CURRICULUM VITA OF

Raina M. Maier
Dept. of Soil, Water, and Environmental Science
University of Arizona
Tucson, AZ 85721
(520) 621-7231

EDUCATION

1983-1988 Ph.D. in Microbiology, Rutgers University
1975-1979 B.A. in Biology/Chemistry, University of Minnesota

EMPLOYMENT

2000-present Professor, Environmental Science; Pharmacology and Toxicology; BIO5 Institute; Microbiology Program; University of Arizona
2017-2019 Interim Director, University of Arizona Institute of the Environment
1995-2000 Associate Professor, University of Arizona
1991-1995 Assistant Professor, University of Arizona
1988-1990 Postdoctoral Research Associate, Department of Biochemistry and Biophysics, Iowa State University
1983-1988 Research/Teaching Assistant, Department of Biochemistry and Microbiology, Rutgers University

RESEARCH PROGRAM

My research interests lie in two focal areas. The first concerns investigation of microorganisms in nutrient-poor (oligotrophic) environments. My environmental microbiology group works to understand patterns in the diversity, community structure and function of microorganisms in oligotrophic environments including subsurface soils, Sonoran and Atacama Desert soils, dust, Kartchner Caverns rock and speleothem surfaces, the Biosphere 2 Landscape Evolution Observatory, and arid/semi-arid mine waste sites. We seek to develop a fundamental understanding of how the microbial component of these systems influences mineral weathering, soil formation and health, and the remediation of any associated metal and organic contamination. This research combines experimental-based investigation with modeling and the information gained from this research is used, in part, to develop innovative approaches to recover, maintain, or enhance soil productivity. The second focal area is the study of microbial surfactants (biosurfactants). Research in this area has ranged from discovery of new biosurfactants to developing both synthetic and biosynthetic strategies for production to development of both biomedical and environmental applications for these fascinating molecules. As just one example, we are exploring the idea of using biosurfactants to mine rare earth elements from both natural and contaminated aqueous sources reducing/replacing the need for hardrock mining. The applied component of this research has resulted in several patents and the formation of a company.

LEADERSHIP

- University of Arizona NIEHS Superfund Research Center
  Director, 2012-present
  Associate Director, 2002-2012
- University of Arizona Center for Environmentally Sustainable Mining
  Director, 2011-2017
  Deputy Director, 2017-present
- University of Arizona Lowell Institute for Mineral Resources, Executive Committee Member, 2014-present

- University of Arizona TRIF-Water, Environmental, and Energy Solutions, Executive Committee Member, 2016-2020
- University of Arizona Institute of the Environment, Interim Director, 2017-2019
- University of Arizona Research Advisory Council Member, 2015-2018
- Deputy Director, University of Arizona TRIF Water Sustainability Program, 2008-2016
- Co-Coordinator, US Department of Energy Subsurface Science Program, Multiphase Fluid Flow Subprogram, 1992-1994
- Vice-Chair, Chair of the Soil Science Society of America S-3 Bioremediation Working Group, 1993-1994

CONFERENCE ORGANIZATION

2018 Workshop on Epidemiology and Risk Assessment organizing committee. Central and Eastern European Conference on Health and the Environment (CEECHE), Krakow, Poland, June 10-14.

2017 NIEHS Superfund Research Program Annual Meeting. Organizing Committee. Philadelphia, PA, Dec 6-8.

2017 Earth Microbiome and Human Health. Organized session for the National Council for Science and the Environment 17th National Conference and Global Forum on Science, Policy & the Environment: Integrating Environment & Health. Washington DC, Jan 24-26.

2016 Central and Eastern European Conference on Health and the Environment (CEECHE) Organizing Committee. Prague, Czech Republic, April 10-14.

2016 International Conference on Developing a Pan American Hub for Environmentally and Socially Compatible Mining. Organizing Committee. Lima, Peru, March 6-9.

2015 Mineral Resources: from Exploration to Environmentally Sustainable Mining in the SW United States and NW Mexico. Organized session for the Centro de Estudios Mexicanos en Tucson UNAM at UA: Academic and Cultural Program. Sept. 25-28.

2015 Border 2020 Arizona-Sonora Mining Symposium, Organizing Committee. Tucson, June 25-26.

2015 Bio-based Surfactants and Detergents. Organized session for American Oil Chemists Society Annual Meeting. Orlando, FL, May 3-7.

2014 Latin American Conference on Compatible Mining: Protecting Vulnerable Populations and the Surrounding Environment. Organizing Committee, San Luis Potosi, Mexico, Sept. 8-10.

2014 UA Center for Environmentally Sustainable Mining Profile Event. Organizing Committee. Phoenix, AZ April 4.

2014 Conference on Health Effects and Mitigation of Arsenic: Current Research Efforts and Future Directions. Organizing Committee. Research Triangle Park, NC, March 3-4.

2013 Developing a Framework for Socially Responsible Mining. Organized session for the 15th International Conference of the Pacific Basin Consortium for Environment and Health Symposium. Honolulu, Hawaii, Sept. 23-27.

2013 Arsenic and Heavy Metals. Organized session for the NIEHS Superfund Research Program Annual Meeting. Baton Rouge, LA, Oct. 15-17.

2013 Conference on Airborne Mineral Dust Contaminants: Impacts on Human Health and the Environment. Organizing Committee. Tucson, AZ, May 20-21.

2012 Conference on Epigenetic Actions of Environmental Arsenicals, Organizing Committee. Tucson, Sept. 20-22.

2008 Conference on Mine Tailings Stabilization and Arid and Semi-Arid Environments: Assessment, Problems, and Solutions. Organizing Committee. Tucson, AZ, June 5-6.

1999 Discussion Leader for Gordon Conference on Environmental Microbiology

1995 Creative Advances in Environmental Science. Organized special session for the 209th ACS National Meeting to celebrate awardee, Donna Bedard, Anaheim, CA, April 2-7.

TEACHING

Environmental Microbiology, SWES 425/525
Biodegradation of Pollutants in Soil and Water, SWES 440/540
Topics in Mine Reclamation and Environmental Management, SWES 696c

HONORS AND AWARDS

2021 Keynote speaker, V Simpósio Internacional De Microbiologia E Biotecnologia
2018 Invited to participate in the Leopold Leadership Program
2017 Inside Tucson Business Women of Influence Mentorship Award
2015 Speaking of Science June 2015 Notable Quote, TheScientist
2014 Public Voices Fellowship 2014-2015
2014 Plenary speaker, 40th Anniversary ENRO-UNAM, Hermosillo, Mexico
2014 Catapult Award for Excellence in Commercialization Partnering, Tech Launch Arizona
2014 Keynote speaker, CEECHE Conference, Cluj-Napoca, Romania
2013 Leading Edge Researcher Award, University of Arizona
2013 Keynote speaker, Penn State Univ. Environ. Chemistry & Microbiology Symposium
2011 Keynote speaker, Rutgers University Symposium on Microbiology
2010 Keynote speaker, BioFert Conference, Guarapari, Brazil
2008 UA Graduate and Professional Student Council 1st Place Award - Outstanding Diversity in a Graduate Program
2007 Research Faculty of the Year, College of Agriculture and Life Sciences, Univ. of Arizona
2004 Article featured as "Science In Action" Release from ASA-CSSA-SSSA
2004 Best article award (featured in ASM News) from American Society for Microbiology
1996 Univ. of Arizona Environmental Science Organization Teacher of the Year Award
1988 Election to full member of Sigma Xi
1986 Theobald Smith Society Scholarship (Chapter of American Societyfor Microbiology)

SERVICE AS A REVIEWER

2021 Genome Canada 2021 Genomics Solutions for Natural Resources and the Environment (Final Grant Review Panel)
2020 Genome Canada 2020 Genomics Solutions for Natural Resources and the Environment (Preliminary Grant Review Panel)
2019 Co-Chair and reviewer for NIEHS R13 Conference Grant Program Panel
2018 Reviewer for NIEHS R13 Conference Grant Program Panel
2015 Reviewer for Genome Canada Large-Scale Applied Research Project Competition
2015 Reviewer for NIEHS GeoHealth Grant Program Panel
2014 Reviewer for the University of Arizona/Conacyt Drylands Consortium Grant Panel
2014 Chair and reviewer for the NIEHS R13 Conference Grant Program Panel
2013 Reviewer for the NIEHS Superfund Research Grant Program Panel
2012 Invited participant: EU-US Environmental Biotechnology Workshop
2012 Appointed to the UA Lowell Institute for Mineral Resources Technical Advisory Committee
2011 Appointed to Editorial Board of International Journal of Phytotechnology
2011 Invited participant: SSSA/NSF Emerging Frontiers in Rhizosphere Science Workshop
2010 Reviewer for the NSF panel “Dimensions of Biodiversity”
2009 Reviewer for the DOE ERSP Panel “Subsurface Microbial Ecology and Biogeochemical Processes”
2009 Appointed to Editorial Board of Water
2009 Panelist “Influence with Authority” UA-ADVANCE Program
2008 Reviewer for the NIEHS Superfund Basic Research Grant Program Panel
2008 Reviewer NSF panel Microbial Interactions & Processes/Microbial Observatories
2007 Reviewer for the NIEHS Superfund Basic Research Grant Program Panel
2007 Reviewer for Department of Soil and Water Science, University of Florida

2007 Reviewer NSF panel Microbial Interactions & Processes/Microbial Observatories
2005 Appointed to Editorial Board of Biodegradation
2005 Reviewer for DOE UMTRA Field Research Program
2004 Reviewer for DOE panel “NABIR Community Dynamics”
2004 Reviewer for DOE panel “Integrative Studies”
2003 Reviewer for NSF panel “Coupled Biogeochemical Cycles”
2002 Reviewer for NSF panel “Coupled Biogeochemical Cycles”
2002 Reviewer for NIH SBIR panel “Innovative technologies for Hazardous Waste Site Remediation and Monitoring”
1998 Appointed to Editorial Board of Applied and Environmental Microbiology
1995 Appointed Member of the Journal of Environmental Quality Editorial Board

REFEREED JOURNAL ARTICLES (Note Miller = Maier) google scholar h-index, 73; i10-index, 164; citations, 19,871

1. Kushwaha P., Q. Yu, A. Tran, D. Quintero, S. Wang, A. Babst-Kostecka, J. Schroeder, R.M. Maier. Interactions between the soil microbiome and quailbush gene regulation in compost-amended metalliferous tailings. In preparation.
2. Sengupta, A., T.H.M. Volkmann, R.E. Danczak, J.C. Stegen, K. Dontsova, A. Bugaj, N. Abramson, M.J. Volk, K. Matos, A. A. Meira-Neto, A. Barberan. J.W. Neilson, R.M. Maier, J. Chorover, P.A. Troch, L.K. Meredith. 2021. Contrasting community assembly forces drive microbial structural and functional responses to precipitation in an incipient soil system. Fron. Microbiol. In revision.
3. Hogan, D.E., R.M. Stolley, C.J. Boxley, M.K. Amistadi, R.M. Maier. Removal of uranium from contaminated groundwater using monorhamnolipids and ion flotation. 2021. J. Environ. Management. https://doi.org/10.1016/j.jenvman.2021.113835
4. Moreno Ramírez, D., M.D. Ramírez-Andreotta, J.A. Lee, Y. Herrera, R.M. Maier. 2021. Voices Unheard: Community-engaged oral history and hazardous waste sites. The Oral History Review, in press.
5. Can-Sener. S.E., V.M.Thomas, D.E. Hogan, R.M. Maier, M. Carbajales-Dale, M.D. Barton, T. Karanfil, J.C. Crittenden, G. Amy. 2021. Recovery of critical metals from aqueous sources. ACS Sustain. Chem. Eng., doi/10.1021/acssuschemeng.1c03005.
6. Kushwaha, P., J.W. Neilson, R.M. Maier*, A. Babst-Kostecka*. 2021. Soil microbial community and abiotic soil properties influence Zn and Cd hyperaccumulation differently in Arabidopsis halleri. STOTEN, doi.org/10.1016/j.scitotenv.2021.150006.
7. Ramirez-Andreotta, M., R. Walls, K. Youens-Clark, K. Blumberg, K.E. Isaacs, D. Kaufmann, R.M. Maier. 2021. Alleviating environmental health disparities through community science and data integration. Front. Sustain. Food Sys., https://doi.org/10.3389/fsufs.2021.620470
8. Kushwaha P., J.W. Neilson, A. Barberan, Y. Chen, C.G. Fontana, B.J. Butterfield, R.M. Maier. 2020. Arid ecosystem vegetation canopy-gap dichotomy: influence on soil microbial composition and nutrient cycling functional potential. Appl. Environ. Microbiol., DOI 10.1128/AEM.02780-20.
9. Chen, Y., J.W. Neilson, P. Kushwaha, R.M. Maier, A. Barberan. 2020. Life-history strategies of soil microbial communities in an arid ecosystem. ISME J., DOI 10.1038/s41396-020-00803-y.
10. Hammond, C.M., R.A. Root, R.M. Maier, J. Chorover. 2020. Arsenic and iron speciation and mobilization during phytostabilization of pyritic mine tailings. Geochim. Cosmochim. Acta. 286:306-323.
11. Hogan, D.E., F. Tian, S.W. Malm, L.L. Kegel, L.Z. Szabo, A.S. Hunjan, J.E.Pemberton, W.T. Klimecki, R. Polt, R.M Maier. 2020. Biodegradability and toxicity of cellobiosides and melibiosides. J. Surfact. Deterg. DOI 10.1002/jsde.12421
12. Sengupta, A., P. Kushwaha, A. Jim, P.A. Troch, R. M. Maier. 2020. New soil, old plants, and ubiquitous microbes: Evaluating the potential of incipient basaltic soil to support native plant

growth and influence belowground soil microbial community composition. Sustainability, 12: 4209. doi.org/10.3390/su12104209
13. Zaharescu, D.G., C.I. Burghelea, K. Dontsova, J.K. Presler, E.A. Hunt, K.J. Domanik, M.K. Amistadi, S. Sandhaus, E. Munoz, E.E. Gaddis, M. Galey, M.O. Vaquera-Ibarra, M.A. Palacios-Menendez, R. Castrejón-Martinez, E. Roldán-Nicolau, K. Li, R.M. Maier, C. Reinhard, J. Chorover. 2019. Ecosystem-bedrock interaction changes nutrient compartmentalization during early oxidative weathering. Sci. Rep. 9:15006. doi: 10.1038/s41598-019-51274-x
14. Hottenstein, J., J.W. Neilson, J. Gil-Loazia, R.A. Root, S.A. White, J. Chorover, R.M. Maier. 2019. Soil microbiome dynamics during pyritic mine tailings phytostabilization: understanding microbial bioindicators of soil acidification. Front. Microbiol. doi.org/10.3389/fmicb.2019.01211
15. Honeker, L.K., J.W. Neilson, C. F. Gullo, R.A. Root, J. Gil-Loaiza, J. Chorover, R.M. Maier. 2019. Effect of re-acidification on buffalo grass rhizosphere and bulk microbial communities during phytostabilization of metalliferous mine tailings. Front. Microbiol. doi.org/10.3389/fmicb.2019.01209
16. Sengupta, A., A.A. Meira-Neto, J.C. Stegen, Y. Wang, J.W. Neilson, J. Chorover, P.A. Troch, and R.M. Maier. 2019. Assessing microbial community patterns during incipient soil formation from basalt. J. Geophysical Res. – Biogeosci. 124: 941–958.
17. Rader, S.T., R.M. Maier, M.D. Barton, F.K. Mazdab. 2019. Uptake and fractionation of thallium by *Brassica juncea* in geogenic thallium-amended substrate. Environ. Sci. Technol., 53:2441-2449.
18. Hogan, D.E., F. Tian, S.W. Malm, C.I. Olivares, R. Palos Pacheco, M.T. Simonich, A.S. Hunjan, R.L. Tanguay, W.T. Klimecki, R. Polt, J.E. Pemberton, J.E. Curry, R.M. Maier. 2019. Biodegradability and toxicity of monorhamnolipid biosurfactant diastereomers. J. Haz. Mat. 364:600-607.
19. Hogan, D.E., J.E. Curry, and R.M. Maier. 2018. Ion flotation of La^{3+}, Cd^{2+}, and Cs^{+} using monorhamnolipid collector. Colloids Interfaces 2:43-58.
20. Gil-Loaiza, J., J.P. Field, S.A. White, J. Csavina, O. Felix, E.A. Betterton, A.E. Saez, R.M. Maier. 2018. Phytoremediation reduces dust emissions from metal(loid)-contaminated mine tailings. Environ. Sci. Technol. 15:5851-5858.
21. Hogan, D.E., Brown-Hogan, K.A., M.J. Harmon, R.M. Maier. 2018. Using ESStudios microbial growth modeling program to improve student comprehension of microbial growth and its underlying mathematics. J. Microbiol. Biol. Education. doi:10.1128/jmbe.v19i2.1489
22. Burghelea, C., K. Dontsova, D. Zaharescu, R.M. Maier, T. Huxman, M.K. Amistadi, E. Hunt, J. Chorover. 2018. Trace element mobilization during incipient bioweathering of four rock types. Geochim. Cosmochim. Acta. 234:98-114.
23. Hammond, C., R.A. Root, R.M. Maier, J. Chorover. 2018. Mechanisms of arsenic sequestration by *Prosopis juliflora* during phytostabilization of metalliferous mine tailings. Env. Sci. Technol. 52:1156-1164.
24. Valentin-Vargas, A., J.W. Neilson, R.A. Root, J. Chorover, R.M. Maier. 2018. Treatment impacts on temporal microbial community dynamics during phytostabilization of acid-generating mine tailings in semiarid regions. Sci. Total Environ. 618:357-368. PMC 5773348
25. Eismin, R.J., E. Munusamy, L.M. Kegel, D.E. Hogan, R.M. Maier, S.D. Schwartz, J.E. Pemberton. 2017. Evolution of aggregate structure in solutions of anionic monorhamnolipids: experimental and computational results. Langmuir. 33:7412-7424.
26. Hogan, D.E., J.E. Curry, J.E. Pemberton, R.M. Maier. 2017. Rhamnolipid biosurfactant complexation of rare-earth elements. J. Hazard. Mater. 340:171-178.
27. Neilson, J.W., K. Califf, C. Cardona, A. Copeland, W. Van Treuren, K.L. Josephson, R. Knight, J.A. Gilbert, J. Quade, J.G. Caporaso, R.M. Maier. 2017. Significant impacts of increasing aridity on the arid soil microbiome. MSystems. 2: e00195-16.

28. Palos Pacheco, R., R.J. Eismin, C.S. Coss, H. Wang, R.M. Maier, R. Polt, J.E. Pemberton. 2017. Synthesis and characterization of four diastereomers of monorhamnolipids. J. Amer. Chem. Soc. 139:5125-5132.
29. Honeker, L.K., J.W. Neilson, R.A. Root, J. Gil-Loaiza, J. Chorover, R.M. Maier. 2017. Bacterial rhizoplane colonization patterns of *Buchloe dactyloides* growing in metalliferous mine tailings reflect plant status and geochemical conditions. Microbial Ecol. 74:853-867. PMC 5654687
30. Santos, A., R. Cruz-Ortega, D. Meza-Figueroa, F.M. Romero., J. Sanchez-Escalante, R.M. Maier, J.W. Neilson L.D. Alcaraz, F. Molina-Freanor. 2017. Plants from the abandoned Nacozari mine tailings: evaluation of their phytostabilization potential. PeerJ. DOI:10.7717/peerj.3280.
31. Moreno Ramirez, D., L. Vea, J.A. Field, P.B. Baker, A.J. Gandolfi, and R.M. Maier. 2017. Transferable training modules: building environmental education opportunities with and for Mexican community health workers (promotores de salud). Fam. Community Health J. 40:306-315. PMC 5562520
32. Zaharescu, D.G., C.I. Burghelea, K. Dontsova, J.C. Presler, R.M. Maier, T. Huxman, K.J. Domanik, E.A. Hunt, M.K. Amistadi, E. Eggleston Gaddis, M.A. Palscios-Menendez, M.O. Vaquera-Ibarra, J. Chorover. 2017. Ecosystem composition controls the early fate of rare earth elements during incipient soil genesis. Sci. Reports. DOI:10.1038/srep43208. PMC5322375
33. Honeker, L.K., R.A. Root, J. Chorover, R.M. Maier. 2016. Resolving colocalization of bacteria and metal(loid)s on plant root surfaces by combining fluorescence in situr hybridization (FISH) with multiple-energy micro-focused x-ray fluorescence (ME uXRF). J. Microbiol. Meth., 131:23-33. PMC5127750
34. Depner, M., M.J. Ege, M.J. Cox, S. Dwyer, L.T. Birqele, J. Genuneit, E. Horak, C. Braun-Fahrlander, H. Danielexicz, R.M. Maier, M.F. Moffat, W. O. Cookson, D. Heederik, E. von Mutius, A. Legatzki. 2017. Bacterial microbiota of the upper respiratory tract and childhood asthma. J. Allergy Clinical Immunol., http://dx.doi.org/10.1016/j.jaci.2016.05.050.
35. Stein, M.M., C.L. Hrusch, J. Gozdz, C. Igartua, V. Pivniouk, S.E. Murray, J.G. Ledford, M.M. dos Santos, R.L. Anderson, N.Metwali, J.W. Neilson, R.M. Maier, J.A. Gilbert, M. Holbriech, P.S. Thorne, F.D. Martinez, E. von Mutius, D. Vercelli, C. Ober, A.I Sperling. 2016. Innate immunity and asthma risk in Amish and Hutterite Farm Children. New England J. Med. 375: 411-421. PMC5137793
36. Sengupta, A., Y. Wang, A.A. Meira Neto, K.A. Matos, K. Dontsova, R. Root, J.W. Neilson, R.M. Maier, J. Chorover, P.A. Troch. 2016. Soil lysimeter excavation for coupled hydrological, geochemical, and microbiological investigations. J. Vis. Exp. doi:10.3791/54536. http://www.jove.com/video/54536.
37. Gil-Loaiza, J., S.A. White, R.A. Root, F.A. Solis-Dominguez, J. Chorover, and R.M. Maier. 2016. Phytostabilization of mine tailings using compost-assisted direct planting: translating greenhouse results to the field. Sci. Total Environ. 656:451-461.
38. Root, R.A., S.M. Hayes, C. Hammond, R.M. Maier, and J. Chorover. 2015. Toxic metal(loid) speciation during weathering of iron sulfide mine tailings under a semi-arid climate. Appl. Geochem. 62:131-149. PMC4632981
39. Burghelea, C., D.G. Zaharescu, K. Dontsova, R.M. Maier, T. Huxman, and J. Chorover. 2015. Mineral nutrient mobilization by plants from rock: influence of rock type and arbuscular mycorrhiza. Biogeochem., 124:187-203.
40. Landrigan, P.J., R.O. Wright, J.F. Cordero, D.L. Eaton, B. Goldstein, B. Hennig, R.M. Maier, D. Ozonoff, M.T. Smith, and R.H. Tukey. 2015. The NIEHS Superfund Research Program: 25 years of translational research for public health. Environ. Health Perspec. 123:909-98. PMC4590764
41. Vaughan, M.J., R.M. Maier, and B.M. Pryor. 2015. Assessing fungal community structure from mineral surfaces in Kartchner Caverns using multiplexed 454 pyrosequencing. Microbial Ecol. 70:175-187.

42. Nelson, K.N., J.W. Neilson, R.A. Root, J. Chorover, and R.M. Maier. 2015. Abundance and activity of 16S rRNA, amoA and nifH bacterial genes during assisted phytostabilization of mine tailings. Internat. J. Phytorem. 17:493-502. PMC426930
43. Ramirez-Andreotta, M.D., M.L. Brusseau, J.F Artiola, R.M. Maier, and A.J. Gandolfi. 2014. Building a co-created citizen science program with gardeners neighboring a superfund site: the Gardenroots case study. Int. Public Health J. 7(1). PMC 4420190
44. Valentin-Vargas, A., R.A. Root, J.W. Neilson, J. Chorover, and R.M. Maier. 2014. Environmental factors influencing the structural dynamics of soil microbial communities during assisted phytostabilization of acid-generating mine tailings: a mesocosm experiment. Sci. Tot. Environ. 500-501:314-324. PMC4253589
45. Ramirez-Andreotta, M.D., M.L. Brusseau, J.F. Artiola, R.M. Maier, and A.J. Gandolfi. 2014. Environmental research translation: enhancing interactions with communities at contaminated sites. Sci. Total Environ. 497-498:651-664. PMC3649874
46. Hayes, S.M., R.A. Root, N. Perdrial, R.M. Maier, and J. Chorover. 2014. Surficial weathering of iron sulfide mine tailings under semi-arid climate. Geochim. Cosmochim. Acta 141:240-257. PMC4151187
47. Zhang, L., J.E. Pemberton, and R.M. Maier. 2014. Effect of fatty acid substrate chain length on *Pseudomonas aeruginosa* ATCC 9027 monorhamnolipid yield and congener distribution. Process Biochem. 49:989-995.
48. Maier, R.M., F. Diaz-Barriga, J.A. Field, J. Hopkins, B. Klein, and M.M. Poulton. 2014. Socially responsible mining: the relationship between mining and poverty, human health and the environment. Rev. Environ. Health, 29:83-89. PMC4739650
49. Ortiz, M., A. Legatzki, J.W. Neilson, B.Fryslie, W.M. Nelson, R.A. Wing, C.A. Soderlund, B.M. Pryor, and R.M. Maier. 2013. Making a living while starving in the dark: metagenomic insights into the energy dynamics of a carbonate cave. ISME J. 8:478-491. PMC3906820
50. Ramirez-Andreotta, M.D., M.L. Brusseau, P. Beamer and R.M. Maier. 2013. Home gardening near a mining site in an arsenic-endemic region of Arizona: assessing arsenic exposure dose and risk via ingestion of home garden vegetables, soils, and water. Sci. Total Environ. 454-455:373-382. PMC3871205
51. de la O-Villanueva, M., D. Meza-Figueroa, R.M. Maier, D. Moreno, A. Gomez-Alvarez, R. Del Rio-Salas, H. Mendivil, and A. Montijo, 2013. Erosive processes in the Presa I mine dam at Nacozari de Garcia, Sonora, and their effect in the dispersion of pollutants. Boletin de la Sociedad Geologica Mexicana, 65:27-38.
52. Neilson, J.W. F.L. Jordan, and R.M. Maier. 2013. Analysis of artifacts limiting the use of DGGE for quantitative diversity analysis. J. Microbiol. Methods. 92:256-263. NIHMS 560986
53. Henry, H.F., J.G. Burken, R.M. Maier, L.A. Newman, S. Rock, J.L. Schnoor, and W.A. Suk. 2013. Phytotechnologies – preventing exposures, improving public health. Internat. J. Phytorem., 15:889-899. PMC3954606
54. Valentin-Vargas, A., J. Chorover, and R.M. Maier. 2013. A new standard-based polynomial interpolation (SBPIn) method to address gel-to-gel variability for the comparison of multiple PCR-denaturing gradient gel electrophoresis profile matrices. J. Microbiol. Methods. 92:173-177. PMC3570647
55. Ortiz, M., J.W. Neilson, W.M. Nelson, A. Legatzki, A. Byrne, Y. Yu, R.A. Wing, C.A. Soderlund, B.M. Pryor, L.S. Pierson III, and R.M. Maier. 2013. Profiling bacterial diversity and taxonomic composition on speleothem surfaces in Kartchner Caverns, AZ, Micro. Ecol., 65:371-383.
56. Ramirez-Andreotta, M.D., M.L. Brusseau, J.F. Artiola, and R.M. Maier. 2013. A greenhouse and field-based study to determine the accumulation of arsenic in common homegrown vegetables grown in mining-affected soils. Sci. Total Environ., 443: 299-306. PMCID: PMC3649874.
57. Coss, C., T. Carrocii, R.M. Maier, J.E. Pemberton, and R. Polt. 2012. Minimally competent lewis acid catalysts: indium (III) and bismuth (III) salts produce rhamnosides (= 6-deoxymannosides) in high yield and purity. Helv. Chim. Acta 95:2652-2659.

58. Zhang, L., T.A. Veres-Schalnat, A. Somogyi, J.E. Pemberton, and R.M. Maier. 2012. Fatty acid co-substrate provides β-oxidation provides precursors for rhamnolipid biosynthesis in *Pseudomonas aeruginosa*: evidence from isotope tracing and gene expression. Appl. Environ. Microbiol. 78:8611-8622.
59. Hayes, S.M., S.M. Webb, J.R. Bargar, P.A. O'Day, R.M. Maier, J. Chorover, 2012. Geochemical weathering increases lead bioaccessibility in semi-arid mine tailings. Environ. Sci. Technol., 46:5834-5941. PMC3376710
60. Neilson, J.W., J. Quade, M. Ortiz, W.M. Nelson, A. Legatzki, F. Tian, M. LaComb, J.L. Betancourt, R.A. Wing, C.A. Soderlund, and R.M. Maier. 2012. Life at the hyperarid margin: novel bacterial diversity in arid soils. Extremophiles 16:553-566.
61. Legatzki, A., M. Ortiz, J.W. Neilson, R.R. Casavant, M.W., C. Rasmussen, B.M. Pryor, L.S. Pierson III, and R.M. Maier. 2012. Factors influencing the speleothem-specific structure of bacterial communities on the surface of formations in Kartchner Caverns, AZ, USA. Geomicrobiol. J., 29:422-434.
62. Solís-Dominguez, F., S.A. White, T. Borrillo Hutter, M.K. Amistadi, R.A. Root, J. Chorover and R.M. Maier. 2012. Response of key soil parameters during phytostabilization in extremely acidic tailings: effect of plant species, Environ. Sci. Technol. 46:1019-27. PMC3263829
63. Wickramasekara, S., J.W. Neilson, N. Patel, A. Hilderbrand, R.M. Maier, and V. Wysocki. 2011. Proteomics analyses of the opportunistic pathogen *Burkholderia vietnamiensis* using protein fractionations and mass spectrometric techniques. J. Biomed. Biotechnol. DOI: 10.1155/2011/701928
64. Hayes, S.M., P.A. O'Day, S.M. Webb, R.M. Maier, and J. Chorover. 2011. Changes in zinc speciation with mine tailings acidification in a semiarid weathering environment. Environ. Sci. Technol., 45:7166-7162. PMC3175378
65. Vaughan, M.J., R.M. Maier, and B.M. Pryor. 2011. Fungal communities on speleothem surfaces in Kartchner Caverns, Arizona, USA. Internat. J. Speleology, 40:65-77.
66. Legatzki, A., M. Ortiz, J.W. Neilson, S. Dominguez, G.L. Andersen, R.S. Toomey, B.M. Pryor, L.S. Pierson III, and R.M. Maier. 2011. Bacterial and archaeal community structure of two adjacent calcite speleothems in Kartchner Caverns, Arizona, USA. Geomicrobiol. J. 28:99-117.
67. Solis-Dominguez, F., A. Valentin-Vargas, J. Chorover, and R.M. Maier. 2011. Effect of arbuscular mycorrhizal fungi on plant biomass and the rhizosphere microbial community structure of mesquite grown in acidic lead/zinc mine tailings. Sci. Total Environ. 409:1009-1016. PMC3030643
68. Ahad, S.M., A.L. Ange, R.B. Bates, B.L. Bell, A.A. Bodour, B.R. Bourne, C.G. Contreras, E.L. Goldberg, A.A.L. Gunatilaka, S. King, A.K. Lee, R.L. Low, R.M. Maier, K.M. Marlor, M.T. Marron, R.C. Scolnik, M.U. Streeter, M. Strelczuk, L.N. Trinh, V.K. Truong, S.P. Vissering, M.C. Weick, M.T. Williams. 2010. Synthesis and biological activities of flavollipids. Tetrahedron. 66:9107-9112.
69. Neilson, J.W., L. Zhang, T.A. Veres, K.B. Chandler, C.H. Neilson, J.D. Crispin, J.E. Pemberton, and R.M. Maier. 2010. Cadmium effects on transcriptional expression of rhlB/rhlC genes and congener distribution of monorhamnolipid and dirhamnolipid in *Pseudomonas aeruginosa* IBG83. Appl. Microbiol. Biotechnol., 88:953-963.
70. De-Bashan, L.E., J-P. Hernandez, K.N. Nelson, Y. Bashan, and R.M. Maier. 2010. Growth of Quailbush in acidic, metalliferous desert mine tailings: effect of Azospirillum brasilense Sp6 on biomass production and rhizosphere community structure. Microbial Ecol., 60:915-927. PMC2974781
71. De-Bashan, L.E., J-P. Hernandez, Y. Bashan, and R.M. Maier. 2010. *Bacillus pumilus* ES4: Candidate plant growth-promoting bacterium to enhance establishment of plants in mine tailings. Environ. Exper. Bot., 69:343-352. PMC4084739

72. Baughman, K.F., R.M. Maier, T.A. Norris, B.M. Beam, A. Mudalige, J.E. Pemberton, and J.E. Curry. 2010. Evaporative deposition patterns of bacteria from a sessile drop: effect of mica conditioning in a laboratory atmosphere. Langmuir, 26:7293-7298.
73. Maier, R.M., M.W. Palmer, G.L. Andersen, M.J. Halonen, K.C. Josephson, R.S. Maier, F.D. Martinez, J.W. Neilson, D.A. Stern, D.Vercelli, A.L. Wright. 2010. The bacterial community in household dust: environmental determinants and impact on childhood asthma. Appl. Environ. Microbiol., 76:2663-2667. PMC2849212
74. Hayes, S.M., S.A White, T.L. Thompson, R.M. Maier, and J. Chorover. 2009. Changes in lead and zinc lability during weathering-induced acidification of desert mine tailings: Coupling chemical and micro-scale analyses. Appl. Geochem. 24:2234-2245. PMC2796778
75. Grandlic, C.J., M.W. Palmer and R.M. Maier. 2009. Optimization of plant growth-promoting bacteria-assisted phytostabilization of mine tailings. Soil Biol. Biochem. 41:1734-1740. PMC2731301
76. Meza-Figueroa, D., R.M. Maier, M. de la O-Villanueva, A.Gómez-Alvarez, A. Moreno-Zazueta, J. Rivera-Castelo, A. Campillo-Castelo, C. Grandlic, and J. Palafox-Reyes. 2009. The impact of unconfined mine tailings in residential areas from a mining town in a semi-arid environment: Nacozari, Sonora, Mexico. Chemosphere 77:140-147. PMC2737070
77. Iverson, S.L., and R.M. Maier. 2009. Effects of compost on colonization of roots of plants grown in metalliferous mine tailings, as examined by fluorescence in situ hybridization. Appl. Environ. Microbiol., 75:842-847. PMC2632157
78. Sun, W., R. Sierra, N. Fernandez, J. Sanz, R. Amils, A. Legatzki, R. M. Maier, and J.A. Field. 2009. Molecular characterization and in situ quantification of anoxic arsenite oxidizing denitrifying enrichment cultures. FEMS Microbiol. Ecol. 68: 72-85.
79. Saini, H.S, B.E. Barragán-Huerta, A. Lebrón-Paler, J.E. Pemberton, R.R. Vázquez, A.M. Burns, M.T. Marron, C.J. Seliga, A.A.L. Gunatilaka, and R.M. Maier. 2008. Efficient purification of the biosurfactant viscosin from *Pseudomonas libanensis* strain M9-3, and its physicochemical and biological properties. J. Nat. Prod. 71:1011-1015.
80. Grandlic, C.J., M.O. Mendez, J. Chorover, B. Machado, and R.M. Maier. 2008. Plant growth-promoting bacteria for phytostabilization of mine tailings. Environ. Sci. Technol., 42:2079–2084.
81. Mendez, M.O., J.W. Neilson, and R.M. Maier. 2008. Bacterial community characterization of a historic semiarid lead-zinc mine tailings site. Appl. Environ. Microbiol. 74:3899-3907. PMC2446573
82. Mendez, M.O., and R.M. Maier. 2008. Phytostabilization of mine tailings in arid and semiarid environments – an emerging remediation technology. Environ. Health Perspec. 116:278-283. PMC2265025
83. Mendez, M.O., and R.M. Maier. 2008. Phytoremediation of mine tailings in temperate and arid environments. Rev. Environ. Sci. Biotechnol. 7:47-59.
84. Rosario, K., S.L. Iverson, D.A. Henderson, S. Chartrand, C. McKeon, E.P. Glenn, and R.M. Maier. 2007. Bacterial community changes during plant establishment at the San Pedro River mine tailings site. J. Environ. Qual., 36:1249-1259.
85. Ikner, L.A., R.S. Toomey, G. Nolan, J.W. Neilson, B.M. Pryor, and R.M. Maier. 2007. Cultural microbial diversity and the impact of tourism in Kartchner Caverns, Arizona. Microbial Ecol. 53:30-42.
86. Mendez, M.O., E.P. Glenn, and R.M. Maier. 2007. Phytostabilization potential of quailbush for mine tailings: growth, metal accumulation and microbial community changes. J. Environ. Qual. 36:245-253.
87. Ochoa-Loza, F.J., W.H. Noordman, D.B. Jannsen, M.L. Brusseau, and R.M. Maier. 2007. Effect of clays, metal oxides, and organic matter on rhamnolipid biosurfactant sorption by soil. Chemosphere, 66:1634-1642.
88. Lebron-Paler, A., J.E. Pemberton, W.C. Otto, B.K. Becker, C.K. Larive and R.M. Maier. 2006. Determination of the acid dissociation constant of the biosurfactants

monorhamnolipid in aqueous solution by potentiometric and spectroscopic methods. Anal. Chem. 78:7649-7658.
89. Drees, K.P., J.W. Neilson, J.L. Betancourt, J.Quade, D.A. Henderson, B.M. Pryor, and R.M. Maier. 2006. Bacterial diversity in the hyper-arid core of the Atacama Desert, Chile. Appl. Environ. Microbiol. 72:7902-7908.
90. Brusseau, M.L., S.K. Sandrin, L. Li, I. Yolcubal, F.L. Jordan, and R.M. Maier. 2006. Biodegradation during contaminant transport in porous media: the influence of microbial system variability on transport behavior and parameter determination. Water Res. Res. 42: W04406, doi:10.1029/2005WR004112.
91. Sandrin, T.R., W.B. Kight, W.J. Maier, and R.M. Maier. 2006. Influence of a nonaqueous phase liquid (NAPL) on biodegradation of phenanthrene. Biodegrad. 17:423-435.
92. Dorn, J.G., M.L. Brusseau and R.M. Maier. 2005. Real-time in situ monitoring of bioactive zone dynamics in heterogeneous systems. Environ. Sci. Technol. 39:8898-8905.
93. Wang, J-M., B. Patterson, A.A. Bodour, R.M. Maier, and M.L. Brusseau. 2005. Biodegradation during contaminant transport in porous media: impact of multiple-degrader community dynamics. Environ. Tox. Chem., 21:2806-2811.
94. Wang, J-M., R.M. Maier and M.L. Brusseau. 2005. Influence of hydroxypropyl-beta-cyclodextrin (HPCD) on the bioavailability and biodegradation of pyrene. Chemosphere. 60:725-728.
95. Maier, R.M., K.P. Drees, J.W. Neilson, J. Quade, D.A. Henderson, and J.L. Betancourt. 2004. Microbial life in the Atacama Desert. Science, 306:1289-1290.
96. Dorn, J.G., M.K. Mahal, M.L Brusseau, and R.M. Maier. 2004. Employing a novel fiber optic detection system to monitor the dynamics of in situ lux bioreporter activity in porous media: system performance update. Analytica Chimica Acta, 525:63-72.
97. Haag, A.P., R.M. Maier, J. Combie, and G.G. Geesey. 2004. Bacterially-derived biopolymers as wood adhesives. Int. J. Adhes. Adhes., 24: 495-502.
98. Wang, X. I. Yolcubal, W. Wang, J.F. Artiola, R.M. Maier, and M.L. Brusseau. 2004. Use of cyclodextrin and calcium chloride for enhanced removal of mercury from soil. Environ. Toxicol. Chem., 23:1888-1892.
99. Jordan, F.L., S.K. Sandrin, R.J. Frye, M.L. Brusseau, and R.M. Maier. 2004. The influence of system complexity on bacterial transport in porous media. J. Contam. Hydrol., 74:19-38.
100. Bodour, A.A., C. Guerrero-Barajas, B.V. Jiorle, M.E. Malcomson, A.K. Paull, A. Somogyi, L.N. Trinh, R.B. Bates, and R.M. Maier. 2004. Structure and characterization of flavolipids, a novel group of biosurfactants produced by *Flavobacterium* sp. MTN11. Appl. Environ. Microbiol. 70:114-120.
101. Bodour, A.A., J-M. Wang, M.L. Brusseau, and R.M. Maier. 2003. Temporal change in culturable phenanthrene-degraders in response to long-term exposure to phenanthrene in a soil column system. Environ. Microbiol. 5:888-895.
102. Sandrin, T.R. and R.M. Maier. 2003. Impact of metals on the biodegradation of organic pollutants. Environ. Health Perspec. 111:1093-1101.
103. Maier, R.M. 2003. Biosurfactants: evolution and diversity. Adv. Appl. Microbiol. 52: 101-121.
104. Yolcubal, I., J.G. Dorn, R.M. Maier, and M.L. Brusseau. 2003. The influence of substrate and electron acceptor availability on bioactive zone dynamics in porous media. J. Cont. Hydrol. 66:219-237.
105. Rensing, C. and R.M. Maier. 2003. Issues underlying use of biosensors to measure metal bioavailability. Ecotoxicol. Environ. Safety. 56:140-147.
106. Bodour, A.A., K.P. Drees, and R.M. Maier. 2003. Distribution of biosurfactant-producing microorganisms in undisturbed and contaminated arid southwestern soils. Appl. Environ. Microbiol. 69:3280-3287.
107. Dorn, J.G., R.J. Frye, and R.M. Maier. 2003. Effect of temperature, pH and initial cell number on *luxCDABE* and *nah* gene expression during naphthalene/salicylate catabolism in

the bioreporter organism *Pseudomonas putida* RB1353. Appl. Environ. Microbiol. 69:2209-2216.
108. Neilson, J.W., J.F. Artiola, and R.M. Maier. 2003. Characterization of lead removal from contaminated soils by nontoxic soil-washing agents. J. Env. Qual. 32:899-908.
109. Drees, K.P., M. Abbaszadegan, and R.M. Maier. 2003. Comparative electrochemical inactivation of bacteria and bacteriophage. Water Res. 37:2291-2300.
110. Marlowe, E.M., J-M. Wang, I.L. Pepper, and R.M. Maier. 2002. Application of a reverse transcriptase-PCR assay to monitor regulation of the catabolic *nahAc* gene during phenanthrene degradation. Biodegradation, 13:251-260.
111. Yolcubal, I., S.A. Pierce, R.M. Maier, and M.L. Brusseau. 2002. Biodegradation during contaminant transport in porous media: V. The influence of growth and cell elution on microbial distribution. J. Environ. Qual. 31:1824-1830.
112. Sandrin, T.R. and R.M. Maier. 2002. Effect of pH on cadmium toxicity, speciation, and accumulation during naphthalene biodegradation. Environ. Toxicol. Chem., 21:2075-2079.
113. Jordan, F.L., M. Robin-Abbott, R.M. Maier, and E.P. Glenn. 2002. A comparison of chelator-facilitated metal uptake by a halophyte and a glycophyte. Environ. Toxicol. Chem., 21:2698-2704.
114. Ochoa-Loza, F.J., J.F. Artiola, and R.M. Maier. 2001. Stability constants for the complexation of various metals with a rhamnolipid biosurfactant. J. Environ. Qual. 30:479-485.
115. Maier, R.M., J.W. Neilson, J.F.Artiola, F.L. Jordan, E.P. Glenn, and S.M. Descher. 2001. Remediation of metal-contaminated soil and sludge using biosurfactant technology. Internat. J. Occupational Med. Environ. Health, 14:241-248.
116. Sandrin, S.K., F.L. Jordan, R.M. Maier, and Mark L. Brusseau. 2001. Biodegradation during contaminant transport in porous media: 4. Impact of microbal lag and bacterial cell growth. J. Contam. Hydrol. 50:225-242.
117. McCray, J.E., G-Y. Bai, R.M. Maier, and M.L. Brusseau. 2001. Biosurfactant-enhanced solubilizaton of nonaqueous phase liquid mixtures. J. Contam. Hydrol. 48:45-68.
118. Sandrin, T. R., A.M. Chech, and R.M. Maier. 2000. A rhamnolipid biosurfactant reduces cadmium toxicity during naphthalene biodegradation. Appl. Environ. Microbiol. 66:4585-4588.
119. Maslin, P. and R.M. Maier. 2000. Rhamnolipid-enhanced mineralization of phenanthrene in organic-metal co-contaminated soils. Biorem. J. 4:295-308.
120. Yolcubal, I., J.J. Piatt, S.A. Pierce, M.L. Brusseau, and R.M. Maier. 2000. Fiber optic detection of in-situ lux reporter gene activity in porous media: system design and performance. Analytica Chimica Acta, 422:121-130.
121. Maier, R.M. and G. Soberon-Chavez. 2000. *Pseudomonas aeruginosa* rhamnolipids: biosynthesis and potential environmental applications. Appl. Microbiol. Biotechnol. 54:625-633.
122. Al-Tahhan, R. T.R. Sandrin, A.A. Bodour, and R.M. Maier. 2000. Rhamnolipid-induced removal of lipopolysaccharide from *Pseudomonas aeruginosa*: effect on cell surface properties and interaction with hydrophobic substrates. Appl. Environ. Microbiol. 66:3262-3268.
123. Jordan, F.L. and R.M. Maier. 1999. Development of an agar lift-DNA/DNA hybridization technique for use in visualization of the spatial distribution of Eubacteria on soil surfaces. J. Microbiol. Meth. 38:107-117.
124. Neilson, J.W., S.A. Pierce, and R.M. Maier. 1999. Factors influencing the expression of luxCDABE and NAH7 genes in *Pseudomonas putida* RB1353 (NAH7, pUTK9). Appl. Environ. Microbiol., 65:3473-3482.
125. Brusseau, M.L., M.Q. Hu, J-M. Wang, and R.M. Maier. 1999. Biodegradation during contaminant transport in porous media. 2. The influence of physicochemical factors. Environ. Sci. Technol., 33:96-103.

126. Compos-Garcia, J., A. D. Caro, R. Najera, R.M. Miller-Maier, R.A. Al-Tahhan, and G. Soberon-Chavez. 1998. The *Pseudomonas aeruginosa rhlG* gene encodes a NADPH-dependent □-ketoacyl reductase which is specifically involved in rhamnolipid synthesis. J. Bacteriol., 180:4442-4451.
127. Wang, J-M., E.M. Marlowe, R.M. Miller-Maier, and M.L. Brusseau. 1998. Cyclodextrin-enhanced biodegradation of phenanthrene. Environ. Sci. Technol. 32:1907-1912.
128. Bodour, A.A., and R.M. Miller-Maier. 1998. Application of a modified drop-collapse technique for surfactant quantitation and screening of biosurfactant-producing microorganisms. J. Microbiol. Methods, 32:273-280.
129. Torrens, J.L., D.C. Herman, and R.M. Miller-Maier. 1998. Biosurfactant (rhamnolipid) sorption and the impact on rhamnolipid-facilitated removal of cadmium from various soils. Environ. Sci. Technol., 32:776-781.
130. Bai, G., M.L. Brusseau, and R.M. Miller. 1998. Influence of cation type, ionic strength and pH on solubilization and mobilization of residual hydrocarbon by a biosurfactant. J. Contamin. Hydrol. 30:265-279.
131. Herman, D.C., Y. Zhang, and R.M. Miller. 1997. Rhamnolipid (biosurfactant) effects on cell aggregation and biodegradation of residual hexadecane under saturated flow conditions. Appl. Environ. Microbiol. 63:3622-3627.
132. Wild, M., A.D. Caro, A.L. Hernandez, R.M. Miller, and G. Soberon-Chavez. 1997. Selection and partial characterization of a *Pseudomonas aeruginosa* monorhamnolipid deficient mutant. FEMS Microbiol. Lett. 153:279-285.
133. Zhang, Y., W.J. Maier, and R.M. Miller. 1997. Effect of rhamnolipids on the dissolution, bioavailability and biodegradation of phenanthrene. Environ. Sci. Technol. 31:2211-2217.
134. Jutras, E.M., C.M. Smart, R.Rupert, I.L. Pepper, and R.M. Miller. 1997. Field scale biofiltration of gasoline vapors extracted from beneath a leaking underground storage tank. Biodegradation. 8:31-42.
135. Bai, G., M.L. Brusseau, and R.M. Miller. 1997. The influence of rhamnolipid biosurfactant on the transport of bacteria through a sandy soil. Appl. Environ. Microbiol. 63:1866-1873.
136. Herman, D.C., R.J. Lenhard, and R.M. Miller. 1997. Formation and removal of hydrocarbon residual in porous media: effects of bacterial biomass and biosurfactants. Environ. Sci. Technol. 31:1290-1294.
137. Marlowe, E., K. Josephson, R.M. Miller, and I.L. Pepper. 1997. A method for the detection and quantitation of PCR template in environmental samples by high performance liquid chromatography. J. Microbiol. Methods. 28:45-53.
138. Stanghellini, M.E. and R.M. Miller. 1997. Biosurfactants: their identity and potential efficacy in the biological control of zoosporic plant pathogens. Plant Disease. 81:4-12.
139. Miller, J.L., M.A. Sardo, T.L. Thompson, R.M. Miller. 1997. Effect of application solvents on heterotrophic and nitrifying populations in soil. Environ. Toxicol. Chem. 16:447-451.
140. Bai, G., M.L. Brusseau, and R.M. Miller. 1997. Biosurfactant-enhanced removal of hydrocarbon from soil. J. Contam. Hydrol. 25:157-170.
141. Herman, D.C., J.F. Artiola, and R.M. Miller. 1995. Removal of cadmium, lead, and zinc from soil by a rhamnolipid biosurfactant. Environmental Science and Technology. 29:2280-2285.
142. Zhang, Y. and R.M. Miller. 1995. Effect of rhamnolipid (biosurfactant) structure on solubilization and biodegradation of n-alkanes. Appl. Environ. Microbiol. 61:2247-2251.
143. Jutras, E., R.M. Miller and I.L. Pepper. 1995. Optimization of arbitrarily primed pcr for the identification of bacterial isolates. J. Microbial Methods. 24:55-63.
144. Champion, J.T., J.C. Gilkey, H. Lamparski, J. Retterer, and R.M. Miller. 1995. Electron microscopy of rhamnolipid (biosurfactant) morphology: effects of ph, cadmium and octadecane. J. Colloid Interface Sci. 170:569-574.
145. Miller, R.M. 1995. Biosurfactant-facilitated remediation of metal-contaminated soils. Environ. Health Perspec., 103 (Suppl 1):59-62.

146. Tan, H., J.T. Champion, J.F. Artiola, M.L. Brusseau, and R.M. Miller. 1994. Complexation of cadmium by a rhamnolipid biosurfactant. Environ. Sci. Technol., 28:2402-2406.
147. Zhang, Y. and R.M. Miller. 1994. Effect of a *Pseudomonas* rhamnolipid biosurfactant on cell hydrophobicity and biodegradation of octadecane. Appl. Environ. Microbiol. 60:2101-2106.
148. Estrella, R., M.L. Brusseau, I.L. Pepper, P.J. Wierenga, and R.M. Miller. 1993. Biodegradation, sorption and transport of 2,4-D in a saturated and unsaturated soil. Appl. Environ. Microbiol. 59:4266-4273.
149. Zhang, Y. and R.M. Miller. Enhanced octadecane dispersion and biodegradation by a *Pseudomonas* rhamnolipid surfactant (biosurfactant). 1992. Appl. Environ. Microbiol. 58:3276-3282.
150. Miller, R.M., L.S. Stitzer, J.F. Artiola and W.H. Fuller. 1992. Effect of four alcohols on adsorption, desorption, and movement of cadmium, nickel, and zinc through soils. Chemosphere. 24:1855-1866.
151. Miller, R.M, Park, E-M. and Thomas, J.A. 1991. Reduction (dethiolation) of protein mixed-disulfides: distribution and specificity of dethiolating enzymes and bcnu inhibition of an nadph-dependent cardiac dethiolase. Arch. Biochem. Biophys., 287:112-120.
152. Miller, R.M., Sies, H., Park, E-M. and Thomas, J.A. 1990. Phosphorylase and creatine kinase modification by thiol-disulfide exchange and by xanthine oxidase-initiated s-thiolation. Arch. Biochem. Biophys. 276:355-363.
153. Miller, R.M. and Bartha, R. 1989. Evidence from liposome encapsulation for transport-limited microbial metabolism of solid alkanes. Appl. Environ. Microbiol. 55:269-274.
154. Miller, R.M., Singer, G.M., Rosen, J.D. and Bartha, R. 1988. Sequential degradation of chlorophenols by photolytic and microbial treatment. Environ. Sci. Tech. 22:1215-1219.
155. Miller, R.M., Singer, G.M., Rosen, J.D. and Bartha, R. 1988. Photolysis primes recalcitrant xenobiotics for degradation. Appl. Environ. Microbiol. 54:1724-1730.
156. Maier, W.J., J. Dezellar, and Miller, R.M. 1981. Benefits from water conservation depend on comprehensive planning. Water Resour. Bull. 17:672-677.

PATENTS

Kim, M., D.E. Hogan, R.M. Maier. Bioinspired glycolipids as fugitive dust suppression agents. Provisional Patent submitted 12/13/2021.
Loy D., D.E. Hogan, R.M. Maier, A. Babst-Kostecka, S. Perez, C.J. Boxley. Recovery and separation of metals from aqueous sources utilizing glycolipid modified hydrogels and resins. Disclosure submitted 8/19/2021.
Hogan, D.E., R.M. Maier. Separation of Metal Ions from a Sample Using Glycolipids. Provisional Patent submitted 6/30/2021.
Pemberton, J.E., R.L. Polt, R.M. Maier, R. Palos Pacheco. 2021. Carbohydrate-Based Surfactants. Patent 11117914.
Pemberton, J.E., R.L. Polt, R.M. Maier, and C.S. Coss. 2016. Synthesis of Carbohydrate-Based Surfactants. Patent No. WO2014077960-A1; US2014142287-A1.
Stanghellini, M.E., R.M. Miller, S.L. Rasmussen, D-H. Kim, and Y. Zhang. 1998. Microbially Produced Rhamnolipid (Biosurfactants) for the Control of Plant Pathogenic Zoosporic Fungi. U.S. Patent No. 5,767,090.

TEXTBOOK

Pepper, I.L., C.P. Gerba, and T.L. Gentry. 2014. Environmental Microbiology, 3nd edition, Academic Press, San Diego, CA. Contributed 7 Chapters:

- Maier, R.M. Bacterial growth.
- Rich, V.I., and R.M. Maier. Aquatic Environments.
- Maier, R.M., J.W. Neilson. 2014. Extreme Environments.
- Maier, R.M., T.J. Gentry 2014. Physiological Methods.
- Maier, R.M. Biogeochemical Cycling.

- Maier, R.M., T.J. Gentry Microorganisms and Organic Pollutants.
- Pierson III, L.S., R.M. Maier, I.L.Pepper. 2014. Microbial Communication: Bacteria/Bacteria and Bacteria/Host.

Maier, R.M., I.L. Pepper, and C.P. Gerba. 2009. Environmental Microbiology, 2nd edition, Academic Press, San Diego, CA.

Maier, R.M., I.L. Pepper, and C.P. Gerba. 2000. Environmental Microbiology. Academic Press, San Diego, CA.

OP-EDs

Maier, R.M. 2015. What about Earth's Microbiome? Scientific American invited guest blog. http://blogs.scientificamerican.com/guest-blog/2015/04/22/what-about-earths-microbiome/

Maier R.M. 2015. Speaking of Science June 2015's selection of notable qotes, TheScientist. http://www.the-scientist.com/?articles.view/articleNo/43009/title/Speaking-of-Science/

CONGRESSIONAL TESTIMONY/PANELS

Maier, R.M. 2016. Panelist in "An Emerging Diverse Workforce to Reclaim Abandoned Mine Lands; Increasing Hispanic Participation". Capitol Hill Policy Briefing Series hosted by the Congressional Hispanic Caucus Institute, Washington DC. April 26.

Lantz, R.C., K. Chief, and R.M. Maier. 2016. University of Arizona programs on environmental health and mining impacts in native populations. Testimony provided for a senate field hearing (chaired by Senators Barrasso and McCain): "Examining EPA's Unacceptable Response to Indian Tribes". City of Phoenix Council Chambers, Phoenix, AZ, April 22.

REPORTS

1. Maier, R.M., J. Lewis, P. Kushwaha, T.A. De Pree, D.A., MacKenzie. 2022. Toxicity review of metals emissions from coal-fired power plants. Prepared for the NGO Center for Applied Environmental Law and Policy (CAELP) to respond to 2022 EPA ruling on coal-fired power plant emissions.
2. Neilson, J.W., R.M. Maier. 2016 Annual Report for the University of Arizona Center for Environmentally Sustainable Mining Industry-Academic Research Cooperative. April 2017.
3. Neilson, J.W., R.M. Maier. 2015 Annual Report for the University of Arizona Center for Environmentally Sustainable Mining Industry-Academic Research Cooperative. March 2016.
4. Neilson, J.W., R.M. Maier. 2014 Annual Report for the University of Arizona Center for Environmentally Sustainable Mining Industry-Academic Research Cooperative. Feb. 2015.

MEDIA INTERVIEWS

The Daily Wildcat, University of Arizona. 2019. Green degree guide spotlights sustainability. http://www.wildcat.arizona.edu/article/2019/03/a-green-concentration

Nogales International. 2017. Pros and cons of mining in Patagonia, Arizona.

The Daily Wildcat. 2017. Proposed Trump budget threatens academic research. http://www.wildcat.arizona.edu/article/2017/05/proposed-trump-budget-threatens-academic-research

Desert Leaf the Catalina Foothills Magazine. 2016. Not just dust. Vol. 30 (July/Aug) pp 12-13. http://trendmag2.trendoffset.com/publication/?m=12024&l=1

Arizona Public Media, Arizona Science. Episode 27: The role of microorganisms in making life livable on planet Earth. May 6, 2016. https://radio.azpm.org/arizonascience/

Arizona Public Media, AZ Week. Is mine waste spill threatening Arizona's water? August 15, 2015. https://www.azpm.org/s/33103-az-week-pollution-from-colorado-mine-spill-flows-toward-arizona/

NSF Science Nation. Surfactants: building greener chemicals. August 3, 2015. http://www.nsf.gov/news/special_reports/science_nation/surfactants.jsp

Arizona Daily Star. Company finds intersection of research, commerce, environmental benefits. April 25, 2015. http://tucson.com/business/local/company-finds-intersection-of-research-commerce-environmental-benefits/article_61ba1f73-ce1a-59be-9d62-528a892c8cc5.html
Arizona Daily Star. Perla Trevizo's favorite stories of 2014. December 19, 2014. http://tucson.com/news/local/border/perla-trevizo-s-favorite-stories-of/collection_f94f5d2e-86dc-11e4-b560-ebee6a77d49f.html
Arizona Daily Star. Livelihoods washed away by toxic spill in Sonora, October 4, 2014. http://tucson.com/news/local/livelihoods-washed-away-by-toxic-spill-in-sonora/article_5b8007ef-82f1-5db1-901f-c4fba8cc1b06.html
UA News. A living desert underground, November 19, 2013. http://uanews.org/story/a-living-desert-underground?no_redirect=true
Arizona Daily Star. Toxic releases by Arizona mines increasing, February 10, 2013. http://tucson.com/news/science/environment/toxic-releases-by-arizona-mines-increasing/article_07e82f9e-0785-5503-83a8-37f1d53069c3.html
Arizona Public Media. Tiny life thrives in dark depths of Kartchner Caverns. January 12, 2012. https://www.azpm.org/s/7826-tiny-life-thrives-in-dark-depths-of-kartchner-caverns/
Arizona Public Media. Web Feature: What lies beneath? June 27, 2011. https://www.azpm.org/s/6522-web-feature-what-lies-beneath/
Arizona Public Media. Tailings dust under the microscope. March 18, 2011 https://www.azpm.org/s/5847-tailings-dust-under-the-microscope/
Arizona Daily Star. Damage appears slight in Sunday's Kartchner break-in. October 14, 2009. http://tucson.com/news/local/crime/damage-appears-slight-in-sunday-s-kartchner-break-in/article_fcc0b2ae-3062-5dc6-8c83-be268e29a273.html
Arizona Daily Star. Microbes triving in Kartchner Caverns, November 15, 2006. http://tucson.com/news/science/environment/microbes-thriving-in-kartchner-caves/article_92b5905e-84b9-5061-902f-2e951935df13.html
Arizona Daily Star. The legacy of our trash. August 5. 2006. http://tucson.com/news/state-and-regional/history-and-culture/the-legacy-of-our-trash/article_a71e0718-e662-54e6-9914-1fdba27aa761.html
NSF Discoveries. Of microbes and Mars. December 17, 2004. http://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=100610&org=NSF
Science. Teaming up cleanup bugs. May 13, 1994. DOI:10.1126/science.264.5161.902-c

TRADE JOURNAL ARTICLE

Boxley, C.J., J.E. Pemberton, and R.M. Maier. 2015. Rhamnolipids and related biosurfactants for cosmetics and cosmeceutical markets. INFORM (International News on Fats, Oils, and Related Materials). 26:193-272.

WEB PUBLICATIONS

Chief K., Artiola JF, Beamer P, Wilkinson S, Maier RM, Rock C, Sanchez C. 2016. Understanding the Gold King Mine Spill. Fact Sheet. University of Arizona, Tucson, AZ. (https://www.superfund.arizona.edu/sites/superfund.arizona.edu/files/u70/understanding_the_gold_king_mine_spill_v13_preamble_final.pdf)
Artiola JF, Chief K, Beamer P, Wilkinson S, Maier RM, Rock C, Sanchez C. The Gold King Mine Spill: Can it Impact Water Users below the Lake Power Reservoir and Yuma Farmers? April 2016, az1698-2016, 4 pp. http://arizona.openrepository.com/arizona/bitstream/10150/607717/1/az1698-2016.pdf
Chief, K., J.F. Artiola, P. Beamer, S.T. Wilkinson, R.M. Maier, C. Rock and C. Sanchez. 2015. Understanding the Gold King Mine Spill. College of Agriculture and Life Sciences Cooperative Extension Bulletin, Aug. 2015. http://superfund.pharmacy.arizona.edu/info-material/gold-king-mine
Stanley, J., S.T. Wilkinson, D. Moreno Ramírez, R.M. Maier, and K.Chief. 2015. Tribal Mining Educational Modules: Copper Mining and Processing. University of Arizona Superfund

Research Program. http://www.superfund.pharmacy.arizona.edu/learning-modules/tribal-modules

Maier, R.M. and H.F. Henry. 2011. Boston Mill Site Pilot Study, Cochise County, Arizona. Case study as part of a web-based technical and regulatory guidance. Interstate Technology Regulatory Council. http://www.itrcweb.org/miningwaste-guidance/cs65_boston_mill.htm

Ramirez-Andreotta MD, Henry HF, Hillenbrand J, Maier RM, Meza Figueroa D, Williams DJ. 2011. Mine Tailing Waste in Arid and Semi-Arid Environments: A Particulate Matter Requiring Stakeholder Cooperation. (In-depth summary of outcomes from 2008 "Mine Tailings Stabilization in Arid and Semi-Arid Environments: Assessment, Problems, and Solutions" workshop). University of Arizona Superfund Research Program website: Mine Tailing Waste in Arid and Semi-Arid Environments: A Particulate Matter Requiring Stakeholder Cooperation.

INTERACTIVE EDUCATIONAL KIOSK

A kiosk was developed in partnership with the Arizona State Parks Discovery Center as part of the NSF Kartchner Caverns Microbial Observatory. The kiosk was installed in the Discovery Center and encompasses two interactive touch screen displays each with four storyboards that allow the up to 200,000 annual cave visitors to explore cave microbiology and the techniques used by microbiologists to study new ecosystems.

WEBSITES

1) http://superfund.pharmacy.arizona.edu/
2) http://swes.cals.arizona.edu/maier_lab/kartchner/
3) http://swes.cals.arizona.edu/maier_lab/

BOOK CHAPTERS

1. Hogan, D.E., C.J. Boxley, R.M. Stolley, R.M. Maier. 2022. Bioinspired glycolipids: interaction with metals and technologies for recovery from aqueous sources. In: Biosurfactants: Research and Development (G. Soberon Chavez, ed.), in press.
2. Soberon-Chavez, G., R. Hausmann, R.M. Maier, E. Deziel. 2022. Challenges and prospects for microbial biosurfactant research. In: Biosurfactants: Research and Development (G. Soberon Chavez, ed.), in press.
3. Maier, R.M. 2019. Biological processes affecting contaminant transport and fate. Chapter 9 In: Brusseau, ML, Pepper IL, Gerba CP. (eds.) Environmental and Pollution Science, 3rd Edition. Elsevier.
4. Volkmann, T.H.M, A. Sengupta, L.A. Pangle, K. Dontsova, G.A. Barron-Gafford, C.J. Harman, G.-Y. Niu, L.K. Meredith, N. Abramson, A.A. Meira Neto, Y. Wang, J.R. Adams, D.D. Breshears, A. Bugaj, J. Chorover, A. Cueva, S.B. DeLong, M. Durcik, T.P.A. Ferre, E.A. Hunt, T.E. Huxman, M. Kim, R.M. Maier, R.K. Monson, J.D. Pelletier, M. Pohlmann, C. Rasmussen, J. Ruiz, S.R. Saleska, M.G. Schaap, M. Sibayan, M. Tuller, J.L.M. van Haren, X. Zeng, P.A. Troch. 2018. Controlled experiments of hillslope coevolution at the Biosphere 2 Landscape Evolution Observatory: toward prediction of coupled hydrological, biogeochemical, and ecological change. In: Hydrology of Artificial and Controlled Experiments. (Liu, J.-F., W.-Z. Gu, eds.). DOI: 10.5772/intechopen.72325
5. Ortiz, M., J.W. Nielson, A. Legatzki, and R.M. Maier. 2015. Bacterial and archaeal diversity on cave speleothem and rock surfaces: A carbonate cave case study from Kartchner Caverns In: Life in Extreme Environments, Vol 3: Microbial Life of Cave Systems. (Summers Engel, A. ed.), DeGruyter, pp. 105-124.
6. Hogan, D.E., T.A. Veres-Schalnat, J.E. Pemberton, and R.M. Maier. 2014. Biosurfactant complexation of metals and applications for remediation. In: Biosurfactants: Research Trends and Applications (C.N. Mulligan, A. Mudhoo, and S.K. Sharma, eds). CRC Press, Taylor and Francis, pp. 277-308.

7. Maier, R.M, and T.M. Roane. 2014. Microorganisms as indicators for metal(loid) impacted environments. In: *Sampling and Monitoring for the Mine Life Cycle, Appendix 3* (V.T. McLemore, K.S. Smith, and C.C. Russell, eds.), Englewood, CO, Society for Mining, Metallurgy and Exploration, Inc. pp. 182-185.
8. Soberon-Chavez, G., and R.M. Maier. 2010. Biosurfactants: general overview. In *Biosurfactants: From Genes to Applications*. Microbiology Monographs, Springer, pp. 1-11.
9. Maier, R.M. 2006. Biological processes affecting contaminant fate and transport. In: *Pollution and Environmental Science*, 2nd ed., Academic Press, San Diego, CA, pp. 105-120.
10. Brusseau, M.L., and R.M. Maier. 2004. Soil and groundwater remediation. In: *Environmental Monitoring and Characterization*. (J.F. Artiola, I.L. Pepper, and M.L. Brusseau, eds.) Academic Press, San Diego, CA, pp. 335-356.
11. Bodour, A.A., and R.M. Maier. 2002. Biosurfactants: types, screening methods, and applications. In: *Encyclopedia of Environmental Microbiology* (G. Bitton, ed.) John Wiley and Sons, pp. 750-770.
12. Herman, D.C. and R.M. Maier. 2002. Biosynthesis and applications of glycolipid and lipopeptide biosurfactants. In: *Lipid Biotechnology* (T.M. Kuo and H.W. Gardner, eds.) Marcel Dekker, New York, pp. 629-654.
13. Neilson, J.W. and R.M. Maier. 2001. Biological techniques for measuring organic and metal contaminants in environmental samples. In: *Humic Substances and Chemical Contaminants* (C.E. Clapp, M.H.B. Hayes, N. Senesi, P.R. Bloom, and P.M. Jardine, eds.) Soil Science Society of America, Madison, WI, pp. 255-273.
14. Maier, R.M. 2000. Bioavailability and its importance to bioremediation. In: *Bioremediation,* (J.J. Valdes, ed.) Kluwer Academic Publishers, Norwell, MA, pp. 59-78.
15. Miller, R.M. and Y. Zhang. 1997. Measurement of biosurfactant-enhanced solubilization and biodegradation of hydrocarbons. In: *Methods in Biotechnology*, *Vol. 2: Bioremediation Protocols* (D. Sheehan, ed.) Humana Press Inc, Totowa, NJ, pp. 59-66.
16. Miller, R.M. and Herman, D.H. 1997. Biotransformation of organic compounds - remediation and ecotoxicological implications. In: *Soil Ecotoxicology.* (J. Tarradellas, G.Bitton, D. Rossel, eds.), Lewis Publishers, Boca Raton, pp. 53-84.
17. Roane, T.M., I.L. Pepper, and R.M. Miller. 1996. Microbial remediation of metals. In: *Bioremediation: Principles and Applications*. (R.L. Crawford, D.L. Crawford, eds.) Cambridge Univ. Press, United Kingdom. pp. 312-340.
18. Miller, R.M., I. Jimenez, and R. Bartha. 1996. The use of liposomes in biodegradability testing. In: *Handbook of Nonmedical Applications of Liposomes: From Gene Delivery and Diagnostics to Ecology*, Volume IV (D.D. Lasic, Y. Barenholz, eds.) CRC Press, Boca Raton. pp. 255-262.
19. Miller, R.M. 1996. Biology of contaminant fate and transport. In: *Pollution Science.* (I. Pepper, C.P. Gerba, M.L. Brusseau, eds.), Academic Press, San Diego. pp. 77-91.
20. Brusseau, M.L. and R.M. Miller. 1996. Remediation. In: *Pollution Science.* (I. Pepper, C.P. Gerba, M.L. Brusseau, eds.), Academic Press, San Diego. pp. 151-168.
21. Miller, R.M. 1995. Surfactant-Enhanced Bioavailability of Slightly Soluble Organic Compounds. In: *Bioremediation - Science & Applications.* (H. Skipper, R. Turco, eds.) Soil Science Society of America special publication, Madison, WI, pp. 33-54.
22. Miller, R.M. 1994. Biotransformation of Organic Compounds. In: *Handbook of Vadose Zone Characterization and Monitoring.* (L.G. Wilson, L.G. Everett, S.J. Cullen, eds.) CRC Press, Boca Raton, pp 105-122.

CONFERENCE PROCEEDINGS

1. Chief, K., C.L. Koch, R.M. Maier, T. Maracle, S. Rader, J. Stanley. 2014. Mining and environmental educational modules for Tribal Colleges. Annual Society for Mining, Metallurgy, and Exploration, Salt Lake City, UT, Feb. 23-26.
2. Curry, J.E., R.M. Maier, T. Norris, and K.F. Baughman. 2010. Evaporative deposition of bacteria and microspheres on mica from a sessile drop: the use of surface conditioning in a

laboratory atmosphere to control drop spreading and particle deposition patterns. Materials Research Society Spring Meeting, San Francisco, CA.
3. Baughman, K., R. M. Maier, and J.E. Curry. 2010. Evaporative deposition of bacteria from a sessile drop: effect of suspension aging. Materials Research Society Spring Meeting, San Francisco, CA.
4. Legatzki, A., M. Ortiz, J.W. Neilson, M. Creamer, K. Nelson, H.Th. Chu, C.E. Banczak, B.M. Pryor, L.S. Pierson III, R.M. Maier, M.J. Vaughan, R.R. Casavant, R.S. Toomey. (2009) Microbial Diversity in Kartchner Caverns, a Carbonate Cave in Southern Arizona, USA. In: Proceedings of the 15th International Congress of Speleology, Volume 1, Symposia Part 1. (White, W.B., ed.), Kerrville, TX, pp. 389-391.
5. Heo, C.H., R.M. Maier, and J.E. Curry. 2006. Directly measuring the adhesive and elastic properties of bacteria using a surface force apparatus: effect of desiccation. Mater. Res. Soc. Symp. Proc. Vol. 295. Materials Research Society.
6. Maier, R.S., W.J. Maier, B. Mohammadi, R. Estrella, M.L. Brusseau, and R.M. Miller. 1996. Estimation of Kinetic Rate Coefficients for 2,4-D Biodegradation During Transport in Soil Columns. In: *Institute for Mathematics and its Applications Volumes in Mathematics and its Applications*, Vol 79. Springer-Verlag, New York. pp. 255-274.
7. Brusseau, M.L., R.M. Miller, R.M., Y. Zhang, X. Wang, and G-Y. Bai. 1995. Biosurfactant and Cosolvent Enhanced Remediation of Contaminated Media. In: *Surfactant Enhanced Subsurface Remediation: Emerging Technologies.* (D.A. Sabatini, R.C. Knox, and J.H. Harwell, eds.) American Chemical Society, Washington, DC, pp. 82-94.
8. Wang, J., M.L. Brusseau, and R.M. Miller. 1995. Biodegradation of Nonionic Organic Compounds Complexed with Cyclodextrins. In: *Proc. of the American Chemical Society National Meetings, Environmental Chemistry Div*., Anaheim, CA, April 2-7. Vol. 35(1), American Chem. Soc., Washington, D.C., pp. 416-417.

GRANTS RECEIVED

1. **Bioinspired Green Glycolipids as Fugitive Dust Mitigation Agents.** NIEHS, NIH SBIR Phase 1, **$**192,035, C.J. Boxley (Company PI), R.M. Maier (UA PI), M. Kim (UA, Co-Pi). 4/1/2022 – 3/31/2023.
2. **White Paper in Support of Regulation of Metals Emissions from Power Plants**. Center for Applied Law and Policy. R.M. Maier (PI) and J. Lewis. $17,697.46 (UA portion). 9/1/2021-10/31/2021.
3. **One Person's Trash Is Another Person's Treasure – Optimizing Metal-Contaminated Plant Biomass Towards The Needs Of Green Chemistry.** CNRS-University of Arizona IRC Graduate Fellowship Program. UA award is one 3-year graduate fellowship (approx. $94,000) and 5000 Euros for travel. UA team: Babst-Kostecka (PI), R.M. Maier (co-PI). CNRS team: Grison (PI), Legrand (co-PI).
4. **KC Donnelly Award Supplement to Superfund Center: Exposures, Health Impacts, and Risk for Mine Waste Contamination.** NIEHS, $15,350, R.M. Maier (PI). 7/19/2021-1/31/2022.
5. **Rhamnolipid-Based Remediation Technologies for Uranium and Rare Earth Element Contamination.** NIEHS, NIH SBIR Phase 2. $1,159,850. C.J. Boxley (Company PI), R.M. Maier (UA PI). 5/5/2020 – 5/4/2022.
6. **Center for Environmentally Sustainable Mining (CESM) Membership Agreement.** Mexicana De Cobre S.A. DE C.V. (Mexico), $40,000. J.W. Neilson (PI) and R.M. Maier. 10/28/2020 – 10/27/2023.
7. **Superfund Research Center: Exposures, Health Impacts, and Risk for Mine Waste Contamination.** NIEHS, NIH. $10,781,305, R.M. Maier (PI) and 17 co-Is. 4/1/2020 – 1/31/2-25.

8. **Center for Environmentally Sustainable Mining (CESM) Membership Agreement.** BHP. $40,000. R.M. Maier (PI), J.W. Neilson. 12/23/19 – 12/22/22.
9. **Glycolipids as Inexpensive Solid Supported Ligands for Uranium Remediation.** NSF STTR Phase I: $224,993. C.J. Boxley (Company PI), R.M. Maier (UA PI). 10/1/2019 – 3/31/2020.
10. **Administrative Supplement for Risk and Remediation of Metal-Mining Wastes for Data Interoperability**. NIEHS, NIH. $543,472. R.M. Maier (PI), 9/12/2019 – 3/31/2020
11. **Center for Environmentally Sustainable Mining (CESM) Membership Agreement.** Resolution Copper Mining LLC. $160,000. J.W. Neilson (PI), R.M. Maier. 05/01/19 - 07/31/2021.
12. **Center for Environmentally Sustainable Mining (CESM) Membership Agreement.** ASARCO, LLC. $140,000. R.M. Maier (PI), J.W. Neilson. 05/15/14 – 06/01/19.
13. **Center for Environmentally Sustainable Mining (CESM) Membership Agreement.** Carlota Mine KGHM International. $170,300. R.M. Maier (PI), J.W. Neilson. 12/01/13 – 3/31/20.
14. **Center for Environmentally Sustainable Mining (CESM) Membership Agreement.** Resolution Copper Mining LLC. $170,300. R.M. Maier (PI), J.W. Neilson. 12/23/13 – 05/30/20.
15. **KC Donnelly Award Supplement to Superfund Center: Risk and Remediation of Metal-Mining Wastes.** NIEHS, $10,692, R.M. Maier (PI). 5/4/2018-3/31/2019.
16. **The Arid Soil Microbiome: Connecting Functional Health to Phylogenetic Diversity.** UA Office for Research, Discovery and Innovation Accelerate for Success. $125,000. R.M. Maier (PI), J.W. Neilson, A. Barberan, K. Ogden, P. Troch. 7/1/2018 – 6/30/2019.
17. **Novel Rhamnolipid Surfactants for (Recovery of Critical Elements and) Remediation of Metal Contaminated Waste Streams.** NIEHS, NIH SBIR Phase I. $224,879. C.J. Boxley (Company PI), R.M. Maier (UA PI). 4/1/2018 – 3/31/2019.
18. **Superfund Research Center: Risk and Remediation of Metal-Mining Wastes.** National Institute of Environmental Health Sciences, NIH. $3,924,381. R.M. Maier (PI) and 15 Co-Is. 8/1/2017 – 3/31/2020.
19. **Sustainable Bioeconomy for Arid Regions**. USDA NIFA $14,976,509. K. Ogden (PI) and 11 UA Co-Is (R.M. Maier portion, $509,986). 10/1/17 – 9/30/22.
20. **Revisioning Landscape Evolution: The Role of Pore-Scale Microbial Life in Landscape-Scale Hydro-Bio-Geochemical Processes.** UA Office of Research and Development Accelerate for Success. $200,000. P. Troch (PI) A. Sengupta, R.M. Maier, and J. Chorover. 8/1/2016-6/30/2018
21. **International Conference on Developing a Pan American Hub for Environmentally and Socially Compatible Mining.** National Institute of Environmental Health Sciences, NIH. $30,500. J.A. Field (PI) and R.M. Maier. 9/1/2015 – 8/31/2016.
22. **Hazardous Waste Risk and Remediation in the US Southwest.** National Institute of Environmental Health Sciences, NIH. $3,480,000. R.M Maier (PI, 30%) and 15 Co-Is. 9/30/2015-3/31/2017
23. **Phytostabilization of Copper Mine Tailings in the Arizona-Sonora Region.** UA-UNAM Consortium on Drylands. $20,000. R.M. Maier (PI) and Francisco Molina (Co-PI). 5/19/15 – 5/18/16.
24. **International Conference on Environmentally and Socially Responsible Mining for the Protection of Vulnerable Populations and Surrounding Environment in Latin America.**

National Institute of Environmental Health Sciences, NIH. $37,203. J.A. Field (PI), R.M. Maier. 01/01/2014-12/31/2014

25. **Phase II: Toward commercialization of a general, low-cost synthesis for glycolipid amphiphiles: scale-up and new novel surfactants.** Tech Launch Arizona, J.E. Pemberton (PI) and R.M. Maier. $91,131, 1/1/14 – 6/30/14.
26. **Phytostabilization of mine tailings in the Sonora/Arizona region.** UA-UNAM Consortium on Drylands. $16,500, R.M. Maier (US PI), F. Molina Freaner (Mexico PI), J.W. Neilson. 1/1/14 – 12/31/14.
27. **NMDS: Molecular design, synthesis and characterization of green glycolipid surfactants.** CHE 1339597 National Science Foundation/Environmental Protection Agency. $4,400,000, J.E. Pemberton (PI), R.M. Maier, W.T. Klimecki, R.L. Polt, and S.D. Schwartz, 9/15/13 – 8/31/18.
28. **Phase I: Toward commercialization of a general, low-cost synthesis for glycolipid amphiphiles: scale-up and new novel surfactants.** Tech Launch Arizona, J.E. Pemberton (PI) and R.M. Maier. $40,000, 1/1/13 – 6/30/13.
29. **Expanding Biotechnology Engagement Track (eUBET).** R.M. Maier (PI). USDA - Maricopa County Community College District. $28,000. 07/01/12 – 06/30/13.
30. **Center for Environmentally Sustainable Mining.** R.M. Maier (PI), $250,000/yr, TRIF Water Sustainability Program, 7/1/10 – 6/31/15.
31. **ETBC: Plant-Microbe-Mineral Interaction as a Driver for Rock Weathering and Chemical Denudation.** National Science Foundation, co-investigators: K. Dontsova (PI), T. Huxman, and J. Perdrial, J. Chorover, R.M. Maier $424,623, 8/1/10 – 7/31/14.
32. **Hazardous Waste Risk and Remediation in the Southwest.** $13,952,000, 4/1/10 - 3/31/15. National Institute of Environmental Health Sciences, NIH, R.M. Maier (PI), 4/1/10 – 3/31/15.
33. **Nano-Scale Mechanisms of Metal(loid) Rhizostabilization in Desert Mine Tailings.** National Institute of Environmental Health Sciences, NIH, $775,000, J. Chorover (PI), R.M. Maier, 1/09 – 1/13.
34. **Conference: Mine Tailings Stabilization in Arid and Semi-Arid Environments: Assessment, Problems, and Solutions**. National Institute of Environmental Health Sciences, NIH, $42,786, RM Maier (PI), A.J. Gandolfi, 10/07- 9/08.
35. **Collaborative Research in Chemistry: Fundamental Surface and Interfacial Chemistry of Microbially-Produced Biosurfactants**. National Science Foundation. $3,323,076, co-investigators: J.E Pemberton (PI), R.M. Maier, R.L. Polt, M-T. Velez, J.C. Ingram, 9/1/07 – 8/31/13.
36. **Research Opportunity Sabbatical Supplement to Kartchner Caverns Microbial Observatory.** $30,548, R.M. Maier (PI), B.M. Pryor, L.S. Pierson, and R. Wing, 1/1/09 – 8/31/09.
37. **Revegetation of the Sierrita Tailings: Greenhouse Studies**. Phelps-Dodge. $32,000. R.M. Maier (PI), 8/1/06 - 7/31/07.
38. **Establishing an Environmental Analytical Small Molecule Facility.** TRIF Venture Fund. $300,000. R.M. Maier (PI), 12/06 – 11/07.
39. **Microbial Observatory: Kartchner Caverns: Habitat Scale Community Structure and Function in Carbonate Caves.** National Science Foundation. $1,599,920, R.M. Maier (PI), B.M. Pryor, L.S. Pierson, and R. Wing, 10/1/06 – 9/30/11.
40. **Revegetation and Monitoring of the Boston Mill Mine Tailings Site**, Bureau of Land Management, $24,469, R.M. Maier (PI), 08/15/06 – 8/1/08.
41. **US-Mexico Binational Center for Environmental Sciences and Toxicology.** US Environmental Protection Agency, $1,458,200, J. Field (PI), A.J. Gandolfi, J. Ruiz, R.M. Maier, 9/1/05 - 8/31/08.

42. **Kartchner Caverns Monitoring Study**. Arizona State Parks. $60,000, R.M. Maier (PI), 6/05 – 5/13.
43. **Production and Purification of Monorhamnolipid.** Paradigm Biomedical Inc., co-investigator: R.M. Maier (PI), J.E. Pemberton, $19,301, 7/8/05 – 12/30/05.
44. **Phytostabilization of Mine Tailings in the Southwestern United States: Plant-Soil-Microbe Interactions and Metal Speciation Dynamics.** National Institute of Environmental Health Sciences, NIH, R.M. Maier (PI), J. Chorover, T.L. Thompson, Y. Bashan, $1,262,800, 4/1/05 - 3/31/10.
45. **Superfund Graduate Training Grant – Core E.** National Institute of Environmental Health Sciences, $712,050, R.M. Maier (PI), 4/1/05 – 3/31/10.
46. **Superfund Administration – Core A.** National Institute of Environmental Health Sciences, co-investigator A.J. Gandolfi (PI), R.M. Maier, $1,015,050, 4/1/05 – 3/31/10.
47. **U.S.-Mexico Higher Education Partnership for Environmental Sciences and Toxicology.** U.S. Agency for International Development, $299,564, A.J. Gandolfi (PI), J. Field, J. Ruiz, C. Lantz, R.M. Maier, and H.V. Aposhian, 03/01/04 - 02/28/07.
48. **Unraveling Bacterial Adhesion: Directly Measuring Bacteria-surface Interactions.** U.S. Department of Agriculture, co-investigators: J.E. Curry (PI), R.M. Maier, and L.S. Pierson, III, $78,179, 7/1/03 - 12/31/04.
49. **Fundamental Studies of in Situ Biosurfactant Production and the Attendant Impact on Metal Interactions with Soil Surfaces.** National Science Foundation, $454,000, R.M. Maier (PI), J.E. Pemberton and C. Larive, 3/1/02 - 2/28/05.
50. **Evaluation of Introduced Microbes and Nutrients on Removal of Grease and BOD from Kitchen Waste.** University of Arizona NSF Water Quality Center, $34,000, R.M. Maier (PI), 7/1/01 – 6/30/03.
51. **Biosurfactants: Their Application to In-situ Remediation of Metal-Contaminated Sites.** National Institute of Environmental Health Sciences, NIH, $431,775, R.M. Maier (PI), M.L. Brusseau, J.F. Artiola, and G. Soberon-Chavez, 4/1/00 - 3/31/05.
52. **Gene Enhanced Remediation of Co-Contaminated Soils.** National Institute of Environmental Health and Safety, NIH, $568,125, R.M. Maier (PI), I.L. Pepper (PI), 4/1/00 - 3/31/05.
53. **Influence of Coupled Physical-Chemical Processes on Biodegradation and In Situ Bioremediation of Organic Compounds.** National Institute of Environmental Health and Safety, $530,250, M.L. Brusseau (PI), R.M. Maier, 4/1/00 - 3/31/05.
54. **Biosurfactant-Faciliated Removal of Metals from Sludge.** University of Arizona NSF Water Quality Center. $30,000, R.M. Maier (PI), 7/1/00 - 5/31/02.
55. **Effect of Electric Current on the Viability of Bacteriophage.** American Water Works. $13,500, R.M. Maier (PI), 1/1/99 - 6/30/99.
56. **Biosurfactant-Enhanced Removal of Cadmium from Soil - Intermediate-Scale Trials.** National Institute of Environmental Health Sciences, NIH, $28,785, R.M. Maier (PI), 7/30/98 - 6/31/99.
57. **Evaluation of the Feasibility for In Situ Bioremediation of Mineral Oil Contaminated Soil**. Electric Power Research Institute, $65,733, R.M. Maier (PI), 9/30/98 - 8/30/2000.
58. **Role of Metal Bioavailability in In Situ Bioremediation of Metal and Organic Co-Contaminated Sites.** U.S. Department of Energy, $469,913, R.M. Maier (PI), I.L. Pepper, T.M. Roane, 9/15/97 - 9/14/2000.
59. **Rhamnolipid-Producing Bacteria: Ecology and Biological Control of Zoosporic Plant Pathogens.** U.S. Department of Agriculture Hatch, $4,000/yr, R.M. Maier (PI), 1/97-12/99.
60. **Bioavailability, Complex Mixtures, and In-Situ Bioremediation of Organic Contaminants.** U.S. Environmental Protection Agency, M.L. Brusseau (PI), R.M. Maier, $487,377, 10/1/96 - 9/30/99.
61. **Renovation of the Environmental Engineering BioProcessing Laboratory**. National Science Foundation, $100,000, B. Logan (PI), R. Arnold, K. Ogden, R. Guzman, R.M. Maier, 9/96.

62. **Food and Agricultural Sciences National Needs Graduate Fellowships Program.** U.S. Department of Agriculture, $54,000, R.M. Maier (PI), P.J. Wierenga, 10/95-9/00.
63. **Bioavailability and Biodegradation of Organic Contaminants in Heterogeneous Subsurface Environments.** National Science Foundation, $410,000, R.M. Maier (PI), M.L. Brusseau, D.C. Herman, 9/95-8/98.
64. **Biosurfactant-Enhanced In Situ Remediation of Metal-Contaminated Soils.** National Institute of Environmental Health and Science, NIH, $805,000, R.M. Maier (PI), M.L. Brusseau, J.F. Artiola, G. Soberón-Chávez, 4/95-3/2000.
65. **Influence of Coupled Physical-Chemical Processes on Biodegradation and In Situ Bioremediation of Organic Compounds.** National Institute of Environmental Health and Science, NIH, co-investigator: $613,000, M.L. Brusseau (PI), R.M. Maier, 4/95-3/2000.
66. **Extraction of Viable Bacteria from Soil Using Electrolysis.** U.S. Department of Agriculture Hatch, $4,500/yr, R.M. Maier (PI), 10/94-9/97.
67. **Influence of Soil Heterogeneity on Biodegradation of Pesticide During Transport Through Soil.** U.S. Department of Agriculture National Research Initiative, $247,841, R.M. Maier (PI), M.L. Brusseau (PI), 9/94 - 8/97.
68. **Bioremediation of a Leaking Underground Storage Tank Site Using Biofiltration.** Central Arizona Water Conservation District, $2000, R.M. Maier (PI), 2/94 - 12/95.
69. **Effects of Microbial Colonization on Transport of Separate Phase Organic Liquids.** Battelle Pacific Northwest Laboratories, $33,999, R.M. Maier (PI), 3/94 - 2/96.
70. **In Situ Biosurfactant Production to Facilitate Binding and Removal of Heavy Metals from Contaminated Soil.** US-Mexico Foundation for Science, $100,000, R.M. Maier (PI), G. Soberón-Chávez, 1/94 - 12/95.
71. **Instrumentation for Improving Environmental Science Laboratory Instruction.** National Science Foundation, $29,601, A.D. Matthias (PI), I.L. Pepper, R.L. Caldwell, S.A. Musil, J.F. Artiola, R.M. Maier, and M.L. Brusseau, 4/93 - 3/95.
72. **Influence of Biosurfactants on Mass Transfer, Biodegradation, and Transport of Mixed Wastes in Multiphase Systems.** US Department of Energy, $237,227, R.M. Maier (PI), M.L. Brusseau, 12/92 - 11/95.
73. **Co-coordination of U.S. Department of Energy Subsurface Science Program, Multiphase Fluid Flow Subprogram**. U.S. Dept. of Energy, $10,078, R.M. Maier (PI), 10/92-9/93.
74. **Coupled Biotransformation and Transport of Nitrogen and Organics in Soils.** USDA-CSRS-Water Quality, M.L. Brusseau (PI), R.M. Maier, T.L. Thompson, $119,988, 9/92 - 8/95.
75. **Coupled Processes: Sorption, Biodegradation and Transport of Organic Compounds in Porous Media.** National Institute Environmental Health and Science, NIH, $75,000, M.L. Brusseau (PI), R.M. Maier, 4/92-3/95.
76. **An Integrated Chemical and Biological Technique for Removal of Heavy Metals from Contaminated Soils and Aquifers.** U.S. Environmental Protection Agency, $173,417, J.F. Artiola (PI) M.L. Brusseau, R.M. Maier, 10/91-9/93.
77. **Effects of Microbially Produced Surfactants on Biodegradation.** U.S. Department of Energy, NORCUS fellowship ($15,600/yr), supplies (total = $4000), R.M. Maier (PI), 9/91-8/93.
78. **Effects of Microbially Produced Surfactants on Biodegradation.** USDA Hatch, $21,000, R.M. Maier (PI), 10/91-9/94.

ADVISEES GRANTS AND AWARDS (pd = post-doc, g = grad, u = undergrad student)

Priyanka Kushwaha (pd)	2020	AGU Voices for Science, Science Communication Fellow
Karen Serrano (u)	2019	Outstanding senior in Ecology and Evolutionary Biology
Karen Serrano (u)	2019	Ecol. Evol. Biol excellence in undergrad research award
Lydia Jennings (g)	2019	American Geophyscial Union “Voice for Science” Science Communication Fellow

Lydia Jennings (g)	2019	SRK Consulting Scholarship
	2019	Native Nations Institute Scholarship
	2019	SCASC Natural Res. Workforce development fellowship
	2019	David A Baker Newmont Mineral Devel & Sus. fellowship
	2019	David A. Baker Scholarship in Sustainable Mining
	2019	First place oral presentation UA SWESx Earth Day
Lia Ossanna (u)	2019	Environmental Science Outstanding Senior Award
Lia Ossanna (u)	2019	Second place poster, Soc. Ecol. Restoration SW Chapter
Lia Ossanna (u)	2019	Second place oral presentation UA SWESx Earth Day
Karen Serrano (u)	2019	First place poster presentation UA SWESx Earth Day
Priyanka Kushwaha (pd)	2019	NOAA travel award for ESWN Profession Dev. Workshop
Priyanka Kushwaha (pd)	2019	MP Biomedicals travel award to Amer. Soc. Microbiology
Denise Moreno Ramirez (g)	2019	Second place oral presentation UA SWESx Earth Day
Karen Serrano (u)	2018	Third place poster presentation UA SWESx Earth Day
Priyanka Kushwaha (pd)	2018	UA Postdoctoral Research Development Grant
	2018	NIEHS KC Donnelly Award
Lydia Jennings (g)	2018	American Indian Science and Engineering Society (AISES) Rising Leader Award
	2018	UA Native American Student Affairs Outstanding Graduate Service Award
Denise Moreno Ramirez (g)	2018	UA SWESx second place poster presentation
Lia Ossanna (u)	2018	ASM Undergraduate Research Fellowship
	2018	First place oral presentation UA SWESx Earth Day
Emalee Eisenhauer (g)	2018	Third place poster presentation UA SWESx Earth Day
Denise Moreno Ramirez (g)	2017	UA T.F. Buehrer Memorial Scholarship
	2017	UA Rodgers Graduate Assistantship Scholarship
	2017	Tucson Water Scholarship, City of Tucson
	2017	UA Carson Scholarship
Lia Ossanna (u)	2017	Second place undergrad poster award UA SWESx Earth Day
Kyle Brown (g)	2017-2020	Tillman Foundation Scholarship
Benjamin Rivera (u)	2017	First place poster presentation the Western Alliance to Expand Student Opportunities Conference
Benjamin Rivera (u)	2017	First place undergrad oral presentation UA SWESx Earth Day
Emalee Eisenhauer (g)	2016	Outstanding graduate TA, SWES
	2016	Honorable Mention NSF Grad. Research Fellowship Program
Aditi Sengupta (p-doc)	2016	NIEHS KC Donnelly award
Linnea Honeker (g)	2015	PEO (Philanthropic Education Organization) Scholar Award
Benjamin Rivera (u)	2015-17	EHS-TRUE recipient
John Hottenstein (g)	2015	UA Pistor-Stanley Scholarship in Agriculture
David Hogan (g)	2015	UA Water Sustainability Program Scholarship
Lydia Jennings (g)	2015-18	NSF Graduate Research Fellowship
Lydia Jennings (g)	2014-18	Alfred P. Sloan Foundation Scholarship
David Hogan (g)	2014	1st place poster, UA Grad & Professional Student Showcase
	2014	1st place poster award—UA SWESx Research Symposium
Linnea Honeker (g)	2014	Departmental Academic Achievement Award
	2013	Great Lakes STEM National Scholarship
	2013	AZ Imaging & Microanalysis Society Annual Conference award for advanced skill and technique in microscopy
	2013-16	NSF Graduate Research Fellowship
	2013	International Phytotechnologies Conf, PhytoScholar award
	2012	Great Lakes STEM National Scholarship
David Hogan (g)	2012-15	NSF Graduate Research Fellowship
Ariel Friel (u)	2014	UA Earth Week first place undergraduate oral presentation

Ariel Friel (u) 2013 ASM regional meeting best poster award
Juliana Gil-Loaiza (g) 2012 UA Earth Week first place poster award
Juliana Gil-Loaiza (g) 2012 UA Earth Week third place abstract award
Monica Ramirez-Andreotta (g) 2012 UA Earth Week third place poster award,
2012 UA Earth Week second place abstract award
Juliana Gil-Loaiza (g) 2013 UA Earth week second place oral presentation award
Juliana Gil-Loaiza (g) 2013 International Phytotechnologies Conf. PhytoScholar award
Catherine Gullo (u) 2014 SWES Outstanding Senior Award
Catherine Gullo (u) 2014 UA Earth Week third place undergraduate student poster award
Karis Nelson (g) 2011 Internat. Phytotechnologies Conference third place poster award
Monica Ramirez-Andreotta (g) 2011 NIEHS Karen Wetterhahn Memorial Award
2011 UA Water Sustainability Program Fellowship
2010, 2011 NASA Space Grant Graduate Fellowship
Marian Ortiz (g) 2010 IGERT/NSF Fellowship in molecular ecology
Karis Nelson (u) 2009 SWES Outstanding Senior Award
2009 ASM regional meeting best oral presentation
Marian Ortiz (g) 2008-12 Alfred P. Sloan Foundation Scholarship
Marian Ortiz (g) 2007 IMSD/NIH Scholarship
Alexis Valentin-Vargas (g) 2013 ASM Robert D Watkins Grad Research Fellowship
Alexis Valentin-Vargas (g) 2009-13 Alfred P. Sloan Foundation Scholarship
2009 UA Graduate Student Diversity Fellowship
Monica Ramirez-Andreotta (g) 2008 Alfred P. Sloan Foundation Scholarship
Monica Ramirez-Andreotta (g) 2008 Graduate Diversity Fellowship
Sky Dominguez (g) 2005-09 Sloan Foundation Fellowship
Monica Mendez (g) 2003 NIEHS Karen Wetterhahn Memorial Award.
Monica Mendez (g) 2003-05 Achievement Rewards for College Scientists Fellowship (ARCS)
Monica Mendez (g) 2002 Alfred P. Sloan Foundation Scholarship
Jonathan Dorn (g) 2001-03 Achievement Rewards for College Scientists Fellowship (ARCS)
Jonathan Dorn (g) 2003 UA GeoDaze Sym. Montgomery Prize for best oral presentation
Jonathan Dorn (g 2002 ASM regional graduate oral presentation award
Kevin Drees (g) 2002 Arizona Foundation Meritorious Teaching Award
Tom Rogers (u) 2001 UA Slonaker Honors Center research grant
Tom Rogers (u) 2000 ASM regional best undergraduate student poster presentation
Adria Bodour (g) 2000 Annual Arizona Imaging and Microanalysis Meeting Outstanding Biology Platform Presentation
Adria Bodour (g) 1999 ASM Travel grant
Adria Bodour (g) 1998 UA CALS Outstanding Graduate Teaching Award
Todd Sandrin (g) 2000 ASM regional best graduate student oral presentation
Todd Sandrin (g) 1998-01 EPA STAR Fellowship grant
Jacob Torrens (g) 1996 Achievement Rewards for College Scientists Fellowship
Shannon Pittner (u) 1995 UA Sloanaker Honors Center Undergraduate Research Award
Shannon Pittner (u) 1996 UA Sloanaker Honors Center Undergraduate Research Award
Eileen Jutras (g) 1995 UA Graduate Student Research Fund Award
Eileen Jutras (g) 1995 UA Women in Science and Engineering Travel Award
Eileen Jutras (g) 1995 Air & Waste Management Association Scholarship
Elizabeth Marlowe (g) 1995 ASM Travel Award
Jerry Miller (g) 1995 George E.P Smith Fellowship
Jill Champion (g) 1993 AZ Society for Electron Microscopy and Microbial Analysis (ASEMMA) Leica student Award
Jill Champion (g) 1993 ASM Travel Award

INVITED PRESENTATIONS

1. Maier, R.M. 2022. Mining in a greener future. 17th Annual College of Science Lecture Series "Minerals". April 7.
2. Maier, R.M. 2021. Revegetation of mine wastes: lessons learned and stakeholder communication. V International Symposium on Microbiology and Biotechnology, Vicosa, Brazil, Nov. 9-11, Virtual.
3. Maier, R.M. 2021. The mine tailings microbiome – friend or foe of revegetation? Massachusetts Institute of Technology (MIT), Feb. 19. Virtual.
4. Maier, R.M. 2021. Revegetation of mine wastes: lessons learned and stakeholder communication. Montana Tech University Public Lecture Series, Jan. 13. Virtual.
5. Neilson, J.W. and R.M. Maier. 2020. Revegetation of mine wastes in arid environments: linking above- and below-ground performance. EPA CLU-IN Webinar, August 12, 2020.
6. Kushwaha, P., Q. Yu, A. Tran, J. Schroeder, R.M. Maier. 2019. Influence of compost amendment on the relationship between plant gene expression and microbial community diversity in remediation of acidic metalliferous mine tailings. NIEHS Superfund Research Program Annual Meeting, Seattle, Washington, Nov. 18-20.
7. Maier, R.M. 2019. Earth microbiome and soil health: is the Earth getting sick?. Basis High School North, Tucson, AZ, Nov. 8.
8. Maier, R.M. 2019. The earth microbiome, soil health, and climate change: is the Earth getting sick? Osher Life-Long Learning Institute, Tucson, AZ Oct. 22.
9. Maier, R.M., P. Carini. 2019. Understanding plant-microbe-metal interactions in metal-contaminated soils. NIEHS Bioremediation-Expanding the Tool box: Session I – The Microbiome. EPA CLU-In Webinar, Sept. 30.
10. Kushwaha P., A. Barberan, B. Butterfield, J.W. Neilson, R.M. Maier. 2019. Linking microbial phylogenetics and genetics to N-cycling functional potential in arid soils. American Society for Microbiology Microbe 2019, San Francisco, CA, June 20-24.
11. Maier, R.M. 2019. Biosurfactants: discoveries to commercialization. Ohio State University, Jan. 23.
12. Maier, R.M. 2019. Lessons learned from a compost-assisted direct planting revegetation field trial: six years at the Iron King Mine Superfund site. Ohio State University, Jan. 22.
13. Hottenstein, J.W. Neilson, J. Gil-Loaiza, R.A. Root, J. Chorover, R.M. Maier. 2019. Soil microbiome dynamics during revegetation of pyritic mine tailings: understanding microbial bioindicators of soil acidification. Soil Science Society of America International Soils Meeting, San Diego, CA, Jan. 6-9.
14. Neilson, J.W., L. Honeker, C. Gullo, J. Chorover, R.M. Maier. 2019. Effect of re-acidification on buffalo grass rhizosphere and bulk microbial communities during phytostabilization of metalliferous mine tailings. Soil Science Society of America International Soils Meeting, San Diego, CA, Jan. 6-9.
15. Jennings, L., L. Ossanna, J. Neilson, M. Theilmann, R. Maier. 2019. Microbial and fungal bio-indicators of degraded soil development on reclaimed mine tailings in southern Arizona. Soil Science Society of America International Soils Meeting, San Diego, CA, Jan 6-9.
16. Maier, R., 2018. University of Arizona sustainability bioeconomy for arid regions project. CALS Ag 100 Council Meeting, Chandler, AZ, Nov. 30.
17. Boxley, C., Hogan, D.E., and R.M. Maier. 2018. Novel rhamnolipid surfactants for (recovery of critical elements and) remediation of metal contaminated waste streams. NIEHS 2018 Superfund Research Program Annual Meeting, Sacramento, CA, Nov. 28-30.
18. Maier, R.M. 2018. Ecoengineering of life on landscapes. iGLOBES CNRS/UA Human Challenges in Extreme Environments Workshop, Nov. 12-13.
19. Maier, R.M. 2018. University of Arizona Superfund Research Program "Risk and Remediation of Metal-Mining Wastes". EPA CLU-IN Webinar Series for NIEHS Superfund Research Program Multiproject Center Grants: Research Across Disciplines. August 23.

20. Maier, R.M. 2018. Phytoremediation of mine waste sites: case studies and the importance of involving stakeholders. Pre-conference training workshop for the Central and Eastern European Conference on Health and Environment (CEECHE). Krakow, Poland June 10-14.
21. Hottenstein, J., J.W. Neilson, J. Gil-Loaiza, R.A. Root, J. Chorover, R.M. Maier. 2018. Soil microbiome dynamics during revegetation of pyritic mine tailings: understanding microbial bioindicators of soil acidification. Central and Eastern European Conference on Health and Environment (CEECHE). Krakow, Poland June 10-14.
22. Maier, R.M. 2018. Lessons learned from a compost-assisted direct planting revegetation field trial: six years at the Iron King Mine Superfund site. 2018. Restoring K'É Conference. University of Arizona, Tucson, April 23.
23. Jennings, L.L., L. Ossanna, M. Theilmann, J.W. Neilson, R.M. Maier. 2018. Biogeochemical indictors of soil formation on reclaimed mine tailings in southern Arizona. University of Arizona, Tucson, April 23.
24. Maier, R.M. 2018. The Earth's microbiome and human health. 13th Annual Frontiers in Immunobiology and Immunopathogenesis Symposium. University of Arizona, Tucson, AZ, March 9.
25. Neilson, J.W., C. Cardona, J. Gilbert, J.G. Caporaso, R.M. Maier. 2017. Increasing aridity impacts the network cohesion of the arid soil microbiome. Soil Science Society of America Annual Meeting, Tampa, FL, Oct. 22-25.
26. Sengupta, A., J.C. Stegen, J.W. Neilson, R.M. Maier. 2017. Heterogeneity of microbial community dynamics in incipient soils. Soil Science Society of America Annual Meeting, Tampa, FL, Oct. 22-25.
27. Chorover J., R.M. Maier, R.A. Root, C.M. Hammond. 2017. Soil chemical transformations affect arsenic bioaccessibility during mine tailings diagenesis. Symposium on Soil Chemistry, Food Security and Human Health, Soil Science Society of America Annual Meetings, Tampa, FL, October 22-25.
28. Maier, R.M. 2017. The University of Arizona Institute of the Environment. TRIF WEES Faculty Networking Event. October, 9.
29. Maier, R.M. 2017. From a passion for science to discovering my voice in science. UA KEYS High School Student Internship Program. Tucson, AZ, June, 21.
30. Root, R.A., J. Chorover, C. Hammond, J. Gil-Loaiza, J.W. Neilson, A. Valentin-Vargas, R.M. Maier. 2017. Mineral resource recovery has driven the Anthropocene; now what? University of Vermont, Department of Geology, Seminar Series April 24.
31. Chorover, J., R.A. Root, C.M. Hammond, R.M. Maier. 2017. Biogeochemical transformation of metal(loid)s in a disturbed critical zone. American Chemical Society, Geochemistry Division Medal Symposium, San Francisco, CA, April 2-6.
32. Maier, R.M. 2017. Development and outcomes from the Center for Environmentally Sustainable Mining. TRIF WEES Engagement Event. Tucson, AZ, Feb. 15.
33. Maier, R.M. 2017. Contributions of the Center for Environmentally Sustainable Mining to the UA Institute for Mineral Resources. UA Lowell Institute for Mineral Resources Board Meeting. Tucson, AZ, Feb. 3.
34. Maier, R.M. 2016. Lessons learned from a compost-assisted direct planting revegetation field trial: six years at the Iron King Mine Superfund Site. NIEHS Environmental Health Science FEST, Raleigh-Durham, NC, Dec. 5-8.
35. Maier, R.M. 2016. Update on University of Arizona Superfund Research Program activities at the Iron King Superfund site. Dewey-Humboldt Town Council Meeting. Dewey-Humboldt, AZ, Nov. 1.
36. Maier, R.M. 2016. Earth's microbiome and its relevance to keeping our Earth healthy. Lunchtime talk with Tucson High Summer School microbiology students. Tucson, AZ, June 23.
37. Maier, R.M. 2016. Revegetation technology for mining wastes. Department of Mining Engineering, University of Arizona, April 18.

38. Maier, R.M. 2016. Developing biogeochemical indicators to enhance revegetation success of mine tailings and waste rock: an industry-academic research cooperative approach. Central and Eastern European Conference on Health and the Environment. Prague, Czech Republic, April 10-14.
39. Maier, R.M. 2016. Making a living while starving in the dark: the NSF Kartchner Caverns Microbial Observatory. Department of Biology, University of New Mexico, Albuquerque, NM, April 7.
40. Maier, R.M. 2016. Revegetation technology for mine tailings. Developing a Pan American Hub for Environmentally and Socially Compatible Mining Conference. Lima, Peru, March 7-9.
41. Maier, R.M. 2016. The University of Arizona Center for Environmentally Sustainable Mining. Arizona Department of Environmental Quality, Tucson, AZ, Feb. 8.
42. Neilson, J.W., L.L Jennings, R.M. Maier, 2016. Developing biogeochemical indicators to enhance revegetation success of mine tailings and waste rock: an academic-industry research cooperative approach. Annual Society of Mining, Metallurgy and Exploration Meeting, Phoenix, AZ, Feb. 21-24.
43. Maier, R.M., M.M. Poulton. 2016. The University of Arizona Center for Environmentally Sustainable Mining. Annual Society of Mining, Metallurgy and Exploration Meeting, Phoenix, AZ, Feb. 21-24.
44. Barton, M.D., R.M. Maier. 2016. Sustainable Arizona mining: seizing the opportunities, meeting the challenges. Arizona Mining Stakeholders Group. Phoenix, AZ, Jan. 19.
45. Maier, R.M., J. Gil-Loaiza, L.K. Honeker, J.D. Hottenstein, A. Valentin-Vargas, L.L. Jennings, C.M. Hammond, J.W. Neilson, R.A. Root, and J. Chorover. 2015. Microbial diversity and metal speciation changes in mine tailings following compost-assisted direct planting: a four-year Superfund site field study. American Geophysical Union Meeting, San Francisco, CA, Dec. 14-18.
46. Root R.A., C.M. Hammond, J. Gil-Loaiza, L.K. Honeker, R.M. Maier, J. Chorover. 2015. Coupling biogeochemical cycles and metal(loid) lability in sediments. LCLS/SSRL Users Meeting, Oct. 7.
47. Maier, R.M. The Center for Environmentally Sustainable Mining. 2015. Centro de Estudios Mexicanos en Tucson UNAM at UA: Academic and Cultural Program, Tucson, AZ, Sept. 25-28.
48. Molina Freaner, F., and Maier, R.M. 2015. Phytostabilization of mine tailings in the Arizona-Sonora Region. Centro de Estudios Mexicanos en Tucson UNAM at UA: Academic and Cultural Program, Tucson, AZ, Sept. 25-28.
49. Maier, R.M. Making a living while starving in the dark: the NSF Kartchner Caverns Microbial Observatory. 2015. University of Arizona School and Animal and Comparative Biomedical Sciences Seminar. Tucson, AZ, Sept. 21.
50. Maier, R.M. 2015. Challenges to realizing the commercial potential for biosurfactants. 106th American Oil Chemists' Society Annual Meeting. Orlando, FL, May 3-6.
51. Hammond, C.M., R.A. Root, S. White, R.M. Maier, J. Chorover. 2015. Use of native plants to efficiently and cost effectively stabilize arsenic in iron sulfide mine tailings. The Superfund Research Program Karen Wetterhahn Award Seminar, March 15.
52. Maier, R.M. 2015. Biosurfactants – discovery to commercialization. Microbiology seminar, University of Arizona, Tucson, AZ, Feb. 18.
53. Maier, R.M. 2015. The University of Arizona NIEHS Superfund Research Program as a model for team science. Academic Research Fellows Program, Tucson, AZ. Jan. 13
54. Maier, R.M. and F. Molina Freaner. 2014. Phytostabilization of copper mine tailings in the Arizona-Sonora Region. UA-UNAM Consortium Meeting, Hermosillo, Mexico, November 19.
55. Maier, R.M. 2014. The University of Arizona Center for Environmentally Sustainable Mining – developing partnerships with Mexico. Plenary talk at the 40th Anniversary of the La Estacion Regional del Noroeste (ERNO)-UNAM, Hermosillo, MX, Nov. 17-18.

56. Maier, R.M. 2014. Revegetation of mine wastes as a sustainable reclamation strategy. Latin American Conference on Compatible Mining: Protecting Vulnerable Populations and the Surrounding Environment. San Luis Potosi, MX, Sept. 8-10.
57. Maier, R.M. 2014. Health Effects and Mitigation of Arsenic: Current Research Efforts and Future Directions Panel Discussion Webinar Series. Part 4: Prevention and Remediation Strategies for Arsenic Exposure. June 3, 2014.
58. Maier, R.M. 2014. Mining and social license. The Central and Eastern European Conference on Health and the Environment. Cluj-Napoca, Romania, May 25-29.
59. Maier, R.M. 2014. Revegetation of mine tailings and waste rock (with a focus on arid and semi-arid environments). Pre-Workshop: The Central and Eastern European Conference on Health and the Environment. Cluj-Napoca, Romania, May 25-29.
60. Maier, R.M. 2014. University of Arizona Center for Environmentally Sustainable Mining. 2014. Southern Arizona Business Coalition, Tucson, AZ, April 11.
61. Maier, R.M. 2014. The University of Arizona Center for Environmentally Sustainable Mining. Arizona Mining Association/Arizona Rock Products Association Profile Event, Phoenix, AZ, April 4.
62. Maier, R.M. 2014. Arizona 101: Mineral Resources – the Environmental Context. Briefing for State and Federal Legislators, San Xavier Mine, San Zavier, AZ, March 25.
63. Maier, R.M. 2014. Phytostabilization of arsenic in mining wastes. NIEHS Workshop on Health Effects and Mitigation of Arsenic: Current Research Efforts and future Directions. Research Triangle Park, NC, March 3-4.
64. Neilson, J.W. and R.M. Maier. 2014. Mine waste reclamation: Unique challenges of arid environments. Mine for Closure Meeting, Phoenix, AZ, Jan 21.
65. Maier, R.M. 2014. The University of Arizona NIEHS Superfund Research Program. Academic Research Fellows Program: Examining Different Models of Team Science. Tucson, AZ, Jan. 14.
66. Maier, R.M. 2013. Mine tailings reclamation/remediation: unique challenges of arid environments. Annual Arizona Society for Mining Engineering Meeting, Tucson, AZ, Dec. 8-9.
67. Maier, R.M. 2013. Mining and social license. Superfund Research Program Colloquium, University of Arizona, Tucson, AZ, Nov. 21.
68. Maier, R.M. 2013. Phytostabilization of mine tailings: metal speciation and dust suppression. International Symposium on Emerging Issues in Environmental and Occupational Health: Mining and Construction in Transition Economies. Yerevan, Armenia, April 22-23, 2013.
69. Maier, R.M. 2013. Making a living while starving in the dark: the NSF Kartchner Caverns Microbial Observatory. Keynote speaker for the 16th Environmental Chemistry and Microbiology Student Symposium, Penn State University, College Station PA, March 15-16
70. Maier, R.M. 2012. Making a living while starving in the dark: the NSF Kartchner Caverns Microbial Observatory. EU US Environmental Biotechnology Workshop, St. Louis, MO, Nov 4-7.
71. Ortiz, M., B.M. Fryslie, W.M. Nelson, A. Legatzki, J.W. Neilson, R.A. Wing, C. Soderlund, B.M. Pryor, and R.M. Maier. 2012. Metagenomic analysis of surficial speleothem microbial communities in Kartchner Caverns, AZ. EU US Environmental Biotechnology Workshop, St. Louis, MO, Nov 4-7.
72. Maier, R.M. 2012. University of Arizona Superfund Research Program Training Core. NIEHS SPAN (Student/Postdoc/Alumni Network) webinar, Sept. 17.
73. Maier, R.M. and J.W. Neilson. 2012. Microbes in Kartchner Caverns: Making a living while starving in the dark. Lunchtime Science Series, Carnegie Center, Phoenix, AZ, Jan. 12.
74. Maier, R.M. 2012. A mine tailings phytostabilization case study: the Iron King Mine Humboldt Smelter Superfund site. NIEHS-EPA Clu-In Webinar, Jan. 11.
75. Maier, R.M. 2011. A mine tailings phytostabilization case study: the Iron King Mine Humboldt Smelter Superfund site. The EPA-Superfund Research Program West Coast Seminar Series, San Francisco, CA, Dec. 7.

76. Maier, R.M., J. Csavina, J. Gil, S. White, J. Chorover, A.E. Saez, A. Landazuri, K. Rine, J. Field, and E.A. Betterton. 2011. Quantifying the reduction in airborne particulate emissions resulting from phytostabilization of mine tailings at the Iron King Mine Humboldt Smelter Superfund site. 8th Intenational Phytotechnology Society Conference, Portland, OR, Sept. 13-16.
77. Maier, R.M. 2011. Approaches to studying the microbiome: three case studies. ABCD Graduate Colloquium, Arizona Center for the Biology of Complex Diseases, Tucson AZ, April 22.
78. Maier, R.M. 2011. Bacterial numbers and diversity in semi-arid mine tailings as a guide for plant establishment. Annual Meeting of the Society for Mining, Metallurgy & Exploration, Denver, CO, Feb. 27 - March 2.
79. Maier, R.M. 2011. Making a living while starving in the dark: the NSF Kartchner Caverns Microbial Observatory. Keynote address, Rutgers University Symposium on Microbiology, New Brunswick, NJ Feb 3.
80. Maier, R.M. 2011. Arizona superfund issues. Green Valley Community Center, Green Valley, AZ, Jan. 14.
81. Neilson, J.W., A. Legatzki, and R.M. Maier. The bacterial communities of Kartchner Caverns" who knew?! CaveFest 2010, Kartchner Caverns State Park, Nov. 13.
82. Maier, R.M. Microbial diversity and community structure in oligotrophic environments. 2010. FertBio 2010 Conference, Guarapari, Brazil, Sept. 13-17.
83. Maier, R.M. Microbial diversity and community structure in oligotrophic environments. 2010. Universidade Federal de Vicosa, Minas Gerais, Brazil, Sept. 14.
84. Maier, R.M. 2010. Phytostabilization of mine tailings in arid environments: plant establishment and tailings characterization. National Center for Environmental Health and Agency for Toxic Substances and Disease Registry (NCEH/ATSDR), Atlanta, GA, April 21.
85. Wright, A.L. and R.M. Maier. 2010. Home microbial communities as risk and protective factors for childhood asthma. Arizona Respiratory Center, University of Arizona, Tucson, Feb. 25.
86. Neilson, J.W. and R.M. Maier. 2010. The search for life in the driest desert on earth - the Atacama Desert, Chile. B2 Institute Lecture Series "Let's Talk Science!", Biosphere 2, AZ, Feb. 13.
87. Maier, R.M. 2009. Microbial diversity in Kartchner Caverns. 10th Anniversary Celebration of Kartchner Caverns State Park, Benson, AZ, Nov. 7.
88. Maier, R.M. 2009. Reclamation of mine tailings in the desert Southwest. Lowell Institute for Mineral Resources, University of Arizona, Tucson, AZ, Oct. 16.
89. Maier, R.M. 2009. Characterization and reclamation of mine tailings in the desert Southwest. Arizona State Mine Inspector Fall Mine Mixer Conference, Oct. 1.
90. Legatzki, A., M. Ortiz, J.W. Neilson, M.Creamer, K.Nelson, H.Th. Chu, C.E. Banczak, B.M. Pryor, L.S. Pierson III, and R.M. Maier. 2009. Microbial diversity in Kartchner Caverns, a carbonate cave in southern Arizona, US. 15th International Congress of Speleology, Kerrville, TX July 19-26.
91. Neilson, J.W., J. Quade, J.L. Betancourt, and R.M. Maier. 2009. Hyperarid extremophiles: A comparison of bacterial communities from distinct locations in the core of the Atacama Desert. Goldschmidt Conference for Geochemistry, Davos, Switzerland, June 21-26.
92. Maier, R.M. 2009. Panel Discussion Participant "Influence without Authority". University of Arizona ADVANCE Program, April 23.
93. Maier, R.M. 2009. The wet dark microbial world of Kartchner Caverns. Biosphere External Advisory Board/Board of Directors. Kartchner Caverns State Park, May 16.
94. Neilson, J.W. and R.M. Maier. 2009. Fitoestabilización – una solución para la remediación de jales mineròs en regions áridas y semiáridas. Community Meeting in Nacozari de Carcia, Sonora, Mexico, Feb. 5.
95. Maier, R.M. 2008. Phytostabilization of mine tailings in arid and semi-arid environments. NIEHS Risk-e-Learning Phytoremediation Seminar Series, Nov. 25.

96. Maier, R.M. 2008. Analysis of unique microbial communities from low nutrient environments. University of Arizona Microbiology Lunch Seminar Series, Tucson, AZ, Sept. 11.
97. Maier, R.M. 2008. The wet dark microbial world of Kartchner Caverns. Undergraduate Biology Research Program, University of Arizona, June 12.
98. Maier, R.M., J.E. Pemberton, R.L. Polt, R.B. Bates, and J.C. Ingram. 2008. Biosurfactants: elegance in structure and function. Green Science: Bioindustrial Processes Symposium, New York Academy of Sciences, NY, May 21.
99. Maier, R.M. and J.E. Pemberton. 2008. Developing collaborative research teams: an example. BIO5 Ambassadors Student Club, March 24.
100. Maier, R.M. 2007. The wet dark microbial world of Kartchner Caverns. Kartchner Caverns State Park, Benson, AZ, Dec. 13
101. Maier, R.M. 2007. Phytostabilization of mine tailings in arid and semi-arid environments. Fourth International Phytotechnology Conference, Denver, CO, Sept. 24-26.
102. Maier, R.M. 2007. Phytostabilization of mine tailings in arid and semi-arid environments. EPA Technology Innovation Internet Seminar July 25.
103. Maier, R.M. 2007. Phytostabilization of mine tailings in arid and semiarid environments. Regional Science Council Seminar Series "Mining Issues in Region 9 - Status, Cleanup, and Research", San Francisco, CA, June 19
104. Maier, R.M. 2007. Fitoestabilizacion de jales mineros en medio ambientes aridos y semi aridos. Fifth Specialized US-Mexico Binational Center Workshop "Health Effects and Remediation of Mine Tailings" San Luis Potosi, MX, June 4-6.
105. Maier, R.M. 2007. Phytostabilization of mine tailings in arid and semi-arid environments. Center for Environmental Systems Microbiology Distinguished Lecture Series. Georgia Institute of Technology, Atlanta, GA, April 11.
106. Maier, R.M. 2007. Rhamnolipid biosurfactants in cell-substrate, cell-cell, and cell-surface interactions: moving toward a molecular understanding. Department of Chemistry Colloquim, University of Arizona, April 5.
107. Maier, R.M. 2007. Phytostabilization of mine tailings in arid and semiarid environments. US-Mexico Binational Center for Environmental Sciences and Toxicology Inaugural Ceremony and Global Environmental Health Workshop. Tucson, AZ March 12-14.
108. Maier, R.M., B.M. Pryor, L.S. Pierson III, R. Wing, R. Toomey, and R.R. Casavant. 2007. Kartchner Caverns Microbial Observatory: Habitat scale community structure and function in carbonate caves. Microbial Observatories/Microbial Interactions and Processes PI Meeting and Workshop, March 1-3, Washington, DC.
109. Maier, R.M. 2007. The wet dark microbial world of Kartchner Caverns. University of Arizona Honors Forum Lunch Series, Feb. 7.
110. Maier, R.M. 2006. Biosurfactants: structure and applications. University of Arizona Chemistry Club, Nov. 15.
111. Maier, R.M. 2006. Phytostabilization of mine tailings in arid and semi-arid environments. NIEHS Superfund 2006 Annual Meeting, San Diego, CA, Dec. 11-12.
112. Maier, R.M. 2006. Bacterial community structure in soils from a hyper-arid region of the Atacama Desert, Chile. LAPLACE Astrobiology Lunch Series, University of Arizona, Oct. 27.
113. Neilson, J.W., K.P. Drees, J.L. Betancourt, J. Quade, and R.M. Maier. 2006. Bacterial community structure in soils from a hyper-arid region of the Atacama Desert, Chile. Geological Society of America Meetings, Philadelphia, PA, Oct. 22-26.
114. Mendez, M.O. and R.M. Maier. 2006. Phytostabilization of mine tailings in arid and semi-arid environments. 19th Rocky Mountain Regional American Chemical Society Meeting, Tucson, AZ, Oct. 14-18.
115. Maier, R.M., A. Lebrón-Paler, V. Ochoa, J.E. Pemberton, B. Becker, and C.K. Larive. 2006. Conditioning of mineral surfaces by rhamnolipid surfactants. FASEB Summer

Research Conference: Microbial Polysaccharides of Medical, Agricultural, and Industrial Importance, Tucson, AZ, June 17-22.

116. Maier, R.M. 2006. The Impact of Tourism on the Wet Dark Microbial World of Kartchner Caverns. Purdue University, March 6.
117. Maier, R.M. 2006. The Impact of Tourism on the Wet Dark Microbial World of Kartchner Caverns. Department of Soil, Water and Environmental Science, University of Arizona, Feb. 20.
118. Maier, R.M., J.E. Pemberton, and C. Larive. 2005. Fundamental studies of in situ biosurfactant production and the attendant impact on metal interactions with soil surfaces 2005. American Chemical Society National Meeting, Washington, DC, Aug. 28-Sept. 1.
119. Maier, R.M. 2005. Fitoestabilización: un método razonable para la remediación de jales de minas en medio ambientes áridos. U.S. AID - CONACYT Taller Sobre Ciencias Ambientales and Toxicologia. Ensenada, Mexico, March 17-18.
120. Maier, R.M. 2004. Phytostabilization: a common sense approach to remediation of mine tailings. Tercer Simposium ce Actualizacion para la Atencion a la Poblacion Infantil Expuesta Ambientalmente a Plomo, Universidad Autonoma de Coahuila Facultad de Medicina, Torreón, Mexico, Dec.10-11.
121. Maier, R.M. From serendipity to a patent license: biosurfactants and biological control. 2004. Controlled Environment Agriculture Program, University of Arizona, Dec. 3.
122. Maier, R.M. Bacterial structure and diversity in low nutrient environments. 2004. Montana State University, Sept. 17.
123. Maier, R.M., K.P. Drees, J.W. Neilson, J.L. Betancourt, and J. Quade. 2004, Bacteria in the hyperarid Atacama Desert, Chile. Round Table Session at the International Society for Microbial Ecology, Cancun, MX, Aug. 22-27.
124. Maier, R.M. 2004. Role of rhamnolipids in cell-substrate, cell-cell, and cell-surface interactions. FASEB Summer Research Conference “Microbial Polysaccharides of Medical, Industrial, and Agricultural Importance” Tucson, AZ, June 5-10.
125. Maier, R.M. 2003. Biosurfactant-facilitated remediation of metal-contaminated soils and wastestreams. Superfund Basic Research Program RiskeLearning web-based seminar. May 14, 2003.
126. Maier, R.M. 2003. An integrated lux-reporter-fiber optic detection system for the study of spatial and temporal distribution of microbial activity in soil columns. Portland State University/Oregon State University, Portland, OR March 3.
127. Maier, R.M. 2002. Biosurfactants: discovery and applications. Superfund Basic Research Program Meeting, Tucson, AZ Nov. 3-6.
128. Maier, R.M. 2002. Soil microbiology or: how I stopped worrying and learned to love ambiguity. Department of Plant Pathology, University of Arizona, Oct. 18.
129. Neilson, J.W., W. Otto, C.L. Larive, J.E. Pemberton, and R.M. Maier. 2002. Biosurfactant-mediated metal behavior in soil. Goldschmidt Conference for Geochemistry, Davos, Switzerland, Aug. 18 - 23.
130. Maier, R.M. 2002. Soil microbiology or: how I stopped worrying and learned to love ambiguity. The Centenary Celebration of the Department of Soil Bacteriology, Rutgers University, April 12 and 13.
131. Maier, R.M. 2000. The use of lux reporter systems to study in situ gene expression in response to substrate perturbation. Department of Veterinary Science and Microbiology, The University of Arizona, Tucson, AZ, Nov. 16.
132. Maier, R.M. 2000. Remediation of metal-contaminated soil using biosurfactant technology. Metals in Eastern and Central Europe: Health Effects, Sources of Contamination and Methods of Remediation, Prague, Czech Republic, Nov. 8-11.
133. Maier, R.M. 2000. Rhamnolipid-induced removal of lipopolysaccharide from *Pseudomonas*: effects on cell surface properties and interactions with hydrophobic substrates. FASEB meeting on Microbial Polysaccharides, Copper Mountain, Colorado, August 13-18.

134. Maier, R.M. 2000. Biosurfactants: effects on cell surface properties and interactions with hydrophobic substrates. Society for Industrial Microbiology, San Diego, CA, July 23-27.
135. Maier, R.M. 2000. Bioremediation strategies for sites co-contaminated with organics and metals. 100th General American Society for Microbiology Meeting, Los Angelos, CA, May 21 - May 25.
136. Maier, R.M. 2000. The biosurfactant story: from bioremediation to biological control. Department of Agricultural and Biosystems Engineering, University of Arizon, April 10.
137. Maier, R.M. 2000. The biosurfactant story: from bioremediation to biological control. Reed College, Portland, Oregon, March 31.
138. Maier, R.M. 2000. Biosurfactants: effects on cell surface properties and interactions with hydrophobic substrates. Annual Society for Industrial Microbiology Meeting, San Diego, CA July 23-27.
139. Maier, R.M. 1999. Application of biosurfactants in the remediation of metal and organic-contaminated soils and wastestreams. U.S. Department of Energy NABIR Workshop on Combined Chemical and Microbiological Approaches to Remediating Metal and Radionuclide Contaminants, Washington, D.C. Oct 28-29.
140. Maier, R.M. 1999. The biosurfactant story: from bioremediation to biological control. Department of Department of Soil, Water, and Climate; and Biological Process Technology Institute, University of Minnesota, October 14.
141. Maier, R.M. 1998. The biosurfactant story: from bioremediation to biological control. Department of Civil and Environmental Engineering, University of Akron, Akron, OH.
142. Maier, R.M. 1998. Application of biosurfactants for removal of metals/metal toxicity from soil. United States/Mexico Conference on Hazardous Waste Management and Technologies, Tucson, AZ, August 9-11.
143. Miller-Maier, R.M. 1998. Role of biosurfactants in the enhanced removal and degradation of petroleum hydrocarbons in contaminated sites. Symposium on Biotechnology, Caracus, Venezuela, July 13-14.
144. Miller-Maier, R.M. 1998. Biosurfactants in the remediation of metal-contaminated soils and wastestreams. Symposium on Risk Considerations for Environmental Health and Safety, Tucson, AZ, Jan 8-9.
145. Miller-Maier, R.M. and J.W. Neilson. 1997. Ultrasensitive biological techniques for the detection of chemical contaminants. 89th Annual American Society of Agronomy Meeting. Anaheim, CA, Oct. 26-30.
146. Miller-Maier, R.M. 1997. Biosurfactants in the remediation of metal-contaminated soils and wastestreams. Conference on Pollution Prevention in the Mining Industry, San Manuel, AZ, November 12.
147. Miller, R.M. 1997. The biosurfactant story: from bioremediation to biocontrol, Center for Agricultural Molecular Biology, Rutgers University, March 26.
148. Miller, R.M. 1997. Application of biosurfactants in the remediation of metal and organic-contaminated sites. Envirogen, Lawrenceville, NJ, March 27.
149. Miller, R.M. 1996. Use of biosurfactants in the remediation of contaminated sites. United Agri Products, October 16.
150. Miller, R.M. 1996. Interaction of microorganisms with metals. Fourth Congress of the Mexican Society for Genetics and Toxicology, Aguascalientes, Mexico, September 29-October 3.
151. Miller, R.M. 1996. Biosurfactants: Use in remediation of organics and metals. Annual Society for Industrial Microbiology Meeting, Research Triangle Park, NC August 4-8.
152. Miller, R.M. 1995. Physical, chemical and biological process affecting contaminant fate in soil. State Bar of Arizona Environmental Science Seminar, Tucson, AZ, Nov. 17.
153. Miller, R.M. 1995. Application of biosurfactants in remediation of contaminated sites. Department of Plant Pathology, University of Arizona, Tucson, AZ, Nov. 17.

154. Miller, R.M. 1995. Biofiltration of extracted gasoline vapors from a leaking underground storage tank. Bioremediation Workshop, 87th Annual American Society of Agronomy Meeting. St. Louis, MO, Oct. 29 - Nov. 3.
155. Miller, R.M. 1995. Effect of biosurfactant-enhanced bioavailability on biodegradation of organic contaminants. Department of Defense Tri-Service Bioavailability Workshop. Monterey, CA. April 9-12.
156. Miller, R.M. 1995. Potential in situ applications of biosurfactants in the remediation of contaminated sites. 209th National Meeting of the American Chemical Society, Anaheim, CA, April 2-7.
157. Miller, R.M. 1995. Bioremediation of nonaqueous phase liquids. U.S. Department of Energy Technology Transfer Workshop, Portsmouth Ohio Gas Diffusion Plant, March 28-29.
158. Miller, R.M. 1994. Biosurfactants and Soil Washing. Bioremediation Workshop, 86th Annual American Society of Agronomy Meeting. Seattle, WA, Nov. 13-18.
159. Miller, R.M. and Y. Zhang. 1994. Biosurfactant Induced Changes in Organic Contaminant Dispersion and Cell Surface Hydrophobity. 94th General American Society for Microbiology Meeting, Las Vegas, Nevada, May 22-26.
160. Miller, R.M. 1993. Surfactant-enhanced bioavailability of slightly soluble organic compounds. Soil Science Society of America Workshop; Bioremediation: Science, Applications, Regulations, and Education. Cincinnati, OH, November 6-7.
161. Miller, R.M. 1993. Biological approaches to remediation of contaminated sites. 85th Annual American Society of Agronomy Meeting. Cincinnati, OH, November 7-12.

SUBMITTED ABSTRACTS AND PRESENTATIONS

1. Fontana, C.G., S. Lauman, J. Ledesma, A. Kline, R.M. Maier, E.S. Gornish, J.W. Neilson. 2021. Impact of hydroseeding season and AMF inoculation on below-ground fertility indicators during copper mine revegetation. ASA, CSSA and SSSA International Annual Meeting, Salt Lake City, UT, Nov. 7-10.
2. Ledesma, J., A. Babst-Kostecka, R.M. Maier, J.W. Neilson, C. Rasmussen. 2021. Effects of long-term stockpiling on soil quality and potential for mine site reclamation in semi-arid regions. ASA, CSSA and SSSA International Annual Meeting, Salt Lake City, UT, Nov. 7-10.
3. Babst-Kostecka, A., P. Kushwaha, J.W. Neilson, R.M. Maier. 2020. Linking the rhizosphere microbial community with variability in Zn and Cd hyperaccumulation in the model species Arabidopsis halleri. ASA, CSSA and SSSA International Annual Meetings, VIRTUAL, Nov. 9-13.
4. Ledesma L., L.Q.R. Ossanna, D. Placido, D.E. Elshikha, C. Dong, G. Ponciano, C. McMahan, R.M. Maier, J.W. Neilson. 2020. Associations between soil rhizosphere bioavailable phosphorus, phosphorus solubilizing microorganisms, and Guayule growth stage and rubber production. ASA, CSSA and SSSA International Annual Meetings, VIRTUAL, Nov. 9-13.
5. Neilson J.W., L.Q.R. Ossanna, D. Placido, D.E. Elshikha, C. Dong, G. Ponciano, R.M. Maier, C. McMahan. 2020. Associations between the Guayule (Parthenium argentatum G) rhizosphere microbiome, plant growth stage, and rubber production. ASA, CSSA and SSSA International Annual Meetings, VIRTUAL, Nov. 9-13.
6. Root, R.A., R.M. Maier, J. Chorover. 2020. Speciation and bioaccessibilty of particulate matter from legacy mine tailings. Geological Soc. America, Portland, Oregon, Oct. 10-13.
7. Ossanna L.Q.R., K. Serrano, L.L Jennings, R.M. Maier, J.W. Neilson. 2020. Vegetation-driven soil development during waste rock reclamation at a copper mine. Soil Science Society's Translating Visionary Science into Practice. Nov. 9-13. Virtual conference.
8. Ossanna L.Q.R., K.S. Brown, Y. Chen, D. Placido, D.E. Elshikha, C. Dong, G. Ponciano, S. Wang, P.M. Waller, D. Diereg, C. McMahan, R.M. Maier, J.W. Neilson. 2020. The

significance of the soil microbiome to guayule production. Sustainable Bioeconomy for Arid Regions Annual Retreat. July 27-29, Tucson, AZ (virtual conference).

9. Jennings L.L., L.Q.R. Ossanna, C.G. Fontana, H. Farrell, A. Kline, E.S. Gornish, J.W. Neilson, R.M. Maier. 2020. Can degraded mining lands attain stable vegetation. University of Arizona ENViSion Annual Conference. April. Tucson, AZ. Virtual.
10. Ledesma, J. O. Ossanna, D. Pacido, D.E, Elshikha, C. Dong, G. Ponciano, C. McMahan, J.W. Neilson, R. M. Maier. 2020. Associations between soil bioavailable phosphorus and guayule plat growth and rubber production. 31st Annual Undergraduate Biology Research Program Conference, Tucson, AZ, Jan 25.
11. Jennings, L.L., L. Ossanna, C. Fontana, H. Farrell, A. Kline, E. Gornish, J.W. Neilson, R.M. Maier. 2019. Biotic potential of degraded soil development on reclaimed mine tailings in southern Arizona. American Geophysical Union Conference. San Francisco, CA, December 9-13.
12. Jennings L.L., L.Q.R. Ossanna, M.L. Theilmann, C.G. Fontana, J.W. Neilson. R.M. Maier. 2019. Biogeophysical soil constituents associated with revegetation success of reclaimed mine tailings in southern Arizona. Annual American Geophysical Union Fall Meeting, San Francisco, CA, Dec. 9-13.
13. Jennings, L.L., L.Q.R. Ossanna, C. Fontana, H. Farrell, A. Kline, E. Gornish, J.W. Neilson, R.M. Maier. 2019. Biotic Potential of Degraded Soil Development on Reclaimed Mine Tailings in Southern Arizona American Geophysical Union National Conference. San Francisco, CA.
14. Ossanna L., K. Serrano, L.L. Jennings, J.W. Neilson, R.M. Maier. 2019. Identifying biogeochemical indicators to measure fertility island effects during mine waste revegetation. NIEHS Superfund Research Program Annual Meeting. Seattle, WA, November 18-20.
15. Ossanna L., K. Serrano, L.L. Jennings, J.W. Neilson, R.M. Maier. 2019. Nitrogen dynamics as an indicator of mine waste revegetation progress. Annual Meeting of the Society for Ecological Restoration Southwest Chapter. Tucson, AZ, November 8-10.
16. Ossanna, L., K. Serrano., L.L. Jennings. J.W. Neilson, R.M. Maier. 2019. Nitrogen dynamics as an indicator of mine waste revegetation progress. American Society for Microbiology Microbe 2019, San Francisco, CA, June 20-24.
17. Jennings, L.L., L. Ossanna, M. Theilmann, J.W. Neilson, R.M. Maier. 2019. Microbial bio-indicators of degraded lands on reclaimed mine tailings in Southern Arizona. University of Arizona SWESx Science of the Environment Earthweek Meeting, Tucson, AZ, March 27-28.
18. Serrano, K. L. Ossanna, L.L. Jennings, J.W. Neilson, R.M. Maier. 2019. Biogeochemical factors affecting phosphorus availability during revegetation of mine waste rock slopes. University of Arizona SWESx Science of the Environment Earthweek Meeting, Tucson, AZ, March 27-28.
19. Serrano, K. L. Ossanna, L.L. Jennings, J.W. Neilson, R.M. Maier. 2019. Biogeochemical factors affecting phosphorus availability during revegetation of mine waste rock slopes. 2018-2019 Soil Science Society of America International Soils Meeting, San Diego, CA, Jan 6-9.
20. Sengupta, A., A. Barberan, J. Stegen, T. Volkmann, K. Dontsova, J. Neilson, J. Chorover, R. Maier, P. Troch. 2019. Structural and functional response of the microbial community in an oligotrophic basalt soil system to shifts in rainfall regimes. 2018-2019 Soil Science Society of America International Soils Meeting, San Diego, CA, Jan 6-9
21. Kushwaha, P., A. Barberan, B. Butterfield, J. Neilson, R. Maier. 2019. Linking microbial phylogenetics and genetics to N-cycling functional potential in arid soils. 2018-2019 Soil Science Society of America International Soils Meeting, San Diego, CA, Jan 6-9.
22. Ossanna, L., K. Serrano, L Jennings, J. Neilson, R. Maier. 2019. Nitrogen dynamics as a biogeochemical indicator of revegetation progress for mine waste rock. 2018-2019 Soil Science Society of America International Soils Meeting, San Diego, CA, Jan 6-9.

23. Hogan, D.E., C. Boxley, R.M. Maier. 2018. Mitigating human and environmental health risks of metals: resource recovery using biosurfactant-based ion flotation. NIEHS 2018 Superfund Research Program Annual Meeting, Sacramento, CA, Nov. 28-30.
24. Kushwaha P, Barberan A, Butterfield B, Neilson J, Maier R. 2018. The arid microbiome: Linking functional capacity to phylogenetic diversity. JGI Microbial Genomics and Metagenomics Workshop-27. Walnut Creek, CA, Sept. 17-21.
25. Jennings, L.L., B. Rivera, L. Ossanna, M. Theilmann, J. W. Neilson, R.M. Maier. 2018. Biogeochemical indicators of soil formation on reclaimed mine tailings in southern Arizona. Restoring K'É Conference. University of Arizona, Tucson, April 23.
26. Jennings, L.L., B. Rivera, L. Ossanna, M. Theilmann, J. W. Neilson, R.M. Maier. 2018. Biogeochemical indicators of soil formation on reclaimed mine tailings in southern Arizona. American Indian Science and Engineering Society. Tucson, AZ, April 12-14.
27. Ossanna, L., J.W. Neilson, and R.M. Maier. 2018. Using total nitrogen and DNA biomass content as biogeochemical indicators of incipient soil development through measuring mining waste rock revegetation. University of Arizona SWESx Science of the Environment Meeting, Tucson, AZ, April 11-12.
28. Jennings, L.L., B. Rivera, L. Ossanna, M. Theilmann, J. W. Neilson, R.M. Maier. 2018. Biogeochemical indicators of soil formation on reclaimed mine tailings in southern Arizona. University of Arizona SWESx Science of the Environment Meeting, Tucson, AZ, April 11-12.
29. Brown, K., J.W. Neilson, R.M. Maier. 2018. Microbial contributions to soil health for optimizing guayule production. University of Arizona SWESx Science of the Environment Meeting, Tucson, AZ, April 11-12.
30. Danny, K. R.M. Maier, K. Chief. 2018. Mining educational modules for impacted tribal communities. University of Arizona SWESx Science of the Environment Meeting, Tucson, AZ, April 11-12.
31. Eisenhauer, E., J. Hottenstein, J. Gil Loaiza, R.M. Maier. 2018. Soil fungal community profiling of compost-assisted phytostabilization of metalliferous mine tailings. University of Arizona SWESx Science of the Environment Meeting, Tucson, AZ, April 11-12.
32. Moreno Ramirez, D., Y. Herrera, M. Ramirez-Andreotta, K. Navarro-McElhaney, M. Nichter, R.M. Maier. 2018. Voices unheard: documenting the human experience of living near Arizona Superfund sites. University of Arizona SWESx Science of the Environment Meeting, Tucson, AZ, April 11-12.
33. Serrano, K., J.W. Neilson, R.M. Maier. 2018. Revegetation of mine waste rock slopes: influence of pH and bioavailable phosphorus. University of Arizona SWESx Science of the Environment Meeting, Tucson, AZ, April 11-12.
34. Theilmann, M.L., J. W. Neilson, J. Gil Loaiza, L.Q. Ossanna, R.M. Maier 2018. Correlating below ground microbial community capacity with stability during reclamation of marginal lands. University of Arizona SWESx Science of the Environment Meeting, Tucson, AZ, April 11-12.
35. Jennings, L.L., B. Rivera, L. Ossanna, M. Theilmann, J. W. Neilson, and R.M. Maier. 2018. Developing biogeochemical indicators of soil formation on reclaimed mine tailings in southern Arizona. University of Arizona SWESx Science of the Environment Meeting, Tucson, AZ, April 11-12.
36. Serrano, K., L.L. Jennings, J.W. Neilson, R.M. Maier. 2018. Revegetation of mine waste rock slope: influence of pH and bioavailable phosphorus. Undergraduate Biology Research Program Annual Meeting, Tucson, AZ.
37. Sengupta, A., J.C. Stegen, A.A. Meira Neto, Y. Wang, J. Chorover, P.A. Troch, R.M. Maier. 2017. Microbial community assembly patterns under incipient conditions in a basaltic soil system. American Geophysical Union Fall Meeting. New Orleans, LA, Dec. 11-15.
38. Rader, S., R.M. Maier, F. Mazdab, and M. Barton. 2017. Uptake and fractionation of thallium by *Brassica juncea* in geogenic Tl-amended substrate. 30th Annual NIEHS Superfund Research Program Meeting, Philadelphia, PA, Dec. 6-8.

39. Sengupta, A., J.C. Stegen, J.W. Neilson, E. Brodie, P.A. Troch, J. Chorover, R.M. Maier. 2017. Microbial assembly processes in marginal soils. 30th Annual NIEHS Superfund Research Program Meeting, Philadelphia, PA, Dec. 6-8.
40. Maier, R.M. 2017. Risk and remediation of metal-mining wastes. 30th Annual NIEHS Superfund Research Program Meeting, Philadelphia, PA, Dec. 6-8.
41. Eisenhauer, E., Hottenstein, J. Gil Loaiza, R.M. Maier. 2017. Soil fungal community profiling of compost-assisted phytostabilization of metalliferous mine tailings. Society for Mining, Metallurgy & Exploration (SME) Arizona Conference, Tucson, AZ, Dec. 3-4.
42. Jennings, L., B. Rivera, L. Ossanna, M. Theilmann, J.W. Neilson, R.M. Maier. 2017. Mine tailings cover material: how important is soil depth? Society for Mining, Metallurgy & Exploration (SME) Arizona Conference, Tucson, AZ Dec. 3-4.
43. Danny, K.R., K. Chief, R.M. Maier. 2017. Educational modules for mining impacted tribal communities. Tribal Environmental Health Forum, Oct. 19, Chandler, AZ
44. Rader, S., R.M. Maier, F. Mazdab, and M. Barton. 2017. Uptake and fractionation of thallium by *Brassica juncea* in geogenic Tl-amended substrate. Goldschmidt Conference, Paris, France, Aug. 13-18.
45. Honeker, L.K., J.W. Neilson, J. Chorover, R.M. Maier. 2017. Effect of re-acidification on buffalo grass rhizosphere and bulk microbial communities during phytostabilization of metalliferous mine tailings. QIIME2 Microbiome Bioinformatics Workshop, Las Vegas, NV, June 21-23.
46. Root, R.A., R.M. Maier, J. Chorover. 2017. Stabilization of metalliferous mine tailings during mesocosm-scale phytostabilization. 253rd American Chemical Society Meeting, San Franciso, CA, April 2-6.
47. Rivera, B.D, L.L. Jennings, R.M. Maier, J.W. Neilson. 2017. Ammonia-oxidation microbiota abundance on an arid mine site. University of Arizona SWESx Science of the Environment Meeting, Tucson, AZ, March 27-31.
48. Moreno Ramirez, D., M.A. Ramirez-Andreotta, R.M. Maier. 2017. Voices Unheard: Documenting the human experience of living near Arizona Superfund sites. University of Arizona SWESx Science of the Environment Meeting, Tucson, AZ, March 27-31.
49. Ossanna, L., J. Gil-Loaiza, L. Jennings, R.M. Maier, and J.W. Neilson. 2017. Determining biogeochemical indicators of soil quality: measuring mining waste rock revegetation progress using total nitrogen and biomass content. University of Arizona SWESx Science of the Environment Meeting, Tucson, AZ, March 27-31.
50. Danny, K.R., K. Chief, R.M. Maier. 2017. Empowering tribal communities with mining educational modules. University of Arizona SWESx Science of the Environment Meeting, Tucson, AZ, March 27-31.
51. Mira L. Theilmann, M.L., J. Gil-Loaiza, R.M. Maier and J.W. Neilson. 2017. Assessing capping materials used for mine reclamation using biogeochemical indicators. University of Arizona SWESx Science of the Environment Meeting, Tucson, AZ, March 27-31.
52. Rivera, B.D, L.L. Jennings, R.M. Maier, J.W. Neilson. 2017. Ammonia-oxidation microbiota abundance on an arid mine site. Western Alliance to Expand Student Opportunities, Phoenix, AZ, March 20.
53. Rivera, B.D, L.L. Jennings, R.M. Maier, J.W. Neilson. 2017. Ammonia-oxidation microbiota abundance on an arid mine site. University of Arizona 28th Annual Undergraduate Biology Research Program Conference, Tucson, AZ, Jan. 21.
54. Mira L. Theilmann, M.L., J. Gil-Loaiza, R.M. Maier and J.W. Neilson. 2017. Assessing capping materials used for mine reclamation using biogeochemical indicators. University of Arizona 28th Annual Undergraduate Biology Research Program Conference, Tucson, AZ, Jan. 21.
55. Moreno Ramirez, D., Y. Herrera, M. Ramirez-Andreotta, K. Navarro-McElhaney, M. Nichter, R.M. Maier. 2016. Voices unheard: documenting the human experience of living near Arizona Superfund sites. NIEHS Environmental Health Science FEST, Durham, NC, Dec. 5-8.

56. Danny, K., K. Chief, D. Moreno Ramirez, R.M. Maier. 2016. Empowering mining-impacted tribal communities with educational modules. NIEHS Environmental Health Science FEST, Durham, NC, Dec. 5-8.
57. Jennings, L.L., J.W. Neilson, R.M. Maier. 2016. Microbes as indicators of soil quality: evaluating microbial bio-indicators to assess mining waste reclamation progress in southern Arizona. NIEHS Environmental Health Science FEST, Durham, NC, Dec. 5-8.
58. Ramirez-Andreotta, M., J.F. Artiola, M.L. Brusseau, and R.M. Maier. 2016. Translational science: the spectrum of participation and the role of the stakeholder in theory and practice. NIEHS Environmental Health Science FEST, Durham, NC, Dec. 5-8.
59. Neilson, J.W., K.J. Califf, A. Copland, W. van Treuren, K.L. Josephson, R. Knight, J.A. Gilbert, J. Quade, J.G. Caporaso, R.M. Maier. 2016. Unique Features of the Arid Soil Microbiome. Soil Science Society of American Meeting, Phoenix, Nov. 6-9.
60. Jennings, L.L., J.W. Neilson, R.M. Maier. 2016. Evaluating microbial bio-indicators to assess mining waste reclamation progress in southern Arizona. Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) National Conference. Long Beach, CA, Oct. 13-15.
61. Hottenstein, J., J.W. Neilson, J. Chorover, R.M. Maier. 2016. Microbial communities as in situ drivers of environmental acidification: an innovative approach to link community taxonomy to functional capacity. International Society for Microbial Ecology Meeting, Montreal, Canada, August 21-26.
62. Neilson, J.W., K.J. Califf, A. Copland, W. van Treuren, K.L. Josephson, R. Knight, J.A. Gilbert, J. Quade, J.G. Caporaso, R.M. Maier. 2016. The desert soil microbiome: defining drivers of microbial diversity in the Atacama Desert, Chile. International Society for Microbial Ecology Meeting, Montreal, Canada, August 21-26.
63. Honeker, L. J.W. Neilson, J. Chorover, R.M. Maier. 2016. Plant root-microbe community dynamics during the phytostabilization of metalliferous mine tailings in semiarid regions. International Society for Microbial Ecology Meeting, Montreal, Canada, August 21-26.
64. Amir, S., M. Fathi, R.M. Maier, J.E. Pemberton. 2016. Synthesis, characterization, and heavy metal metal binding properties of new sugar-based glycolipid surfactants. American Chemical Society Meeting, Philadelphia, Aug. 21-25.
65. Eismin, R.J., R. Palos-Pacheco, M. Elango, D.E Hogan, R.M. Maier, R. Polt,S.D. Schwartz, J.E. Pemberton. 2016. Microenvironment of monorhamnolipid aggregates and their synthetically produced diastereomers as a function of solution conditions. American Chemical Society Meeting, Philadelphia, Aug. 21-25.
66. Boxley, C.J., J.E. Pemberton, R.M. Maier. 2016. Synthetic platform technology to create known and novel bioinspired glycolipids. American Chemical Society Meeting, Salt Lake City, May 1-4.
67. Hammond, C.M., R.A. Root, R.M. Maier, J. Chorover. 2016. Synchrotron-based study on plant-mineral interactions during phytostabilization of acidic metalliferous mine tailings in semi-arid conditions. University of Arizona SWESx Science of the Environment Meeting, Tucson, AZ, March 31.
68. Jennings, L.L., J.W. Neilson, R.M. Maier. 2016. Biogeochemical indicators of phytostabilization on reclaimed mine tailings in southern Arizona. University of Arizona SWESx Science of the Environment Meeting, Tucson, AZ, March 31.
69. Rivera, B.D., L.L. Jennings, R.M. Maier and J.W. Neilson. 2016. Using microbiota to evaluate mine revegetation success. University of Arizona Graduate and Professional Student Council Student Showcase, Tucson, AZ, Feb. 24.
70. Rivera, B.D., L.L. Jennings, R.M. Maier and J.W. Neilson. 2016. Using microbiota to evaluate mine revegetation success. University of Arizona 27th Annual Undergraduate Biology Research Program Conference Tucson, AZ, Jan 23.
71. Ramirez-Andreotta, M.D., Brusseau, M.L., Artiola, J.F., Maier, R.M., and Gandolfi, A.J. Building a Co-Created Citizen Science Program with Community Members Neighboring a

Hazardous Waste Site. 2015. American Geophysical Union Annual Meeting, San Francisco, CA, December 14-18.

72. Ramirez-Andreotta, M.D., Brusseau, M.L., Artiola, J.F., Maier, R.M., and Gandolfi, A.J. 2015. Environmental Research Translation: Enhancing interactions with communities at contaminated sites. American Geophysical Union Annual Meeting, San Francisco, CA, December 14-18.
73. Wilkinson, S.T., Moreno Ramírez, D., Chief, K., Neilson, J. W., Brusseau, M.L., Artiola, J., and Maier, R.M. 2015. The Center for Environmentally Sustainable Mining: An Industry-Academic Cooperative to Promote Environmental Stewardship of Mining Sites. NIEHS Superfund Research Program Annual Meeting, San Juan, Puerto Rico, Nov. 18 – 20.
74. Dontsova, K., D. Zaharescu, C. Burghelea, R. M. Maier, T. Huxman, and J. Chorover, 2015. Grass and microbiota effect on lithogenic element mobilization during weathering of basalt, granite, rhyolite, and schist. Geological Society of America, Baltimore, MD, Nov. 1-4.
75. Maier, R.M, J. Gil-Loaiza, L.K. Honeker, J.D. Hottenstein, A. Valentin-Vargas, L.L. Jennings, C.M. Hammond, J.W. Neilson, R.A. Root, and J. Chorover. 2015. A four-year Superfund site field study demonstrates that direct planting on mine tailings is a reclamation alternative to cap and plant. NIEHS Superfund Research Program Annual Meeting, San Juan, Puerto Rico, Nov. 18 - 20.
76. Hogan, D.E., J.E. Pemberton, and R.M. Maier. 2015. Biosurfactants as a tool for metal removal from waste effluents. Student Members of the American Chemical Society at the University of Arizona. Tucson, AZ. November, 21.
77. Honeker, L., J.W. Neilson, R.M. Maier. 2015. Plant root-microbe community dynamics during the phytostabilization of metalliferous mine tailings in semiarid regions. 12th International Phytotechnologies Conference, Manhattan, KS, Sept. 29-Oct. 1.
78. Pemberton J.E., L. Szabo, D.E. Hogan, S. Malm, R. Palos-Pacheco, F. Tian, L.. Kegel, A. Fathi, R. Gonzales, R.J. Eismin, C.S. Coss, D.J. Hanrahan, A. Hunjan, R. Polt, R.M. Maier, and W.T. Klimecki. 2015. Quantitative structure-activity relationships for predicting toxicity and biodegradability of biosynthetic and bio-inspired glycolipid surfactants. 250th American Chemical Society General Meeting. Boston, MA. Aug. 16-20.
79. Hogan, D.E., Pemberton, J.E., and Maier, R.M. 2015. Biosurfactants as a tool for metal removal from waste effluents. 106th American Oil Chemists' Society Annual Meeting. Orlando, FL, May 3-6.
80. Tian, F., D.E. Hogan, J.E. Pemberton, and R.M. Maier. 2015. Biodegradation and toxicity of synthetic and natural monorhamnolipids. 106th American Oil Chemists' Society Annual Meeting. Orlando, FL, May 3-6.
81. Hogan, D.E., R. Palos-Pacheco, R. Polt, J.E. Pemberton, and R.M. Maier. 2015. Rhamnolipid biosurfactant binding of critical and rare earth elements. 54th Annual Arizona/Southern Nevada American Society for Microbiology Branch Meeting. Flagstaff, AZ. April, 18.
82. Gil-Loaiza, J., S.A. White, J. Field, O. Felix, E.A. Betteron, A.E. Sáez, J. Chorover, and R.M. Maier. 2015. Phytostabilization of acidic metalliferous mine tailings reduces dust emissions. 27th International Applied Geochemistry Symposium (IAGS). Tucson, AZ. Apr 20-24.
83. Honeker, L., J.W. Neilson, R.M. Maier. 2015. Assessing the microbial ecology of buffalograss rhizosphere for bioindicators of plant heath during revegetation. University of Arizona Earthweek, Tucson, AZ, April 7 - 10.
84. Jennings, L.L., B.D. Rivera, J.W. Neilson, R.M. Maier, R.M. 2015. Indicators of soil formation during re-vegetation of mine waste rock materials. University of Arizona Earthweek, Tucson, AZ, April 7 - 10.
85. Rivera, B.D., L.L. Jennings, R.M. Maier and J.W. Neilson. 2015. Biogeochemical indicators for assessing plant establishment during mine reclamation. University of Arizona Earthweek, Tucson, AZ, April 7 - 10.

86. Hogan, D.E., Pemberton, J.E., and Maier, R.M. 2015. Biosurfactants as a tool for metal removal from waste effluents. American Chemical Society General Meeting. Denver, CO, March 22-26.
87. Gullo, C., L.K. Honeker, J.W. Neilson, and R.M. Maier. 2015. The effect of mine tailings phytostabilization in a semi-arid environment on abundance of microbial populations. The 26th Annual Undergraduate Biology Research Program Conference. University of Arizona, Tucson, AZ, Jan. 24.
88. Rivera, B.D., L.L. Jennings, R.M. Maier and J.W. Neilson. 2015. Biogeochemical indicators for assessing plant establishment during mine reclamation. The 26th Annual Undergraduate Biology Research Program Conference. University of Arizona, Tucson, AZ, Jan. 24.
89. Chorover. J., R.A. Root, S.M. Hayes, C. Hammond, and R.M. Maier. 2014. Biogeochemical evolution of sulfide ore mine tailings profiles under semi-arid climate. American Geophysical Union, San Francisco, CA Dec. 15-19.
90. Zaharescu D.G., K. Dontsova, C.I. Burghelea, R.M. Maier, T. Huxman, J. Chorover. 2014. Cracking the code of soil genesis. The early role of rare earth elements. American Geophysical Union, San Francisco, CA Dec. 15-19.
91. Hogan, D.E., Pemberton, J.E., and Maier, R.M. 2014. Recovery of critical materials from wastestreams using biosurfactants. Poster. Graduate and Professional Student Council's Student Showcase. Tucson, AZ, Nov. 7.
92. Ramirez-Andreotta M.D., Brusseau M.L., Artiola J.F., Gandolfi A.J., Maier R.M. Environmental Research Translation at Contaminated Sites for Improving Community Engagement and Citizen Science: The Gardenroots Case Study. US EPA Caribbean Citizen Science Workshop, University of Puerto Rico, PR, September 12, 2014.
93. Chief, K., C.L. Koch, R.M. Maier, T. Maracle, S. Rader, J. Stanley, and D. Moreno. 2014. Empowering mining impacted tribal communities with educational modules to understand environmental impacts and minimize exposure. Native American and Indigenous Studies Association Annual Meeting, Austin, TX, May 29-31.
94. Chief, K., C.L. Koch, R.M. Maier, T. Maracle, S. Rader, and J. Stanley. 2014. Mining and environmental educational modules for tribal colleges: sociocultural impacts. Native American and Indigenous Studies Association Annual Meeting, Austin, TX, May 29-31.
95. Eismin, R.J., C.S. Coss, R.M. Maier, R.L. Polt, J.E. Pemberton. 2014. Aggregation characteristics of rhamnolipid biosurfactants and several synthetic variants. 247th American Chemical Society Meeting, Dallas, TX, March 16-20.
96. Neilson, J.W., J. Chorover, R.M. Maier. 2014. Enhanced microbial diversity is critical to successful revegetation of mine tailings and waste rock piles. Annual Society for Mining, Metallurgy, and Exploration, Salt Lake City, UT, Feb. 23-26.
97. Root, R.A., N. Menka, R.M. Maier, J. Chorover. 2014. Combining molecular-scale speciation with in vitro bio-assays to interrogate the bioaccessibility of arsenic in mine tailings. Annual Society for Mining, Metallurgy, and Exploration, Salt Lake City, UT, Feb. 23-26.
98. Herbertson (Honeker), L., R.A. Root, J. Chorover, and R.M. Maier. 2014. Metal contaminant immobilization on plant root surfaces: Are microbes involved? Annual Society for Mining, Metallurgy, and Exploration, Salt Lake City, UT, Feb. 23-26.
99. Herbertson (Honeker), L., R.A. Root, J. Chorover, and R.M. Maier. 2014. Metal contaminant immobilization on plant root surfaces: Are microbes involved? University of Arizona Earthweek., Tucson, AZ, Feb. 23-26.
100. Hogan, D.E., Pemberton, J.E., and Maier, R.M. 2014. Recovery of critical materials from wastestreams using biosurfactants. University of Arizona EarthWeek Conference. Tucson, AZ, Feb. 23-26..
101. Gil-Loaiza, J. S. White, J. Chorover, and R.M. Maier. 2014. Scaling assisted phytostabilization from the greenhouse to the field at the Iron King Mine-Humboldt Smelter Superfund site. Annual Society for Mining, Metallurgy, and Exploration, Salt Lake City, UT, Feb. 23-26.

102. Koch, C.L., K. Chief, R.M. Maier, S. Rader, and T. Maracle. 2013. Mining and environmental educational modules for tribal community colleges and universities. University of Arizona Environmental Research Grad Blitz, Tucson, AZ, Nov. 13.
103. Koch, C.L., K. Chief, R.M. Maier, S. Rader, and T. Maracle. 2013. Mining and environmental educational modules for tribal community colleges and universities. University of Arizona American Indian Studies Poster Competition, Tucson, AZ, Nov. 10.
104. Koch, C.L., K. Chief, R.M. Maier, S. Rader, and T. Maracle. 2013. Mining and environmental educational modules for tribal community colleges and universities. American Indian Higher Education Consortium (AIHEC) First Americans Land-grant Consortium (FALCON) 9th Annual Conference, Washington, D.C. Washington, DC, Nov. 2-4.
105. Root, R.A., S.M. Hayes, C. Hammond, R.M. Maier, J. Chorover. 2013. Weathering of sulfide minerals in a semi-arid climate, part 2: Toxic metal behavior. 125th Annual Geological Society of America Meeting Denver, CO, Oct. 27-30.
106. Hammond, C., R.A. Root, S.A. White, W. Scott, R.M. Maier, J. Chorover. Use of native plants to efficiently and cost effectively stabilize arsenic in iron sulfide mine tailings. Superfund Research Program Annual Meeting, Baton Rouge, LA, Oct. 15-17.
107. Herbertson (Honeker), L., J. Chorover, and R.M. Maier. 2013. Assessing bacterial colonization of plant roots as a bio-indicator of phytostabilization sustainability using fluorescent in situ hybridization (FISH) 10th International Phytotechnologies Conference, Oct. 1-4, Syracuse, NY.
108. Gil-Loaiza, J. S. White, J. Chorover, and R.M. Maier. 2013. Scaling assisted phytostabilization from the greenhouse to the field at the Iron King Mine-Humboldt Smelter Superfund Site. 10th International Phytotechnologies Conference, Oct. 1-4, Syracuse, NY.
109. Herbertson (Honeker), L., J. Chorover, and R.M. Maier. 2013. Assessing bacterial colonization of plant roots as a bio-indicator of phytostabilization sustainability using fluorescent in situ hybridization (FISH)**.** 15th International Conference of the Pacific Basin Consortium for Environment and Health: "Environmental Exposure in Indigenous Communities". Honolulu, Hawaii, Sept. 24-27.
110. Gil-Loaiza, J. S. White, J. Chorover, and R.M. Maier. 2013. Scaling assisted phytostabilization from the greenhouse to the field at the Iron King Mine-Humboldt Smelter Superfund Site. 15th International Conference of the Pacific Basin Consortium for Environment and Health: "Environmental Exposure in Indigenous Communities". Honolulu, Hawaii, Sept. 24-27.
111. Chorover, J. R.A. Root, C. Hammond, A. Valentin, and R.M. Maier. 2013. Toxic metal(loid) speciation is controlled by iron mineral (bio)weathering in phyto-stabilized mine tailings. Annual American Chemical Society Meeting Indianapolis, IN, Sept. 8-12.
112. Valentin-Vargas, A., K.N. Nelson, R.A. Root, J. Chorover, and R.M. Maier. 2013. Analysis of the metabolic potential and phylogenetic composition of rhizosphere microbial communities during the phytostabilization of metalliferous mine tailings. Annual American Chemical Society Meeting Indianapolis, IN, Sept. 8-12.
113. Root, R.A., C.M. Hammond, A. Adel, M.K, Amistadi, R.M. Maier, and J. chorover. 2013. (Bio)geochemical mechanism of metalloid phytostabilization in arid mine tailings. Annual American Chemical Society Meeting Indianapolis, IN, Sept. 8-12.
114. Hammond, C.M., R.A. Root, R.M. Maier, and J. Chorover. 2013. Plant establishment in sulfide ore-derived mine tailings stabilizes arsenic in situ despite promoting arsenopyrite oxidation. Goldschmidt Conference, Florence, Italy, Aug. 25-30.
115. Root, R.A., C.M. Hammond, A. Valentin, L. Herbertson, R.M. Maier, and J. Chorover. Toxic metal(loid) speciation is controlled by iron mineral (bio)weathering in phytostabilizaed mine tailings. Goldschmidt Conference, Florence, Italy, Aug. 25-30.
116. Hogan, D.E., J.E. Pemberton, and R.M. Maier. 2013. Potential for recovering critical materials from waste streams using rhamnolipid biosurfactant. American Society for Microbiology Annual Meeting, Denver, CO, May 18-21.

117. Friel, A.D., J.W. Neilson and R.M. Maier. 2013. Selective media development for the isolation of oligotrophic organisms from Kartchner Caverns, Arizona. 52nd Annual Arizona/Southern Nevada American Society for Microbiology Branch Meeting, University of Arizona, April 13.
118. Gil-Loaiza, J., S. White, J. Chorover, and R.M. Maier. 2013. Scaling phytostabilization from the greenhouse to the field scale at the Iron King Mine and Humboldt Smelter Superfund site. 52nd Annual Arizona/Southern Nevada American Society for Microbiology Branch Meeting, University of Arizona, April 13.
119. Hogan, D.E., J.E. Pemberton, and R.M. Maier. 2013. Potential for recovering critical materials from waste streams using rhamnolipid biosurfactant. 52nd Annual Arizona/Southern Nevada American Society for Microbiology Branch Meeting, University of Arizona, April 13.
120. Herbertson, L., J. Chorover, and R.M. Maier. 2013. Assessing bacterial colonization of plant roots as bio-indicators of phytostabilization sustainability using fluorescent in situ hybridization. 52nd Annual Arizona/Southern Nevada American Society for Microbiology Branch Meeting, University of Arizona, April 13.
121. Gil-Loaiza, J., S. White, J. Chorover, and R.M. Maier. 2013. Scaling phytostabilization from the greenhouse to the field scale at the Iron King Mine and Humboldt Smelter Superfund site. Earth Week 2013, University of Arizona, April 10-12.
122. Hogan, D.E., J.E. Pemberton, and R.M. Maier. 2013. Potential for recovering critical materials from waste streams using rhamnolipid biosurfactant. Earth Week 2013, University of Arizona, April 10-12.
123. Valentin-Vargas, A., J. Chorover, and R.M. Maier. 2013. Dynamics of rhizosphere microbial communities during the phytostablilization of metalliferous desert mine tailings. Earth Week 2013, University of Arizona, April 10-12.
124. Herbertson, L., J. Chorover, and R.M. Maier. 2013. Assessing bacterial colonization of plant roots as bio-indicators of phytostabilization sustainability using fluorescent in situ hybridization. Earth Week 2013, University of Arizona, April 10-12.
125. Soemo, A.R., R.M. Maier, T. Camenisch, and J.E. Pemberton. 2013. Hydrogel platform for mitigation of mine tailings dust. 245th National Meeting of the Amercian Chemical Society, New Orleans, LA, April 7-11.
126. Rader, S., T. Maracle, C.L. Koch, and R.M. Maier. 2013. Piloting educational module: Reclamation of mine tailings site in arid environments. Environmental biology course, Tohono O'odham Community College, Sells, AZ, April 2.
127. Chorover, J., R.Root, C. Hammond, A. Valentin, and R.M. Maier. 2013. Toxic metal(loid) speciation is controlled by iron mineral (bio)weathering in phytostabilized mine tailings. Conference on Iron Biogeochemistry: From Molecular Processes to Global Cycles, Monte Verita, Switzerland, March 3-8.
128. Stanley, J., K. Chief and R.M. Maier. 2012. Piloting education module: Copper mining and processes: copper electrolysis., 2012. General chemistry course, Tohono O'odham Community College, Sells, AZ, Dec. 5
129. Zaharescu, D.G., K. Dontsova, C.I. Burghelea, J. Chorover, R.M. Maier, and J.N Perdrial. 2012. Life on rock: scaling down biological weathering in a new experimental design at Biosphere-2. AGU Fall Meeting, San Francisco, CA, Dec. 3-7.
130. Hogan, D.E., and Maier, R.M. (2012). Conditional stability constants of valuable metals with rhamnolipid biosurfactant. Poster. Graduate and Professional Student Council's Student Showcase. Tucson, AZ, Nov. 9.
131. Herbertson, L., J. Chorover, and R.M. Maier. 2012. Microbial colonization of roots grown in mine tailings as examined by fluorescent in situ hybridization (FISH). NIEHS Superfund Research Program Annual Meeting, Research Triangle Park, NC, Oct. 21-24.
132. Moreno Ramírez, D., S.T. Wilkinson, M.L. Brusseau, J.A. Field, J.F. Artiola, A.J. Gandolfi, T.D. Camenisch, and R.M. Maier. 2012. University of Arizona Superfund Research Program: Delivering Arizona communities resources and tools to make informed decisions regarding

contamination. NIEHS Superfund Research Program Annual Meeting, Research Triangle Park, NC, Oct. 21-24.

133. Hogan, D.E., and Maier, R.M. (2012). Conditional stability constants of valuable metals with rhamnolipid biosurfactant. Institute of the Environment's Graduate Student Environmental Research Blitz Symposium. Tucson, AZ, Aug. 23.
134. Moreno Ramirez, D., S.T. Wilkinson, M.L. Brusseau, J.A. Field, A.J. Gandolfi, T.D. Camenisch, and R.M. Maier. 2012. University of Arizona Superfund Research Program: Engaging Arizona communities near contamination. Conference on Connecting Research and Practice: A Dialogue between ATSDR and the NIEHS Superfund Research Program, Atlanta, GA, Aug. 7-8.
135. Zaharescu, D.G., K. Dontsova, N. Perdrial, C. Burghelea, J. Chorover, J. Perdrial, R. Maier, and T. Huxman. 2012. Weathering of granular basalt on a volcanic crater slope: an electron microprobe and synchrotron-XRD study. Goldschmidt Conference, Montreal, Canada, June 24-29.
136. Valentin-Vargas, A., K.N. Nelson, R.A. Root, J. Chorover, and R.M. Maier. 2012. Dynamics of rhizosphere microbial communities during the phytostabilization of metalliferous desert mine tailings: a mesocosm experiment. 112th Annual American Society for Microbiology Meeting, San Francisco, CA, June 16-19.
137. Neilson, J.W., J. Quade, M. Ortiz, W. Nelson, A. Legatzki, J. Betancourt, R. Wing, C. Soderlund, and R.M. Maier. 2012. Life at the hyperarid margin: soil moisture and bacterial diversity in the Atacama Desert, Chile. 112th Annual American Society for Microbiology Meeting, San Francisco, CA, June 16-19.
138. Legatzki, A., J. Neilson, M. Ortiz, W. Nelson, B. Pryor, R. Wing, C. Soderland, R. Casavant, and R.M. Maier. 2012. Stretching the limit of metagenomic analysis: a comparison of oligotrophic microbial communities on stalactite and rock surfaces in a carbonate cave. 112th Annual American Society for Microbiology Meeting, San Francisco, CA, June 16-19.
139. Ortiz, M., B.M. Fryslie, W.M. Nelson, C. Soderlund, R.A. Wing, B.M. Pryor, L.S. Pierson, and R.M. Maier. 2012. Metagenomic analysis of microbial communities inhabiting speleothem surfaces in Kartchner Caverns, AZ. 112th Annual American Society for Microbiology Meeting, San Francisco, CA, June 16-19.
140. Maier, R.M., M.T. Hoffman, M. Ortiz, A.L. Wright, and E. von Mutius. 2012. Diversity and relationship of indoor microbial communities to development of asthma in children. 112th Annual American Society for Microbiology Meeting, San Francisco, CA, June 16-19.
141. Pemberton, J.E., A.R. Soemo, and R.M. Maier. 2012. Effect of rhamnolipids on the dispersion of metal oxide nanoparticles in aqueous solution. 243rd ACS National Meeting and Exposition, San Diego, CA, March 25-29.
142. Pemberton, J.E., H. Wang, C.S. Coss, R.L. Polt, and R.M. Maier. 2012. Fundamental studies of rhamnolipids and their synthetic mimetics: enhanced understanding of structure-function. 243rd ACS National Meeting and Exposition, San Diego, CA, March 25-29.
143. Hogan, D.E., J.E. Pemberton, and R.M. Maier. 2012. Isolation of biosurfactant-producing bacteria from soils. University of Arizona Earth Week 2012. March 28-30.
144. Donstova, K., J. Chorover, E. Hunt, T. Huxman, R. Maier, N. Mark, D.G. Zaharescu. 2011. Plants and microorganisms as drivers of mineral weathering. Amer. Geophys. Union Fall Meeting, San Francisco, CA Dec. 5-9.
145. Wilkinson, S.T., M.D. Ramirez-Andreotta, R.M. Maier, A.J. Gandolfi, and M.L. Brusseau. 2011. Applying laboratory and field research to real-world problems through research translation: an Arizona mining example. NIEHS Superfund Research Program Annual Meeting, Lexington, KY, Oct. 23-26.
146. Moreno Ramirez, D., J.A. Field, A.J. Gandolfi, and R.M. Maier. 2011. Packaging environmental trainings: transferable modules targeting community health workers. NIEHS Superfund Research Program Annual Meeting, Lexington, KY, Oct. 23-26.
147. Chorover, J., R.A. Root, C. Hammond, S. Hayes, R.Rushforth, J. Neilson, A. Valentin-Vargas, K. Nelson, and R.M. Maier. 2011. Nanoscale mechanisms of metal(loid)

rhizostabilization in desert mine tailings. NIEHS Superfund Research Program Annual Meeting, Lexington, KY, Oct. 23-26.

148. Hammond, C., R.A. Root, S.A. White, R.M. Maier, and J. Chorover. 2011. Monitoring soil forming processes and contaminant transport during field-scale phytostabilization of arsenic-containing Iron King Mine tailings, Dewey-Humboldt, Arizona. NIEHS Superfund Research Program Annual Meeting, Lexington, KY, Oct. 23-26.
149. Gil-Loaiza, J., F.A. Solis-Dominguez, S.A. White, R.A. Root, C. Hammond, A. Valentin-Vargas, K.N. Nelson, J. Chorover, and R.M. Maier. 2011. Field-scale phytostabilization of mine tailings at the Iron King Mine-Humboldt Smelter Superfund Site. NIEHS Superfund Research Program Annual Meeting, Lexington, KY, Oct. 23-26.
150. Nelson, K.N., J. Chorover, and R.M. Maier. 2011. Influence of phytostabilization on carbon and nitrogen cycling activities in metalliferous mine tailings. 8th International Phytotechnology Society Conference, Portland, OR, Sept. 13-16.
151. Zaharescu, D., K. Dontsova, J. Chorover, T. Huxman, R. Maier, and J. Perdrial. 2011. Effect of plant-microbial associations on weathering of basalt, granite, schist, and rhyolite. Goldschmidt Conference, Prague, Czech Republic, Abst. Mineralog. Mag. 75: 2240.
152. Ortiz, M., A. Legatzki, A. Byrne, W. Nelson, J.W. Neilson, R.R. Casavant, R.A. Wing, C. Soderlund, B. M. Pryor, L.S. Pierson III and R.M. Maier. 2011. Estimation of the Bacterial Taxonomic Diversity and Variability on Speleothem Surfaces in Kartchner Caverns, Arizona, SWES Day at EarthWeek 2011, University of Arizona, Tucson, March 31.
153. Ortiz, M., A. Legatzki, W. Nelson, J.W. Neilson, R.R. Casavant, R.A. Wing, C. Soderlund, B.M. Pryor, L.S. Pierson III and R.M. Maier. 2011. Metagenomic analysis of speleothem surfaces in Kartchner Caverns, AZ. 8th DOE JGI Microbial Genomics and Metagenomics Workshop, Walnut Creek, CA/ USA, Feb. 7-11.
154. Ortiz, M., A. Legatzki, A. Byrne, W. Nelson, J.W. Neilson, R.R. Casavant, R.A. Wing, C. Soderlund, B. M. Pryor, L.S. Pierson III and R.M. Maier. 2011. Pyrosequencing reveals the diversity and variability of bacterial communities on speleothem surfaces in Kartchner Caverns. University of Arizona Environmental Research Grad Blitz, Tucson, Feb. 1.
155. Valentin-Vargas, A., K. Nelson, R. Root, J. Chorover, and R.M. Maier. 2011. Ecology of rhizosphere microbial communities during the phytostabilization of metalliferous acidic mine tailings: a long-term greenhouse experiment. University of Arizona Environmental Research Grad Blitz, Tucson, AZ, Feb. 1.
156. Hammond, C.M., R.A. Root, S. White, R.M. Maier, and J. Chorover. A phytostabilization strategy for arsenic containing mine tailings in the semi-arid southwestern United States. University of Arizona Environmental Research Grad Blitz, Tucson, AZ, Feb. 1.
157. Gil-Loaiza, J. and R.M. Maier. 2011. Field scale phytostabilization of mine tailings in the Iron King Mine Humboldt Smelter Superfund site. University of Arizona Environmental Research Grad Blitz, Tucson, AZ, Feb. 1.
158. Neilson, J.W., M. Ortiz, A. Valentín-Vargas, A. Legatzki, W. Nelson, F. Tian, R.A. Wing, C. Soderlund, J. Quade, J.L. Betancourt, and R.M. Maier. 2010. Pyrosequencing and clone library analysis of transitions in bacterial diversity along a precipitation gradient through the hyper-arid region of the Atacama Desert, Chile. 13th International Symposium on Microbial Ecology, Seattle, WA Aug. 22-27.
159. Ortiz, M., A. Legatzki, A. Byrne, W. Nelson, J.W. Neilson, R.R. Casavant, R.A. Wing, C. Soderlund, B.M. Pryor, L.S. Pierson III and R.M. Maier. 2010. Pyrosequencing reveals the diversity and variability of bacterial communities on speleothem surfaces in Kartchner Caverns. 13th International Symposium on Microbial Ecology, Seattle, WA Aug. 22-27.
160. Legatzki A., M. Ortiz, J.W. Neilson, R.R. Casavant, B.M. Pryor, L.S. Pierson III, and R.M. Maier. 2010. Variations in bacterial community structure on ten different speleothems in Kartchner Caverns, Arizona. 13th International Symposium on Microbial Ecology. Seattle, WA, Aug. 22-27.
161. Solis-Dominguez, F.A., A. Valentin-Vargas, and R.M. Maier. 2010. Influence of inoculated arbuscular mycorrhizal fungi on *Prosopis juliflora* (mesquite) growth and

rhizosphere microbial community structure in acidic desert mine tailings. 13th International Symposium on Microbial Ecology. Seattle, WA, Aug. 22-27.

162. Vaughan, M.J.S., R.M. Maier, and B.M. Pryor. 2010. Examining culturable fungal diversity from speleothem surfaces in Kartchner Caverns, Benson, Arizona, USA. Ninth International Mycological Congress, Edinburgh, Scotland, August 1-6.
163. Vaughan, M.J.S., R.M. Maier, and B.M. Pryor. 2010. Culturable fungal diversity from speleothem surfaces in Kartchner Caverns, Benson, Arizona. The 2010 Annual Mycological Society of America Meeting, Lexington Kentucky, June 28- July 1.
164. Coss, C.S., T. Carrocci, A. Soemo, R.L. Polt, J.E. Pemberton, and R.M. Maier. 2010. Synthetic method for development of rhamnolipids. Amer. Soc. Biochem. Molec. Biol. Anaheim, CA, April 24-28.
165. Vaughan, M.J.S., R.M. Maier, B.M. Pryor. 2010. Culturable fungal diversity from speleothem surfaces in Kartchner Caverns, Benson, Arizona. Geodaze: the 38th annual Geosciences Symposium, University of Arizona, Tucson, AZ, April 1-3.
166. Ortiz, M., A. Legatzki, J.W. Neilson, B.M. Pryor, L.S. Pierson III and R.M. Maier. 2010. "Intra-and inter-speleothem variability of bacterial communities in Kartchner Caverns." GeoDaze: the 38th Annual Geosciences Symposium, University of Arizona, Tucson, AZ, April 1-3.
167. Villegas, D., A. Herrera-Martinez, and R.M. Maier. 2010. The search for a flavolipid-negative *Flavobacterium* sp. MTN11 mutant. University of Arizona Undergraduate Biology Research Program Conference, Jan. 23.
168. Byrne, A., A. Legatzki, M. Ortiz, J.W. Neilson, and R.M. Maier. 2010. Characterization of bacteria present on a calcite speleothem in Kartchner Caverns. University of Arizona Undergraduate Biology Research Program Conference, Jan. 23.
169. Solis-Dominguez, F.A., A. Valentin-Vargas, A. Legatzki and R.M. Maier. 2009. Influence of inoculated arbuscular mycorrhizal fungi on mesquite (*Prosopis juliflora*) rhizosphere microbial community structure in acidic desert mine tailings. 6th International Phytotechnology Conference, St. Louis, Missouri. Dec. 2-4.
170. Solis-Dominguez, F.A., J.A. Rivera Castelo, T. Borrillo-Hutter, S.A, White, J. Chorover, and R.M. Maier. 2009. Native desert plants suitable for the phytostabilization of the Iron King Mine Tailings Superfund Site, Dewey-Humbolt, Arizona, USA. 6th International Phytotechnology Conference, St. Louis, Missouri. Dec. 2-4.
171. Solis-Dominguez, F.A. and R.M. Maier. 2009. *Prosopis juliflora* and mycorrhizal fungi to revegetate arid acidic, metalliferous desert mine tailings. 6th International Phytotechnology Conference, St. Louis, Missouri. Dec. 2-4.
172. Hayes, S., R.M. Maier, and J. Chorover. 2009. Toxic dust: Studying lead speciation in desert mine tailings to assess health risk. "Emerging Issues, Emerging Progress" 2009 Annual Meeting of the NIEHS Superfund Research Program, New York NY, Nov. 2-5.
173. Maier, R.M., F.A. Solis-Dominguez, J.A. Rivera Castelo, T. Borrillo-Hutter, S.A, White, and J. Chorover. 2009. Phytostabilization of the Iron King Mine Tailings Superfund Site, Dewey-Humboldt, AZ. "Emerging Issues, Emerging Progress" 2009 Annual Meeting of the NIEHS Superfund Research Program, New York NY, Nov. 2-5.
174. Ramirez, M.D. L. Butler, R.M. Maier, E. Betterton, and A.J. Gandolfi. 2009. Creating partnerships with agencies to improve cleanup at the Iron King Mine and Humboldt Smelter Superfund site, Humboldt, Arizona. "Emerging Issues, Emerging Progress" 2009 Annual Meeting of the NIEHS Superfund Research Program, New York NY, Nov. 2-5.
175. Byrne, A., A. Legatzki, M. Ortiz, and R.M. Maier. 2009. Identifying and characterizing microbes found on formations in Kartchner Caverns. Undergraduate Biology Research Program Summer Poster Session. University of Arizona, Tucson, AZ, Aug. 6.
176. LaComb, M., J.W. Neilson, and R.M. Maier. 2009. Comparative diversity of two hyper-arid regions of the Atacama Desert, how similar are they? Undergraduate Biology Research Program Summer Poster Session. University of Arizona, Tucson, AZ, Aug. 6.

177. Neilson, J.W., L.A. Ikner, R.R. Casavant, R.S. Toomey, G. Nolan, R.M. Maier, and E. Cook. 2009. Monitoring of microbial populations in Kartchner Caverns State Park - a cost-effective cave management and outreach strategy. 15th International Congress of Speleology, Kerrville, TX July 19-26.
178. Maier, R.M., J. Chorover, S.L. Iverson, and S.M. Hayes. 2009. Combined FISH, u-XRF and SEM analysis to examine microbe-metal interactions on root surfaces. Goldschmidt Conference for Geochemistry, Davos, Switzerland, June 21-26.
179. Legatzki, A., M. Ortiz, J.W. Neilson, B.M. Pryor, L.S. Pierson III, and R.M. Maier. 2009. Bacterial and archaeal diversity in Kartchner Caverns, a carbonate cave in southwestern USA. Goldschmidt Conference for Geochemistry, Davos, Switzerland, June 21-26.
180. Solis-Dominguez, F., and R.M. Maier. 2009. *Prosopis juliflora* and mycorrhizal fungi to revegetate arid acidic, metalliferous desert mine tailings. Goldschmidt Conference for Geochemistry, Davos, Switzerland, June 21-26.
181. Ortiz, M., A. Legatzki, J.W. Neilson, B.M. Pryor, L.S. Peirson III and R.M. Maier. 2009. Intra-and inter-speleothem variability of bacterial communities in Kartchner Caverns. Goldschmidt Conference for Geochemistry, Davos, Switzerland, June 21-26.
182. Ortiz, M., A. Legatzki, J.W. Neilson, B.M. Pryor, L.S. Pierson, and R.M. Maier. 2009. Variability of speleothem microbial communities in Kartchner Caverns, Arizona. 48th Annual Arizona-Southern Nevada Branch American Society for Microbiology, Tucson, AZ, April 4.
183. Zhang, L., J.W. Neilson, and R.M. Maier. 2009. The effect of fatty acid substrate chain length on rhamnolipid production by *Pseudomonas aeruginosa*. 48th Annual Arizona-Southern Nevada Branch American Society for Microbiology, Tucson, AZ, April 4.
184. Solis-Dominguez, F.A., and R.M. Maier. 2009. Growth promotion of *Prosopis julifolora* by mycorrhizal fungi in metalliferous desert mine tailings. 48th Annual Arizona-Southern Nevada Branch American Society for Microbiology, Tucson, AZ, April 4.
185. Camilios Neto, D., R.M. Maier, J.W. Neilson, D.A. Mitchell, and N. Krieger. 2009. Rhamnolipid production by solid-state cultivation. 48th Annual Arizona-Southern Nevada Branch American Society for Microbiology, Tucson, AZ, April 4.
186. Nelson, K.N., A. Legatzki, and R.M. Maier. 2009. Magnificent speleothems in Kartchner Caverns: Are microbes involved? 48th Annual Arizona-Southern Nevada Branch American Society for Microbiology, Tucson, AZ, April 4.
187. Villegas, D.., J. W. Neilson, L. Zhang, and R.M. Maier. 2009. The effect of growth medium on rhamnolipid production by *Pseudmonas aeruginosa*. 20th Annual University of Arizona Undergraduate Biology Research Conference, Jan. 17.
188. La Comb, M. J. W. Neilson, J. Quade, J.L. Betancourt, and R.M. Maier. 2009. The use of community profiles to characterize the effect of elevation, depth and time on microbial populations in extreme hyperarid environments. 20th Annual University of Arizona Undergraduate Biology Research Conference, Jan. 17.
189. Hayes S.M., S.L. Iverson, K.L. Runtzel, C.J. Grandlic, R.M. Maier and J. Chorover. 2008. Phytostabilization of arid mine tailings: a collaboration of field study, geochemistry and environmental microbiology. Annual NIEHS Superfund Basic Research Program Meeting, Pacific Grove, CA, Dec. 7-9.
190. Moreno Ramírez, D., M. Ramírez, R. Estrella, J. Artiola, M.L. Brusseau, J.A. Field, R.M. Maier, and A.J. Gandolfi. 2008. Toward an informed Mexican and Mexican-American citizenry. Annual NIEHS Superfund Basic Research Program Meeting, Pacific Grove, CA, Dec. 7-9.
191. Vaughan, M.J., R.M. Maier, and B.M. Pryor. 2008. Fungal diversity in carbonate caves across diverse substrates, 93rd Ecol. Soc. Amer. Annual Meeting, Milwaukee, Wisconsin, Aug. 3-8.
192. Neilson, J.W., K.B. Chandler, A. Lebron-Paler, C.H. Neilson, T. Veres, L. Zhang, J.E. Pemberton and R.M. Maier. 2008. Rhamnolipid production and *rhlB*/*rhlC* expression in

Pseudomonas aeruginosa IGB83 during cadmium stress. American Society for Microbiology 108th General Meeting, Boston, MA, June 1-5.

193. Legatzki, A., K. Nelson, M. Ortiz, J.W. Neilson, L.S. Pierson, B.M. Pryor, and R.M. Maier. 2008. Inter- and intra-speleothem variability of microbial communities in the Kartchner Caverns Microbial Observatory. American Society for Microbiology 108th General Meeting, Boston, MA, June 1-5.
194. Mendez, M.O., J.W. Neilson, and R.M. Maier. 2007. The Klondyke mine tailings site: analysis of its bacterial community. Annual NIEHS Superfund Basic Research Program "20 Years of Success and a Vision for the Future", Durham, NC, Dec. 3-5.
195. Iverson, S.L. and R.M. Maier. 2007. Fluorescence in situ hybridization (FISH) analysis of roots to examine bacterial colonization during phytostabilization of mine tailings. Annual NIEHS Superfund Basic Research Program "20 Years of Success and a Vision for the Future", Durham, NC, Dec. 3-5.
196. Steward, F.M., T.L. Thompson, R.M. Maier, S.A. White, and J. Chorover. Growth and metal uptake of native desert plants grown in mine tailings. Annual ASA-CSSA-SSSA International Meeting, New Orleans, LA, Nov. 4 – 8.
197. Grandlic, C.J., S.L. Iverson, M.O. Mendez, and R.M. Maier. 2007. Evaluation of potential plant growth-promoting bacteria and their use to enhance *Atriplex lentiformis* and *Buchloe dactyloides* growth in acidic mine tailings. American Society for Microbiology 107th General Meeting, Toronto, Ontario, May 21-25.
198. Grandlic, C.J., M.O. Mendez, and R.M. Maier. 2007. Evaluation of potential plant growth-promoting bacteria and their use to enhance *Atriplex lentiformis* growth in acidic mine tailings. Symposium on Translational Studies in Environmental Health. University of Arizona, April 4.
199. Iverson, S.L., C.J. Grandlic, and R.M. Maier. 2007. Fluorescence in situ hybridization for the visualization of plant growth-promoting bacteria in mine tailings. Symposium on Translational Studies in Environmental Health. University of Arizona, April 4.
200. Vazquez-Ortega, A., S. Hayes, R.M. Maier, and J. Chorover. 2007. Changes in speciation and mobility in Pb and Zn induced by phytostabilization of mine tailings. Symposium on Translational Studies in Environmental Health. University of Arizona, April 4.
201. Iverson, S.L., C.J. Grandlic, and R.M. Maier. 2007. Fluorescence in situ hybridization for the visualization of plant growth-promoting bacteria in mine tailings. US-Mexico Binational Center for Environmental Sciences and Toxicology Inaugural Ceremony and Global Environmental Health Workshop. Tucson, AZ March 12-14.
202. Grandlic, C.J., M.O. Mendez, and R.M. Maier. 2007. Inoculating plants with plant-growth-promoting bacteria increases total plant biomass and may enhance the phytostabilization process in acidic, arid-climate mine tailings. US-Mexico Binational Center for Environmental Sciences and Toxicology Inaugural Ceremony and Global Environmental Health Workshop. Tucson, AZ March 12-14.
203. Chandler, K., C.J. Neilson, J.W. Neilson, and R.M. Maier. 2007. Relative expression of the Pseudomonas aeruginosa *rhlB* and *rhlC* genes varies with exposure to cadmium. 2007. 18th Annyual Undergraduate Biology Research Program, University of Arizona, Jan. 20.
204. Grandlic, C.J., M.O. Mendez, and R.M. Maier. Evaluation of potential plant growth-promoting bacteria and their use to enhance *Atriplex lentiformis* growth in acidic mine tailings. NIEHS Superfund 2006 Annual Meeting, San Diego, CA, Dec. 11-12.
205. Veres, T., A. Lebron-Paler, J.E. Pemberton and R.M. Maier. 2006. Ionic strength and heavy metal effects on microbially-produced rhamnolipid biosurfactant structures at the air-water interface. 19th Rocky Mountain Regional American Chemical Society Meeting, Tucson, AZ, Oct. 14-18.

206. Curry, J.E., C.H. Heo, and R.M. Maier. 2006. Directly measuring the adhesive and elastic properties of bacteria using a Surface Force Apparatus. 19th Rocky Mountain Regional American Chemical Society Meeting, Tucson, AZ, Oct. 14-18.
207. Lebron-Paler, A., J.E. Pemberton, and R.M. Maier. 2006. Adsorption of the biosurfactant rhamnolipid on alumina by ATR-FTIR spectroscopy: Effect of solution pH. 19th Rocky Mountain Regional American Chemical Society Meeting, Tucson, AZ, Oct. 14-18.
208. Pruden, T.L., A. Lebron-Paler, J.E. Pemberton, and R.M. Maier. 2006. Atomic force microscopy of rhamnolipid organized assemblies adsorbed on graphite and metal oxide surfaces. 19th Rocky Mountain Regional American Chemical Society Meeting, Tucson, AZ, Oct. 14-18.
209. Wickramasekara, S., A. Hilderbrand, L. Breci, J.W. Neilson, R.M. Maier, and V. Wysocki. 2006. Proteomics analyses of the opportunistic pathogen *Burkholdaria cepacia* using fractionation and mass spectrometric techniques. 19th Rocky Mountain Regional American Chemical Society Meeting, Tucson, AZ, Oct. 14-18.
210. Becker, B.A., A. Lebrón-Paler, J.E. Pemberton, W. Otto, R.M. Maier, and C.K. Larive. 2006. Characterizing monorhamnolipids in mixtures. SMASH NMR meeting.
211. Hayes, S., T. L. Thompson, R.M. Maier, and J. Chorover. 2006. Lead speciation and mobility in mine tailings. American Chemical Society 232nd National Meeting and Expedition, San Francisco, CA, Sept. 9-14.
212. Maier, R.M., L.A. Ikner, R.S. Toomey, G. Nolan, J.W. Neilson, and B.M. Pryor. 2006. Cultural bacterial diversity along a human impact gradient in Kartchner Caverns, Benson, AZ. 11th International Symposium on Microbial Ecology in Vienna, Austria, Aug. 20-25.
213. Mendez, M.O., E.P. Glenn, B.M. Pryor, and R.M. Maier. 2006. Analysis of the microbial community during a greenhouse study of the potential phytostabilization of the Klondyke mine tailings. 11th International Symposium on Microbial Ecology in Vienna, Austria, Aug. 20-25.
214. Maier, R.M., J.W. Neilson, K.P. Drees, J.L. Betancourt, J. Quade, B.M. Pryor, D.A. Henderson. 2006. Bacterial populations in the hyperarid core of the Atacama Desert, Chile. 11th International Symposium on Microbial Ecology in Vienna, Austria, Aug. 20-25.
215. Wickramasekara, S.I., A. Hilderbrand, J. Neilson, R.M. Maier, V.H. Wysocki. 2006. Identification of low level virulence factors in protein fractions of *Burkholderia cepacia* using Mass Spectrometric techniques. 54th ASMS Conference on Mass Spectrometry, Seattle, WA, May 28 - June 1.
216. Curry, J., N. Tashvighi-Khoob, K. Baughman, C.H. Heo, R.M. Maier, and R.E. Goldstein. 2006. Evaporative deposition of bacteria on surfaces: Two dimensional films, cellular patterns and potential for constructing living functional materials. Materials Research Society Meeting, San Francisco, April 17-21.
217. Heo, C.H., R.M. Maier, and J.E. Curry. 2006. Directly measuring the adhesive and elastic properties of bacteria using a Surface Force Apparatus: Effect of desiccation. Materials Research Society Meeting, San Francisco, April 17-21.
218. Cruz Matos, R., R.M. Maier, and M.O. Mendez. 2006. Of enzymatic digests and clones; useful and reliable? Sigma Xi Student Poster Day, University of Puerto Rico, Mayaguez, PR, March 30.
219. Begay, C.K., M. Yellowhair, J.W. Neilson, R.M. Maier, and A.J. Gandolfi. 2006. An assay for detection of bioavailable toxicants using the luminescent bioreporter *Escherichia coli* HB101 pUCD607. Society of Toxicology 45th Annual Meeting, San Diego, CA, March 5-9.
220. Chandler, K., J. Crispin, J.W. Neilson, and R.M. Maier. 2006. The effect of heavy metals on production of rhamnolipid by Pseudomonas aeruginosa. Undergraduate Biology Research Program 17th Annual Conference, Tucson, AZ, Jan. 21.
221. Grandlic, C., M.O. Mendez, and R.M. Maier. 2006. Identification of Plant Growth-Promoting Bacteria and their Potential Applications for Phytostabilization of Mine Tailings. NIEHS Superfund Annual Conference, New York, NY Jan. 12-13.

222. Mendez, M. O., E. P. Glenn, and R. M. Maier. 2005. Phytostabilization of the Klondyke Mine Tailings site and the associated microbial community. Water Sustainability, University of Arizona Forum,Tucson, AZ, November 9.
223. Grandlic, C., M.O. Mendez, and R.M. Maier. 2005. Identification of Plant Growth-Promoting Bacteria and their Potential Applications for Phytostabilization of Mine Tailings. University of Arizona Forum,Tucson, AZ, November 9.
224. Cruz Matos, R., M.O. Mendez, and R.M. Maier. 2005. Of enzymatic digestion and cloning: useful and reliable? Minority Health Disparities Summer Research Program Conference, University of Arizona, Aug. 10.
225. Dorn, J.G., M.L. Brusseau, and R.M. Maier. 2005. Real-time in situ monitoring of bioactive zone dynamincs in saturated porous media comprising chemical, physical , and microbial heterogeneities. American Society for Microbiology 105th General Meeting, Atlanta, GA, June 5–9.
226. Heo, C.H., J.G. Dorn, R.M. Maier and J.E. Curry. 2005. A new method to study bacterial adhesion: direct measurement bacteria-surface interaction using a surface forces apparatus. 229th American Chemical Society National Meeting, San Diego, CA, March 13-17.
227. Baughman, K.F., C.H. Heo, J.G. Dorn, R.M. Maier, and J.E. Curry. 2005. Surface force measurements on *Escherichia coli*: probing the impact of *Escherichia coli's* lipopolysaccharides on adhesion. 229th ACS National meeting, San Diego, CA, March 13-17.
228. Iverson, S.L., K. Rosario, and R.M. Maier. 2005. Limitations on denaturing gradient gel electrophoresis analysis of bacterial diversity in mine tailings. Undergraduate Biology Research Program 16th Annual Conference, Tucson, AZ, Jan. 29.
229. Curry, J.E., C.H. Heo, K. Baughman, J.G. Dorn, and R. M. Maier. 2004. Unraveling Bacterial Adhesion by Directly Measuring Bacteria-Surface Interactions. ASA-CSSA-SSSA Annual International Meeting, Seattle, WA, Oct. 31- Nov. 4.
230. Neilson, J.W., K.P. Drees, J.L. Betancourt, J. Quade, D.A. Henderson, and R.M. Maier. 2004. Soil microbial diversity of a hyperarid region of the Atacama Desert, Chile. International Society for Microbial Ecology, Cancun, MX, Aug. 22-27.
231. Rosario, K., S. Chartrand, C. McKeon, E.P. Glenn, and R.M. Maier. 2004. Microbial community changes during plant establishment at the San Pedro River mine tailings site. American Society for Microbiology 104rd General Meeting, New Orleans, LA, May 23–27.
232. Mendez, M.O., E.P. Glenn, and R.M. Maier. 2004. Phytostabilization of the Klondyke Mine Tailings site and the associated microbial community. American Society for Microbiology 104rd General Meeting, New Orleans, LA, May 23–27.
233. Ikner, L.A., J.W. Neilson, and R.M. Maier. 2004. Assessment of human impact on the culturable microbial community of Kartchner Caverns. American Society for Microbiology 104rd General Meeting, New Orleans, LA, May 23–27.
234. Crispin, J.D., A. Vazquez, J.E. Pemberton, and R.M. Maier. 2004. The effect of heavy metals on rhamnolipid production by *Pseudomonas aeruginosa*. American Society for Microbiology 104rd General Meeting, New Orleans, LA, May 23–27.
235. Neilson, J.W., F.L. Jordan, A.A. Bodour, and R.M. Maier. 2004. Preferential amplification patterns of 16S rDNA from mixed environmental isolates. American Society for Microbiology 104rd General Meeting, New Orleans, LA, May 23–27.
236. Crispin, J.D., A. Vasquez, and R.M. Maier. 2003. The effect of heavy metals on rhamnolipid production by *Pseudomonas aeruginosa*. Superfund Quad-University EPA Region 9 Conference, Oct. 8-10.
237. Mendez, M.O., E.P. Glenn, and R.M. Maier. 2003. Microbial community assessment during the germination and growth of *Atriplex canescens* in the Klondyke mine tailings site. Superfund Quad-University EPA Region 9 Conference, Oct. 8-10.
238. Dorn, J.G. and R.M. Maier. 2003. Luminescent response of the *lux* bioreporter organism *Pseudomonas putida* rb1353 during naphthalene/salicylate catabolism: temporal

requirement of ATP, NADPH, fatty acid and aldehyde. American Society for Microbiology 103rd General Meeting, Washington, DC, May 18–22.

239. Crispin, J.D., M.R. Totola, and R.M. Maier. 2003. Characterization of a GFP-reporter constructed to monitor rhamnolipid production in *Pseudomonas aeruginosa*. American Society for Microbiology 103rd General Meeting, Washington, DC, May 18–22.
240. Neilson, J.W., K.P. Drees, J.L. Betancourt, J. Quade**,** and R.M. Maier. 2003. Soil microbial diversity along a 4500-m elevational transect in the Atacama Desert. American Society for Microbiology 103rd General Meeting, Washington, DC, May 18–22.
241. Mendez, M.O., E.P. Glenn, and R.M. Maier. 2003. Microbial community development during the germination of *Atriplex canescens* in the Klondyke Mine Tailings. American Society for Microbiology 103rd General Meeting, Washington, DC, May 18–22.
242. Ikner, L.S., J.W. Neilson, and R.M. Maier. 2003. Microbial diversity in Kartchner Caverns. American Society for Microbiology 103rd General Meeting, Washington, DC, May 18–22.
243. Drees, K.P. and R.M. Maier. 2003. The prevalence of *Pseudomonas aeruginosa* in the soils of southern Arizona biomes. American Society for Microbiology 103rd General Meeting, Washington, DC, May 18–22.
244. Yolcubal, Y., R.M. Maier, and M.L. Brusseau. 2002. The effect of growth and cell elution on microbial distribution during solute transport in porous media. Superfund Basic Research Program Meeting, Tucson, AZ Nov. 3-6.
245. Mendez, M.O. and R.M. Maier. 2002. Microbial community development during revegetation of the Klondyke mine tailings site. Superfund Basic Research Program Meeting, Tucson, AZ Nov. 3-6.
246. Ikner, L.A., J.W. Neilson, and R.M. Maier. 2002. Analysis of slime deposits on fiberglass surfaces in Kartchner Caverns. 102nd General Meeting American Society for Microbiology, Salt Lake City, UT, May 19–23.
247. Rogers, T.E., J.W. Neilson, and R.M. Maier. 2002. The effect of rhamnolipid, a biosurfactant, on increasing antibiotic sensitivity of *Pseudomonas aeruginosa*. 102nd General Meeting American Society for Microbiology, Salt Lake City, UT, May 19–23.
248. Dorn, J.E. and R.M. Maier. 2002. Environmental and physiological factors affecting *luxCDABE* and *nah* gene expression in the bioreporter organism *Pseudomonas putida* RB1353, 102nd General Meeting American Society for Microbiology, Salt Lake City, UT, May 19–23.
249. Descher, S.M. and R.M. Maier. 2002. Copper removal from municipal sludge using rhamnolipid biosurfactant. 102nd General Meeting American Society for Microbiology, Salt Lake City, UT, May 19–23.
250. Totola, M.R. G. Grass, R.C.R. Fernandes, C. Rensing, and R.M. Maier. 2002. Rhamnolipid-gfp reporter constructs to use in studying regulation of rhamnolipid synthesis in *Pseudomonas aeruginosa*, 102nd General Meeting American Society for Microbiology, Salt Lake City, UT, May 19–23.
251. Dorn, J., I. Yolculbal, and M.L. Brusseau and R.M. Maier. 2002. The use of a fiber-optic lux reporter system to characterize in situ microbial activity in saturated soil environments. Regional American Society for Microbiology Conference, Flagstaff Arizona, April 13.
252. Sandrin, S.K., F.L. Jordan, L. Li, R.M. Maier, and M.L. Brusseau. 2001. Application of a biodegradation and transport model incorporating microbial lag to soil systems of increasing heterogeneity and biological diversity. American Geophysical Union, Boston, MA, May 29 - June 2.
253. Patterson, B.M., M.L. Brusseau, R.M. Maier, and R. Frye. 2001. Influence of multiple bacterial populations on phenanthrene degradation, bacterial cell elution, and species distribution. American Geophysical Union, Boston, MA, May 29 - June 2.
254. Yolcubal, I., J.G. Dorn, R.M. Maier, and M.L. Brussseau. 2001. The influence of substrate and electron acceptor bioavailability on bioactive zone dynamics in porous media. Amer. Geophys. Union, Boston, MA, May 29 - June 2.

255. Drees, K.P., and R.M. Maier. 2001. A PCR assay for the determination of the genetic potential of rhamnolipid production in soils. 101st General American Society for Microbiology Meeting, Orlando, FL, May 20 - May 24.
256. Dorn, J.G., I. Yolcubal, J.W. Neilson, M.L. Brusseau, and R.M. Maier. 2001. The use of a fiber-optic lux reporter system to characterize in situ microbial activity in soil environments. 101st General American Society for Microbiology Meeting, Orlando, FL, May 20 - May 24.
257. Sandrin, T.R., and R.M. Maier. 2001. Effect of pH on cadmium toxicity speciation and accumulation during naphthalene biodegradation. 101st General American Society for Microbiology Meeting, Orlando, FL, May 20 - May 24.
258. Bodour, A.A. and R.M. Maier. 2001. Purification and characterization of a novel biosurfactant from *Flavobacterium heparinum*. 101st General American Society for Microbiology Meeting, Orlando, FL, May 20 - May 24.
259. Jordan, F.L., A.A. Bodour, F. Blackmer, and R.M. Maier. 2001. Using denaturing high performance liquid chromatography (DHPLC) to evaluate denaturing gradient gel electrophoresis (DGGE) analysis of microbial community profiles. 101st General American Society for Microbiology Meeting, Orlando, FL, May 20 - May 24.
260. Maier, R.M. 2001. The use of an integrated fiber optic-lux reporter system to study the formation of bioactive zones. Annual W-82 Western Regional Research Meeting. Berkeley, California, January 8-9.
261. Bodour, A.A., J. Wang, M.L. Brusseau, and R.M. Maier. 2000. The development of an indigenous phenanthrene degrading community during long-term exposure to phenanthrene under saturated flow conditions. 100th General American Society for Microbiology Meeting, Los Angelos, CA, May 21 - May 25.
262. Jordan, F.L, S.K. Snyder, M.L. Brusseau, and R.M. Maier. 2000. The influence of a substrate pulse on bacterial elution from porous media. Q–244.100th General American Society for Microbiology Meeting, Los Angelos, CA, May 21 - May 25.
263. Drees, K.P., M. Abbaszadegan, and R.M. Maier. 2000. Comparative inactivation of bacteria and bacteriophage by direct electric current. 100th General American Society for Microbiology Meeting, Los Angelos, CA, May 21 - May 25.
264. Curtis, S.J. and R.M. Maier. 2000. The effect of a rhamnolipid biosurfactant and the *in situ* production of surface-active compounds on the biodegradation of a mixture of organic compounds by an indigenous soil community. 100th General American Society for Microbiology Meeting, Los Angelos, CA, May 21 - May 25.
265. Chech, A.M. and R.M. Maier. 2000. Combined phytoremediation and biosurfactant addition for *in situ* remediation of mineral oil-contaminated soils. General American Society for Microbiology Meeting, Los Angelos, CA, May 21 - May 25.
266. Kight, W.B. and R.M. Maier. 2000. The effects of hexadecane as a nonaqueous-phase liquid on the biodegradation of phenanthrene. 100th General American Society for Microbiology Meeting, Los Angelos, CA, May 21 - May 25.
267. Maier, R.M., D.M. Gage, and A.A. Bodour. 2000. Substrate induced switch between bioemulsifier and biosurfactant production. 100th General American Society for Microbiology Meeting, Los Angelos, CA, May 21 - May 25.
268. Bodour, A.A., R.A. Al-Tahhan, T.R. Sandrin, and R.M. Maier. 2000. Cell surface properties of *Pseudomonas aeruginosa*: effect of rhamnolipid on lipopolysaccharide content. Arizona Imaging and Microanalysis Annual Meeting, Feb. 10, Tucson, AZ.
269. Sandrin, T.R., A.M. Chech, and R.M. Maier. 2000. Protective effect of a rhamnolipid biosurfactant on naphthalene biodegradation in the presence of cadmium. Arizona-Nevada Branch of the American Society for Microbiology Meeting. Tucson, AZ, Feb. 19.
270. Bodour, A.A., J-M. Wang, M.L. Brusseau and R. M. Maier. Development of an indigenous phenanthrene degrading community during long-term exposure to phenanthrene. Arizona-Nevada Branch of the American Society for Microbiology Meeting. Tucson, AZ, Feb. 19.

271. Kight, W.B. and R.M. Maier. 2000. Effects of hexadecane as a non aqueous phase liquid (NAPL) on biodegradation of phenanthrene. Arizona-Nevada Branch of the American Society for Microbiology Meeting. Tucson, AZ, Feb. 19.
272. Rogers T. Jr., J.W. Neilson, and R.M. Maier. 2000. Effect of rhamnolipid on the sensitivity of *Pseudomonas aeruginosa* to hydrophobic antibiotics. Arizona-Nevada Branch of the American Society for Microbiology Meeting. Tucson, AZ, Feb. 19.
273. McCray J.E., G-Y. Bai, M.L. Brusseau, and R.M. Maier. 1999. Nonideal biosurfactant-enhanced solubilization of nonaqueous phase liquid mixtures. GSA National Meeting Denver, CO, Oct 25-28.
274. Neilson, J.W. and R.M. Maier. 1999. The effect of dissolved oxygen tension on expression of luxCDABE and NAH7 genes in *Pseudomonas putida* RB1353 (NAH7, pUTK9). 99th General American Society for Microbiology Meeting, Chicago, IL, May 30 - June 3.
275. Curtis, S.J. and R.M. Maier. 1999. The effect of a rhamnolipid biosurfactant on the biodegradation of a mixture of organics by indigenous soil microorganisms. 99th General American Society for Microbiology Meeting, Chicago, IL, May 30 - June 3.
276. Jordan. F.L., S.K. Snyder, M.L. Brusseau, and R.M. Maier. 1999. Substrate-induced bacterial elution from porous media under saturated flow conditions. 99th General American Society for Microbiology Meeting, Chicago, IL, May 30 - June 3.
277. Bodour, A.A. and R.M. Maier. 1999. An ecological survey of biosurfactant-producing microorganism in arid southwestern soils. 99th General American Society for Microbiology Meeting, Chicago, IL, May 30 - June 3.
278. Drees, K.P. and R.M. Maier. 1999. Determination of the genetic potential for rhamnolipid production in soil and epiphitic bacterial communities. 99th General American Society for Microbiology Meeting, Chicago, IL, May 30 - June 3.
279. Sandrin, T.R. and R.M. Maier. 1999. Divalent cations protect against cadmium toxicity during biodegradation of naphthalene. 99th General American Society for Microbiology Meeting, Chicago, IL, May 30 - June 3.
280. Marlowe, E.M. R.M. Maier, and I.L. Pepper. 1999. An evaluation of bacterial gene expression during the biodegradation of organic contaminants. 99th General American Society for Microbiology Meeting, Chicago, IL, May 30 - June 3.
281. Maslin, P. and R.M. Maier. 1999. Biosurfactant-induced protection against cadmium toxicity during phenanthrene degradation in soil. 99th General American Society for Microbiology Meeting, Chicago, IL, May 30 - June 3.
282. Snyder, S.K., M.L. Brusseau, F.L. Jordan, and R.M. Maier. 1998. The impact of bacterial cell growth and microbial metabolic lag on the transport and biodegradation of organic compounds. Amer. Geophys.Union Meeting, San Francisco, CA, Dec 6-10.
283. Ochoa-Loza, F. and R.M. Maier. 1998. Effect of soil constituents on sorption of a rhamnolipid biosurfactant. United States/Mexico Conference on Hazardous Waste Management and Technologies, Tucson, AZ, August 9-11.
284. Sandrin, T.R., A.M. Chech, and R.M. Maier. 1998. Protective effect of a rhamnolipid biosurfactant on naphthalene biodegradation in the presence of cadmium. United States/Mexico Conference on Hazardous Waste Management and Technologies, Tucson, AZ, August 9-11.
285. Gage, D. and R.M. Maier. 1998. Application of rhamnolipid biosurfactant for remediation of soil contaminated with mixed metals. United States/Mexico Conference on Hazardous Waste Management and Technologies, Tucson, AZ, August 9-11.
286. Marlowe, E.M., R.M. Miller-Maier, and I.L. Pepper. 1998. An assay for evaluating gene expression as an index of bioavailability. 98th General American Society for Microbiology Meeting, Atlanta, GA, May 17-21.
287. Jordan, F.L. and R.M. Miller-Maier. 1998. Visualization of bacterial spatial distribution on soil surfaces by gene probing. 98th General American Society for Microbiology Meeting, Atlanta, GA, May 17-21.

288. Al-Tahhan, R.A. and R.M. Miller-Maier. 1998. Cell surface hydrophobicity of *Pseudomonas aeruginosa*: effects of monorhamnolipid and substrate on fatty acid and LPS content. 98th General American Society for Microbiology Meeting, Atlanta, GA, May 17-21.
289. Neilson, J.W., S.A. Pierce, and R.M. Miller-Maier. 1998. Factors influencing the expression of luxCDABE and NAH7 genes in Pseudomonas putida RB1353. 98th General American Society for Microbiology Meeting, Atlanta, GA, May 17-21.
290. Gage-Fasse, D., J.L Torrens, and R.Miller-Maier. 1998. Residual toxicity in various soils following biosurfactant treatment to remove metal contamination. Symposium on Risk Considerations for Environmental Health and Safety, Tucson, AZ, Jan 8-9.
291. Ochoa-Loza, F. and R. M. Miller-Maier. 1998. Competition of naturally occuring metals and metal contaminants for complexation by a rhamnolipid biosurfactant. Symposium on Risk Considerations for Environmental Health and Safety, Tucson, AZ, Jan 8-9.
292. Chech, A. and R.M. Miller. 1997. Effect of a rhamnolipid biosurfactant on cadmium toxicity during biodegradation of naphthalene. 97th General American Society for Microbiology Meeting, Miami Beach, FL, May 4-8.
293. Al-Tahhan, R. and R.M. Miller. 1997. Effect of carbon source and a biosurfactant on *Pseudomonas aeruginosa* cell surface hydrophobicity and cell lipids. 97th General American Society for Microbiology Meeting, Miami Beach, FL, May 4-8.
294. Bodour, A. and R.M. Miller. 1997. Semi-quantitative screening for biosurfactant production by environmental isolates. 97th General American Society for Microbiology Meeting, Miami Beach, FL, May 4-8.
295. Pittner, S.A.J. and R.M. Miller. 1997. Effect of a rhamnolipid biosurfactant on cadmium toxicity in soil. 97th General American Society for Microbiology Meeting, Miami Beach, FL, May 4-8.
296. Jutras, E.M., R.M. Miller and I.L. Pepper. 1997. 16S probes for the identification of bacteria that degrade BTEX. 97th General American Society for Microbiology Meeting, Miami Beach, FL, May 4-8.
297. Ochoa-Loza, F. and R.M. Miller. 1997. Evaluation of factors that affect rhamnolipid performance in removal of metals from soil. Superfund Basic Research Program Meeting, Chapel Hill, NC, Feb. 23-26.
298. Torrens, J., D.C. Herman, and R.M. Miller. 1997. Biosurfactant-enhanced removal of cadmium from various soils under saturated flow conditions. Superfund Basic Research Program Meeting, Chapel Hill, NC, Feb. 23-26.
299. Miller, R.M., M.E. Stanghellini, Y. Zhang, D.H. Kim, and S.L. Rasmussen. 1996. Rhamnolipid biosurfactants as biocontrol products for zoosporic plant pathogens. 96th General American Society for Microbiology Meeting, New Orleans, LA, May 19-23.
300. Jutras, E.M., R.M. Miller, and I.L. Pepper. 1996. Comparison of 16S rDNA RFLP analysis and AP-PCR for the identification of dominant bacteria in a microbial consortia that biodegrades TPH and BTEX. 96th General American Society for Microbiology Meeting, New Orleans, LA, May 19-23.
301. Huber, M.S., Q. Hu, M.L. Brusseau and R.M. Miller. 1996. Spatial distribution of bacteria in 2, 4-D-contaminated soil columns containing macropores. 96th General American Society for Microbiology Meeting, New Orleans, LA, May 19-23.
302. Miller, J.L., M.A. Sardo, T.L. Thompson, and R.M. Miller. 1996. Differential effects of application solvents on various populations of soil bacteria. 96th General American Society for Microbiology Meeting, New Orleans, LA, May 19-23.
303. Zhang, Y., and R.M. Miller. 1996. Production of rhamnolipid biosurfactants by nonpathogenic *Pseudomonas* strains. 96th General American Society for Microbiology Meeting, New Orleans, LA, May 19-23.
304. Huber, M.S., B.D. Zenner, E.M. Marlowe, I.L. Pepper, and R.M. Miller. 1995. The use of AP-PCR to simultaneously identify multiple bacterial genomes in one sample. 95th General American Society for Microbiology Meeting, Washington, DC, May 21-25.

305. Herman, D.C., J.F. Artiola, and R.M. Miller. 1995. Removal of metals from soil by an anionic rhamnolipid biosurfactant. 95th General American Society for Microbiology Meeting, Washington, DC, May 21-25.
306. Zhang, Y. and R.M. Miller. 1995. Effect of *Pseudomonas* rhamnolipid surfactants on hexadecane degradation by hydrophilic and hydrophobic pseudomonads. 95th General American Society for Microbiology Meeting, Washington, DC, May 21-25.
307. Jutras, E.M., E.M. Marlowe, C. Smart, R.M. Miller and I.L. Pepper. 1995. Identification and evaluation of gasoline degraders using arbitrarily primed PCR. The Third International Symposium on In Situ and On-Site Bioreclamation, San Diego, CA, April 24-27.
308. Miller, R.M., G-Y. Bai, Y. Zhang, and M.L. Brusseau. 1995. Biosurfactant-enhanced removal of non-aqueous phase liquids from soil. The Third International Symposium on In Situ and On-Site Bioreclamation, San Diego, CA, April 24-27.
309. Bai, G-Y., M.L. Brusseau, and R.M. Miller. 1995. Biosurfactant-enhanced removal of residual hexadecane from soil. 209th National Meeting of the American Chemical Society, Anaheim, CA, April 2-7.
310. Al-Tahhan, R. and R.M. Miller. 1995. Effect of dissolution rate on biodegradation of organic compounds. Arizona Student Conference on Environmental Science and Engineering, Tucson, AZ, March 10-11.
311. Miller, J., M. Sardo, T. Thompson, and R.M. Miller. 1995. Coupled biotransformation of nitrogen and organic compounds in soil. Arizona Student Conference on Environmental Science and Engineering, Tucson, AZ, March 10-11.
312. Jutras, E.M., C. Smart, I.L. Pepper, and R.M. Miller. 1995. Fingerprinting bacterial petroleum degraders. Arizona Student Conference on Environmental Science and Engineering, Tucson, AZ, March 10-11.
313. Bai, G-Y., M.L. Brusseau, and R.M. Miller. 1995. Biosurfactant-enhanced removal of residual hexadecane from soil. Arizona Student Conference on Environmental Science and Engineering, Tucson, AZ, March 10-11.
314. Brusseau, M.L. and R.M. Miller. 1994. The use of biosurfactants for enhancing subsurface remediation. Ground Water Remediation: Existing Technology and Future Direction, 46th Annual NGWA Convention, Las Vegas, Nevada, Oct 9-12.
315. Zhang, Y. and R.M. Miller 1994. Structure-function analysis of rhamnolipid biosurfactant solubilization of aliphatic and aromatic hydrocarbons. 94th General American Society for Microbiology Meeting, Las Vegas, Nevada, May 22-26.
316. Huber, M.S. and R.M. Miller. 1994. A continuous-flow apparatus for removal of microorganisms from soil using electricity. 94th General American Society for Microbiology Meeting, Las Vegas, Nevada, May 22-26.
317. Jutras, E.M., R.M. Miller, and I.L. Pepper. 1994. Characterization of gasoline degraders in soil community DNA using direct lysis and RAPD analysis. 94th General American Society for Microbiology Meeting, Las Vegas, Nevada, May 22-26.
318. Champion, J.T., H.Tan, M.L. Brusseau, J.F. Artiola, and R.M. Miller. 1994. Biosurfactant-enhanced desorption of cadmium from soil. Annual Americal Chemical Society Meeting. San Diego, CA, March 13-18.
319. Bai, G-Y., M.L. Brusseau, and R.M. Miller. 1994. The influence of biosurfactant on immiscible liquid displacement in sand. Annual Americal Chemical Society Meeting. San Diego, CA, March 13-18.
320. Milczarek, M., Brusseau, M.L., Artiola, J.F., Wang, W.Z., and Miller, R.M. 1994. Sorption and transport phenomena of humic substances through soil. Presented at the American Chemical Society National Meetings, Environmental Chemistry Division, San Diego, CA, March 13-18, 1994.
321. Wang, W. J.F. Artiola, M.L. Brusseau, and R.M. Miller. 1994. Use of calcium and fulvic acid to facilitate transport of cadmium in soil. Annual American Chemical Society Meeting. San Diego, CA, March 13-18.

322. Jutras, E.M., R.M. Miller, and I.L. Pepper. 1993. Evaluation of microbial diversity of rapd analysis of soil community dna. 85th Annual American Society of Agronomy Meeting. Cincinnati, OH, November 7-12.
323. Milczarek, M.A., M.L. Brusseau, J.F. Artiola, and R.M. Miller. 1993. Facilitated transport of metals by humic substances - theory vs. reality. 85th Annual American Society of Agronomy Meeting. Cincinnati, OH, November 7-12.
324. Zhang, Y. and R.M. Miller. 1993. Effect of a *Pseudomonas* rhamnolipid biosurfactant on cell hydrophobicity and biodegradation of octadecane. 93rd General American Society for Microbiology Meeting. Atlanta, GA, May 16-20.
325. Champion, J.T., J.C. Gilkey, V.A. Lindley, and R.M. Miller. 1993. Electron microscopy of rhamnolipid (biosurfactant) morphology: effects of ph, cadmium, and octadecane. 93rd General American Society for Microbiology Meeting. Atlanta, GA, May 16-20.
326. Tan, H., J.F. Artiola, M.L. Brusseau, J.T. Champion, and R.M. Miller. 1992. Bioremediation of cadmium by complexation with a biosurfactant. 84th Annual American Society of Agronomy Meeting. Minneapolis, MN, November 1-6.
327. Brusseau, M.L., J.F. Artiola, R.M. Miller, M.A. Milczarek, and H. Tan. 1992. An integrated chemical and biological technique for removal of heavy metals from contaminated soils and aquifers. Subsurface Restoration Conference, Dallas, TX June 21-24.
328. Zhang, Y. and R.M. Miller. 1992. Biosurfactant enhanced biodegradation of octadecane (C_{18}). 68th Annual Meeting of the Southwestern and Rocky Mountain Division of the American Association for the Advancement of Science, Tucson, AZ.
329. Zhang, Y. and R.M. Miller. 1992. Enhancement of octadecane biodegradation by a *Pseudomonas* rhamnolipid surfactant. 92nd General American Society for Microbiology Meeting, New Orleans, LA, May 26-30.
330. Estrella, R., Brusseau, M.L., Pepper, I.L., Wierenga, P.J., and Miller, R.M. 1992. Quantification of 2,4-d biodegradation and sorption during transport through soil columns. Presented at the National Meeting of the Southwestern and Rocky Mountain Div. of the Amer. Assoc. Advancement Science, Tucson, AZ, May 17-21, 1992.
331. Estrella, R. M.L. Brusseau, P.J. Wierenga and R.M. Miller. 1992. Biodegradation of 2,4-D in batch and column experiments under different soil moisture conditions. 92nd General American Society for Microbiology Meeting, New Orleans, LA, May 26-30.
332. Estrella, R., R.M. Miller, M.L. Brusseau, P.J. Wierenga, and I.L. Pepper. 1991. Quantifying 2,4-d sorption and degradation during transport through soil columns. 83rd Annual American Society of Agronomy Meeting, Denver, CO, Oct. 27 - Nov. 1.
333. Miller, R.M. and J.A. Thomas. 1990. Reduction of protein mixed-disulfides by protein dethiolases: quantitation of enzyme activity with s-glutathiolated protein substrates. Gordon Research Conference on Oxygen Radicals in Biology, Ventura, CA.
334. Thomas, J.A., R.M. Miller, C-H. Jung, and S. Ashraf. 1990. The role of thioreedoxin and glutaredoxin in reduction of protein sulfhydryls (dethiolation). Free Radical Biology and Medicine (Abstracts of "Oxidative Damage and Repair" the 5th Biennial Meeting of the International Society for Free Radical Research. 9:89.
335. Miller, R.M. and J.A. Thomas. 1990. Dethiolase activity of *Escherichia coli* thioredoxin. 90th Annual American Society for Microbiology Meeting. Anaheim, CA, May 13-17.
336. Miller, R.M. 1988. Liposome enhanced bacterial metabolism of solid n-alkanes. 88th Annual American Society for Microbiology Meeting. Miami, FL, May 8-13.
337. Miller, R.M., J.D. Rosen, and R. Bartha. 1987. Sequential degradation of chlorophenols by photolytic and microbial treatment. Society of Industrial Microbiology Meeting, Baltimore, MD.
338. J.D. Rosen, A. Marei, R. Bartha, and R.M. Miller. 1986. Biological treatment of chemical wastes pretreated with uv irradiation. International Conference on Biological Treatment of Water Waste, Washington D.C.

339. R.M. Miller, A. Marei, J.D. Rosen, and R. Bartha. 1986. Photolysis primes recalcitrant xenobiotics for biodegradation. Annual Meeting of Theobald Smith Society and the 86th Annual American Society for Microbiology Meeting, Washington, D.C.