. Tsien, H. C., L. Alvarez-Cohen, P. L. McCarty, and R. S. Hanson. 1991. "Use of Soluble Methane Monooxygenase Component B Gene Probe for the Detection of Trichloroethylene Degrading Methanotrophs", Annual Meeting of American Society for Microbiology, Dallas, Texas.
184. Alvarez, L. M., and P. L. McCarty, 1989. "The Cometabolic Transformation of Trichloroethylene by a Methanotrophic Consortia", Annual Meeting of American Society for Microbiology, New Orleans, La.
185. Alvarez, L.M., P.L. McCarty and P.V. Roberts, 1989. "Sorption and Biotransformation in the Presence of Aquifer and Synthetic Solids", International Symposium on Processes Governing Movement and Fate of Contaminants in the Subsurface Environment, IAWPRC Stanford, CA.
186. Alvarez, L.M., P.L. McCarty and P.V. Roberts, 1989. "The Effects of Sorption on the Biotransformation Rate of TCE by Methanotrophs --Experiments with a Synthetic Zeolite", Water Pollution Control Federation Annual Conference, San Francisco, CA.
187. Lipfert, F. W., L. R. Dupuis and L. M. Alvarez. 1984. "Urban and Local Source Effects on Precipitation Chemistry", Brookhaven National Laboratory Technical Report.