

LISA ALVAREZ-COHEN
Fred and Claire Sauer Professor
Chair of Civil and Environmental Engineering Department
University of California, 760 Davis Hall, Berkeley, CA 94720-1710
Phone: (510) 643-8739, Fax: (510) 643-5264
email: alvarez@ce.berkeley.edu
<http://www.ce.berkeley.edu/~alvcohen/>

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 University, Cambridge, MA

EMPLOYMENT HISTORY:

Chair of the Civil and Environmental Engineering Dept. 7/07 - present
University of California, Berkeley, CA

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, biotransformation of environmental contaminants including chlorinated solvents, NDMA, 1,4-Dioxane and PBDEs; and genomic, transcriptomic, proteomic and isotopic evaluation of bioremediation communities.

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

Assistant/Associate Professor, Environmental Engineering 7/91 – 6/00
University of California, 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:

- Elected to the National Academy of Engineering 2010
- 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 Division 4 Peer Committee, National Academy of Engineering (2011-present)

Member of the External Review Committee, Civil and Environmental Engineering Dept., University of Illinois, Urbana Champaign (2011-present).

Member of the National Research Council Water Science and Technology Board (2010-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)

Chair of the American Academy of Microbiology William A. Hinton Research Training Award Committee (2007-2011, member from 2004-2011)

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 21st 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:

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 (REAP) - Phase 1 (with Fiona Doyle, Matt Francis and John Coates) Siemens, Inc., 5/11-10/11.

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-02-025, 3/11-2/14.

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.

Innovative Tools to Measure Transformation of Contaminants. Chevron Energy Technology Company, 8/07-3/12.

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.

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, Civil and Environmental Engineering Dept., 7/07-present.

Search Committee for QB3 Director, UC Berkeley Campus, 6/09-present.

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.

PEER REVIEWED PUBLICATIONS:

1. 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*, in press.
2. **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. 2011. "Sustainable syntrophic growth of *Dehalococcoides ethenogenes* with *Desulfovibrio vulgaris* Hildenborough and *Methanobacterium congolense*", *International Society for Microbial Ecology Journal*, in press.
3. **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*, in press.
4. **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**: 1014–1024. doi:10.1038/ismej.2010.202
5. **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
6. 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
7. 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.
8. **Sharp, J. O.**, **C. M. Sales**, and L. Alvarez-Cohen. 2010. "Functional characterization of propane-enhanced n-nitrosodimethylamine degradation by two Actinomycetales", *Biotechnology and Bioengineering*, **107** (6) 924-932. DOI: 10.1002/bit.22899
9. Zeng X., **K.R. Robrock**, S.L. Simonich, L. Alvarez-Cohen, P. Korytár, and D. F. Barofsky. 2010. "Application of a congener specific degradation model to study photodebromination, anaerobic microbial debromination, and Fe⁰ reduction of PBDEs". *Environmental Toxicology and Chemistry*, **29** (4) 770-778. DOI: 10.1002/etc.119
10. **Fan, A.F.**, **P. K. H. Lee**, W.J. Ng, L. Alvarez-Cohen, E.L. Brodie, G.L. Andersen, J.Z. He. 2009. "Influence of trace erythromycin and erythromycin-H₂O on carbon and nutrient removal and on resistance selection in sequencing batch reactors", *Applied Microbiology and Biotechnology*, **85** (1): 185-195. PMID: 19727707
11. **Lee, P. K. H.**, J. Z. He, S. H. Zinder, and L. Alvarez-Cohen. 2009. "Evidence for Nitrogen fixation by "*Dehalococcoides ethenogenes*" strain 195", *Applied and Environmental Microbiology*, **75** (23):7551-7555. PMID: 19820162

12. **Robrock, K.R.**, M. Coelhan, D.L. Sedlak and L. Alvarez-Cohen. 2009. "Aerobic Biotransformation of polybrominated diphenyl ethers (PBDEs) by bacterial isolates", *Environmental Science and Technology*, **43** (15): 5705–5711.
13. Tang, Y.J., S. Yi, W.Q. Zhuang, S. H. Zinder, J.D. Keasling, and L. Alvarez-Cohen, 2009. "Investigation of Carbon Metabolism in "*Dehalococcoides ethenogenes*" strain 195 Using Isotopomer and Transcriptomic Analysis", *Journal of Bacteriology*, **191** (16): 5224-5231. PMID: 19525347
14. **Johnson, D. R.**, **A. Nemir**, G. L. Andersen, S. H. Zinder and L. Alvarez-Cohen. 2009. "Transcriptomic Microarray Analysis of Corrinoid Responsive Genes in *Dehalococcoides ethenogenes* strain 195", *FEMS Microbial Letters*, **294** (2): 198-206. PMID: 19341394
15. National Research Council Committee on Water Resources Activities at the USGS (LA-C committee member) 2009. *Toward a Sustainable and Secure Water Future: A Leadership Role for the US Geological Survey*, National Academy Press, Washington DC.
16. **Zeng X.**, S.L. Simonich, **K.R. Robrock**, P. Korytár, L. Alvarez-Cohen, and D. F. Barofsky. 2008. "Development and validation of a congener specific photodegradation model for PBDEs". *Environmental Toxicology and Chemistry*, **27** (12): 2427–2435. PMID: 18613751
17. **West, K. A.**, **D. R. Johnson**, P. Hu, T. Z. DeSantis, E. L. Brodie, **P.K.H. Lee**, H. Feil, G. L. Andersen, S. H. Zinder and L. Alvarez-Cohen. 2008. "Comparative Genomics of *Dehalococcoides ethenogenes* 195 and an Enrichment Culture containing unsequenced *Dehalococcoides* strains", *Applied and Environmental Microbiology*, **74** (11): 3533-3540. PMID: 18359838
18. **Johnson, D. R.**, E. L. Brodie, A. E. Hubbard, G. L. Andersen, S. H. Zinder, and L. Alvarez-Cohen . 2008. "Temporal Transcriptomic Microarray Analysis of "*Dehalococcoides ethenogenes*" Strain 195 During the Transition into Stationary Phase", *Applied and Environmental Microbiology*, **74** (9): 2864-2872. PMID: 18310438
19. **Robrock, K.**, P. Korytár and L. Alvarez-Cohen. 2008. "Pathways for the Anaerobic Microbial Debromination of Polybrominated Diphenyl Ethers", *Environmental Science and Technology*, **42** (8): 2845-2852. PMID: 18497133
20. **Lee, P. K. H.**, T. W. Macbeth, K. S. Sorenson and L. Alvarez-Cohen. 2008. "Quantifying Genes and Transcripts to Assess the In Situ Physiology of *Dehalococcoides* spp. in a Trichloroethene-Contaminated Groundwater Site", *Applied and Environmental Microbiology*, **74** (9): 2728-2739. PMID: 18326677
21. **Sharp, J. O.**, **Sales, C.M.**, LeBlanc, J., Liu, J., Wood, T. K., Eltis, L.D., Mohn, W. W., and L. Alvarez-Cohen. 2007. "An Inducible Propane Monooxygenase is Responsible for *N*-nitrosodimethylamine Degradation by *Rhodococcus* sp. RHA1", *Applied and Environmental Microbiology*, **73**: 6930-6938. PMID: 17873074
22. National Research Council Committee on Metagenomics (LA-C committee member) 2007. *The New Science of Metagenomics: Revealing the Secrets of our Microbial Planet*, National Academy Press, Washington DC.
23. **Mahendra, S.**, C. J. Petzold, E. E. Baidoo, J. D. Keasling and L. Alvarez-Cohen. 2007. "Identification of the Intermediates of in-vivo Oxidation of 1,4-Dioxane by Monooxygenase-Containing Bacteria", *Environmental Science and Technology*, **41**(21): 7330-7336. PMID: 18044507
24. **Lee, P. K. H.**, M.E. Conrad, and L. Alvarez-Cohen. 2007. "Stable Carbon Isotope Fractionation of Chloroethenes by Dehalorespiring Isolates", *Environmental Science and Technology*, **41**(12): 4277-4285. PMID: 17626425

25. He, J, V. F. Holmes, **P. K. H. Lee** and L. Alvarez-Cohen. 2007. "Influence of Vitamin B₁₂ and Co-cultures on the Growth of *Dehalococcoides* Isolates in Defined Medium", *Applied and Environmental Microbiology*, **73** (9): 2847-2853. PMID: 17337553
26. National Research Council Committee to Assess the Performance of Surface and Subsurface Engineered Barriers (LA-C committee member) 2007. *Assessment of the Performance of Engineered Waste Containment Barriers*, National Academy Press, Washington DC.
27. **Lee, P. K. H., D. R. Johnson**, V. F. Holmes, J. He and L. Alvarez-Cohen. 2006. "Reductive Dehalogenase Gene Expression as a Biomarker for Physiological Activity of *Dehalococcoides* spp.", *Applied and Environmental Microbiology*, **72** (9):6161-6168. PMID: 16957242
28. Holmes, V. F., J. He, **P. K. H. Lee** and L. Alvarez-Cohen. 2006. "Discrimination of Multiple *Dehalococcoides* Strains in a TCE Enrichment by Quantification of their Reductive Dehalogenase Genes", *Applied and Environmental Microbiology*, **72** (9):5877-5883. PMID: 16957207
29. **Mahendra, S.** and L. Alvarez-Cohen. 2006. "Kinetics of 1,4-Dioxane Biodegradation by Monooxygenase-expressing Bacteria", *Environmental Science and Technology*, **40** (17): 5435-5442. PMID: 16999122
30. He, J., **K. R. Robrock** and L. Alvarez-Cohen. 2006 "Microbial Reductive Debromination of Polybrominated Diphenyl Ethers (PBDEs)", *Environmental Science and Technology*, **40** (14): 4429-4434. PMID: 16903281
31. **Rahm, B.G.**, S. Chauhan, V.F. Holmes, T.W. Macbeth, K.S. Sorenson and L. Alvarez-Cohen. 2006. "Molecular Characterization of Microbial Populations at Two Sites with Differing Reductive Dechlorination Abilities." *Biodegradation*, **17** (6): 523-534. PMID: 16477354
32. **Templeton, A. S., K-H Chu**, L. Alvarez-Cohen and M. E. Conrad. 2006. "Variable Carbon Isotope Fractionation Expressed by Aerobic Methane-Oxidizing Bacteria". *Geochimica et Cosmochimica Acta*, **70**:1739-1752.
33. **Johnson, D. R., P. K. H. Lee**, V.F. Holmes, **A.C. Fortin** and L. Alvarez-Cohen. 2005. "Transcriptional Expression of the *tceA* Gene in a *Dehalococcoides*-Containing Microbial Enrichment." *Applied and Environmental Microbiology*, **71**: 7145-7151. PMID: 16269753
34. **Freeborn R. A., K. A. West V. K. Bhupathiraju**, S. Chauhan, **B. G. Rahm, R. E. Richardson** and L. Alvarez-Cohen. 2005. "Phylogenetic Analysis of TCE-Dechlorinating Consortia Enriched on a Variety of Electron Donors." *Environmental Science and Technology*, **39**(21):8358-8368. PMID: 16294874
35. **Johnson, D. R., P. K. H. Lee**, V. F. Holmes and L. Alvarez-Cohen. 2005. "An Internal Reference Technique for Accurately Quantifying Specific mRNAs by Real-Time PCR with Application to the *tceA* Reductive Dehalogenase Gene." *Applied and Environmental Microbiology*, **71**:3866-3871. PMID: 16000799
36. **Sharp, J. O.**, T. K. Wood and L. Alvarez-Cohen. 2005. "Aerobic Biodegradation of N-Nitrosodimethylamine (NDMA) by Axenic Bacterial Cultures." *Biotechnology and Bioengineering*, **89** (5): 608-618.
37. **Mahendra, S.** and L. Alvarez-Cohen. 2005. "*Pseudonocardia dioxanivorans* sp. nov., a Novel Actinomycete that Grows on 1,4-Dioxane." *International Journal of Systematic and Evolutionary Microbiology*, **55**(Part 2):593-598.

38. National Research Council Committee on Source Removal of Contaminants in the Subsurface (LA-C committee member) 2004. *Contaminants in the Subsurface: Source Zone Assessment and Remediation*, National Academy Press, Washington DC.
39. **Chu, K-H, S. Mahendra, D. L. Song**, M. E. Conrad, and L. Alvarez-Cohen. 2004. "Stable Carbon Isotope Fractionation During Aerobic Biodegradation of Chlorinated Ethenes". *Environmental Science and Technology*, **38**(11):3126-3130.
40. **Deeb, R.A., K.H. Chu**, T. Shih, S. Linder, M. Suffett, M. C. Kavanaugh and L. Alvarez-Cohen. 2003. "MTBE and Other Oxygenates: Environmental Sources, Analysis, Occurrence and Treatment". *Environmental Engineering Science*, **20**(5):433-447.
41. **Mitch W.A., J.O. Sharp**, R.R. Trussel, R.L. Valentine, L. Alvarez-Cohen, and D.L. Sedlak. 2003. "The Current Status of N-Nitrosodimethylamine as a Water Quality Contaminant". *Environmental Engineering Science*, **20**(5):389-404.
42. Alvarez-Cohen, L. and D.L. Sedlak. 2003. "Emerging Contaminants in Water", *Environmental Engineering Science*, **20**(5), 387-388
43. **Richardson, R. E., C. A. James**, V. K. Bhupathiraju, and L. Alvarez-Cohen. 2002. "Microbial Activity in Soils Following Steam Exposure". *Biodegradation*, **13**(4): 285–295.
44. **Richardson, R. E., V. K. Bhupathiraju, D. S. Song**, T. Goulet, and L. Alvarez-Cohen. 2002. "Phylogenetic Characterization of Microbial Communities that Reductively Dechlorinate TCE Based upon a Combination of Molecular Techniques". *Environmental Science and Technology*, **36**(12):2652-2662.
45. **Song, D. L., M. E. Conrad, K. S. Sorenson**, and L. Alvarez-Cohen. 2002. "Stable Carbon Isotopic Fractionation During Enhanced In-Situ Bioremediation of Trichloroethylene". *Environmental Science and Technology*, **36**(10), 2262 -2268.
46. **Deeb, R. A., J. O. Sharp**, A. Stocking, S. McDonald, **K. A. West, M. Laugier**, P. J. J. Alvarez, M. C. Kavanaugh and L. Alvarez-Cohen. 2002. "Impact of Ethanol on Benzene Plume Lengths: Microbial and Modeling Studies" *ASCE Journal of Environmental Engineering*, **128**(9), 868-875.
47. Bhupathiraju, V. K., P. Krauter, H-Y. N. Holman, M. E. Conrad, P. F. Daley, A. S. Templeton, J. R. Hunt, M. Hernandez, and L. Alvarez-Cohen. 2002. "Assessment of in-situ Bioremediation at a Refinery Waste-Contaminated Site and an Aviation Gasoline Contaminated Site", *Biodegradation*, **13**(2): 79–90.
48. 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.
49. **Deeb, R.A., A. Stocking**, L. Alvarez-Cohen, and M. C. Kavanaugh. 2001. "Biodegradability of Methyl Tert-Butyl Ether and Tert-Butyl Alcohol", Chap. 16 in *Oxygenates in Gasoline, Environmental Aspects*, A. F. Diaz and D. L. Drogos Eds., ACS Symposium Series No. 799, American Chemical Society Books, ISBN: 0-8412-3760-3.
50. Alvarez-Cohen, L., and G. E. Speitel. 2001. "Kinetics of Aerobic Cometabolism of Chlorinated Solvents", *Biodegradation*, **12**(2):105-126.
51. **Deeb, R.A., H-Y Hu, J.R. Hanson, K.M. Scow**, and L. Alvarez-Cohen. 2001. "Substrate Interactions in BTEX and MTBE Mixtures by an MTBE-Degrading Isolate" *Environmental Science and Technology*, **35**(2):312-317.
52. **Deeb, R.A., K.M. Scow**, and L. Alvarez-Cohen. 2000. "Aerobic MTBE Degradation: an Examination of Past Studies, Current Challenges and Future Directions", *Biodegradation*, **11** (2/3):171-185.

53. **Deeb, R.A.**, and L. Alvarez-Cohen. 2000. "Aerobic Biotransformation of Gasoline Aromatics in Multi-Component Mixtures", *Bioremediation Journal*, **4**(2):171-179.
54. **Chu, K. H.**, and L. Alvarez-Cohen. 2000. "Treatment of Chlorinated Solvents by Nitrogen-Fixing and Nitrate-Supplied Methane Oxidizers in Columns Packed with Unsaturated Porous Media", *Environmental Science and Technology*, **34**(9):1784-1793.
55. Conrad, M. E., **A. S. Templeton**, P. F. Daley, and L. Alvarez-Cohen. 1999. "Seasonally-Induced Fluctuations in Microbial Production and Consumption of Methane during the Bioremediation of Aged Subsurface Refinery Contamination", *Environmental Science and Technology*, **33**(22):4061-4068.
56. Bhupathiraju, V. K., M. Hernandez, **D. Landfear**, and L. Alvarez-Cohen. 1999. "Quantitation of Anaerobic Microbial Activity Using a Tetrazolium Dye", *Journal of Microbiological Methods*, **37**(9):231-243.
57. Conrad, M. E., **A. S. Templeton**, P. F. Daley, and L. Alvarez-Cohen. 1999. "Isotopic Evidence for Biological Controls on Migration of Petroleum Hydrocarbons", *Organic Geochemistry*, **30**(8A):843-859.
58. Bhupathiraju, V. K., M. Hernandez, P. Krauter, and L. Alvarez-Cohen. 1999. "A New Direct Microscopy Based Method for Evaluating *In-Situ* Bioremediation", *Journal of Hazardous Materials*, **B67**:299-312.
59. **Chu, K. H.**, and L. Alvarez-Cohen. 1999. "Evaluation of Toxic Effects of Aeration and Trichloroethylene Oxidation on Methanotrophic Bacteria Grown with Different Nitrogen Sources", *Applied and Environmental Microbiology* **65**(2):766-772.
60. Stringfellow, W. T., and L. Alvarez-Cohen. 1999. "Evaluating the Relationship Between the Sorption of PAHs to Bacterial Biomass and Biodegradation", *Water Research*, **33**(11):2535-2544.
61. **Deeb, R. A.** and L. Alvarez-Cohen. 1999. "Temperature Effects and Substrate Interactions During the Aerobic Biotransformation of BTEX Mixtures by Toluene-Enriched Consortia and *Rhodococcus rhodochrous*", *Biotechnology and Bioengineering* **62**(5):526-536.
62. **Chu, K. H.**, and L. Alvarez-Cohen. 1998. "Effect of Nitrogen Source on Growth and Trichloroethylene Degradation by Methane-Oxidizing Bacteria", *Applied and Environmental Microbiology*, **64**(9):3451-3457.
63. **Chang, H-L.**, and L. Alvarez-Cohen. 1997. "Two-Stage Methanotrophic Bioreactor for the Treatment of Chlorinated Organic Wastewater", *Water Research*, **31**(8):2026-2036.
64. **Chang, H-L.**, and L. Alvarez-Cohen. 1996. "The Biodegradation of Individual and Multiple Chlorinated Aliphatics by Mixed and Pure Methane Oxidizing Cultures", *Applied and Environmental Microbiology*, **62**(9):3371-3377.
65. **Chu, K. H.**, and L. Alvarez-Cohen. 1996. "TCE Degradation by Methane Oxidizing Cultures Grown with Various Nitrogen Sources", *Water Environment Research*, **68**:76-82.
66. National Research Council Committee on U.S. Geological Survey Water Resources Research (LA-C committee member) 1996. *Hazardous Materials in the Hydrologic Environment*, National Academy Press, Washington DC.
67. **Chang, H-L.**, and L. Alvarez-Cohen. 1995. "A Model for the Cometabolic Degradation of Chlorinated Organics" *Environmental Science and Technology*, **29**(9):2357-2367.
68. **Chang, H-L.**, and L. Alvarez-Cohen. 1995. "Transformation Capacities of Chlorinated Organics by Mixed Cultures Enriched on Methane, Propane, Toluene or Phenol", *Biotechnology and Bioengineering*, **45**:440-449.

69. **Chu, K. H., J. Vernalia,** and L. Alvarez-Cohen. 1995. "Evaluation Of Nitrogen Sources For Bioremediation Of Trichloroethylene In Unsaturated Porous Media" in *Bioremediation of Chlorinated Solvents*, p. 281-288. R.E. Hinchee, A. Leeson and L. Semprini eds., Lewis Publishers, Ann Arbor MI.
70. Aitken, M. D., **P. E. Heck,** L. Alvarez-Cohen, **S. J. Grimberg,** and **W. T. Stringfellow.** 1994. "Activated Sludge and Other Aerobic Suspended Culture Processes", *Water Environment Research*, **66**:325-336.
71. Alvarez-Cohen, L. 1993. "Engineering Challenges Associated with the Application Of *In Situ* Bioremediation" in *In Situ Bioremediation: When Does it Work?*, p. 136-152. National Academy Press, Washington DC.
72. Alvarez-Cohen, L., P. L. McCarty, and P. V. Roberts. 1993. "Sorption of Trichloroethylene onto a Zeolite Accompanied by Methanotrophic Biotransformation", *Environmental Science and Technology*, **27**(10):2141-2148.
73. Aitken, M. D., **P. E. Heck,** L. Alvarez-Cohen, **S. J. Grimberg,** and **W. T. Stringfellow.** 1993. "Activated Sludge", *Water Environment Research*, **65**:324-336.
74. Alvarez-Cohen, L. 1993. "Application of Methanotrophic Oxidations for the Bioremediation of Chlorinated Organics" in *Microbial Growth on C₁ Compounds*, p. 337-350. J. C. Murrell and D. P. Kelly eds., Intercept Ltd., Hampshire England.
75. Alvarez-Cohen, L., P. L. McCarty, E. Boulygina, R. S. Hanson, G. A. Brusseau, and H. C. Tsien. 1992. "Characterization of a Methane-Utilizing Bacterium from a Bacterial Consortium that Rapidly Degrades Trichloroethylene and Chloroform", *Applied and Environmental Microbiology*, **58**(6):1886-1893.
76. Alvarez-Cohen, L., and P. L. McCarty. 1991. "Effects of Toxicity, Aeration, and Reductant Supply on Trichloroethylene Transformation by a Mixed Methanotrophic Culture", *Applied and Environmental Microbiology*, **57**(1):228-235.
77. Alvarez-Cohen, L., and P. L. McCarty. 1991. "A Cometabolic Biotransformation Model for Halogenated Aliphatic Compounds Exhibiting Product Toxicity", *Environmental Science and Technology*, **25**(8):1381-1387.
78. Alvarez-Cohen, L., and P. L. McCarty. 1991. "Two-Stage Dispersed-Growth Treatment of Halogenated Aliphatic Compounds by Cometabolism", *Environmental Science and Technology*, **25**(8):1387-1393.
79. Alvarez-Cohen, L., and P. L. McCarty. 1991. "Product Toxicity and Cometabolic Modeling of Chloroform and Trichloroethylene Transformation by Methanotrophic Resting Cells", *Applied and Environmental Microbiology*, **57**(4):1031-1037.
80. Criddle, C. S., L. M. Alvarez, and P. L. McCarty. 1991. "Microbiological Processes in Porous Media", in *Transport Processes in Porous Media*, J. Bear and M. Y. Corapcioglu, eds., Kluwer Academic Publishers, N.Y. p. 639-691.

SELECTED PRESENTATIONS, PROCEEDINGS, REPORTS:

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.

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.

Sales, C.M., A. Grostern, S. Mahendra, R.E. Parales and L. Alvarez-Cohen. 2011. The genome sequence of *Pseudonocardia dioxanivorans* strain CB1190. 2011. 111th General Meeting, American Society for Microbiology, New Orleans, LA.

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. 111th General Meeting, American Society for Microbiology, New Orleans, LA.

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 ¹³C isotopic tracer analysis. 111th General Meeting, American Society for Microbiology, New Orleans, LA.

Alvarez-Cohen, L. 2010. “Application of advanced molecular tools to optimize bioremediation of environmental contaminants.” Tongji University, Shanghai, China. *Invited Speaker*.

Grostern, A., C.M. Sales, S. Mahendra, and L. Alvarez-Cohen, 2010. “Genome assembly of the 1,4-dioxane degrading *Pseudonocardia dioxanivorans* strain CB1190”, 13th International Symposium for Microbial Ecology, Seattle, WA.

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”, 13th International Symposium for Microbial Ecology, Seattle, WA.

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.

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.

Alvarez-Cohen, L., 2010. “Biodegradation of Fire Retardants”, 110th general meeting of American Society for Microbiology, San Diego, CA. *Invited Speaker*.

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”, 110th general meeting of American Society for Microbiology, San Diego, CA.

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", 110th general meeting of American Society for Microbiology, San Diego, CA.

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", 110th general meeting of American Society for Microbiology, San Diego, CA.

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", 110th general meeting of American Society for Microbiology, San Diego, CA.

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", 110th general meeting of American Society for Microbiology, San Diego, CA.

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*.

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" 109th general meeting of American Society for Microbiology, Philadelphia, PA.

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" 109th general meeting of American Society for Microbiology, Philadelphia, PA.

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", 109th general meeting of American Society for Microbiology, Philadelphia, PA.

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", 109th general meeting of American Society for Microbiology, Philadelphia, PA.

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*.

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.*

Alvarez-Cohen, L., 2008. "How Bioremediation can be Optimized using Cutting-Edge Molecular Tools", California Department of Toxics Substances Control, Sacramento, CA. *Invited Speaker.*

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.*

Alvarez-Cohen, L., 2008. "Combining Transcriptomics with Proteomics for Analysis of Microbial Isolates and Communities", Tsinghua University, Beijing, China. *Invited Speaker.*

Alvarez-Cohen, L., 2008. "Application of Cutting-Edge Molecular Tools to Optimizing Bioremediation", Peking University, Beijing, China. *Invited Speaker.*

Alvarez-Cohen, L., 2008. "Proteomics, Transcriptomics and Genomics applied to Optimize Bioremediation", NIEHS Spirit Lecture, 20th, Raleigh, NC. *Invited Speaker.*

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", 108th general meeting of American Society for Microbiology, Boston, MA.

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.*

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.*

Alvarez-Cohen, L., 2007. "Application of Omics-Based Tools to Optimize Bioremediation", Superfund Basic Research Program, 20th Anniversary Conference, Raleigh, NC. *Invited Speaker.*

Robrock, K. and Alvarez-Cohen, L., 2007. "Aerobic Biodegradation of Polybrominated Biphenyl Ethers", Superfund Basic Research Program, 20th Anniversary Conference, Raleigh, NC.

Alvarez-Cohen, L., 2007. "Application of Molecular Tools and Microarrays to Optimize Bioremediation", Partners in Environmental Technology Symposium and Workshop, Washington DC. *Invited Speaker*.

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.

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

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

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

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*.

Alvarez-Cohen, L., 2007. "Optimizing Bioremediation using Molecular Tools and Microarrays", CEE Distinguished Lecture Series, University of Texas at Austin. *Invited Speaker*.

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", 107th general meeting of American Society for Microbiology, Toronto, Canada.

He, J., P. K. H. Lee, V. F. Holmes, and L. Alvarez-Cohen, 2007. "Growth of *Dehalococcoides* species in an Autotrophic Consortium", 107th general meeting of American Society for Microbiology, Toronto, Canada.

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", 107th general meeting of American Society for Microbiology, Toronto, Canada.

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", 107th general meeting of American Society for Microbiology, Toronto, Canada.

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", 107th general meeting of American Society for Microbiology, Toronto, Canada..

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", 107th general meeting of American Society for Microbiology, Toronto, Canada.

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", 9th International In Situ and On-Site Bioremediation Symposium, Baltimore, MD.

Holmes, V. F., L. Alvarez-Cohen and W. Clayton, 2007. "Why *Dehalococcoides* 16S Isn't Enough to Predict Bioremediation of PCE or TCE", 9th International In Situ and On-Site Bioremediation Symposium, Baltimore, MD.

Alvarez-Cohen, L., 2007. "Microbial Communities and Pollution", 2007 AAAS Annual Meeting, San Francisco, CA. *Invited Speaker.*

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.*

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.*

Alvarez-Cohen, L., 2006. "Biodegradation of Emerging Water Contaminants", National University of Singapore, *Invited Speaker.*

Alvarez-Cohen, L., 2006. "Application of Molecular and Isotopic Tools to Optimize in situ Bioremediation", National Technical University of Singapore. *Invited Speaker.*

Alvarez-Cohen, L., 2006. "A Thousand Points of Light – Use of Microarrays and other Molecular Tools to Understand *Dehalococcoides*", Stanford University, CA. *Invited Speaker.*

Alvarez-Cohen, L., 2006. "Application of Molecular and Isotopic Tools to Optimize Reductive Dechlorination", Tsinghua University, PRC. *Invited Speaker.*

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" 106th general meeting of American Society for Microbiology, Orlando, FL.

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 B₁₂) Regulon" 106th general meeting of American Society for Microbiology, Orlando, FL.

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" 106th general meeting of American Society for Microbiology, Orlando, FL.

Robrock, K. R., J. He, P. Korytar, J. de Boer and L. Alvarez-Cohen, 2006. "Degradation of Polybrominated Diphenyl Ethers by *Dehalococcoides* species." 106th general meeting of American Society for Microbiology, Orlando, FL.

Lee, P. K. H., M. S. Conrad and L. Alvarez-Cohen, 2006. "Stable Carbon Isotope Fractionation of Chloroethenes by Dehalogenating isolates." 106th general meeting of American Society for Microbiology, Orlando, FL.

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." 106th general meeting of American Society for Microbiology, Orlando, FL.

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." 106th general meeting of American Society for Microbiology, Orlando, FL.

He, J.Z., V. Holmes, P. K.H. Lee and L. Alvarez-Cohen, 2006. "Optimizing Growth of *Dehalococcoides ethenogenes* Strain 195 in Defined Medium" 106th general meeting of American Society for Microbiology, Orlando, FL.

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.

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.

Robrock, K. and L. Alvarez-Cohen, 2005. "Inhibition of Denitrification by the Antibacterial Triclosan", 2005 TSR&TP Annual Conference, Sacramento, CA.

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" 105th general meeting of American Society for Microbiology, Atlanta, GA.

He, J., K. R. Robrock and L. Alvarez-Cohen. 2005 "Anaerobic Microbial Degradation of Polybrominated Diphenyl Ethers (PBDEs)" 105th general meeting of American Society for Microbiology, Atlanta, GA.

Holmes, V. F., J. He and L. Alvarez-Cohen, 2005. "Cooperative Dechlorination of Trichloroethene to Ethene by Two or More Dehalococcoides spp." 105th general meeting of American Society for Microbiology, Atlanta, GA.

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" 105th general meeting of American Society for Microbiology, Atlanta, GA.

Mahendra, S. and L. Alvarez-Cohen, 2005. "Kinetics of 1,4-Dioxane Biodegradation by Monooxygenase-expressing Organisms". 105th general meeting of American Society for Microbiology, Atlanta, GA.

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.

Sharp, J.O. and L. Alvarez-Cohen, 2004. "Tools for assessing N-nitrosodimethylamine (NDMA) biodegradation by monooxygenase enzymes". Superfund Basic Research Program Annual Meeting, Seattle, WA.

Holmes, V. F., He, J. Z., Johnson, D. R., and L. Alvarez-Cohen. 2004. "Assessing Reductive Dechlorination Potential by Quantifying Dehalococcoides Reductase Genes". Superfund Basic Research Program Annual Meeting, Seattle, WA.

Alvarez-Cohen, L., 2004. "Addressing the Water Crisis", Sixth Annual Asian Leadership Conference, Singapore. *Invited Speaker*.

Robrock, K. and L. Alvarez-Cohen, 2004. "Effects of Triclosan on Environmental Microbial Communities", 2004 TSR&TP Annual Conference, San Diego, CA.

Holmes, V. F., and L. Alvarez-Cohen, 2004. "Growth and Dechlorination Activity of *Dehalococcoides ethenogenes* 195 within Assembled Co- and Tri-Cultures". 104th general meeting of American Society for Microbiology, New Orleans, LA.

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". 104th general meeting of American Society for Microbiology, New Orleans, LA.

Sharp, J. O. and L. Alvarez-Cohen. 2004. "Tools for Assessing the Potential for Bacterial N-Nitrosodimethylamine (NDMA) Degradation", 104th general meeting of American Society for Microbiology, New Orleans, LA.

Alvarez-Cohen, L., 2004. "Biodegradation of Emerging Water Contaminants", University of Michigan, Ann Arbor, Michigan. *Invited Speaker*.

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*.

Mahendra, S. and L. Alvarez-Cohen, 2003. "Aerobic Biodegradation of 1,4-Dioxane", 103rd general meeting of American Society for Microbiology, Washington DC.

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", 103rd general meeting of American Society for Microbiology, Washington DC.

Alvarez-Cohen, L. 2003. "Trichloroethylene (TCE) in Groundwater: Attacking the problem", UC Berkeley in Silicon Valley, Santa Clara, CA. *Invited Speaker*.

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.

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*.

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*.

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*.

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*.

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.

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.

Sharp, J. O. and L. Alvarez-Cohen. 2002. "Biodegradation of N-Nitrosodimethylamine by Monooxygenase Containing Bacteria", 102nd general meeting of American Society for Microbiology, Salt Lake City, Utah.

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.

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*

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*.

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.

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.

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.

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.

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.

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.

Alvarez-Cohen, L. 2000. “Water Quality: Perception Versus Reality”, Lair of the Golden Bear Summer Camp Seminar Series, Pinehurst, CA. *3 Invited lectures.*

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*

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.*

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*

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.

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.

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.

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.*

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.

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.

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.*

Richardson, R., James, C. A., and L. Alvarez-Cohen. 1999. "Bacterial Rebound in Soils Following Steam Injection: Stimulating PAH Degradation," The Fifth International Battelle Symposium on In Situ and On-Site Bioremediation, San Diego, CA.

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.

Alvarez-Cohen, L. 1998. "Kinetics of Aerobic Cometabolic Biodegradation of Chlorinated Solvents", Seventh Biocatalysis and Bioprocessing Conference, Iowa City, IA. *Invited Lecture*

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.

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.

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).

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.

- 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.
- Alvarez-Cohen, L. 1997. "Modeling the Cometabolic Degradation of Chlorinated Organics", Gordon Conference on Applied and Environmental Engineering, Newport R.I. *Invited Lecture*
- 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.
- 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", The Fourth International Battelle Symposium on In Situ and On-Site Bioremediation, New Orleans, LA.
- 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.
- 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: 10th Annual Research Symp., San Diego, CA.
- 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
- Alvarez-Cohen, L. 1996. "Methods for Evaluating In Situ Bioremediation in the Field", Petroleum Environment Research Foundation Annual Meeting, San Francisco, CA. *Invited Lecture*.
- Alvarez-Cohen, L. 1996. "Degradation of Chlorinated Organics by Oxygenase Expressing Cultures", Stanford University, Palo Alto CA. *Invited Lecture*.
- Chang, H-L., and L. Alvarez-Cohen. 1995. "Modeling Cometabolic Biodegradation of Chlorinated Organics" American Chemical Society Annual Meeting, Atlanta Georgia.
- Alvarez-Cohen, L. 1995. "Biological Destruction of Chlorinated Organics", Annual Meeting of American Society for Microbiology, Washington DC. *Invited Lecture*.
- Alvarez-Cohen, L. 1995. "Aerobic Degradation of Hazardous Contaminants", University of North Carolina, Chapel Hill. *Invited Lecture*.
- 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.

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.

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.

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.

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.

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.

Alvarez-Cohen, L. 1993. "Biological Aspects of *In Situ* Remediation" Proceedings of the Nineteenth Biennial Groundwater Conference, Sacramento, CA. *Invited Lecture and Paper*

Alvarez-Cohen, L. 1992. "Applications of Bioremediation Processes Involving Methanotrophs" 7th International Symposium on Microbial Growth on C₁-Compounds, Warwick, England. *Invited Lecture and Paper*

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*

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.

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.

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.

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.

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.

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.

Lipfert, F. W., L. R. Dupuis and L. M. Alvarez. 1984. "Urban and Local Source Effects on Precipitation Chemistry", Brookhaven National Laboratory Technical Report.