

October 30, 2018

CURRICULUM VITAE
Rolf U. Halden, Ph.D., P.E.
Tenured Full Professor

BUSINESS ADDRESS Arizona State University
School of Sustainable Engineering and the Built Environment
Biodesign Institute, Center for Environmental Health Engineering
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ASU CENTER & INSTITUTE Biodesign Institute, Tempe, AZ
Founding Director, Center for Environmental Health Engineering

AFFILIATIONS Tenured Professor, School of Sustainable Engineering and the Built Environment, Arizona State University
School of Biological and Health Systems Engineering (Affiliate), ASU
School of Molecular Sciences (Affiliate), ASU
Lincoln Center for Applied Ethics (Affiliate), ASU
Senior Sustainability Scientist, ASU Global Institute of Sustainability, ASU
Center for Biodiversity Outcomes, (Affiliate), ASU
Honors Faculty, Barrett Honors College, Arizona State University
Faculty & Chair of Admission, Biological Design Graduate Program, ASU
Founding Director, Environmental Health Engineering Mass Spectrometry

EDUCATION Ph.D., 1997, (Environmental Engineering) Department of Civil Engineering, University of Minnesota, Minneapolis, MN
M.S., 1994, (Environmental Engineering) Department of Civil Engineering, University of Minnesota, Minneapolis, MN
M.S., 1992 (Diploma, Biology), Technical University of Braunschweig, Minors: Microbiology, Biotechnology & Sanitary Engineering
B.S., 1986 (Pre-diploma, Biology), Technical University of Braunschweig

ACADEMIC ASU EXPERIENCE Founding Director, Center for Environmental Health Engineering (CEHE), The Biodesign Institute, 6/2012 – Present
Founding Director, Environmental Health Engineering Mass Spectrometry Facility, 7/2013 – Present
Founding Director, Human Health Observatory (HHO), 7/2012 – Present
Chair of Admissions for the University-wide Biological Design Program at Arizona State University, 2012 – 2017
Leader, Biosecurity Thrust Area, Security and Defense Systems Initiative, ASU, 6/2012 – 12/2015
Barrett Honors Faculty, 2012 – Present
Tenured Full Professor, School of Sustainable Engineering and the Built Environment, Arizona State University, 2011 – Present
Senior Sustainability Scientist, Global Institute of Sustainability, ASU, 2010 – Present
Adjunct Faculty, Johns Hopkins University, Bloomberg School of Public Health, Baltimore, MD, 2008 – 2014
Special Government Employee, Food and Drug Administration, 2005 – 2017.
Interim Co-Director, Center for Health Information & Research (CHiR), 2011 – 2012

Associate Director, Swette Center for Environmental Biotechnology, ASU Biodesign Institute, 2011 – 2012
 Assistant Director, Center for Environmental Biotechnology, ASU Biodesign Institute, 2009 – 2011
 Tenured Associate Professor, School of Sustainable Engineering and the Built Environment, Arizona State University, 12/2007 – 7/2011
 Associate Professor, Department of Environmental Health Sciences, Johns Hopkins Bloomberg School of Public Health, 2007
 Joint Appointment in the Department of Geography and Environmental Engineering, Johns Hopkins University, 2007
 Assistant Professor, Department of Environmental Health Sciences, Johns Hopkins Bloomberg School of Public Health, Johns Hopkins University, 2001 – 2007
 Postdoctoral Researcher, University of California, Lawrence Livermore National Laboratory, Environmental Protection Department, Livermore, CA 1997-1998
 Research & Teaching Fellow/Assistant, Department of Civil Engineering, University of Minnesota, Twin Cities, MN. Supervisor: Dr. Daryl Dwyer. 1/1993 – 4/1997
 Research Associate, Helmholtz Centre for Infection Research (formerly German National Institute for Biotechnology (GBF), Braunschweig, Germany. Principal Responsibilities: Microbial Ecology. Supervisor: Dr. Daryl F. Dwyer. 1/1992 – 7/1992
 Research Assistant, Helmholtz Centre for Infection Research, (formerly German National Institute for Biotechnology (GBF), Braunschweig, Germany. Principal Responsibilities: Bioreactors. Supervisor: Dr. Joachim Klein. 1/1991 – 12/1991

INDUSTRIAL EXPERIENCE

NIH Environmental Health Sciences (EHS) Disaster Research Response Network Member. 2015 – Present
 Co-Founder and Chief Technical Officer, In Situ Well Technologies (ISW), LLC Startup Company, ASU/AzTE, 2011 – 2018
 Special Government Employee, Food and Drug Administration, 2005 – 2017.
 Project Engineer & Environmental Scientist, Environmental Protection Department, Lawrence Livermore National Laboratory, Livermore, CA. Principal Responsibilities: Design and Management of Subsurface Remediation Activities with a Cumulative Budget of \$6M. Supervisor: Dr. John Ziagos. 1998 – 2001
 Postdoctoral Researcher, University of California, Lawrence Livermore National, Laboratory, Environmental Protection Department, Livermore, CA, 1997 – 1998
 Research Associate, Helmholtz Centre for Infection Research (formerly German National Institute for Biotechnology (GBF), Braunschweig, Germany. Principal Responsibilities: Microbial Ecology. Supervisor: Dr. Daryl F. Dwyer. 1/1992 – 7/1992
 Research Assistant, Helmholtz Centre for Infection Research, (formerly German National Institute for Biotechnology (GBF), Braunschweig, Germany. Principal Responsibilities: Bioreactors. Supervisor: Dr. Joachim Klein. 1/1991 – 12/1991

PROFESSIONAL LICENSURE

Professional Environ Engineer, AZ Lic. #51849, 11/23/2010 – 12/31/2019
 Professional Environmental Engineer, Minnesota Lic. #25155, 1997 – Present
 Supervisor Certificate, 40-Hour SARA/OSHA 8CCR5192(e)(4)
 Management Certificate, University of the Pacific, 2000

Engineer-in-Training, Minnesota, 1996 - 1997

AREAS OF EXPERTISE

TEACHING

- Environmental Health
- Environmental Engineering & Remediation
- Environmental Analytical Chemistry
- Biological Design
- Public Health
- Human Exposure and Risk Assessment
- Environmental Policy
- Green Chemistry and Engineering

AREAS OF EXPERTISE

RESEARCH & PRACTICE

- Environmental Remediation
- Development of Diagnostic Tools and Monitoring Devices
- Environmental Exposure and Risk Assessment
- Environmental Policy
- Sustainability Science and Engineering

AWARDS & HONORS

- 2018 Leadership Award, Arizona State University
- 2018 Rocky Mountain Emmy Award, Best Commercial – Single Spot, Director: Josh Soskin
- 2018 Invited Member, Editorial Board, Current Opinion in Environmental Science & Health
- 2017 Invited Fellow, Institute for the Future of Innovation in Society, ASU (2017 -)
- 2017 – Lincoln Center Applied Ethics, Affiliated Faculty
- 2015-7 Invited Member, Editorial Advisory Board, ACS Journal of Proteome Research
- 2014 – Invited Expert for Media Relations, Expert Program, American Chemical Society (ACS)
- 2012-4 Appointed National Leader of R01 Working Group of the NIEHS Superfund Program
- 2011 Leroy E. Burney Lecturer, Johns Hopkins School of Public Health
- 2011 List of 20 Public Health Experts Worth Knowing
- 2010 Senior Sustainability Scientist, Global Institute of Sustainability, ASU. 2010 – Present
- 2010 Award for Research Excellence, Arizona BioIndustry Association's BIOFEST 2010, Nominee and Finalist
- 2010 Biodesign Impact Accelerator Program, Selected Startup Company, ASU
- 2010 Faculty Honoree, School of Sustainable Engineering and the Built Environment, ASU
- 2007 Faculty Research Initiative Award, Johns Hopkins University
- 2005 Faculty Research Initiative Award, Johns Hopkins University
- 2002 Faculty Innovation Award, Johns Hopkins University
- 2000 Two Recognition Awards, Lawrence Livermore National Laboratory
- 1998 American Permanent Residency National Interest Waiver, LLNL
- 1997 American Society for Microbiology, Travel Grant
- 1996 Dissertation Fellowship, Outstanding Ph.D. Student, University of Minnesota

PUBLICATIONS

Refereed Journal Publications (* Corresponding Author)

1. Chen, J., Hartmann, E. M., Kline, J., Wymelenberg, K. V. D., Halden, R. U. 2018. Assessment of Human Exposure to Triclocarban, Triclosan and Five Parabens in U.S. Indoor Dust Using Dispersive Solid Phase Extraction Followed by Liquid Chromatography Tandem Mass Spectrometry. *Journal of Hazardous Materials*. Accepted 5 Aug 2018.

2. Gushgari, A. J., Driver, E. M., Steele, J. C., Halden, R. U. 2018. Tracking Narcotics Consumption at a Southwestern U.S. University Campus by Wastewater-based Epidemiology. *Journal of Hazardous Materials*. 359: 437-444. 5 Oct 2018. <https://doi.org/10.1016/j.jhazmat.2018.07.073>
3. Magee, H. Y., Maurer, M. M., Cobos, A., Pycke, B. F. G., Venkatesan, A. K., Magee, D., Scotch, M., Halden, R. U. 2018. U.S. Nationwide Reconnaissance of Ten Infrequently Monitored Antibiotics in Municipal Biosolids. *Science of the Total Environment*. 17 June 2018. <https://doi.org/10.1016/j.scitotenv.2018.06.206>
4. Dang, V. D., Kroll, K. J., Supowit, S. D., Halden, R. U., Denslow, N. D. 2018. Activated Carbon as a Means of Limiting Bioaccumulation of Organochlorine Pesticides, Triclosan, Triclocarban, and Fipronil from Sediments Rich in Organic Matter. *Chemosphere* (In Press). <https://doi.org/10.1016/j.chemosphere.2018.01.062>. PMC5811353
5. Halden, R. U. et al. 2017. The Florence Statement on Triclosan and Triclocarban. *Environmental Health Perspectives* 125(6): UNSP064501. [PMC5644973](https://pubmed.ncbi.nlm.nih.gov/35644973/)
6. Venkatesan, A. K., Halden, R. U. 2017. Modeling the pH-mediated Extraction of Ionizable Organic Contaminants to Improve the Quality of Municipal Sewage Sludge Destined for Land Application. *Science of the Total Environment*. 550: 736-741. doi: 10.1016/j.scitotenv.2016.01.119 [PMC4769932](https://pubmed.ncbi.nlm.nih.gov/2769932/)
7. Gushgari, A. J., Halden, R. U., Venkatesan, A. K. 2017. Occurrence of N-nitrosamines in US freshwater sediments near wastewater treatment plants. *Journal of Hazardous Materials*. 323: 109-115. Doi: 10.1016/j.hazmat.2016.03.091 [PMID: 27067539](https://pubmed.ncbi.nlm.nih.gov/27067539/)
8. Chen, J., Pycke, B. F. G., Brownawell, B. J., Kinney, C. A., Furlong, E. T., Kolpin, D. W., Halden, R. U. 2017. Occurrence, temporal variation and estrogenic burden of five parabens in sewage sludge collected across the United States. *Science of the Total Environment*. 593: 368-374. DOI: 10.1016/j.jhazmat.2016.03.028 [PMC5018415](https://pubmed.ncbi.nlm.nih.gov/25018415/)
9. Wells E.M, J. B. Herbstman, Y. H. Lin, J. R. Hibbeln, R. U. Halden, F. R. Witter, L R. Goldman 2017. Methyl mercury, but not inorganic mercury, associated with higher blood pressure during pregnancy. *Environmental Research* 154: 247-252. doi: 10.1016/j.envres.2017.01.013 [PMC5328834](https://pubmed.ncbi.nlm.nih.gov/28328834/)
10. Geer, L. A., Pycke, F. G., Waxenbaum, J., Sherer, D. M. Abulafia, O., Halden, R. U. 2017. Association of birth outcomes with fetal exposure to parabens, triclosan and triclocarban in an immigrant population in Brooklyn, New York. *J Hazardous Materials*. 323: 177-183. [PMC4123932](https://pubmed.ncbi.nlm.nih.gov/29123932/)
11. Driver, E. M., J. Roberts, P. Dollar, M. Charles, P. Hurst and R. U. Halden*. 2017. Comparative Meta-Analysis and Experimental Kinetic Investigation of Column and Batch Bottle Microcosm Treatability Studies Informing *In Situ* Groundwater Remedial Design. *J. Haz. Mat.* 323: 377-385. [PMID: 27207379](https://pubmed.ncbi.nlm.nih.gov/27207379/), [PMC5097027](https://pubmed.ncbi.nlm.nih.gov/25097027/)
12. Pirini, F., L. R. Goldman, E. Soudry, R. U. Halden, F. Witter, D. Sidransky and R. Guerrero-Preston*. 2017. Prenatal exposure to tobacco smoke leads to increased mitochondrial DNA content in umbilical cord serum associated to reduced gestational age, *International Journal of Environmental Health Research* 27(1):52-57. doi: 10.1080/09603123-2016-1268677 [PMID: 28002977](https://pubmed.ncbi.nlm.nih.gov/28002977/), [PMC5532520](https://pubmed.ncbi.nlm.nih.gov/25532520/)
13. Jirjies, S., G. Wallstrom, R. U. Halden and M. Scotch. 2016. pyJacqQ: Python Implementation of Jacquez's Q-Statistics for Space-Time Clustering of Disease Exposure in Case-Control Studies. *J. Stat Software* 2016 (74) doi: 10.18637/jss.v074.i06

14. Sadaria, A. M., R. Sutton, K. Moran, J. Teerlink, J. Brown, and R. U. Halden. 2017. Passage of Fiproles and Imidacloprid from Urban Pest Control Uses Through Wastewater Treatments Plants in Northern California, *Environ Toxicol Chem* 36(6): 1473-1482. PMID: 27808432
15. Dang, V. D., K. J. Kroll, S. D. Supowit, R. U. Halden and N. D. Denslow. 2016. Tissue Distribution of Organochlorine Pesticides in Largemouth Bass (*Micropterus salmoides*) from Laboratory Exposure and a Contaminated Lake, *Environ. Pollut.*, 2016 Sep;216:988-83. doi: 10.1016/j.envpol.2016.06.061 PMID: 27394080, PMC5014564
16. Sadaria, A. M., S. D. Supowit and R. U. Halden*. 2016. Mass Balance Assessment for Six Neonicotinoid Insecticides During Conventional Wastewater and Wetland Treatment: Nationwide Reconnaissance in U. S. Wastewater. *Environ. Sci. Technol.*, 2016, 50(12), pp 6199-6206. doi: 10.1021/acs.est.6b01032 PMID: 27196423, PMC4930273
17. Meng, Z., A. K. Venkatesan, Y. Ni, J. Steele, L. Wu, A. Bignert, A. Bregman, and R. U. Halden. 2016. Organic Contaminants in Chinese Sewage Sludge: A Meta-Analysis of Literature of the Past 30 Years. *Environ. Sci. Technol.* 50(11):5454-66. Doi: 10.1021/acs.est.5b05583 PMID: 27144960
18. Halden, R. U. 2016. Commentary: Lessons Learned from Probing for Impacts of Triclosan and Triclocarban on Human Microbiomes. *mSphere*. 2016 May 18:1(3). pii: e00089-1618 May 2016, doi: 10.1128/mSphere.00089-16 PMID: 27306705 <http://msphere.asm.org/content/1/3/e00089-16>, PMC4888884
19. Gushgari, A. J., R. U. Halden* and A. K. Venkatesan. 2016. Occurrence of N-Nitrosamines in U.S. Freshwater Sediments near Wastewater Treatment Plants. *J. Haz. Mat.* 2016 Mar 31. pii: S0304-3894(16)30326-0. doi: 10.1016/j.jhazmat.2016.03.091 PMID: 27067539
20. Geer, L., B. F. G. Pycke, J. Waxenbaum, D. M. Sherer, O. Abulafia and R. U. Halden. 2016. Association of Birth Outcomes with Fetal Exposure to Parabens, Triclosan and Triclocarban in an Immigrant Population in Brooklyn, New York. *J. Haz. Mat.* 2016 Mar 11. pii: S0304-3894(16)30250-3. doi: 10.1016/j.jhazmat.2016.03.028. PMID: 27156397, PMC5018415
21. Roll, I. B., E. M. Driver and R. U. Halden. 2016. Apparatus and Method for Time-integrated, Active Sampling of Contaminants in Fluids Demonstrated by Monitoring of Hexavalent Chromium in Groundwater. *Sci. Total Environ.* 556: 45-52. doi: 10.1016/j.scitotenv.2016.03.011. PMID: 26971208, PMC4826302
22. Roll, I. B. and R. U. Halden. 2016. Critical Review of Factors Governing Data Quality of Integrative Samplers Employed in Environmental Water Monitoring. *Water Res.* 94:200-207 doi: 10.1016/j.watres.2016.02.048. PMID: 26945963, PMC4822337
23. Heckenbach, M. E., F. N. Romero, M. D. Green and R. U. Halden. 2016. Meta-Analysis of Ionic Liquid Literature and Toxicology. *Chemosphere* 150:266-274 doi: 10.1016/j.chemosphere.2016.02.029. PMID: 26907595, PMC4789176
24. Wells, E. M., J. B. Herbstman, Y. H. Lin, J. Jarrett, C. Verdon, C. Ward, K. L. Caldwell, J. R. Hibbeln, F. R. Witter, R. U. Halden, L. R. Goldman. 2016. Cord Blood Methylmercury and Fetal Growth Outcomes in Baltimore Newborns: Potential Confounding and Effect Modification by Omega-3 Fatty Acids, Selenium, and Sex. *Environ. Health Perspect*, 124(3):373-379. doi: 10.1289/ehp.1408596 PMID: 26115160, PMC4786979
25. Supowit, S. D., I. B. Roll, V. D. Dang, K. J. Kroll, N. D. Denslow and R. U. Halden. 2016. Active Sampling Device for Determining Pollutants in Surface and Pore Water – the *In Situ* Sampler for

Biphasic Water Monitoring. *Scientific Reports* 6: Article 21886. doi: 10.1038/srep21886. PMID: 26905924, PMC4764808

26. Dang, V. D., K. J. Kroll, S. D. Supowit, R. U. Halden and N. D. Denslow.* 2016. Bioaccumulation of Legacy and Emerging Organochlorine Contaminants in *Lumbriculus variegatus*. *Archives of Environmental Contamination and Toxicology*, 71(1):60-69. PMID: 26833202
27. Venkatesan, A. K. and R. U. Halden. 2016. Modeling the pH-mediated extraction of ionizable organic contaminants to improve the quality of municipal sewage sludge destined for land application. *Sci. Total Environ.* 550:736-741. doi: 10.1016/j.scitotenv.2016.01.119. PMID: 26849337, PMC4769932
28. Supowit, S. D., A. M. Sadaria, E. J. Reyes, and R. U. Halden. 2016. Mass Balance of Fipronil and Total Toxicity of Fipronil-Related Compounds in Process Streams during Conventional Wastewater and Wetland Treatment. *Environ. Sci. Technol.* 50(3):1519-1526. doi: 10.1021/acs.est.5b04516. PMID: 26710933, PMC4740881
29. Venkatesan, A. K., A. M. Hamdan, V. M. Chavez, J. D. Brown, R. U. Halden*. 2016. Mass Balance Model for Sustainable Phosphorus Recovery in a U. S. Wastewater Treatment Plant. *J. Environ. Qual.* 45(1):84-89. doi: 10.2134/jeq2014.11.0504. PMID: 26828163
30. Pycke, B. F. G, L. A. Geer, M. Dalloul, O. Abulafia, R. U. Halden.* 2015. Maternal and fetal exposure to parabens in a multiethnic urban U. S. population. *Environ. Int.* 84:193-200. doi: 10.1016/j.envint.2015.08.012. PMID: 26364793, PMC4613774
31. Bakulski, K. M., H. Lee, J. I. Feinberg, E. M. Wells, S. Brown, J. B. Herbstman, F. R. Witter, R. U. Halden, K. Caldwell, M. E. Mortensen, A. E. Jaffe, J. Moye Jr., L. E. Caulfield, Y. Pan, L. R. Goldman, A.P. Feinberg, M. D. Fallin. 2015. Prenatal mercury concentration is associated with changes in DNA methylation at TCEANC2 in newborns. *Int. J. Epidemiol.* 44(4):1249-62. doi: 10.1093/ije/dyv032. PMID: 25906783, PMC4588863
32. Yu, X. H., J. C. Xue, H. Yao, Q. Wu, A. K. Venkatesan, R. U. Halden and K. Kannan. 2015. Occurrence and estrogenic potency of eight bisphenol analogs in sewage sludge from the U.S. EPA targeted national sewage sludge survey. *J. Hazard. Mater.* 299:733-739. doi: 10.1016/j.jhazmat.2015.07.012. PMID: 26298263
33. Venkatesan, A. K., H. Y. Done, and R. U. Halden.* 2015. United States National Sewage Sludge Repository at Arizona State University – A New Resource and Research Tool for Environmental Scientists, Engineers, and Epidemiologists. *Environ. Sci. Pollut. Res. Int.* 22(3):1577-1586. doi: 10.1007/s11356-014-2961-1. PMID: 24824503, PMC4232481
34. Venkatesan, A. K., R. U. Halden.* 2015. Effective Strategies for Monitoring and Regulating Chemical Mixtures and Contaminants Sharing Pathways of Toxicity. *Int. J. Environ. Res. Public Health* 12(9):10549-10557; doi: 10.3390/ijerph120910549. PMID: 26343697, PMC4586627
35. Barbosa, G. L., F. D. A. Gadelha, N. Kublik, A. Proctor, L. Reichelm, E. Weissinger, G. M. Wohlleb and R. U. Halden*. 2015. Comparison of Land, Water, and Energy Requirements of Lettuce Grown Using Hydroponic vs. Conventional Agricultural Methods. *Int. J. Environ. Res. Public Health* 12(6):6879-6891. doi: 10.3390/ijerph120606879. PMID: 26086708, PMC4483736
36. Xue, J., A. K. Venkatesan, Q. Wu, R. U. Halden and K. Kannan.* 2015. Occurrence of Bisphenol A Diglycidyl Ethers (BADGEs) and Novolac Glycidyl Ethers (NOGEs) in Archived Biosolids from the

U. S EPA's Targeted National Sewage Sludge Survey. *Environ. Sci. Technol.* 49(11):6538-6544. doi: 10.1021/acs.est.5b01115. PMID: 25922885

37. Verce, M. F., V. M. Madrid, S. D. Gregory, S. Demir, M. J. Singleton, E. P. Salazar, P. J. Jackson, R. U. Halden and A. Verce. 2015. A Long-Term Field Study of In Situ Bioremediation in a Fractured Conglomerate Trichloroethene Source Zone. *Bioremediation Journal* 19(1):18-31. doi: 10.1080/10889868.2014.978836.
38. Roll, I. B., R. U. Halden* and B. F. G. Pycke. 2015. Indoor Air Condensate as a Novel Matrix for Monitoring Inhalable Organic Contaminants. *J. Hazard. Mater.* 288:89-96. doi: 10.1016/j.jhazmat.2015.01.043. PMID: 25706557
39. Hartmann, E. M., D. R. Colquhoun, K. J. Schwab, and R. U. Halden.* 2015. Absolute Quantification of Norovirus Capsid Protein in Food, Water, and Soil Using Synthetic Peptides with Electrospray and MALDI Mass Spectrometry. *J. Hazard. Mater.* 286:525-532. doi: 10.1016/j.jhazmat.2014.12.055. PMID: 25603302, PMC4369174
40. Done, H. Y., A. K. Venkatesan, and R. U. Halden.* 2015. Does the Recent Growth of Aquaculture Create Antibiotic Resistance Threats Different from those Associated with Land Animal Production in Agriculture? *The AAPS Journal* 17(3):513-524. doi: 10.1208/s12248-015-9722-z. PMID: 25700799, PMC4406955
41. Yegambaram, M.; B. Manivannan, T. G. Beach, R. U. Halden.* 2015. Role of Environmental Contaminants in the Etiology of Alzheimer's Disease: a Review. *Curr. Alzheimer Res.* 12(2): 116-146. doi: 10.2174/1567205012666150204121719. PMID: 25654508, PMC4428475
42. Westerhoff, P., S. Lee, Y. Yang, G. Gordon, K. Hristovski, R. U. Halden, P. Herckes. 2015. Characterization, Recovery Opportunities, and Valuation of Metals in Municipal Sludges from U.S. Wastewater Treatment Plants Nationwide. *Environ. Sci. Technol.* 49(16):9479-9488. doi: 10.1021/es505329q. PMID: 25581264
43. Hansmeier, N., T.-C. Chao, J. B. Herbstman, L. R. Goldman, F. R. Witter, and R. U. Halden.* 2015. Elucidating the Molecular Basis of Adverse Health Effects from Exposure to Anthropogenic Polyfluorinated Compounds Using Toxicoproteomic Approaches. *J. Proteome Res.* 14(1):51-58. doi: 10.1021/pr500990w. PMID: 25350270
44. Halden, R. U.,* E.M. Hartmann, N. D. Denslow, P. A. Haynes and J. LaBaer. 2015. Recent Advances in Proteomics Applied to Elucidate the Role of Environment Impacts on Human Health and Organismal Function. *J. Proteome Res.* 14(1):1-4. doi: 10.1021/pr501224f. PMID: 25751307
45. Done, H. Y., and R. U. Halden.* 2015. Reconnaissance of 47 Antibiotics and Associated Microbial Risks in Major Seafood and Aquaculture Products Consumed in the United States. *J. Hazard. Mater.* 282:10-17. doi: 10.1016/j.jhazmat.2014.08.075. PMID: 25449970, PMC4254636
46. Geer, L. A., B. F. Pycke, D. M. Sherer, O. Abulafi, and R. U. Halden. 2015. Use of Amniotic Fluid for Determining Pregnancies at Risk of Preterm Birth and for Studying Diseases of Potential Environmental Etiology. *Environ. Res.* 136:470-481. doi: 10.1016/j.envres.2014.09.031. PMID: 25460669, PMC4279852
47. Halden, R. U.* 2015. Epistemology of Contaminants of Emerging Concern and Literature Meta-analysis. *J. Hazard. Mater.* 282:2-9. doi: 10.1016/j.jhazmat.2014.08.074. PMID: 25294779, PMC4253867

48. Halden, R. U.*. 2014. Response to Comment on “On the Need and Speed of Regulating Triclosan and Triclocarban in the United States”. *Environ. Sci. Technol.* 48(19):11023-11024. doi: 10.1021/es5041333. PMID: 25203123
49. Pycke, B. F. G.; L. A. Geer; M. Dalloul; O. Abulafia; A. M. Jenck; R. U. Halden. 2014. Human Fetal Exposure to Triclosan and Triclocarban in an Urban Population from Brooklyn, New York. *Environ. Sci. Technol.* 48(15):8831–8838. doi: 10.1021/es501100w. PMID: 24971846, PMC4123932
50. Pycke, B. F. G., I. Roll, B. Brownawell, C. Kinney, E. Furlong, D. Kolpin, and R. U. Halden.* 2014. Transformation Products and Human Metabolites of Triclocarban and Triclosan in Sewage Sludge across the United States. *Environ. Sci. Technol.* 48(14):7881-7890. doi: 10.1021/es5006362. PMID: 24932693, PMC4215897
51. Bruton, T. A., B. F. G. Pycke, and R. U. Halden.* 2014. Effect of Nanoscale Zero-Valent Iron Treatment on Biological Reductive Dechlorination: A Review of Current Understanding and Research Needs. *Critical Reviews in Environ. Sci. Technol.* 45(11):1148-1175. doi: 10.1080/10643389.2014.924185.
52. Venkatesan A. K. and R. U. Halden.* 2014. Loss and In Situ Production of Perfluoroalkyl Chemicals in Outdoor Biosolids-soil Mesocosms. *Environ. Res.* 132:321–327. doi: 10.1016/j.envres.2014.04.024. PMID: 24834828, PMC4122524
53. Venkatesan, A. K., B. F. G. Pycke, and R. U. Halden.* 2014. Detection and Occurrence of N-Nitrosamines in Archived Biosolids from the Targeted National Sewage Sludge Survey of the U.S. Environmental Protection Agency. *Environ. Sci. Technol.* 48(9):5085-5092. doi: 10.1021/es5001352. PMID: 24697330, PMC4018098
54. Wells, E. M.,* A. Navas-Ancien, B. J. Apelberg, J. B. Herbstman, J. M. Jarrett, Y. H. Lin, C. P. Verdon, C. Ward, K. L. Caldwell, J. R. Hibbeln, R. U. Halden, F. R. Witter, and L. R. Goldman. 2014. Association of Selenium and Copper with Lipids in Umbilical Cord Blood. *Journal of Developmental Origins of Health and Disease.* 5(4):281-287. doi: 10.1017/S2040174414000233. PMID: 24697330
55. Hesari, N., C. M. Francis, and R. U. Halden.* 2014. Evaluation of Glycol Ether as an Alternative to Perchloroethylene in Dry Cleaning. *Toxics* 2(2):115-133. doi: 10.3390/toxics2020115.
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9. Driver, E. M., I. B. Roll, S. D. Supowit and R. U. Halden. Sustainable Diagnostic Tools for Site Characterization and Remediation, AGU Fall Meeting, San Francisco, CA, December 12-16, 2016

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53. Kidd, J. M., I. C. Ruiz, P. K. Mondal, B. E. Sleep, S. Fenton and R. U. Halden. Thermal Treatment for Solubilization and Biodegradation of Weathered Heavy Hydrocarbon Contaminated Soil. Poster Presentation. Third International Symposium on Bioremediation and Sustainable Environmental Technologies, Miami, FL, May 18-21, 2015.
54. Mondal, P. K., B. E. Sleep, J. M. Kidd and R. U. Halden. Thermally-enhanced Solubilization and Oxidation of Weathered Heavy Hydrocarbons in Soil. Poster Presentation. Third International Symposium on Bioremediation and Sustainable Environmental Technologies, Miami, FL, May 18-21, 2015.
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56. Hart, S., O. Epshtein and R. U. Halden, Greener Agriculture, Healthier Forests, Cleaner Waters? Feasibility Studies for Agricultural Biochar Amendment, AZ Water Conference, Glendale, AZ May 6, 2015.
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60. Dang, V. D., K. J. Kroll, S. D. Supowit, R. U. Halden and N. D. Denslow. Bioactivity of Legacy and Emerging Contaminants in Fish via Feeding Study, 54th Annual Meeting and ToxExpo, San Diego, CA, March 22-26, 2015.
61. Halden, R. U. Environmental Proteomics Session, Exploring New Frontiers in Environmental Proteomics for Human Health Assessment, US HUPO 2015 Next Generation Proteomics Conference, Tempe, AZ, March 17, 2015
62. Supowit, S. D., V. D. Dang, K. J. Kroll, I. B. Roll, N. D. Denslow, and R. U. Halden. Assessment of Pesticide Concentrations Across the Surface Water-Sediment Interface Using *In Situ* Solid Phase Extraction – the *In Situ* Sampler for Bioavailability (IS2B). Poster presentation. Superfund Research Program Annual Meeting, San Jose, CA, November 12-14, 2014.
63. Supowit, S. D., V. D. Dang, K. J. Kroll, I. B. Roll, N. D. Denslow, and R. U. Halden. Novel Active Sampling Device for Determination of Pollutants in Surface Water and Porewater – the *In Situ* Sampler for Bioavailability Assessment (IS2B). Platform presentation. Society for Environmental Toxicology and Chemistry North America Annual Meeting, Vancouver, B.C., Canada, November 10-12, 2014
64. Pycke, B. F. G., R. U. Halden, M. Dalloul, O. Abulafia, A. Jenck, and L. A. Geer. Prenatal Exposure to Triclocarban and Triclosan In Relation to Birth Weight and Size in an Urban Immigrant Population from Brooklyn, NY. 24th Annual International Society of Exposure Science Conference. Cincinnati, OH, October 12-16, 2014.
65. Venkatesan, A. K. and R. U. Halden. Occurrence of carcinogenic N-nitrosamines in nationally representative samples of U.S. sewage sludges. 248th American Chemical Society National Meeting and Exposition, San Francisco, CA, August 10-14, 2014.
66. Venkatesan, A. K. and R. U. Halden. Nationwide Occurrence, Release Inventories and Prioritization of Emerging Contaminants in U.S. Sewage Sludges: Results from the National Sewage Sludge Repository of Arizona State University. 248th American Chemical Society National Meeting and Exposition, San Francisco, CA, August 10-14, 2014.
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95. Kalinowski T., I. Bennett and R. U. Halden. Facilitating Mutual Understanding Among Diverse Stakeholders Through Participatory Assessment Of An Emerging Technology. DuPont Summit on Science, Technology and Environmental Policy, Washington, D.C., December 2012.
96. McClellan, K., T. Kalinowski, T. A. Bruton, I. B. Roll, R. U. Halden. Bringing The Lab To The Field - The In Situ Microcosm Array. DEHEMA International Environmental Remediation Symposium. Frankfurt am Main, Germany, November 26-27, 2012.
97. North, E. J. and R. U. Halden. Exploring Opportunities and Obstacles in Society’s Transition to Environmentally Sustainable Plastics / Plastics and Environmental Health: The Road Ahead. SETAC North America 33rd Annual Meeting, Long Beach, CA, November 11-15, 2012.
98. Fernandez, J., H. A. Sanderson and R. U. Halden. Comparison of Policies in the United States and Europe Concerning Pesticide Use, by Example of Herbicide Atrazine. SETAC North America 33rd Annual Meeting, Long Beach, CA, November 11-15, 2012.
99. Dang, V. D., K. J. Kroll, S. D. Supowit, R.U. Halden and N. D. Denslow. Assessing Bioavailability of Hydrophobic Organic Contaminants (HOCs) Using Microcosms. SETAC North America 33rd Annual Meeting, Long Beach, CA, November 11-15, 2012.
100. North, E. J. and R. U. Halden. Exploring Opportunities and Obstacles in Society’s Transition to Environmentally Sustainable Plastics. SETAC North America 33rd Annual Meeting, Long Beach, CA, November 11-15, 2012.
101. Supowit, S.D., I. B. Roll, V. D. Dang, K. J. Kroll, N. D. Denslow, and R.U. Halden. Sampling for Bioavailability Using Solid Phase Extraction – the *In Situ* Sampler for Bioavailability (IS2B). SETAC North America 33rd Annual Meeting, Long Beach, CA, November 11-15, 2012.
102. Geer, L. A., B. F. G. Pycke, M. Dalloul, O. Abulafia, and R.U. Halden. Maternal Exposure to Environmental Aromatic Compounds from Consumer Products. 22nd Annual Meeting of the International Society of Exposure Science, Seattle, WA, October 28-November 1, 2012.
103. Lee, H., E. W. Wells, J. I. Feinberg, S. Brown, R. A. Irizarry, J. Herbstman, F. R. Witter, R. U. Halden, L. R. Goldman, A. P. Feinberg, and M. D. Fallin. Genome-wide Association Between

- DNA Methylation and Neonatal Heavy Metal Exposures During Pregnancy. Annual ECHO Conference, Baltimore, October 2012.
104. Supowit, S.D., I. B. Roll, V. D. Dang, K. J. Kroll, N. D. Denslow, and R.U. Halden. Sampling for Bioavailability Using Solid Phase Extraction – the In Situ Sampler for Bioavailability (IS2B). 25th Annual Meeting of the Superfund Research Program, Raleigh, NC, October 21-24, 2012.
 105. Kalinowski, T., K. McClellan, T. A. Bruton, I. B. Roll, and R. U. Halden. Assessing the Predictive Performance of the In Situ Microcosm Array. 25th Annual Meeting of the Superfund Research Program, Raleigh, NC, October 21-24, 2012.
 106. Roll, I. B., S. D. Supowit, and R. U. Halden. Performance Data for a System for In Situ Sample Preparation, the In Situ Sampler (IS2). 25th Annual Meeting of the Superfund Research Program, Raleigh, NC, October 21-24, 2012.
 107. Charles, M., K. McClellan, T. Kalinowski, B. F. G. Pycke, D. W. Kang, R. Krajmalnik-Brown, and R. U. Halden. Effects of Nutrient Delivery Mode on the Composition of Microbial Communities Relevant to Bioremediation Using the “In Situ Microcosm Array” (ISMA). 25th Annual Meeting of the Superfund Research Program, Raleigh, NC, October 21-24, 2012.
 108. Kalinowski, T., K. McClellan, T. A. Bruton, I. B. Roll, S. Supowit and R. U. Halden. Introducing the In Situ Microcosm Array: A New Tool for Evaluating In Situ Remediation technologies In Situ. Motorola 52nd St. Superfund Site Community Information Meeting, Sonoran Science Academy, Phoenix, AZ, October 2012.
 109. Kalinowski, T., R. Rushforth, F. Rider, R. U. Halden, and A. Wiek. Motorola 52nd St. Community Workshop on Emerging Remediation Technology: In Situ Microcosm Array. Gateway Community College, Phoenix, AZ, August 2012.
 110. Venkatesan, A. K., and R. U. Halden. Nationwide Occurrence in Biosolids of Alkylphenol Ethoxylate Compounds and Their Fate in Soil Amended With Biosolids. 2012 Summer Specialty Conference: Contaminants of Emerging Concern, Denver, CO, June 25 -27, 2012.
 111. Love, D. K., R.U. Halden, M. Davis and K. Nachmann. Are Animal Feed Ingredients Contributing to Antimicrobial Resistance? Feather Meal Contains Multiple Antimicrobials, and Enrofloxacin at Levels that Inhibit Susceptible *E. coli*. 22nd Annual Meeting of the American Society for Microbiology (ASM) San Francisco, June 19-22, 2012.
 112. Kalinowski, T., K. McClellan, T. A. Bruton, I. B. Roll, R. Krajmalnik-Brown and R. U. Halden. Bioremediation of TCE and Hexavalent Chromium: Comparing Bench-Scale Treatability Studies to the *In Situ* Microcosm Array. Battelle’s 8th International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA, May 2012.
 113. Kalinowski, T., K. McClellan, T. A. Bruton, I. B. Roll, R. U. Halden. “*In Situ* Microcosm Array (ISMA) Vs. Standard Laboratory Assessment Of Candidate Remediation Technologies – A Trichloroethylene And Hexavalent Chromium Case Study” ACS National Meeting, San Diego, CA, March 29, 2012.
 114. Bruton, T. A., K. McClellan, T. Kalinowski, I. B. Roll, R. U. Halden. "Use of the *In Situ* Microcosm Array for Predicting the Effectiveness of Persulfate ISCO for the Treatment of Trichloroethene" ACS National Meeting, San Diego, CA, March 29, 2012.
 115. McClellan, K., T. Kalinowski, T. A. Bruton, I. B. Roll, R. U. Halden. “Bringing the Lab to the Field - The *In Situ* Microcosm Array” ACS National Meeting, San Diego, CA, March 29, 2012.
 116. Kalinowski, T., K. McClellan, T. A. Bruton, and R.U. Halden. In Situ Microcosm Array: A Novel Tool for Conducting Treatability Studies In Situ. 22nd Annual International Conference on Soil, Water, Energy, and Air and AEHS Foundation Annual Meeting, San Diego, California, March 19-22, 2012.
 117. McClellan, K., Kalinowski, T., T. A. Bruton, and R. U. Halden. Lowering the Barrier for Novel *In Situ* Remediation Approaches - the *In Situ* Microcosm Array. 22nd Annual International Conference on Soil, Water, Energy, and Air and AEHS Foundation Annual Meeting, San Diego, California, March 19-22, 2012.

118. Gray, E. P., Bruton, T.A., Higgins, C.P., Halden, R. U., Westerhoff, P., Ranville, J. F. Comparison of Two Nanoparticle Separation Techniques, Asymmetrical Field Flow Fractionation and Hydrodynamic Chromatography Using Gold Particles, 32nd Annual SETAC North America Meeting, Boston, MA, November 13-17, 2011.
119. McClellan, K., T. Kalinowski, T. A. Bruton, I. B. Roll, and R.U. Halden. In Situ Microcosm Array (ISMA) vs. Standard Laboratory Assessment of Candidate Remediation Technologies – A Perchlorate Case Study. Annual Symposium of the NIEHS Superfund Program, Lexington, KY, October 23-26, 2011.
120. Kalinowski, T., K. McClellan, T. A. Bruton, I. B. Roll, R. Krajmalnik-Brown and R.U. Halden. Evaluating Bioremediation of TCE and Hexavalent Chromium: A Case Study of the *In Situ* Microcosm Array (ISMA). Annual Symposium of the NIEHS Superfund Program, Lexington, KY, October 23-26, 2011.
121. Halden, R. U., A. K. Venkatesan and N. Hansmeier. Mixtures of Manmade Hazardous Compounds in the Anthroposphere and in Humans. International Toxicology of Mixtures Conference, Arlington, VA, October 21-23, 2011.
122. Kalinowski, T., K. McClellan, T. A. Bruton, I. B. Roll and R.U. Halden. *In Situ* Microcosm Array (ISMA): A Novel Device for Conducting Treatability Studies. Geological Society of America Annual Meeting, Minneapolis, MN, October 9-12, 2011.
123. McClellan, K., T. Kalinowski, T. A. Bruton, I. B. Roll and R.U. Halden. *In Situ* Microcosm Array (ISMA) vs. Standard Laboratory Assessment of Candidate Remediation Technologies – A Perchlorate Case Study. Geological Society of America Annual Meeting, Minneapolis, MN, October 9-12, 2011.
124. Bruton, T. A., K. McClellan, T. Kalinowski, I. B. Roll and R.U. Halden. Field Application of the In Situ Microcosm Array. Groundwater Resources Association of California (GRAC) Conference, Sacramento, CA, October 5, 2011.
125. Halden, R. U. Biosolids: A Diagnostic Matrix Foretelling Exposures in the Anthroposphere. 3rd International Conference on Occurrence, Fate, Effects, and Analysis of Emerging Contaminants in the Environment, Copenhagen, Denmark, August 23-26, 2011.
126. Hartmann, E. M., M. L. Fisher, and R. U. Halden. Site-Directed Mutagenesis of the Dioxin Dioxygenase to Improve Activity Towards 2,3,7,8-Tetrachloro-Dibenzo-*p*-Dioxin. National Science Foundation East Asia and Pacific Summer Institute, Toyama, Japan, August 2011.
127. Wells, E. M., J. Jarrett, C. Verdon, C. D. Ward, K. Caldwell, F. R. Witter, R. U. Halden, and L. R. Goldman. Umbilical Cord Blood Methyl and Inorganic Mercury Concentrations and Their Relationship With Ponderal Index. 2011 International Conference on Mercury as a Global Pollutant. Halifax, Nova Scotia, July 24-29, 2011.
128. Miller, T. R., D. R. Colquhoun and R. U. Halden. Analysis of Wastewater Bacteria-Degrading Triclocarban. International Symposium on Bioremediation and Sustainable Environmental Technologies, Battelle Conference, Reno, NV, June 27-30, 2011.
129. Ziv-El, M., S. Popat, K. Cai, R. U. Halden, R. Krajmalnik-Brown and B. E. Rittmann. Optimization of the Membrane Biofilm Reactor for Biological Reduction of Trichloroethylene. International Symposium on Bioremediation and Sustainable Environmental Technologies, Battelle Conference, Reno, NV, June 27-30, 2011. Seager, T., M. Fraser, M. Holl and R. U. Halden. The SUMMIT Approach to Sustainability in Superfund Research Translation. International Conference on Sustainable Remediation. Amherst, MA, June 1-3, 2011.
130. Hartmann, E. M. and R. U. Halden. Use of AQUA and MALDI-TOF/TOF MS to Quantify a Dioxin-Degrading Enzyme. Science Foundation Arizona Grand Challenges Conference, Flagstaff, AZ, May 22-24, 2011.
131. Delgado, A. G., M. Ziv-El, R. U. Halden, and R. Krajmalnik-Brown. Microbial Trichloroethene Dechlorination by a Novel Enriched Consortium. Science Foundation Arizona Grand Challenges Conference, Flagstaff, AZ, May 22-24, 2011.

132. Venkatesan, A. K., B. G. F. Pycke, T.-C. Chao and R. U. Halden. Occurrence of Triclosan, Triclocarban, and Their Transformation Products in Sediments Up and Downstream of U.S. Wastewater Treatment Plants. Water Environment Federation: Industrial Wastewater Conference. Bally's Hotel, Atlantic City, New Jersey, May 9-10, 2011.
133. Doudrick, K, A. K. Venkatesan, E. M. Hartmann, T. Kalinowski and R. U. Halden. Assessment of the Contribution of Triclosan to Dioxin Emissions from Sludge Incineration in the U.S. Using a Mathematical Model. Water Environment Federation: Industrial Wastewater Conference. Bally's Hotel, Atlantic City, New Jersey, May 9-10, 2011.
134. Pycke, B. F. G., T.-C. Chao, T. M. Benn, R. Scholze, P. Herckes, R. U. Halden, and P. Westerhoff. 2011. Mass spectrometry-based detection of aqueous and oxidized fullerenes in biological and environmental samples. Nanotechnology GO Meeting, NIEHS, Bethesda, MD, March 4-5, 2011.
135. Hartmann, E. M. and R. U. Halden. Use of AQUA and MALDI-TOF/TOF MS to Quantify a Dioxin-Degrading Enzyme. 23rd Annual Sanibel Conference on Mass Spectrometry, American Society for Mass Spectrometry (ASMS), St. Pete Beach, FL, January 21-24, 2011.
136. McClellan, K., T. A. Bruton, T. Kalinowski, and R. U. Halden. Use of the "In Situ Microcosm Array" (ISMA) Technology for Evaluation of 1,4-Dioxane and Trichloroethene Co-Remediation. Partners in Environmental Technology Technical Symposium & Workshop, Washington, D.C., November 30 - December 2, 2010.
137. Bruton, T. A., K. McClellan, T. Kalinowski, and R. U. Halden. Development of Online Sensing Capability for the In Situ Microcosm Array (ISMA) Technology. Partners in Environmental Technology Technical Symposium & Workshop, Washington, D.C., November 30 - December 2, 2010.
138. Roll, I. B. and R. U. Halden. Rationale and Theory for a New In Situ Sampling Device. Partners in Environmental Technology Technical Symposium & Workshop, Washington, D.C., November 30 - December 2, 2010.
139. Kalinowski, T., K. McClellan, T. A. Bruton, and R. U. Halden. Capabilities of the In Situ Microcosm Array. Partners in Environmental Technology Technical Symposium & Workshop, Washington, D.C., November 30 - December 2, 2010.
140. Halden, R. U., K. McClellan, T. Kalinowski, T. A. Bruton, T. R. Miller, E. M. Hartmann, D. R. Colquhoun, T.-C. Chao, N. Hansmeier, R. P. Deo, A. Sapkota, T. E. A. Chalew, T. A. Young, C. R. Matos-Pérez, E. Walters, R. N. Cole, F. R. Witter and L. R. Goldman. Novel Approaches to Studying the In Situ Bioremediation Potential of Complex Mixtures. Annual Conference of the NIEHS Superfund Program, Portland, OR, November 10-12, 2010.
141. McClellan, K., T. Kalinowski, T. A. Bruton, and R. U. Halden. Field Application of the *In Situ* Microcosm Array. Annual Conference of the NIEHS Superfund Program, Portland, OR, November 10-12, 2010.
142. Westerhoff, P., T. Benn, B. G. F. Pycke, T.-C. Chao, K. Doudrick, R. U. Halden and P. Herckes. Characterization of Fullerols and Fullerenes in Complex Matrices. SETAC North America 31st Annual Meeting, November 7-11, 2010.
143. Goldman, L. R., G. Neta, J. B. Herbstman, A. Sjödin, F. R. Witter, and R. U. Halden. Use of principal component analysis to elucidate independent effects of in utero exposure to PBDE and PCB mixtures on newborn thyroid hormone measures. Dioxin 2010 - 30th International Symposium on Halogenated Persistent Organic Pollutants (POPs), San Antonio, TX, September 12-17, 2010.
144. Ziv-El, M. A. Delgado, R. U. Halden, and R. Krajmalnik-Brown. 2010. Molecular-biological characterization of a novel, sediment-free mixed culture showing exceptionally rapid dechlorination of TCE to ethane. 13th International Symposium on Microbial Ecology (ISME), Seattle, WA, August 22-27, 2010.
145. Delgado, A., M. Ziv-El, R. U. Halden, and R. Krajmalnik-Brown. 2010. Role of pH Buffering on TCE Reduction and Composition of Dechlorinating Consortia. 13th International Symposium on Microbial Ecology (ISME), Seattle, WA, August 22-27, 2010.

146. Halden, R. U. Sustainable Management of Hazardous Mixtures. A Proposal. Arizona Department of Environmental Quality, Phoenix, AZ, August 13, 2010.
147. Wells, E. M., J. M. Jarrett, B. J. Apelberg, J. B. Herbstman, A. Navas-Acien, K. L. Caldwell, R. U. Halden, F. R. Witter, and L. R. Goldman. The non-monotonic relationship of selenium exposure with blood pressure and hypertension during late pregnancy. The 23rd Annual Meeting of the Society for Pediatric and Perinatal Epidemiologic Research (SPER), Seattle, WA, June 23-26, 2010.
148. Lee, H.-S., A. G. Delgado, C. I. Torres, R. U. Halden, B. E. Rittmann and R. Krajmalnik-Brown. Anaerobic Dechlorination of Trichloroethene with Hydrogen Produced from a Microbial Electrolysis Cell. Leading Edge Technologies Conference, Phoenix, AZ, June 1, 2010.
149. Neta, G., L. R. Goldman, D. Barr, A. Sjödin, B. Apelberg, F. Witter, R. U. Halden. Distribution and Determinants of in utero Pesticide Mixtures using Principal Component Analysis. Society for Epidemiologic Research (SER) 43rd Annual Meeting Seattle, WA, June 23-26, 2010.
150. Hartmann, E. M. and R. U. Halden. Concept for a Brain Tissue Screening Procedure to Ensure Prion Exclusion. Arizona Alzheimer's Consortium Annual Conference, Glendale, AZ, May 21, 2010.
151. Wells E. M., A. Navas-Acien, B. J. Apelberg, J. B. Herbstman, J. M. Jarrett, K. L. Caldwell, R. U. Halden, F. R. Witter, and L. R. Goldman. Association of selenium and copper with triglycerides in umbilical cord blood serum. Research ShowCASE 2010, Case Western Reserve University: Cleveland, Ohio, April 15, 2010.
152. Hartmann, E.M. and R. U. Halden. 2010. Discovery and Detection of Biomarkers of Petroleum-degrading Bacteria. Science Foundation Arizona Grand Challenges Conference, Phoenix, Arizona, April 12-13, 2010.
153. Halden, R. U. Concluding Remarks on Policies for Promoting Sustainable Chemistry. Spring 2010 National Meeting & Exposition of the American Chemical Society, San Francisco, CA, March 21-25, 2010.
154. Halden, R. U. Introduction to Policies for Promoting Sustainable Chemistry. Spring 2010 National Meeting & Exposition of the American Chemical Society, San Francisco, CA, March 21-25, 2010.
155. Halden, R. U. Concluding Remarks on Antimicrobial Agents and Sustainability. Spring 2010 National Meeting & Exposition of the American Chemical Society, San Francisco, CA, March 21-25, 2010.
156. Halden, R. U. Introduction to Antimicrobial Agents and Sustainability. Spring 2010 National Meeting & Exposition of the American Chemical Society, San Francisco, CA, March 21-25, 2010.
157. Halden, R. U. Examining the Sustainability of Persistent Antimicrobial Compounds. Spring 2010 National Meeting & Exposition of the American Chemical Society, San Francisco, CA, March 21-25, 2010.
158. Deo, R. P. and R. U. Halden. Impact of Sample Processing Procedures on the Quality of Environmental Monitoring Data Influencing Policy Decisions. Spring 2010 National Meeting & Exposition of the American Chemical Society, San Francisco, CA, March 21-25, 2010.
159. Halden, R. U. Toward Sustainable Use of Organohalogenes. Spring 2010 National Meeting & Exposition of the American Chemical Society, San Francisco, CA, March 21-25, 2010.
160. Wells, E. M., A. Navas-Acien, B. J. Apelberg, J. Herbstman, J. M. Jarrett, K. L. Caldwell, R. U. Halden, F. R. Witter and L. R. Goldman. Association of Selenium and Copper with Triglycerides in Umbilical Cord Serum. Society of Toxicology PPTOXII: Role of Environmental Stressors in the Developmental of Origins of Disease. Loews Hotel, Miami Beach, Florida. December 7-10, 2009.
161. McClellan, K., T. Kalinowski and R. U. Halden. ESTCP Project 200914: A New Technology for Remedial Design. Annual Technical Symposium & Workshop hosted by the Strategic Environmental Research and Development Program (SERDP) and the Environmental Security Technology Certification Program (ESTCP), Washington, DC, December 1-3, 2009.
162. Kalinowski, T., K. McClellan and R. U. Halden. In Situ Sediment Column Microcosms for Studying Bioremediation. Annual Technical Symposium & Workshop hosted by the Strategic Environmental Research and Development Program (SERDP) and the Environmental Security Technology Certification Program (ESTCP), Washington, DC, December 1-3, 2009.

163. Guerrero-Preston, R., C. LeBron, J. B. Herbstman, R. U. Halden, D. Sidransky, and L. Goldman. Global DNA Hypomethylation in Cord Blood Serum of Babies Exposed to Maternal Smoking *In Utero*. 137th APHA Annual Meeting & Exposition, San Antonio, TX, November 7-11, 2009.
164. Kalinowski, T., K. McClellan and R. U. Halden. Novel Approaches to Studying the In Situ Bioremediation Potential of Complex Mixtures. Superfund Research Program 2009 Annual Conference, Columbia University, New York, NY, November 3, 2009.
165. Halden, R. U. *In Situ* Downhole Technology for Commercialization. First ASU Spartan Workshop for Technology Commercialization, Scottsdale, AZ, September 19, 2009.
166. Halden, R. U. Toward Sustainable Chemistry and Engineering. ASU School of Sustainability and the Built Environment, Student Organization, Invited Seminar, Tempe, AZ, September 4, 2009.
167. Walters, E., K. McClellan and R. U. Halden. Fate of Pharmaceuticals and Personal Care Products in Agricultural Soils Modified With Biosolids. 238th American Chemical Society (ACS) National Meeting, Washington, DC, August 16-20, 2009.
168. McClellan, K. and R. U. Halden. Analysis of PPCPs in biosolids originating from the 2001 EPA National Sewage Sludge Survey. 238th American Chemical Society (ACS) National Meeting, Washington, DC, August 16-20, 2009.
169. Deo, R. P. and R. U. Halden. *In Silico* Screening for Unmonitored High Production Volume (HPV) Chemicals Prone to Accumulate in Biosolids. 238th American Chemical Society (ACS) National Meeting, Washington, DC, August 16-20, 2009.
170. Deo, R. P. and R. U. Halden. Empirical Model for Predicting Concentrations of Refractory Hydrophobic Organic Compounds in Digested Sludges from Municipal Wastewater Treatment Plants. 238th American Chemical Society (ACS) National Meeting, Washington, DC, August 16-20, 2009.
171. Fox, A. and R. U. Halden. Applicability of Passive Sampling Modules for the Determination of Contaminants of Emerging Interest in Digested Municipal Sewage Sludge (Biosolids). 238th American Chemical Society (ACS) National Meeting, Washington, DC, August 16-20, 2009.
172. Higgins, C. P., Z. J. Paesani, T. E. A. Chalew, R. U. Halden, and L. S. Hundal. Persistence and Bioaccumulation of Triclocarban and Triclosan in Soils After Land Applications of Municipal Biosolids. EmCon 2009, 2nd International Conference on Occurrence, Fate, Effects, and Analysis of Emerging Contaminants in the Environment, August 4-7, 2009.
173. Walters, E., K. McClellan and R. U. Halden. Fate of Pharmaceuticals and Personal Care Products in Agricultural Soils Modified With Biosolids. Micropol/Ecotox, Burlingame, CA, June 8-10, 2009.
174. McClellan, K. and R. U. Halden. Nationwide Assessment of Pharmaceuticals and Personal Care Products in U.S. Biosolids. Micropol/Ecotox, Burlingame, CA, June 8-10, 2009.
175. Doom, T. R. and Halden, R. U.: BME Capstone Design Project Presentation. Tempe, May 1, 2009.
176. Doom, T. R. and Halden, R. U.: In Situ Remediation of Contaminated Subsurface Environments: Assessing Industry Needs for Technical Innovations. 19th Annual AEHS Meeting and West Coast Conference on Soils, Sediments, and Water. San Diego, CA, March 10, 2009.
177. Geer, L. and R. U. Halden. Triclosan and Triclocarban Levels in Urine and Cord Blood of Mother/Infant Pairs. Annual Meeting of the Superfund Basic Research Program of the National Institute of Environmental Health Sciences, Pacific Grove, CA, December 7-9, 2008.
178. Hartmann, E., McClellan, K. and R. U. Halden. Toward Proteomics-informed Optimization of In Situ Bioremediation. Annual Meeting of the Superfund Basic Research Program of the National Institute of Environmental Health Sciences, Pacific Grove, CA, December 7-9, 2008.
179. Higgins, C. P., Z. J. Paesani, T. E. A. Chalew, and R. U. Halden. Bioaccumulation of Triclocarban in *Lumbriculus variegatus*. SETAC Meeting, November 2008.
180. Wells, E. M., A. Navas-Acien, K. L. Caldwell, R. L. Jones, B. J. Apelberg, J. B. Herbstman, R. U. Halden, F. R. Witter, and L. R. Goldman. Selenium and lipids in umbilical cord serum. International Society for Environmental Epidemiology Annual Conference, Pasadena, CA, October 12-16, 2008.
181. Wells, E., L. R. Goldman, R. Jones, K. Caldwell, B. J. Apelberg, J. Herbstman, L. Needham, F. R. Witter, and R. U. Halden. Public Health Policy Implications of Socioeconomic and Demographic

- Correlates of Prenatal Lead Exposure. 135th Annual Meeting of the American Public Health Association, Washington, D.C., November 3-7, 2007.
182. Wells, E., L. R. Goldman, R. Jones, K. Caldwell, B. J. Apelberg, J. Herbstman, L. Needham, F. R. Witter, and R. U. Halden. Modeling low-level cord blood lead exposure and maternal blood pressure. 19th Annual Conference of the International Society for Environmental Epidemiology, Mexico City, Mexico, September 5-7, 2007.
 183. Herbstman J. B., Witter F. R., Apelberg B. J., Sjödin A., Patterson D. G., Halden, R. U., Needham, L. L., and Goldman, L. R. Prenatal PCB and PBDE Exposure and Thyroid Hormone Levels. 19th Annual Conference of the International Society for Environmental Epidemiology, Mexico City, Mexico, September 5-7, 2007.
 184. Heidler, J., and R. U. Halden. Behavior of Persistent Biocides During Wastewater Treatment: Mass Balances and Meta Analysis. American Water Resources Association (AWRA) Summer Specialty Conference on "Emerging Contaminants of Concern in the Environment," Vail, Colorado, June 25-27, 2007.
 185. Heidler, J., and Halden, R. U. Detection of Persistent Biocides in Sewage Sludge and Human Blood Using LC-ESI-MS and LC-ESI-MS/MS. 55th ASMS Conference on Mass Spectrometry, Indianapolis, IN, June 3-7, 2007.
 186. Colquhoun, D. R. and R. U. Halden. Comparative Proteomic Analysis of Cells of the Dioxin Degrading Bacterium *Sphingomonas wittichii* RW1 Grown on Various Substrates. 107th ASM General Meeting, Toronto, Ontario, Canada, May 21-25, 2007.
 187. Hartmann, E. M., D. R. Colquhoun, and R. U. Halden. Identification of Pollutant-Degrading Bacteria Using Peptide Mass Fingerprinting and Mass Spectrometry. American Chemical Society Middle Atlantic Regional Meeting, Philadelphia, PA, May 16-18, 2007.
 188. DeLaquil, A., T. R. Miller, and R. U. Halden. Accumulation of Antimicrobial Chemicals in Sediment. American Chemical Society Middle Atlantic Regional Meeting, Philadelphia, PA, May 16-18, 2007.
 189. Miller, T. R., Salzberg, S. L., Eisen, J. A., and R. U. Halden. Comparative Sequence Analysis of Catabolic Megaplastids from *Sphingomonas wittichii* RW1 and Related Bioremediation Agents. 107th ASM General Meeting, Toronto, Ontario, Canada, May 21-25, 2007.
 190. Miller, T. R., Salzberg, S. L., and R. U. Halden. Sequence Analysis of Megaplastids from the Dioxin Mineralizing Bacterium *Sphingomonas wittichii* RW1. Joint Genome Institute User Conference, Walnut Creek, CA, March 28-31, 2007.
 191. Higgins, C. P., J. P. Bressler and R. U. Halden. Mechanisms of Perfluorochemical Surfactant Bioaccumulation: The Potential Role of Organic Anion Transporters. 15th Annual Scientific Workshop of the JHU-NIEHS Center In Urban Environmental Health. Baltimore, MD, February 28, 2007.
 192. Goldman, L. R., B. J. Apelberg, J. B. Herbstman, R. U. Halden, F. R. Witter, A. M. Calafat, Z. Kuklennyik, L. L. Needham. Possible Etiologies of PFAA-Induced Developmental Effects: Reflections from a Pediatric Perspective. Society of Toxicology Conference: Current Concepts in Toxicology—Perfluorinated Alkyl Acids and Related Chemistries: Toxicokinetics and Mode-of-Action Workshop. Arlington, VA, February 14-16, 2007.
 193. Halden, R. U., and T. R. Miller. In Situ Microcosm Array Technology for Remedial Feasibility Assessment and Design. Partnership in Environmental Technology Technical Symposium & Workshop (ESTCP/SERDP), Washington, D.C., November 28-30, 2006.
 194. Herbstman J. B., A. Sjödin, B. J. Apelberg, F. R. Witter, D. G. Patterson, R. U. Halden, R. S. Jones, A. Park, J. Heidler, L. L. Needham, and L. R. Goldman. Determinants of Prenatal Exposure to Polybrominated Diphenyl Ethers (PBDEs) in an Urban Population. International Conference on Environmental Epidemiology & Exposure, Paris, France, September 2-6, 2006.
 195. Apelberg B. J., Calafat, A. M., Herbstman J. B., Halden, R. U., Heidler, J., Witter, F. R., Needham, L. L., and Goldman, L. R. Magnitude and Determinants of Fetal Exposure to Perfluorinated

- Chemicals. International Conference on Environmental Epidemiology & Exposure, Paris, France, September 2-6, 2006.
196. Halden, R. U., D. R. Colquhoun, R. N. Cole and K. J. Schwab. Mass Spectrometry Method for the Epidemiological Surveillance of Norovirus. 106th General Meeting of the American Society for Microbiology, Orlando, FL, May 21-25, 2006.
 197. Colquhoun, D. R., T. R. Miller, E. M. Hartmann, and R. U. Halden. Rapid Characterization of Pollutant Degrading Bacteria Using Matrix Assisted Laser Desorption Ionization—Time of Flight Mass Spectrometry. 106th General Meeting of the American Society for Microbiology, Orlando, FL, May 21-25, 2006.
 198. Miller, T. R., Colquhoun, D. R., and R. U. Halden. Characteristics of a Bacterial Enrichment Culture Utilizing the Antimicrobial Compound Triclocarban as Sole Carbon and Energy Source. 106th General Meeting of the American Society for Microbiology, Orlando, FL, May 21-25, 2006.
 199. Halden, R. U., and T. R. Miller. Novel Diagnostic In Situ Monitoring Technology. BIO 2006. Annual International Convention. Environmental Biotechnology Session. Chicago, IL, April 9-12, 2006.
 200. Heidler, J., and R. U. Halden. Preliminary Assessment of Biocide Inputs to U.S. Water Resources and Soils. 5th International Conference on Pharmaceuticals and Endocrine Disrupting Chemicals in Water, Costa Mesa, California, March 13-15, 2006.
 201. Colquhoun, D. R. and R. U. Halden. Phenotypic Characterization of a Dioxin-degrading Bacterium Using MALDI-TOF MS. American Society for Mass Spectrometry, Fall Workshop on Characterization of Microorganisms by Mass Spectrometry, San Diego, CA, December 9, 2005.
 202. Halden, R. U. Effect of Lifestyle on Mother/Infant Exposure to Ubiquitous Pollutants. CLF Research Day: Insights Along the Path of Sustainability, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, November 30, 2005.
 203. Halden, R. U., A. Sapkota, J. Heidler, J. Keehner, N. Haws, and B. G. Halden. Municipal Sludge Disposal and Sustainable Agriculture: A Pilot Study Showcasing the Challenge of Combining the Two. CLF Research Day: Insights Along the Path of Sustainability, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, November 30, 2005.
 204. Naples, J., C. Shiff, C., D. R. Colquhoun, and R. U. Halden. The Use of Cedar Oil Components to Prevent Infection by Schistosome Cercariae. 54th Annual Meeting of the American Society of Tropical Medicine and Hygiene, Washington, DC, December 11-15, 2005.
 205. Miller, T. R. and Halden, R. U.: Enrichment of Xenobiotic-Degrading Bacteria Using a New In Situ Monitoring Device. SETAC 26th Annual Meeting in North America, Baltimore, MD, November 17, 2005. <http://abstracts.co.allenpress.com/pweb/setac2005/document/?ID=56786>
 206. Heidler, J. and Halden, R. U.: Tracking the Fate of Triclosan during Activated Sludge Wastewater Treatment. SETAC 26th Annual Meeting in North America, Baltimore, MD, November 14, 2005. <http://abstracts.co.allenpress.com/pweb/setac2005/document/?ID=56429>
 207. Kim, S.-R., R. U. Halden, and T. Buckley. Laboratory Studies Characterizing the Sensitivity and Stability of VOC Sampling and Analysis. International Society of Exposure Analysis (ISEA) Annual Meeting, Tucson, AZ, October 30 - November 3, 2005.
 208. Herbstman, J., A. Sjodin, D. Patterson, B. Apelberg, F. Witter, R. U. Halden, J. Heidler, L. Needham, and L. Goldman. PCBs and PBDEs and Thyroid Hormone Levels in Umbilical Cord Blood in an Urban U.S. Population: A Feasibility Study. Dioxin 2005, Toronto, Canada, August 21-26, 2005.
 209. Halden, R. U.: Innovative Method for Environmental Monitoring and Bioprospecting. 8th In Situ and On-Site Bioremediation Symposium, Baltimore, MD, June 6-9, 2005.
 210. Halden, R. U.: Pharmaceuticals and Personal Care Products in Biosolids. New Jersey Water Environment Association Annual Conference, Tropicana Hotel, Atlantic City, NJ, May 4, 2005.
 211. Halden, R. U.: Pharmaceuticals and Personal Care Products as Indicators of Sewage Spills. Maryland Water Monitoring Council 10th Annual Conference, Linthicum, MD, November 18, 2004.

212. Heidler, J. and R. U. Halden: Mass Balance for Persistent Antimicrobials in the Back River Wastewater Treatment Plant in Baltimore, MD. Maryland Water Monitoring Council 10th Annual Conference, Linthicum, MD, November 18, 2004.
213. Matos, C. and R. U. Halden: Antimicrobial Compounds as Indicators of Sewage Contamination in Surface Waters. Annual Biomedical Research Conference for Minority Students (ABRCMS), Dallas, TX, November 10-13, 2004.
214. Heidler, J. and R. U. Halden: Mass Balance for Antimicrobial Compounds at a Municipal Wastewater Treatment Plant in Baltimore, MD. Groundwater and Public Health – Making the Connection. Groundwater Foundation Annual Conference and Groundwater Guardian Designation, Washington, D.C., November 4-5, 2004.
215. Heidler, J. and R. U. Halden: Fate of antimicrobial compounds during wastewater treatment. Proceedings of the 228th National Meeting of the American Chemistry Society. Presented at the 2nd National Symposium on Environmental Aspects of Pharmaceuticals and Personal Care Products, Philadelphia, PA, August 22-26, 2004. <http://www.tntech.edu/wrc/PPCPWebcast/PPCP.htm>
216. Colquhoun, D., E. S. Wisniewski, D., A. Kalmykov, and R. U. Halden: Identification of *Sphingomonas wittichii* RW1 Through the Dioxin Dioxygenase Enzyme Using Mass Spectrometry. General Meeting of the American Society for Microbiology, New Orleans, LA, May 23-27, 2004.
217. Halden, R. U., J. Heidler, D. H. Paull, and R. Classon: Trace Analysis of the Broad Spectrum Antimicrobial Compound Triclosan in Drinking Water, Urban Streams and Wastewater by LC/APCI/MS and LC/ESI/MS. 41st Florida Pesticide Residue Workshop, Lake Buena Vista, FL, July 18-21, 2004.
218. Paull, D.H., and R. U. Halden: Environmental Fate of Antimicrobials in Personal Care Products: Implications for Agriculturally Applied Sewage Sludge and Human Milk. Johns Hopkins University Center for a Livable Future Research Conference: Insights Along the Path to Sustainability, Baltimore, MD, 2003.
219. Paull, D.H., and R. U. Halden: Monitoring Antimicrobial Compounds as Indicators of Sewerage Problems Impacting Urban Streams. Maryland Water Monitoring Council 9th Annual Conference: Ecological Restoration Assessment and Monitoring, Linthicum, MD, 2003.
220. Halden, R.U., R. N. Cole, C. Bradford, D. Chen, and K. J. Schwab. Rapid Detection of Norwalk Virus-like Particles using MALDI-TOF MS and ESI-MS/MS. 51st ASMS Meeting, Montreal, Quebec, Canada, 2003.
221. Franklin, M. P., V. Madrid, S. Gregory, and R. U. Halden: Spatial Analysis of a Microbial Community Mediating Intrinsic Reductive Dechlorination of TCE to *cis*-DCE at a DOE Superfund Site. 103rd General Meeting of the American Society for Microbiology, Washington, D.C., 2003.
222. Xie, G., T. Palmateer Oxenberg, W. Dong, A. Kalmykov, M. P. Franklin, E. J. Bouwer, and R. U. Halden: Sorption, Bioavailability, and Bioreduction of U(VI) in Sediment from the Aberdeen Proving Ground, MD. 103rd General Meeting of the American Society for Microbiology, Washington, D.C., 2003.
223. Halden, R. U., R. N. Cole, C. Bradford, D. Chen, and K. J. Schwab: Rapid Detection of Norwalk Virus-like Particles by MALDI-TOF MS. NIH Exploring the Proteome II, Bethesda, MD, 2003. <http://proteome.nih.gov/SymposiumII/poster26.html>
224. Halden, R. U., T. Palmateer Oxenberg, W. Dong, M. Lowe, A. Spiro, and E. Bouwer: Aberdeen Proving Grounds Environmental Research. National Defense Industrial Association (NDIA) TACOM – ARDEC Technical Symposium, Rockaway, NJ, 2002.
225. Halden, R. U.: Microarrays for Bioremediation. Presenter and Session Moderator. DOE-NABIR PI Workshop, Warrenton, VA, 2002.
226. Lowe, M., A. Spiro, G. Xie, and R. U. Halden: Development of a Multiplexed, Bead-based Assessment Tool for Rapid Identification and Quantitation of Microorganisms in Field Samples. DOE-NABIR PI Workshop, Warrenton, VA, 2002.

227. Madrid, V. M., Z. Demir, R. U. Halden, S. D. Gregory and J. E. Valett: New Geospatial Model Tracks Chloroethene Subsurface Contamination. Third International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA, 2002.
228. Madrid, V. M., R. U. Halden, Z. Demir, J. E. Valett, and S. D. Gregory: 3-D Geospatial Modeling of a DNAPL Source Area. 97th Annual Meeting of the Geological Society of America, Universal City, CA, 2001.
229. Kane, S. R., H. R. Beller, T. C. Legler, C. J. Koester, R. U. Halden, and A. M. Happel: Aerobic Metabolism of Methyl *tert*-Butyl Ether by Aquifer Bacteria. 101st General Meeting of the American Society for Microbiology, Orlando, FL, 2001.
230. Daily, W., III, R. U. Halden, and P. W. Krauter: Removal of Nitrate from Groundwater Using Open Container Bioreactors. 6th In Situ and On-Site Bioremediation Symposium, San Diego, CA, 2001.
231. Ziagos, J. P., and R. U. Halden: Implementing “Green” Technology to Achieve Cleanup Goals. 12th National DOE Technology Information Exchange Workshop, Atlanta, GA, 2000.
232. Halden, R. U., V. M. Madrid, S. D. Gregory, R. L. Goodrich, and P. F. Daley: Advanced Site Characterization and Data Visualization Using Passive Soil Vapor Surveying, GPS/GIS and 3D-Imaging Tools. 10th West Coast Conference on Contaminated Soil and Groundwater, San Diego, CA, 2000.
233. Semprini, L., S. Vancheeswaran, S. Yu, M.-Y. Chu, and R. U. Halden: Tetraalkoxysilanes as Slow-release Substrates to Promote Aerobic and Anaerobic Dehalogenation Reactions in the Subsurface. General Meeting of the American Chemical Society, Washington, D.C., 2000.
234. Happel, A. M., E. H. Beckenbach, B. P. Dooher, K. Emmerson, S. R. Kane, C. Koester, R. U. Halden, H. R. Beller, and T. C. Legler: Evaluating Attenuation of MTBE. EPA MTBE Biodegradation Workshop, Cincinnati, OH, 2000.
235. Brown, D., R. Holley-Shanks, D. Maeder, K. Schindler, M. Lowe, F. Brockman, R. U. Halden, and F. Robb: Comparison of ISR and 16S-ISR Analysis of VOC Effect on Microbial Communities at Two DOE Sites. 100th General ASM Meeting, Los Angeles, CA, 2000.
236. Ziagos, J. P., R. U. Halden, P. W. Krauter, and W. D. Daily: The Proposed Application of “Green” Technology to Achieve Cleanup Goals. 11th National DOE Technology Information Exchange Workshop, Las Vegas, NV, 1999.
237. Halden, R. U., A. M. Happel, H. R. Beller, C. Koester, B. G. Halden, S. R. Kane, and T. C. Legler: Evidence for Intrinsic Bioremediation of MTBE at a LUFT Site. In-Situ Alternatives for MTBE Impacted Aquifers, Oxnard, CA, 1999.
238. Halden, R. U., V. Madrid, P. Daley, M. Lima, S. Gregory and J. P. Ziagos: Silicon Lubricants Facilitate Bioattenuation of TCE at LLNL’s Superfund Site 300. 5th In Situ and On-Site Bioremediation Symposium, San Diego, CA, 1999.
239. Halden, R. U., S. R. Schoen, Y. Galperin, I. R. Kaplan, and A. M. Happel: Evaluation of EPA and ASTM Methods for Analysis of Oxygenates in Gasoline-Contaminated Ground Water. 8th Annual AEHS West Coast Conference on Contaminated Soil and Groundwater, Oxnard CA, 1998.
240. Halden, R. U., W. W. McNab Jr., R. Ruiz, and A. M. Happel: Palladium-Catalyzed Transformation of TCE and MTBE in Groundwater, 1st International Symposium on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA, 1998.
241. Rhodes, I., J. Milazzo, L. Brzuzny, L. Harvey, A. Verstuyft, R. U. Halden, S. Schoen, Y. Galperin, I. R. Kaplan, and A. M. Happel: Analytical Methods for the Determination of Oxygenates in Gasoline-contaminated Groundwater: Modified EPA and ASTM Methods. 21st EPA Conference on Analysis of Pollutants in the Environment, Norfolk, VA, 1998.
242. Halden, R. U., B. G. Halden, and D. F. Dwyer: A Kinetic Analysis of Dioxin Degradation in Bioaugmented Soils. 97th General ASM Meeting, Miami Beach, FL, 1997.
243. Halden, R. U., and D. F. Dwyer: Biodegradation of Dioxins in Soils. 4th International Battelle Bioremediation Symposium, New Orleans, LA, 1997.
244. Halden, R. U.: A Kinetic Analysis of Dioxin Degradation in Bioaugmented Soils. 5th Environmental Science & Engineering Conference, Minneapolis, MN, 1997.

245. Halden, R. U., and D. F. Dwyer: Biotransformation of Dioxin-Related Compounds Via Angular Dioxygenation: Bacterial Strains, Degradative Pathways and Their Potential Use for Bioremediation. 3rd International ISEB Symposium, Boston, MA, 1996.
246. Halden, R. U., and D. F. Dwyer: Small Inocula Can Effect In Situ Biodegradation of Carboxydiphenyl Ether in Soil. Proceedings of the North Amer. Water & Environment Congress, ASCE, Somerset, NJ, 1996.
247. Halden, R. U., and D. F. Dwyer: Colonization of Soil by Low Numbers of a Bacterium Constructed to Degrade Dioxin-Related Pollutants. 96th General ASM Meeting, New Orleans, LA, 1996.
248. Raatz, W. A., K. Anderson, R. U. Halden, and D. F. Dwyer: Bioremediation of Aquifers Using Introduced Bacteria. 96th General ASM Meeting, New Orleans, LA, 1996.
249. Halden, R. U.: Detection and Environmental Fate of Bacteria Able to Degrade Dioxin-Related Compounds. 4th Annual Environmental Science & Engineering Conference, St. Paul, MN. 1996.
250. Halden, R. U., G. W. Mundfrom, E. G. Peters, and D. F. Dwyer: Detection and Environmental Fate of Bacteria Able to Degrade Dioxin-Related Compounds," 55th Annual ASM North Central Branch Meeting, Iowa City, IA, 1995.
251. Halden, R. U., G. W. Mundfrom, E. G. Peters, and D. F. Dwyer: In Situ Bioremediation: Tracking Introduced Diaryl Ether-Degrading Bacteria In Soil. National ASCE Environmental Engineering Conference, Pittsburgh, PA, 1995.
252. Halden, R. U., G. W. Mundfrom, E. G. Peters, and D. F. Dwyer: Bioaugmentation: Monitoring Diaryl Ether-Degrading Bacteria Introduced Into Contaminated Environments Using Molecular-Genetic Methods. 3rd International Bioreclamation Symposium, San Diego, CA, 1995.
253. Halden, R. U.: In Situ Biodegradation of Diaryl Ether Compounds in Soil and Sediment. 3rd Annual Environmental Science & Engineering Conference, Minneapolis, MN, 1995.

PUBLICATIONS

INVITED TALKS AT NATIONAL AND INTERNATIONAL EVENTS

Invited Keynotes, Invited Presentations, Invited Webinars, Invited Expert Panel Member & Conference Session Moderation

1. Venkatesan, A., Halden, R. U. Invited Talk: Analytical challenges and alternatives for monitoring opioid consumption in communities using wastewater-based epidemiology. American Chemical Society Annual Meeting, Boston, MA, August 23, 2018.
2. Rolsky, C., Kelkar, V., Halden, R. U., Tongay, S., Green, M. Invited Talk: Chemical and physical changes in a variety of contact lenses during the wastewater treatment processes. American Chemical Society Annual Meeting, Boston, MA, August 20, 2018.
3. Driver, E. M., Gushgari, A., Steele, J. C., Halden, R. U. Invited Talk: Tracking population stress via analysis of wastewater-borne Glucocorticoid hormones. American Chemical Society Annual Meeting, Boston, MA, August 22, 2018.
4. Gushgari, A., Driver, E. M., Steele, J. C., Halden, R. U. Invited Talk: Wastewater-based epidemiological tracking of narcotic use at a Southwestern U.S. university. American Chemical Society Annual Meeting, Boston, MA, August 20, 2018.
5. Halden, R. U. Invited Talk. Urban Metabolism Metrology and Sewage Epidemiology. U.S. Environmental Protection Agency Headquarters, Office of Water, Washington, DC., December 8, 2017.
6. Halden, R. U. Invited Webinar. Urban Metabolism Metrology: a new scientific discipline to combat the opioid epidemic and other intractable public health and environmental challenges. U.S. Environmental Protection Agency Headquarters, Washington, DC. October 25, 2017.
7. Halden, R. U. Invited Webinar: Sewage Testing for Drugs, Alcohol and Nicotine Concentrations, New York, NY. July 24, 2017.

8. Halden, R. U. Invited Talk: Harnessing Urban Metabolism Metrology to Combat the U.S. Opioid Crisis. Arizona State Capitol, Governor Doug Ducey's Office, Phoenix, AZ, June 30, 2017.
9. Halden, R. U. Invited Talk. Delivered by M. Maurer. Office of the Director of National Security (ODNI), Washington, DC, June 22, 2017.
10. Halden, R. U. Invited Talk: Harnessing Urban Metabolism Metrology to Combat the U.S. Opioid Crisis. City of Louisville, Mayor's Office, Louisville, KY, May 31, 2017.
11. Halden, R. U. Invited Talk: Research Projects at Arizona State University's Biodesign Center for Environmental Health Engineering, Flagstaff, AZ, May 22, 2017.
12. Halden, R. U. Invited Talk: Diagnosing Cities. ASU Downtown Campus, Arizona Biomedical Collaborative Building, Phoenix, AZ, April 27, 2017.
13. Halden, R. U. Invited Talk: Urban Metabolism Metrology and Sewage Epidemiology Panel. ASU Downtown Campus, ABC1, Phoenix, AZ, April 25, 2017.
14. Halden, R. U. Invited Keynote: Diagnosing Cities – From Hazard Discovery to Nationwide Chemical Ban and Beyond, AZ Water Luncheon, Tempe, AZ, February 14, 2017.
15. Halden, R. U. Invited Talk: Diagnosing the Health of Urban Populations, Ethics@Noon, Arizona State University, Tempe, AZ, February 8, 2017.
16. Halden, R. U. and E. M. Driver. Active In Situ Samplers for Environmental Waters. Invited RMP Webinar, San Francisco Bay Estuary Institute, CA, January 25, 2017.
17. Venkatesan, A. K. and R. U. Halden. Broadcasted Webinar: Results from the National Sewage Sludge Repository at Arizona State University: Contaminant Prioritization, Human Health Implications and Opportunities for Resource Recovery, Mid-Atlantic Biosolids Association Annual Meeting, Wilmington, DE, November 15-16, 2016.
18. Halden, R. U. Invited Talk: Down the Drain, Spirit of the Senses, The Biodesign Institute at Arizona State University, Tempe, AZ, October 27, 2016
19. Halden, R. U. Invited Talk: Impact of FDA Regulations on Antimicrobial Usage, Environmental Releases, and Risks from Antibiotic Drug Resistance, FDA CDER, Silver Spring, MD, October 19, 2016
20. Halden, R. U. Plenary Talk: Urban metabolism metrology: A new discipline elucidating the human condition in cities around the world, 252nd ACS National Meeting, Philadelphia, PA, August 21-25, 2016
21. Halden, R. U. Invited Panelist: Marine Plastics: What's the Catch?, The Monterey Bay Aquarium Sustainable Foods Institute, Monterey, CA, August 18-19, 2016
22. Halden, R. U. Keynote Speaker: Urban Metabolism Metrology Informed by Tandem Mass Spectrometer and Mass Balance Analyses, 12th Annual LC-MS/MS Workshop on Environmental Applications and Food Safety, Barcelona, Spain, July 5-6, 2016
23. Halden, R. U. Invited Seminar: Research on Urban Diagnostics at Arizona State University Biodesign Institute, Presented at the Catalan Institute of Water Research (ICRA), Girona, Spain, July 4, 2016
24. Halden, R. U. Invited Seminar Speaker: Diagnosing Cities Across the United States Using Tandem Mass Spectrometry, Presented at l'Institut de Diagnosi Ambiental i Estudis de l'Aigua (IDÆA), Barcelona, June 22, 2016
25. Halden, R. U. Invited Talk: Urban Metabolism Metrology – Understanding the Human Condition in Cities Around the World, Mario Negri Institute for Pharmaceutical Research, Milan, Italy, May 5, 2016
26. Halden, R. U. Invited Talk: Diagnosing Cities and the Urban Water Cycle, UChem Seminar, EAWAG, Duebendorf, Switzerland, January 22, 2016
27. Halden, R. U. Invited Talk: Urban Metabolism Metrology & Human Health, Parsons School of Design, New York, NY November 9, 2015
28. Halden, R. U. and I. B. Roll. Nationally broadcasted Webinar: Monitoring Aquatic Contaminants with Time-averaged Concentrations by Programmable *In Situ* Extraction, ESTCP ER-201122, Presented Online on October 27, 2015.

29. Halden, R. U. Invited Talk: Real-time Sustainability Assessment Using Urban Wastewater, San Francisco Bay Area Pollution Prevention Group, Oakland, CA, June 3, 2015.
30. Halden, R. U. Invited Talk: Toward Sustainability Using Data from Your Sewer, Google Inc, Mountain View, CA, June 2, 2015.
31. Halden, R. U. Invited Talk: Exploring New Frontiers in Environmental Proteomics for Human Health Assessment, Environmental Proteomics Sessions, US HUPO 2015 Next Generation Proteomics Conference, Tempe, AZ, March 15, 2015.
32. Halden, R. U. Invited Talk: New Approaches to Regulating Organohalogen Compounds to Protect Public Health, The Green Science Policy Institute Flame Retardant Dilemma, Berkeley, CA, February 13, 2015.
33. Halden, R. U. Invited Talk: Regulating Chemicals in the Future by Learning from the Past, Green Science Policy Workshop, Berkeley, CA, February 12, 2015.
34. Halden, R. U. Invited Talk: Use of Wastewater Treatment Plants as Observatories to Inform Regulatory Decision-Making for Chemicals, Department of Toxic Substances Control Safer Consumer Products Program, Sacramento, CA, February 11, 2015.
35. Halden, R. U. Analytical Methods for Detecting and Prioritizing Contaminants of Concern. ACS-Invited Symposium Chair. 248th ACS National Meeting & Exposition, San Francisco, CA, August 10-14, 2014.
36. Halden, R. U. Invited Talk: Sewage Metrology - Taking the Chemical Pulse of our Nation at the Sewer. Johns Hopkins University, School of Public Health, April 24, 2014.
37. Halden, R. U. Invited Talk, Panel Member, and Panel Moderator: Potential Human Health Risks of Microplastics. U.S. National Academies, Washington, D.C., April 23, 2014.
38. Halden, R. U. Invited Talk and Nationally Broadcasted Webinar: Chemical Composition of U.S. Sewage Sludges Informed by Analysis of EPA-Collected Biosolids Samples from Across the United States. United States Environmental Protection Agency Headquarter, Washington, D.C., April 22, 2014.
39. Halden, R. U. Invited Talk and Nationally Broadcasted Webinar: Update on Antimicrobials in the U.S. Environment. United States Food and Drug Administration, Headquarter, Washington, D.C., April 22, 2014.
40. Halden, R. U. Invited Keynote Address: Sewage Epidemiology - Taking the Chemical Pulse of a Nation at the Sewer. AZ Engineers Club of the West Valley: Sun City West, AZ. March 7, 2014.
41. Halden, R. U. Fate, Transport, and Toxicity of Wastewater-borne Contaminants by Example of Widely Used Persistent Antimicrobials. SETAC North America 34th Annual Meeting, Nashville, TN, November 17-21, 2013.
42. Halden, R. U. Environmental Fate and Human Health Risks of Contaminants of Emerging Concern in the U.S. Environment. Invited Seminar. Distinguished Lecture Series. Simulcast and Taped. <http://icsde.ifas.ufl.edu/accordent/live/Haden05-21-13/> University of Florida, Gainesville, FL, May 21, 2013.
43. Halden, R. U., K. McClellan and T. Kalinowski. *In Situ* Microcosm Array – A New Decision-Making and Design Tool for In Situ Remediation. Invited Webinar. Technical Practices Network – In Situ Bioremediation Group, AECOM. Presented Online. December 11, 2012.
44. Halden, R. U., S. D. Supowit, I. A. Roll, V. D. Dang, K. J. Kroll and N. D. Denslow. Addressing Risk Assessment Needs for Traditional and Emerging Contaminants Using the Innovative *In Situ* Sampling/Bioavailability (IS2B) Device. SETAC North America 33rd Annual Meeting, Long Beach, CA, November 11-15, 2012. (Invited talk).
45. Halden, R. U. Antimicrobials, Antimicrobial Resistance and New Risk Assessment Tools. SETAC North America 33rd Annual Meeting, Long Beach, CA, November 11-15, 2012.
46. Halden, R. U. Understanding and Minimizing the Health Risks of Plastics. SETAC North America 33rd Annual Meeting, Long Beach, CA, November 11-15, 2012.
47. Kalinowski T., K. McClellan and R. U. Halden. An Emerging Remediation Technology: The *In Situ* Microcosm Array. Community Informational Group meeting for the Motorola 52nd St.

- Superfund Site community hosted by the EPA. Sonoran Science Academy-Phoenix K-12 School. October 24, 2012. (Invited talk).
48. Halden, R. U., K. McClellan and T. Kalinowski. *In Situ* Microcosm Array – A New Decision-Making and Design Tool for In Situ Remediation. Invited Interactive Webinar. Remedial Design (In-Situ) Network. Presented Online. September 19, 2012.
 49. Halden, R. U., K. McClellan and T. Kalinowski. *In Situ* Microcosm Array – A New Decision-Making and Design Tool for In Situ Remediation. Invited EPA Clu-in Webinar. Presented Online. August 15, 2012. <http://www.clu-in.org/conf/tio/isma/>
 50. Halden, R. U. and N. Denslow. *In Situ* Sampling Tool for Assessing Bioavailability and Toxicity of Sediments. Invited Webinar Presented Online on May 7, 2012. <http://www.clu-in.org/conf/tio/srpfunding/>
 51. Halden, R. U. Invited Member of 5-Expert Panel Discussion. *Feed 8 Billion*. Arizona State University, Tempe Campus, AZ, February 2, 2012.
 52. Halden, R. U. Invited Talk. Polluting While Cleaning: *How Personal Care Products Affect Environmental Quality and Human Health*. Polytechnic Campus, Arizona State University, Mesa, AZ, January 10, 2012.
 53. Benny F.G. Pycke, L. A. Geer, A. K. Venkatesan, K. E. Lee, L. B. Barber, A. Crabbé, N. Leys, P. Monsieurs, M. Mergeay, G. Vanermen, H. De Wever, W. Verstraete, and R. U. Halden. Invited Talk. Antimicrobial Exposure Assessment From The Cradle To The Grave. *International Conference of the Flemish Centre of Expertise for Environment and Health*. Brussels, Belgium, December 21-22, 2011.
 54. Halden, R. U. Invited Talk (Webcast). Sustainable Chemistry: Public Health at the Crossroads. Biomedical Informatics Symposium Series, Department of Biomedical Informatics, ASU Mayo Campus, Scottsdale, AZ, November 17, 2011.
 55. Halden, R. U. Invited Talk. Novel Approaches to Assessing the *In Situ* Treatability and Health Impacts of Toxic Mixtures. Pacific Northwest National Laboratory (PNNL), Richland, WA, November 14, 2011.
 56. Halden, R. U. Invited Talk: Overuse of Antimicrobial Household Products: Environmental and Human Health Effects. American Public Health Association (APHA) Annual Meeting, Washington, DC, October 31, 2011.
 57. Halden, R. U. Invited Panel Member: Beyond the Hospital: Antibiotic Resistance as a Problem of the Community Environment. American Public Health Association (APHA) Annual Meeting, Washington, DC, October 31, 2011.
 58. Halden, R. U., K. McClellan, T. Kalinowski, T. A. Bruton, E. M. Hartmann, T. R. Miller, M. Ziv-El, A. Delgado, D. R. Colquhoun, T.-C. Chao, N. Hansmeier, R. P. Deo, J. Heidler, J. B. Herbstman, B. J. Apelberg, E. M. Wells, G. Neta, F. R. Witter, L. R. Goldman, and R. Krajmalnik-Brown. Novel Approaches to Understanding and Managing Complex Mixtures. Annual Conference of the NIEHS Superfund Program, Lexington, KY, October 23-26, 2011.
 59. Halden, R. U. Invited Talk: Biosolids: A Diagnostic Matrix Foretelling Exposures in the Anthroposphere. Institute for Food Toxicology and Analytical Chemistry, University of Veterinary Medicine, Hanover, Germany, August 29, 2011.
 60. Halden, R. U. Invited Talk: Antimicrobial Agents and Sustainable Chemistry, *Science Cafe* Series, hosted by the Center for Nanotechnology in Society, Phoenix, AZ, May 20, 2011.
 61. Halden, R. U. Invited Talk: Public Health Engineering: From Problem Recognition to Regulation. Presented to the IGERT Program at the University of Minnesota, Minneapolis, MN, May 5, 2011.
 62. Halden, R. U. Invited Talk: In Situ Microcosm Array and In Situ Sampling Technologies for Technology Transfer. ASU Biodesign Institute, April 21, 2011.
 63. Halden, R. U. Invited Talk: Sustainable Chemistry & Human Health in the 21st Century. U.S. EPA Emerging Chemicals Workgroup. Presented on April 6, 2011.

64. Halden, R. U. and T. Jones-Lepp. Invited Session Chairs: Contaminants of Emerging Concern in the Natural and Built Environment. 241st American Chemical Society National Meeting & Exposition, Anaheim, California, March 27-31, 2011.
65. Halden, R. U. Invited Talk at Leroy E. Burney Lecturer Series: Sustainable Chemistry and Human Health in the 21st Century, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, March 7, 2011.
66. Halden, R. U. Invited Talk at the U.S. Congress: Environmental Health Risks of Triclosan. Capitol Hill Congressional Briefing Room, Washington, DC, February 17, 2011. Halden, R. U. Invited Talk: In Situ Microcosm Array Technology and the SUMMIT Center. Arizona Department of the Environment, Phoenix, AZ, January 31, 2011.
67. Halden, R. U. Invited Talk: Sustainable Chemistry and Human Health, *The Wiseguise Seminar Series*, Scottsdale, AZ, November 19, 2010.
68. Halden, R. U. Invited Chalk Talk. Sustainable Chemistry for the 21st Century and Beyond. Center for Biological Physics Seminar Series, Arizona State University, Tempe, AZ, October 26, 2010.
69. Halden, R. U. Invited Presentation. Antimicrobial Personal Care Products: Are They Good for Us? Science Salon. Spirit of the Senses Seminar Series. Biodesign Institute, Arizona State University, Tempe, AZ, September 30, 2010.
70. Halden, R. U. Invited Presentation. The SUMMIT Project. CHiR-Arizona HealthQuery Stakeholder Meeting, ASU Biomedical Campus, Phoenix, AZ, September 20, 2010.
71. Halden, R. U.: Invited Seminar. Examining the Sustainability of Persistent Antimicrobial Compounds. Department of Chemical and Environmental Engineering, University of Arizona, Tucson, AZ, April 20, 2010.
72. Halden, R. U.: Parallel *In Situ* Screening of Remediation Strategies for Improved Decision Making, Remedial Design, and Cost Savings. Department of Defense, ESTCP Program, Arlington, VA, February 10, 2010.
73. Halden, R. U.: Chemicals of Emerging Concern in the U.S. Environment. American Chemical Society Meeting, Las Vegas, November 10, 2009.
74. Halden, R. U.: Wastewater Treatment Plants as Chemical Observatories of Persistent and Problematic Contaminants in the Environment. 238th American Chemical Society (ACS) National Meeting, Washington, DC, August 16-20, 2009. Halden, R. U.: Invited Panel Member. "Superfund Contaminants: The Next Generation." Invitation-only Special Symposium Tucson, AZ, August 12-14, 2009.
75. Halden, R. U. and J. Katz: Occurrence, Fate, and Impact of Triclosan and Other Antimicrobials to Wastewater Treatment Utilities. Microconstituents and Industrial Water Quality, Water Environment Federation (WEF), Baltimore, MD, July 26-29, 2009.
76. Halden, R. U.: Invited Speaker. "State of the Science – Antimicrobial Resistance." FDA Discussion: the Problem of Triclosan, Food and Drug Administration, Washington, D.C., July 13, 2009.
77. Halden, R. U.: Invited Speaker. "State of the Science – Environmental Fate & Persistence." FDA Discussion: the Problem of Triclosan, Food and Drug Administration, Washington, D.C., July 13, 2009.
78. Hartmann, E. and R. U. Halden. Invited presentation: "Challenges of Detecting Bioterrorism Agents in Complex Matrices." NATO ARW Workshop on "Detection of Biological Agents and Toxins for the Prevention of Bioterrorism in Homeland Security by Advanced Mass Spectrometric Methods," Spezzano Albanese Terme, Italy, June 26 - July 2, 2009.
79. Halden, R. U.: Toward Sustainable Chemistry and Engineering. Invited Seminar presented at the 1st Biological Design Graduate Program Symposium, Tempe, May 6, 2009. Halden, R. U.: Invited Speaker. High-throughput Diagnostic Screening and Proteomics in Bioremediation - Opportunities & Challenges. The 19th Annual AEHS Meeting and West Coast Conference on Soils, Sediments, and Water. San Diego, CA, March 10, 2009.
80. Halden, R. U.: Invited Speaker. What's in Our Water? National Research Council 6th Workshop of the Standing Committee on Risk Analysis Issues and Reviews. Characterizing the Potential Human

Toxicity from Low Doses of Pharmaceuticals in Drinking Water: Are New Risk Assessment Methods or Approaches Required? The National Academies, Washington, D.C., December 11-12, 2008.

81. Halden, R. U. and B. Anderson: SBRP Technology Transfer: Statistics & Case Study. Annual Conference of the Superfund Basic Research Program (SBRP) of the National Institute of Environmental Health Sciences. Member of Steering Committee and Invited Speaker of Technology Transfer Session, Pacific Grove, CA, December 7-9, 2008.
82. Halden, R. U.: Pharmaceuticals and Personal Care Products in U.S. Water Resources. Invited Keynote at the 2008 Fall Meeting of the Interstate Technology & Regulatory Council (ITRC). Phoenix, AZ, October 21, 2008.
83. Halden, R. U.: Invited Panel Member. Antibiotic Resistance: New Approaches to an Old Problem. The American Academy of Microbiology. Invitation-Only International Symposium, Annecy, France, October 12-14, 2008.
84. Halden, R. U.: Invited Speaker and Session Chair. Environmental Fate of Antimicrobials: 50 years in 15 minutes. Pacific Southwest Organic Residuals Symposium 2008. Sacramento, October 1-2, 2008.
85. Halden, R. U.: Parallel *In Situ* Screening of Remediation Strategies for Improved Decision Making, Remedial Design, and Cost Savings. Department of Defense, ESTCP Program, Arlington, VA, September 16, 2008.
86. Halden, R. U.: Occurrence of and Exposure Routes to Triclosan and Triclocarban in the U.S. Environment. State University of New York, Downstate Medical Center, Department of Preventive Medicine and Community Health Seminar, August 28, 2008.
87. Halden, R. U.: Work Plan for Field Deployment of the *In Situ* Microcosm Array Technology, Lawrence Livermore National Laboratory, Livermore, CA, July 11, 2008.
88. Halden, R. U.: Exposure Sources of Triclosan and Triclocarban in the Environment. Invited Talk at the Food and Drug Administration, Washington, DC, February 27, 2008.
89. Halden, R. U.: Field Deployment of the *In Situ* Microcosm Array Technology, Lawrence Livermore National Laboratory, Livermore, CA, February 25, 2008.
90. Halden, R. U.: Innovative Technologies. Session Moderator and Planning Committee Member, 20th Anniversary Meeting of the Superfund Basic Research Program, Durham, NC, December 3, 2007.
91. Halden, R. U.: Findings from the Johns Hopkins Nationwide Study on the Fate of Pharmaceuticals and Personal Care Products in the Environment. U.S. EPA, Office of Science and Technology, November 28, 2007.
92. Halden, R. U.: Forensic Tools for Environmental Assessment and Remediation. University of Delaware, Newark, DE, Department of Civil and Environmental Engineering, October 19, 2007.
93. Halden, R. U.: Keynote Speaker. Emerging Knowledge on Emerging Contaminants. New England Interstate Water Pollution Control Commission's (NEIWPCC) 2007 Northeast Water Science Forum – Pharmaceuticals and Personal Care Products: State of the Science Conference, Portland, ME, August 8–9, 2007.
94. Halden, R. U.: Guest Speaker. Risks and Benefits of Using Persistent Antimicrobials in Public Health Practice. Public Health Practice Grand Rounds, Live Webcast, MidAtlantic Public Health Training Center (MAPHTC), Baltimore, MD, June 20, 2007.
95. Halden, R. U. and K. J. Schwab: Guest Speaker. Environmental Issues Related to Industrial Food Animal Production. National Commission on Industrial Farm Animal Production. Denver, CO, June 5, 2007.
96. Halden, R. U.: Guest Speaker. Antimicrobial Pesticides in Aquatic Environments – Implications for the Great Lakes. Beyond Pesticides 25th National Pesticide Forum: “*New Opportunities for Protecting Health and the Environment*,” Chicago, IL, June 3, 2007.
97. Halden, R. U.: Keynote Speaker. Antimicrobial Pesticides as Environmental Pollutants. Beyond Pesticides 25th National Pesticide Forum: “*New Opportunities for Protecting Health and the Environment*,” Chicago, IL, June 2, 2007. Halden, R. U.: Guest Speaker. Rachel Carson Open House

- and Centennial Celebration: "U.S. Environmental Quality 45 Years after the Publication of Silent Spring," Silver Spring, MD, May 19, 2007.
98. Halden, R. U.: Guest Speaker. USGS Symposium: Rachel Carson Centennial Celebration: "Considering the Microbial Loop in Wildlife Conservation," USGS Patuxent Wildlife Research Center, Laurel, MD, May 18, 2007.
 99. Halden, R. U.: Guest Speaker & Session Moderator. Antimicrobial Agents in the Chesapeake Bay Watershed. Pesticides in Chesapeake Waterways: Working Group Meeting, Reisterstown, MD, May 14, 2007.
 100. Halden, R. U.: Guest Speaker. Emerging Contaminants in U.S. Surface Waters: Challenges and Potential Solutions. Potomac River Basin Drinking Water Source Protection Partnership's Mini-Workshop. Rockville, MD, May 7, 2007.
 101. Halden, R. U.: Moderator of Film Screening and Invited Discussant. Lifecycle Analysis of Polyvinyl Chloride Products. Chesapeake Sustainable Business Alliance, Visionary Arts Museum, Baltimore, MD, March 19, 2007.
 102. Halden, R. U.: Keynote Speaker. Antimicrobial Agents in the Environment and Human Exposure Assessment. Chesapeake Potomac Chapter of SETAC Winter Meeting, Washington, DC, February 22, 2007.
 103. Halden, R. U.: Panel Chair and Keynote Speaker. Reducing Our Ecological Footprint. 10th Anniversary of the Johns Hopkins Center for a Livable Future – Charting A Course To Sustainability Through Research, Education And Service, Baltimore, MD, December 6, 2006.
 104. Halden, R. U.: Overused Household Biocides Cause Nationwide Pollution. 10th Anniversary of the Johns Hopkins Center for a Livable Future – Charting A Course To Sustainability Through Research, Education And Service, Baltimore, MD, December 6, 2006.
 105. Halden, R. U.: Persistent Antimicrobials as Emerging Endocrine Disrupting Chemicals in U.S. Water Resources, Biosolids and Sediments. Endocrine Disruptors – What We Know & What We Don't Know. Research Symposium of the Mid-Atlantic Regional Water Program, A Partnership of USDA CSREES & Land Grant Colleges and Universities, Frederick, MD, November 16, 2006.
 106. Halden, R. U.: Environmental Routes of Human Exposure to Persistent Antimicrobial Compounds – A Human Exposure Assessment. Municipal Institute of Medical Research, Barcelona, Spain, November 3, 2006.
 107. Halden, R. U.: Environmental Toxins. 44th Annual New Horizons in Science Briefing, sponsored by the Council for the Advancement of Science Writing, hosted by The Johns Hopkins University, Baltimore, MD, October 30, 2006. <http://www.jhu.edu/newhorizons/>
 108. Halden, R. U.: Persistent Antimicrobial Compounds in the Environment – A Human Health Concern? Christine Mirzayan Science and Technology Policy Graduate Fellowship Program at the National Academies—National Academy of Sciences, National Academy of Engineering, Institute of Medicine, and National Research, Washington, DC, October 25, 2006.
 109. Halden, R. U.: Contemporary Technologies for Combating Emerging Contaminants. Biodesign Institute, Center for Environmental Biotechnology. Tempe, AZ, October 12, 2006.
 110. Halden, R. U.: In Situ Microcosm Array (ISMA) Technology for Environmental Monitoring and Toxicity Testing. U.S. Army Invitation-Only Symposium, Massachusetts Institute of Technology. Boston, MA, September 15, 2006.
 111. Halden, R. U.: Novel Approaches in Environmental Biotechnology. Arizona State University. Tempe, AZ, August 16, 2006.
 112. Halden, R. U.: Use of Proteomics and In Situ Microcosm Arrays in Environmental Biotechnology. BIO 2006. Annual International Convention. Environmental Biotechnology Session. Chicago, IL, April 9-12, 2006.
 113. Halden, R. U.: Study on Consumer Products and Pharmaceuticals in the Environment. The Mid-Atlantic States Section of the Air & Waste Management Association (MASS-A&WMA), New Brunswick, NJ, April 6, 2006.

114. Halden, R. U.: Environmental Fate of Persistent Antiseptic Compounds. Southern Nevada Water Authority. Las Vegas, NV, February 9, 2006.
115. Halden, R. U.: A Novel Tool in Environmental Restoration: Proteomics-enabled In Situ Microcosm Array. Lawrence Livermore National Laboratory, CA, February 6, 2006.
116. Halden, R. U.: Fate of Persistent Antimicrobials in the Environment: From Germ Killers to Culinary Curiosities. Colorado School of Mines, Golden, CO, December 14, 2005.
117. Halden, R. U.: Environmental Exposure to Persistent Antimicrobial Compounds – A Human Health Concern? Municipal Institute of Medical Research, Barcelona, Spain, November 18, 2005.
118. Halden, R. U.: Through a Glass Safely: How Healthy is Our Drinking Water? A Woman's Journey—Johns Hopkins Premier Woman's Health Conference, Baltimore, MD, November 12, 2005.
119. Halden, R. U.: Sources, Occurrences, and Fate of Pharmaceuticals and Personal Care Products in the Environment. Public Health Risk Assessment Workshop. Harvard School of Public Health, Boston, MA, November 10, 2005.
120. Halden, R. U.: Screening of Groundwater Remediation Technologies Using In Situ Microcosm Arrays. Presenter and Chair of Groundwater Remediation Session. International Conference on Safe Water: Exploring Global Demands and Impact of Natural Disasters, San Diego, CA, October 21, 2005.
121. Halden, R. U.: Secondary Routes of Exposure to Biocides. Food And Drug Administration, Center For Drug Evaluation And Research (CDER) Nonprescription Drugs Advisory Committee. "Benefits and Hazards of Antiseptic Products Marketed for Consumer Use." Silver Spring, MD, October 20, 2005.
122. Halden, R. U.: Use of Proteomics in Bioremediation. The 21st Annual International Conference on Soils, Sediments, and Water. University of Massachusetts, Amherst, MA, October 18, 2005.
123. Halden, R. U.: Measuring Antibacterial Agents in Biosolids and Predicting Their Environmental Fate. Mid-Atlantic Biosolids Association Research Symposium, Washington, D.C., September 28, 2005.
124. Halden, R. U.: Proteomics in Bioremediation: Opportunities and Challenges. University of Maryland, Department of Chemistry and Biochemistry. College Park, MD, September 9, 2005.
125. Halden, R. U.: Potential Application of Proteomics. DoD SERDP/ESTCP Molecular Biological Tools Workshop, Charlottesville, VA, August 9, 2005.
126. Halden, R. U.: Fate of Personal Care Products During Wastewater Treatment. 35th Annual Joint Conference and Exhibition. The Chesapeake Water Environment Association and the Waters and Waste Operators Association of Maryland, Delaware and the District of Columbia, Ocean City, MD, July 8, 2005.
127. Halden, R. U.: Use of Proteomic Mass Spectrometry and Bioinformatics for the Identification of Environmental Microorganisms. U.S. Department of Agriculture, Beltsville, MD, June 27, 2005.
128. Halden, R. U.: ISMA – A Platform Technology with Biomedical Applications. Johns Hopkins University, School of Medicine. Alliance for Science and Technology. Spring 2005 Meeting. April 12, 2005.
129. Halden, R. U.: Fate of Polychlorinated Antimicrobial Compounds in the U.S. Environment. U.S. Headquarters of the Soap and Detergent Association (SDA), Washington, D.C., March 29, 2005.
130. Halden, R. U.: Polychlorinated Antimicrobials as Indicators of Sewage Spills. Presented at the American Chemical Society Meeting, Maryland Chapter, Baltimore, MD, February 23, 2005.
131. Halden, R. U.: Triclocarban: A New Contaminant in Baltimore Streams. Maryland State Water Quality Advisory Committee (SWQAC), Baltimore, MD, December 3, 2004.
132. Halden, R. U.: Pharmaceuticals and Personal Care Products as Indicators of Sewage Spills. Presenter and Panelist at the Maryland Water Monitoring Council 10th Annual Conference, Linthicum, MD, November 18, (2004). <http://mddnr.chesapeakebay.net/MWMC/pub/MWMC10conf.pdf>.
133. Halden, R. U.: Antimicrobials Signal High Levels of Pathogens in Baltimore Streams. Herring Run Watershed Association Annual Meeting, Baltimore, MD, November 16, 2004.

134. Halden, R. U.: Invited Discussant for Seminar by Dr. Leigh English, Director of the Monsanto Protein Science Team, titled: Genetically Modified Crops: A Jelly Donut of Social Issues Surrounded by Technical Explanations. Institute for Global Studies in Culture, Power and History; Fall Seminar Series: Feeding the World: Ethical, Moral, Legal and Scientific Dimensions, Baltimore, MD, November 11, 2004.
135. Halden, R. U.: JHU Center for Water and Health On-going Research. Chesapeake Bay Foundation Research Retreat, Port Isobel, VA, October 3, 2004.
136. Halden, R. U.: The Johns Hopkins University Center for Water and Health Nationwide Study on the Fate of Pharmaceuticals and Personal Care Products in the Environment – Preliminary Results for the State of Maryland. Johns Hopkins University, Baltimore, MD, September 21, 2004.
137. Halden, R. U.: Pharmaceuticals and Personal Care Products in the Environment. Chesapeake Biological Laboratory, University of Maryland, Solomon, MD, September 9, 2004.
138. Halden, R. U.: Leaky Pipes and Cross-Contamination – Is Baltimore’s Aging Sewer System a Threat to Public Health? Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, August 13, 2004.
139. Halden, R. U.: Chemical Analysis and Treatment of Perchlorate. Aberdeen Proving Ground, MD, July 23, 2002.
140. Halden, R. U.: Aberdeen Proving Grounds Environmental Research. National Defense Industrial Association TACOM – ARDEC Technical Symposium, Rockaway, NJ, April 10, 2002.
141. Halden, R. U.: Pharmaceuticals in U.S. Streams – A Public Health Concern? Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, March 27, 2002.
142. Halden, R. U.: Microcontaminants in Food and Water. Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, March 12, 2002.
143. Halden, R. U.: Toxins as Modifiers of Human Vulnerability to Disease. University of Pennsylvania, 2002 Health-Environment Symposium, Hershey, PA, March 7, 2002.
144. Halden, R. U.: Bioremediation: From Pure Culture to the Dirty Reality. Johns Hopkins University, Department of Geography and Environmental Engineering, Baltimore, MD, October 23, 2001.
145. Halden, R. U.: From Cloning to Cleaning: Bioremediation in the Real World. University of Maryland Biotechnology Institute – Center of Marine Biotechnology, Baltimore, MD, September 26, 2001.
146. Halden, R. U.: Detection and Bioremediation of Fuel Oxygenates, Perchlorate and Trichloroethene. University of Minnesota, School of Public Health, Minneapolis, MN, August 21, 2001.
147. Halden, R. U.: Detection and Destruction of Anthropogenic Toxins in Drinking Water Resources. University of California at Berkeley, Center for Environmental Biotechnology Video-taped Lecture Series, Berkeley, CA, March 6, 2001.
148. Halden, R. U.: Detection and Destruction of Anthropogenic Toxins in Drinking Water Resources. Johns Hopkins University, Department of Environmental Health Sciences, October 15, 2000. Halden, R. U.: ASTD Deployment of Bioremediation and Natural Attenuation at the Building 834 Complex at Site 300. Lawrence Livermore National Laboratory, Subcon Focus Area Meeting, Livermore, CA, October 9, 2000.
149. Halden, R. U.: Analytical Methods for the Detection of Oxygenates in Ground Water. United States Environmental Protection Agency, MTBE Scientist-to-Scientist Meeting, Argonne National Laboratory, Argonne, IL, June 20, 2000.
150. Halden, R. U.: The Building 834 Study Area at Site 300, CA. Idaho National Engineering and Environmental Laboratory, Idaho Falls, ID, September 9, 1999.
151. Halden, R. U.: Where Did that TCE End Up? – Refining the Conceptual Model for Contaminant Fate at LLNL’s Site 300, Building 834. Oregon State University, Department of Civil Engineering, Corvallis, OR, February 5, 1999.
152. Halden, R. U.: Engineered In Situ Biodegradation of Dioxins – Do Laboratory Bacteria Function in the Real World? University of Florida at Gainesville, Department of Environmental Engineering Sciences, Gainesville, FL, March 4, 1997.

153. Halden, R. U.: Engineered In Situ Biodegradation of Dioxins. Lawrence Livermore National Laboratory, Environmental Protection Department, Livermore, CA, January 16, 1997.

SPONSORED RESEARCH AWARDS & PROJECTS

Halden (0.0% Effort) Occurrence and Impact of Phthalates in the Irish Environment. Role: USA PI: Halden; Project PI: Jennifer Lawler	01/1/2016 – 12/31/2018 European EPA. International Project. €350,000
Halden (% Effort) MRI: Acquisition of Cryo-EM for Southwest Regional Center NSF-BIO: Division of Biological Infrastructure (DBI) Role: Co-I with John Spence (PI)	9/15/2015 – 8/31/2018 \$2,825,509
Halden (0.0% Effort) The Fingerprints of Plastic in Monterey Bay Pelagic Food Webs Monterey Bay Aquarium Research Institute Role: Contract PI	8/12/2017 – 12/31/2017
Halden (0.0% Effort) 2016 Toxics Release Inventory (TRI) University Challenge, Academic Partner, 2016-2017 Role: PI (100% Recognition)	08/1/2016 – 07/31/2017
Halden (0.0% Effort) Biology and Built Environment (BioBE) Center Renewal Role: PI (100% Recognition)	09/1/2015 – 08/31/2017 \$44,551
Halden (0% Effort) <i>In Situ</i> Delivery of Remediation Agents Chevron. Role: PI (60% Recognition)	01/01/2014 – 03/15/2016 \$127,450 of \$2M Total
Halden (3% Effort) Thermal <i>In Situ</i> Remediation of Weathered Heavy Hydrocarbons Chevron. Role: PI (100% Recognition)	01/1/2014 – 03/15/2016 \$141,700 of \$2M Total
Halden (15.7% Effort) NIEHS-R01 1R01ES020889 In Situ Sampling Tool for Assessing Bioavailability and Toxicity of Sediments This Project Explores the Bioavailability of Traditional and Emerging Contaminants Role: PI (100% Recognition)	09/20/2011 – 07/31/2016 \$830,943
Halden (15.7% Effort) DoD ESTCP Project 201122 Cost-effective, Ultra-sensitive Groundwater Monitoring for Site Remediation and Management Role: PI (100% Recognition)	05/04/2011 – 12/31/2015 \$1,151,519
Halden (8.33% Effort) U.S. Army Dense Urban Area (DUA) Planning Role: PI (50% Recognition)	07/15/2015 – 09/30/2015 \$49,978
Halden (0% Effort)	06/1/2013 – 05/30/2014

Arizona Technology Enterprises (AzTE) The ASU Catalyst Fund Role: PI (100% Recognition)	\$25,000
Halden (0% Effort) NIEHS-R01 Supplement 3R01ES020889-03S1 <i>In Situ</i> Sampling / Bioavailability Assessment (IS2B) Tool Addressing Remediation Market Needs This Project Supports the Development for Commercial Application of a Small Sampling Device Role: PI (100% Recognition)	08/1/2013 – 07/31/2015 \$42,597
Halden (8.3% Effort) Salt River Project (SRP) In Situ Bioremediation – An Innovative Approach for Elevated Chlorinated Volatile Organic Compounds in Groundwater Role: PI (100% Recognition)	05/01/2013 – 08/31/2014 \$60,000
Halden (0% Effort) Piper Charitable Trust Center for Environmental Health Engineering/AZ Public Health Observatory Role: PI (100% Recognition)	05/1/2012 – 06/30/2017 \$750,000
Halden (0% Effort) AZ Board of Regents Planning, Development and Implementation of a State-wide Research Initiative in Environmental Informatics: “Arizona Environmental Grid Infrastructure Service (AEGIS)” Role: ASU-PI. (PD: Petuskey)	05/24/2013 – 12/31/2015 \$140,000 subcontract of \$450K Total
Halden (0% Effort) TRIF Biodesign Mass Spectrometry Recharge Facility Trial Run Role: PI. (0% Recognition)	01/1/2013 – 12/30/2013 \$60,000
Halden (0% Effort) NASA 2012-T72247 Analysis of Hormones, Steroids, Pharmaceuticals, and Personal Care Products in Water, Wastewater and Preserved Urine Samples Role: PI. (100% Recognition)	03/1/2012 – 02/28/2013 \$15,000
WRF Water Research Foundation (PI: Westerhoff, Co-PI: Halden, 8.3% Effort) Constructed Wetlands for Treatment of Organic and Nanomaterial Pollutants. The major goal of this project is to develop design criteria for constructed wetlands for removal of emerging contaminants. Role: Co-PI (30% Recognition or \$100,200)	9/30/2010 – 8/31/2012 \$334,000 (\$84,000 match. funds)
NIH-NIEHS-RC2 1RC2ES018801-01 (PI: Westerhoff; Co-PI: Halden, Herckes, Hristovski) Detection of Engineered Nanomaterials in Drinking Water, Food, Commercial Products and Biological Samples. The major goal of this project is to develop and validate analytical methods for the determination of nanomaterials in environmental and biological samples. Role: Co-PI (28% Recognition or \$355,144; 8.3% Effort)	9/30/2009 – 7/31/2011 \$1,268,370
Halden (0% Effort; PI: B. Bakkaloglu)	01/01/2011 – 12/31/2011

ASU Grand Challenges Seed Funding Research Center for Integrated Sub-mm Environmental & Molecular Sensors (iSEMS) Role: Co-PI. (15% Recognition)	\$100,000
Halden (16.6% Effort) DoD ESTCP ER-200914 Parallel In Situ Screening of Remediation Strategies for Improved Decision Making, Remedial Design, and Cost Savings. Role: Sole PI. (100% Recognition)	03/01/2009 – 12/31/2013 \$1,060,125
Halden (16.6% Effort) Biocides in the U.S. Environment. Role: Sole PI. (100% Recognition)	02/01/2008 – 12/31/2011 \$373,031
Halden (0% Effort) Anonymous Gift, JHU Hopkins Graduate Student Initiative Role: Sole PI. (100% Recognition)	02/01/2008 – 12/31/2011 \$131,468
Halden (0% Effort) NIEHS-R01 3R01ES015445-04W1 Cooperative Supplement to: Novel Approaches to Studying the In Situ Bioremediation Potential of Complex Mixtures Detection of Triclocarban in Human Specimens. Role: Sole PI at ASU. (100% Recognition)	08/12/2009 – 07/31/2012 \$228,164
Halden (0% Effort) NIEHS-R01 3R01ES015445-04S-TT Technology Transfer Supplement to: Novel Approaches to Studying the In Situ Bioremediation Potential of Complex Mixtures Development of a Nutrient Injection Unit for the In Situ Microcosm Array. Role: Sole PI. (100% Recognition)	08/12/2009 – 07/21/2012 \$152,843
Halden (0% Effort) NIEHS-R01 1R01ES015445S Supplement to: Novel Approaches to Studying the In Situ Bioremediation Potential of Complex Mixtures Evaluation of In Situ Microcosms Arrays for the Study of Chemical Mixtures in Contaminated Environments. Role: Sole PI. (100% Recognition)	09/28/2009 – 09/27/2012 \$109,375
Halden (16.6% Effort) NIEHS-R01 1R01ES015445 Novel Approaches to Studying the In Situ Bioremediation Potential of Complex Mixtures Evaluation of In Situ Microcosms Arrays for the Study of Chemical Mixtures in Contaminated Environments. Role: Sole PI. (100% Recognition)	09/28/2006 – 07/31/2012 \$624,261
Halden (8.3% Effort) Central Arizona Project (PI: Westerhoff, Co-PI: Halden and Herckes) Enhancement Project by Central Arizona Project (CAP): Regional Water Quality Monitoring and Evaluation for the Metropolitan-Phoenix Area Water Supply. Role: Co-PI. (25% Recognition or \$7,500)	01/01/2008 – 04/30/2009 \$30,000

Halden (0% Effort) City of Phoenix Planning Dept. (PI: Westerhoff, Co-PI: Halden and Herckes) Regional Water Quality Monitoring and Evaluation for the Metropolitan-Phoenix Area Water Supply. Role: Co-PI. (0% Recognition)	07/01/2007 – 06/30/2010 \$155,250
Salt River Project (SRP) Halden (8.3% Effort) In Situ Bioremediation – An Innovative Approach for Elevated Chlorinated Volatile Organic Compounds in Groundwater Role: Sole PI. (100% Recognition)	06/01/2011 – 5/30/2012 \$75,000
Halden (0% Effort) DOE BER Genome Sequencing Program Genome Sequencing of the Dioxin-Mineralizing Bacterium <i>Sphingomonas wittichii</i> RW1 Sequencing and Annotation of the Genome of a Dioxin-Metabolizing Bacterium. Role: Sole PI. (100% Recognition)	01/01/2007 – 12/31/2009 Free Genome Sequencing ~\$100,000
Halden (PI: Ketner) JHSPH-Faculty Research Initiative Proteomic Approach to Understanding Viral Infection and Pathogenesis Elucidation of viral infection mechanisms and identification of intervention strategies. Role: Co-PI. (50% Recognition or \$17,500)	03/01/2007 – 2/28/2009 \$35,000
Halden (PI: Schwab; Co-PI: Halden, Graczyk) R83300201 U.S. EPA Science to Achieve Results (STAR) Program Quantitative Assessment of Pathogens in Drinking Water Development and Evaluation of Novel Methods for the Detection of Emerging Waterborne Pathogens. Role: Co-PI. (30% Recognition or \$180,000)	04/01/2006 – 12/31/2008 \$600,000
Halden (PI: Lawrence; Co-PI: Silbergeld, Schwab, Halden) The Pew Charitable Trusts National Commission on Industrial Farm Animal Production A Collaboration Was Formed Between The Pew Charitable Trusts and the Johns Hopkins Bloomberg School of Public Health to Investigate and Summarize in a Report, Issues of Environmental Quality, Public Health, and Ethics Linked to Concentrated Animal Feeding Operations (CAFOs) in the United States. Role: Co-I. (20% Recognition or \$84,600)	10/01/2005 - 12/31/2007 \$423,000 (JHU of \$2.4M total)
Halden State of Maryland TEDCO Supporting Funds for International Patent Rights to a Hopkins' Technology (International Patent Application PCT WO 2004/081530). Role: Sole PI. (100% Recognition)	10/01/2005 – 09/30/2006 \$10,000
Halden (PI: Goldman) JHU-Center for a Livable Future Pilot Project Exposures to Persistent Contaminants in Food and Fetal Growth and Development. Determination of Potential Linkages Between Fetal Exposure to Polybrominated Flame Retardants / Perfluorinated Organic Compounds and Adverse Health Outcomes. Role: Co-I. (10% Recognition)	10/01/2005 – 09/30/2006 \$20,000
Halden JHSPH-Faculty Research Initiative Carcinogens in Biosolids as Determinants of Human Morbidity and Mortality	01/01/2005 – 06/30/2007

Creation of a Nationwide Repository and Database for Application of Municipal Sludge (Biosolids) in Agriculture. Role: PI. (100% Recognition)	\$50,000
Halden JHU-NIOSH ERC Pilot Project Application of Proteomics for the Development of Biomarkers of Occupational Exposure Proteomic Analysis of Baltimore Cord Blood Serum Samples for the Discovery of Protein Biomarkers of Exposure to Toxic Occupational Contaminants. Role: Sole PI and Advisor. (100% Recognition)	01/1/2006 – 07/30/2006 \$14,995
Halden JHU-Center for a Livable Future Pilot Project Municipal Sludge Disposal and Sustainable Agriculture – A Pilot Study Showcasing the Challenge of Combining the Two Explore the Fate of Persistent Antimicrobial Compounds in Municipal Sludge and Their Potential Uptake into Agricultural Plants as a Pathway for Human Exposure to Carcinogens. Role: Sole PI. (100% Recognition)	9/1/2004 – 8/31/2005 \$20,000
Halden CRF—Maryland Cigarette Restitution Fund (Matching Funds by the CDC; PI: Needham) Human Fetal Exposure to Drinking Water Carcinogens in Maryland Creation and Analysis of a Cord Blood/Cord Tissue Repository and Determination of Fetal Exposure Levels to Carcinogens in Maryland Drinking Water Resources and Water Supply. Role: Sole PI. (100% Recognition)	06/01/2004 – 05/30/2005 \$150,000
Halden CDC—Centers for Disease Control and Prevention (Matching Funds for CRF Study; PI: Needham) Human Fetal Exposure to Drinking Water Carcinogens in Maryland Creation and Analysis of a Cord Blood/Cord Tissue Repository and Determination of Fetal Exposure Levels to Carcinogens in Maryland Drinking Water Resources and Water Supply. Role: Sole PI of Parent Grant. (10% Recognition)	06/01/2004 – 05/30/2005 \$250,000
Halden (PI: Buckley; Co-PI: Halden) CRF—Maryland Cigarette Restitution Fund Statistical Analysis of Drinking Water Quality vis-à-vis Cancer Morbidity and Mortality Geospatial Analysis to Identify Potential Links Between Drinking Water Quality and Cancer Morbidity and Mortality in the State of Maryland. Role: Co-PI. (50% Recognition or \$10,000)	11/1/2004 – 10/30/2005 \$20,000
Halden JHSPH—Technology Transfer Seed Grant Production and Testing of an In Situ Microcosm Array Prototype Design, Construction and Initial Testing of an Innovative Environmental Monitoring Device. Role: Sole PI. (100% Recognition)	11/1/2003 – 10/31/2004 \$25,000
Halden JHU-Center for a Livable Future Pilot Project Mass Spectrometric Determination of Microbial Pathogens in Waste Streams of Explore the Use of Mass Spectrometry for Detecting the Bacteriophage MS2 as an Indicator of Microbial Pathogens Originating from Concentrated Animal Feeding Operations.	9/1/2003 – 8/31/2004

Role: Sole PI, Advisor. (100% Recognition)	\$20,000
Halden	10/1/2003 – 9/30/2004
JHU-Center for a Livable Future Pilot Project Effect of Lifestyle on Mother/Infant Exposure to Ubiquitous Pollutants Determine Whether Exposure to Polyfluorinated Environmental Contaminants is Associated with Lifestyle Choices. (100% Recognition)	
Role: Sole PI.	\$20,000
Halden	10/1/2003 – 8/31/2005
JHU-CLF Pre-doctoral Fellowship/Mentor Award Proteomic Approach to Monitoring Microbes in Waste Streams from Animal Production Facilities Explore the Use of Mass Spectrometry for Detecting Viruses and Bacterial Pathogens in Samples from Concentrated Animal Feeding Operations Using MALDI-TOF MS, Nanospray ESI-MS/MS, and AP-MALDI and ESI-IT-MS Techniques.	
Role: Sole PI and Advisor. (100% Recognition)	\$99,000
Halden	7/1/2003 – 12/31/2003
JHU-CLF Donor's Gift (No Title) Environmental Fate of Persistent Personal Care Products.	
Role: Sole PI. (100% Recognition)	\$3,000
Halden	3/1/2003 – 2/28/2004
JHSPH—Technology Transfer Seed Grant Down-Well Diagnostic Device for Environmental Monitoring and Bioprospecting Conceptually Develop and Refine Plans for a Novel Environmental Monitoring Device Amenable to Automated, High-throughput Analysis Using Genomic and Proteomic Analyses.	
Role: Sole PI. (100% Recognition)	\$25,000
Halden	10/1/2003 – 9/30/2004
JHU-NIOSH Education and Research Center Grant LC-MS Analysis of a Urinary Biomarker of Occupational Exposure to PAHs Detection of a Urinary PAH Biomarker in Human Specimens Targeting the Underivatized Conjugate.	
Role: Sole PI. (100% Recognition)	\$9,000
Halden	06/01/2004 – 05/30/2005
Donor's Gift (No Title) In Support of Technology Transfer Activities Directed Toward a Down-Well Diagnostic Device for Environmental Monitoring and Bioprospecting (International Patent Application PCT WO 2004/081530).	
Role: Sole PI. (100% Recognition)	\$20,000
Halden	10/1/2002 – 6/30/2003
JHU-Center for a Livable Future Pilot Project Bioaccumulation of Methyl Triclosan in Agriculturally Applied Sewage Sludge and in Breast Milk Trace Analysis of Biocides in Municipal Sludge and Human Milk.	
Role: Sole PI. (100% Recognition)	\$17,500
Halden	6/1/2002 – 5/30/2003
JHU-NIEHS Center Pilot Project; P30ES03819 Development of an Exposure Assessment Tool for the Biocide Triclosan Development an LC-MS Technique Suitable for Trace Analysis of the Biocides.	
Role: Sole PI. (100% Recognition)	\$15,000

Halden	7/1/2002 – 9/30/2002
JHU-Center for a Livable Future Internship/Mentoring Award	
Sponsored Research Internship in Environmental Health Sciences	
Provide Laboratory Study Opportunities for an Undergraduate Student.	
Role: Sole PI; Student Advisor. (100% Recognition)	\$4,000
Halden	5/1/2002 – 6/30/2003
JHSPH—Faculty Innovation Award	
Environmental Sources, Occurrence and Biodegradation of the Biocide Triclosan	
Pilot Study Designed to Explore the Extent of Environmental Contamination with the Biocide Triclosan.	
Role: Sole PI. (100% Recognition)	\$30,000
Halden	2/12/2002 – 12/31/2002
Bechtel BWXT Idaho, LLC, Research Contract	
Determination of the Microbial Community Structure at a Trichloroethene-Contaminated Area at Site 300, CA, in Support of a Proposed In Situ Bioremediation Deployment	
Use Non-culture-dependent Techniques to Determine the Impact of Chloroethenes on the Microbial Community of a Polluted Aquifer.	
Role: Sole PI (100% Recognition)	\$57,500
Halden	7/1/2001 – 6/30/2002
Shimadzu Corp. Instrumentation Grant (No Title)	
Improve Laboratory Instrumentation Infrastructure for Trace Analysis of Environmental Toxicants.	
Role: Sole PI. (100% Recognition)	\$56,000
Halden (PI: Naples; Co-PI: Shiff, Halden)	11/1/2003 – 10/31/2004
JHSPH—Technology Transfer Seed Grant	
A Product for the Detection and Focal Control of Schistosome Cercariae to Reduce Disease Burden and Cercariae Dermatitis, Both in Endemic Areas, and in U.S. Lacustrine Habitats	
Explore the Use of Natural Essential Oils for the Control of Cercariae in Surface Waters. Role: Co-PI.	
(25% Recognition or \$6,250)	\$25,000
Halden (PI: Lowe; Co-PI: Halden)	2/12/2002 – 12/31/2002
DOE—NABIR Research Grant (DE-FG02-01ER63264)	
Development of a Multiplexed, Bead-based Assessment Tool for Rapid Identification and	
Development of Novel Diagnostic Tool for Microbial Community Analysis at Contaminated Subsurface Sites.	
Role: Co-PI. (30% Recognition or \$19,444)	\$64,812
Halden (Project Director: Rice)	10/1/2000 – 9/30/2001
LLNL Work-In-the-Public-Interest Grant	
Dioxins in San Francisco Bay	
Determine Potential Avenues for Reducing Environmental Contamination with Dioxin-like Compounds.	
Role: PI (20% Recognition or \$26,000)	\$130,000
Halden (PI: Happel)	10/1/2000 – 9/30/2001
DOE—Fossil Fuel Research Project	
Detection and Biodegradation of MTBE from Leaking Underground Storage Tanks	
Determine the Bioremediation Potential of LUFT Sites.	
Role: Co-PI. (10% Recognition or \$5,000)	\$50,000

TEACHING
COURSES TAUGHT
Classroom Instruction

Principal Instructor Designation

CEE470	Biological Design Seminar (78283) Lecture (3 credit). Fall 2018. Enrollment: 15; 45 Credit Hours.
CEE570	Biological Design Seminar (78284) Lecture (3 credit). Fall 2018. Enrollment: 4; 12 Credit Hours.
HON494	Sustainable Environ. Biotechnologies (78509) (3 credits). Fall 2018. Enrollment: 2; 6 Credit Hours.
BDE598	Biological Design Seminar (77235) Lecture (1 credit). Fall 2018. Enrollment: 15; 15 Credit Hours.
HON494	Biological Design Seminar (79968) Lecture (1 credit). Fall 2017. Enrollment: 1; 1 Credit Hours.
BDE598	Biological Design Seminar (78043) Lecture (1 credit). Fall 2017. Enrollment: 15; 15 Credit Hours.
CEE470	Sustainable Environ. Biotechnologies (79276) (3 credits). Fall 2017. Enrollment: 15; 45 Credit Hours.
CEE570	Sustainable Environ. Biotechnologies (79277) (3 credits). Fall 2017. Enrollment: 8; 24 Credit Hours.
HON494	Sustainable Environ. Biotechnologies (79555) (3 credits). Fall 2017. Enrollment: 8; 24 Credit Hours.
BDE598	Biological Design Seminar (79318). Lecture (1 credit). Fall 2016. Enrollment: 10; 10 Credit Hours.
HON494	Biological Design Seminar (81820). Lecture (1 credit). Fall 2016. Enrollment: 6; 6 Credit Hours.
CEE470	Sustainable Environ. Biotechnologies (80908) (3 credits). Fall 2016. Enrollment: 13; 39 Credit Hours.
CEE570	Sustainable Environ. Biotechnologies (80909) (3 credits). Fall 2016. Enrollment: 9; 27 Credit Hours.
HON494	Sustainable Environ. Biotechnologies (81281) (3 credits). Fall 2016. Enrollment: 11; 33 Credit Hours.
BDE598	Biological Design Seminar (80612). Lecture (1 credit). Fall 2015. Enrollment: 11; 11 Credit Hours.
HON494	Biological Design Seminar (84398). Lecture (1 credit). Fall 2015. Enrollment: 6; 6 Credit Hours.
CEE470	Sustainable Environ. Biotechnologies (82888) (3 credits). Fall 2015. Enrollment: 11; 33 Credit Hours.
CEE570	Sustainable Environ. Biotechnologies (82889) (3 credits). Fall 2015. Enrollment: 9; 27 Credit Hours.
HON494	Sustainable Environ. Biotechnologies (83494) (3 credits). Fall 2015. Enrollment: 7; 21 Credit Hours.
CEE470	Sustainable Environ. Biotechnologies (87936) (3 credits). Fall 2014. Enrollment: 15; 45 Credit Hours.
CEE570	Sustainable Environ. Biotechnologies (87937) (3 credits). Fall 2014. Enrollment: 7; 21 Credit Hours.
HON494	Sustainable Environ. Biotechnologies (88753) (3 credits). Fall 2014. Enrollment: 5; 15 Credit Hours.
HON494	Biological Design Seminar (89949). Lecture (1 credit). Fall 2014. Enrollment: 9; 9 Credit Hours.
BDE598	Biological Design Seminar (84106). Lecture (1 credit). Fall 2014. Enrollment: 7; 7 Credit Hours.

BDE598	Biological Design Seminar (89564). Lecture (1 credit). Fall 2013. Enrollment: 8
HON494	Biological Design Seminar (89591). Lecture (1 credit). Fall 2013. Enrollment: 12
CEE361	Introduction to Environmental Engineering, Lecture (3 credits). Spring 2013 Enrollment: 61
CEE361	Introduction to Environmental Engineering, Laboratory (1 credit). Spring 2013 Enrollment: 61
CEE563	Environmental Chemistry Laboratory (3 credits). Fall 2012. Enrollment: 18
ASU101	The ASU Experience (1 credit). Fall 2011. Enrollment: 16
CEE598*	Sustainable Environmental Biotechnologies (3 credits). Fall 2011. Enrollment: 16
CEE494	Sustainable Environmental Biotechnologies (3 credits). Fall 2011. Enrollment: 2
CEE361	Introduction to Environmental Engineering, Lecture (3 credits). Spring 2011. Enrollment: 56
CEE361	Introduction to Environmental Engineering, Laboratory (1 credit). Spring 2011 Enrollment: 56
CEE790	Reading and Conference, Spring 2011 Enrollment: 1
CEE563	Environmental Chemistry Laboratory (3 credits). Fall 2010. Enrollment: 19
ASU101	The ASU Experience (1 credit). Fall 2010. Enrollment: 19
E2 Camp	Taught one module of ASU101 at Fall 2010 Freshman Camp in Prescott, AZ
CEE790	Reading and Conference. Fall 2010. Enrollment: 3
ASU101-1	The ASU Experience (1 credit). Fall 2009. Enrollment: 19
ASU101-2	The ASU Experience (1 credit). Fall 2009. Enrollment: 19
CEE790	Reading and Conference. Fall 2009. Enrollment: 2
CEE563	Environmental Chemistry Laboratory (3 credits). Fall 2009. Enrollment: 17
CEE598*	Sustainable Environmental Biotechnologies (3 credits). Spring 2009. Enrollment: 7
CEE494	Sustainable Environmental Biotechnologies (3 credits). Spring 2009. Enrollment: 33
CEE598	Environmental Engineering Analytical Laboratory (3 credits). Fall 2008. Enrollment: 11
JHU-Spain	Air, Water and Food Toxics (3 credits). Barcelona, Spain. JHU Fall Institute on Health Policy and Management (October 2008). Enrollment: 7.
182.638	Water & Health (4 credits), 4 th Term, 2006/07. Enrollment: 12.
182.852	Air, Water, and Food Toxics (3 credits), 3 rd Annual JHU Fall Institute in Health Policy and Management, Barcelona, Spain, 2006. Enrollment: 14.
182.638	Fundamentals of Water Quality Engineering for Public Health (4 credits), 4 th Term, 2005/06. Enrollment: 13.
182.639	Introductory Principles of Water Quality Engineering for Public Health Water (3 credits). Highest-ranked Course of the 2 nd Annual JHU Fall Institute in Health Policy and Management, Barcelona, Spain, 2005. Enrollment: 6.
183.849	SSR: Water-borne Diseases: Emerging Threats To Potable Water Supplies. 2004. Enrollment: 6.
	Online Training Modules for the Center of Public Health Preparedness
(No Code)	Chemical Weapons and Water Safety, 2005. http://www.jhsph.edu/preparedness/ training/online/chemagents_water_safety.html .
(No Code)	Water Safety, 2005. http://www.jhsph.edu/preparedness/training/online/water_safety.html
(No Code)	Water Safety—A Case Study, 2005. http://www.jhsph.edu/preparedness/ training/online/water_safety_case_study.html
(No Code)	Monitoring Chemical Agents, 2005. http://www.jhsph.edu/preparedness/ training/online/monitoring_chem_agents.html
	Guest Lectures
LIA394	Lincoln Scholars, Fall 2017
MIC445	Molecular Biology & Genetics, Fall 2012. Enrollment: 50
PFF	Preparing Future Faculty, Fall 2012. Enrollment: 32

BDE 598	Biological Design. Fall 2011. Enrollment: 13.
BDE 701	Biological Design. Fall 2009. Enrollment: 13.
CEE 100	Introduction to Civil and Environmental Engineering. Spring 2009. Enrollment: 60.
BDE 598	Biological Design. Fall 2008. Enrollment: 13.
180.609	Principles of Environmental Health I. 2004, 2006. Sources and Types of Water Contamination.
180.609	Principles of Environmental Health I. 2004. Water and Wastewater Treatment Systems.
182.640	Food and Waterborne Diseases, 3 rd Term, 2002, 2004, 2006. Microcontaminants in Water.
180.880	Special Studies in Environmental Health Community Outreach. 2004. Sewage Spills: Turning a Community Concern into a Science Project.
(No Code)	Diversity Student Summer Seminar Series. 2004. Pharmaceuticals and Personal Care Products in the Environment.
(No Code)	Maryland Public Television Summer Institute. 2004.
550.865	Public Health Perspectives on Research. 2002. Environmental Health Engineering—Making a Career of Protecting the Environment and Human Health.
AS 020.151	General Biology I. Fall. Bioremediation. Enrollment: 297 (2004), 250 (2005). TBD (2006).
AS 020.161	Biology Workshop I. Fall. Bioremediation. Enrollment: 48 (2004), 48 (2005), TBD (2006).
(Taped)	Environmental Biotechnology Lecture Series, UC Berkeley, Berkeley, CA. 2001. Detection and Destruction of Anthropogenic Toxins in Drinking Water.

TEACHING

NEW COURSES DEVELOPED

CEE570	Sustainable Environmental Biotechnologies (Graduate Students; 3 Credits). This course provides an introduction to principles of green chemistry and green engineering, and their integration in the design of sustainable bioengineering and biotechnology applications that protect environmental quality and human health. Case studies of unsustainable engineering are discussed along with alternative green biotechnologies to identify common design flaws and illustrate the value of bio-based processes in manufacturing, water and soil stewardship, and pollution prevention. Current U.S. regulations for environmental protection are presented and examined for their effectiveness in promoting a sustainable societal lifestyle. This course is tailored toward graduate students interested in gaining an understanding of the fundamentals of: Green Chemistry & Green Engineering; Sustainable Bioengineering; Public Health; and Biological Design.
CEE470	Sustainable Environmental Biotechnologies (Undergraduate Students; 3 Credits). This course provides an introduction to principles of green chemistry and green engineering, and their integration in the design of sustainable bioengineering and biotechnology applications that protect environmental quality and human health. Case studies of unsustainable engineering are discussed along with alternative green biotechnologies to identify common design flaws and illustrate the value of bio-based processes in manufacturing, water and soil stewardship, and pollution prevention. Current U.S. regulations for environmental protection are presented and examined for their effectiveness in promoting a sustainable societal lifestyle. This course is tailored toward undergraduate students interested in gaining an understanding of the fundamentals of: Green Chemistry & Green Engineering; Sustainable Bioengineering; Public Health; and Biological Design.

- HON494 Sustainable Environmental Biotechnologies (Barrett Honors College Undergraduate Students; 3 Credits). As above course CEE470 but customized to enable non-engineering students to learn the theory and application of engineering principles to environmental problems and biotechnology solutions.
- BDE598 Biological Design Seminar. Lecture (Graduate Students; 1 Credit). This seminar series provides an introduction to the concepts and implementation of Biological Design in academia, society and commerce. Students will: understand interdisciplinary science of Biological Design and its key research fields; interact with key faculty that lead research in Biological Design fields; participate in proseminar format, where students focus on discussion questions before class and then discuss answers in class; and develop skills in identifying and discussing key scientific challenges that face our society.
- HON494 Biological Design Seminar. Lecture (Barrett Honors College Undergraduate Students; 1 Credit). This seminar series provides an introduction to the concepts and implementation of Biological Design in academia, society and commerce. Students will: understand interdisciplinary science of Biological Design and its key research fields; interact with key faculty that lead research in Biological Design fields; participate in proseminar format, where students focus on discussion questions before class and then discuss answers in class; and develop skills in identifying and discussing key scientific challenges that face our society.
- CEE598 Environmental Engineering Analytical Laboratory (Graduate Students; 3 Credits). This graduate-level course provides an overview of strategies for environmental monitoring. The course curriculum prepares students for both conducting hands-on research and critically interpreting environmental monitoring data obtained by standard and custom methods. Interspersed into lectures are laboratory demonstrations of analytical instrumentation. After successful completion of this course, students will be familiar with traditional and emerging analytical techniques (e.g., proteomics) for assaying diverse environmental matrices. Course topics include criteria for the selection of sampling and analytical methods, statistical determination of method detection limits, challenges arising from complex sample matrices (microbial biomass, wastewater, municipal sludge, cell cultures, food and blood), as well as approaches for data interpretation and graphical representation of monitoring information. Students are encouraged to integrate into the course curriculum particular analytical challenges of their research project through active participation and guest lectures.

GRADUATE STUDENTS SUPERVISION – IN PROGRESS

Ph.D. Students (In Progress)

1. Devin Bowles (Ph.D.) Biological Design, ASU. (August 2018 – May 2021). (Chairman)
2. Sangeet Adhikari (Ph.D.), Environ. Engineering, ASU (August 2018 – May 2021). (Chairman)
3. Elizabeth Terlinden (Ph.D.), Environ. Engineering, ASU (Aug 2017 – May 2021). (Chairman)
4. Nivedita Biyani (Ph.D.), Environ. Engineering, ASU (August 2017 – May 2020). (Chairman)
5. Cayla Cook (Ph.D.), Environmental Engineering, ASU (August 2017 – May 2021). (Chairman)
6. Joshua Steele (Ph.D.), Environ. Engineering, ASU. (August 2015 – May 2019). (Chairman)
7. Olga Hart (Ph.D.), Biological Design, ASU. (August 2015 – May 2019). (Chairman)
8. Erin Driver (Ph.D.) Environmental Engineering, ASU. “Kinetics of Chemical Transformations and Transport Modeling of Groundwater Contaminants in Laboratory and In Situ Continuous-Flow Column Feasibility Studies for Complex Remediation Sites.” (August 2013 – October 2018). (Chairman)

9. Charles Rolsky (Ph.D.) Evolutionary Biology, ASU. “Non-invasive Analysis of Stress and Environmental Health Status of Humans and Indicator Organisms.” (August 2013 – May 2017). (Chairman)

GRADUATE STUDENTS SUPERVISION; COMPLETED

Ph.D. Students (Degree Awarded)

1. Erin Driver (Ph.D.) Environmental Engineering, ASU. “Methods and Devices for Evaluating Environmental Remediation Progress and Population Health.” (August 2013 – October 2018). (Chairman)
2. Jing Chen (Ph.D.) Biological Design, ASU. “Development and Application of Methods for Environmental and Biological Monitoring of Contaminants of Emerging Concerns. (August 2014 – May 2018). (Chairman)
3. Adam Gushgari (Ph.D.), Environmental Engineering, ASU. “Tracking chemical indicators of human health in the urban water environment (August 2015 – May 2018) (Chairman)
4. Akash Sadaria (Ph.D.), Environmental Engineering, ASU. (August 2015 – May 2017).
5. Isaac Roll (Ph.D.) Environmental Engineering, ASU. “Novel Integrative Methods for Sampling Environmental Contaminants” (August 2011 – December 2015). (Chairman)
6. Samuel Supowit (Ph.D.) Environmental Engineering, ASU. “Occurrence, detection, and fate of fiproles in engineered waterways.” (August 2011 – December 2015). (Chairman)
7. Hansa Done (Ph.D) Biological Design, ASU. “Antibiotics as Environmental Pollutants: Detection, Method Development, and Associated Antibiotic Resistance Issues,” (August 2011-December 2015). (Chairman)
8. Arjun K. Venkatesan (Ph.D.) Environmental Engineering, ASU. “Contaminants of Emerging Concern in U.S. Sewage Sludges and Forecasting of Associated Ecological and Human Health Risks Using Sewage Epidemiology Approaches” (8/1/2010 - 11/14/2013). (Chairman)
9. Tomasz Kalinowski (Ph.D.) Biological Design, ASU. “Technical, Economical and Social Aspects of Moving Treatability Studies for the *In Situ* Bioremediation of Contaminated Aquifers from the Laboratory to the Field” (8/2008 – 4/4/2013). (Chairman)
10. Erica M. Hartmann (Ph.D.) Biological Design, ASU. “Application of Proteomic Mass Spectrometry in Bioremediation” (8/2008 – 6/2012). (Chairman)
11. Kristin McClellan (Ph.D.) Environmental Engineering, ASU. “A New Approach to Groundwater Remediation Treatability Studies – Moving Flow-through Column Experiments from Laboratory to *In Situ* Operation” (8/2008 – 4/3/2013). (Chairman)
12. Jochen Heidler (Ph.D.) Environmental Health Sciences, Johns Hopkins. (Chairman) “Environmental Fate of Persistent Biocides and Human Exposure” (2007).
13. David R. Colquhoun (Ph.D.) Environmental Health Sciences, Johns Hopkins. “Public Health Applications of Quantitative Protein Biomarkers” (2007). (Chairman)
14. Tanya Oxenberg (Ph.D.) Environmental Engineering, Hopkins. “Subsurface Transformation of Depleted Uranium at Aberdeen Proving Ground, Maryland” (2006). (Co-Advisor)
15. Sung-Roul Kim (Ph.D.) Environmental Health Sciences, Johns Hopkins. “Assessment of Urban Air Pollution Exposure Among New Mothers and Nursing Infants and Internal Dose Measured in Breast Milk” (2006). (Committee member)

GRADUATE STUDENTS SUPERVISED; COMPLETED

M.S., M.S.E, and M.P.H. Students (Degree Awarded)

19. Cayla Cook (M.S.) Environmental Engineering, ASU. “Meta-analysis of Error Sources in the Determination of Micro- and Nanoplastics.” (August 2017 – October 2018). (Chairman)
20. Erin Driver (M.S.E.) Environmental Engineering (Master in Passing; May 2017). (Chairman)

21. Alizee Jenck (Ph.D.) Environmental Engineering, ASU. "Application of MALDI-TOF/TOF and Electrospray Tandem Mass Spectrometry to Environmental Health Monitoring." (August 2012 – May 2017). (Chairman)
22. Akash Sadaria (M.S.E.) Environmental Engineering, ASU. "Fate of Six Neonicotinoids During Full-scale Wastewater Treatment and Passage Through an Engineering Wetland" (January 2014 – May 2015). (Chairman)
23. Maurissa Charles (M.S.E.) Environmental Engineering, ASU. (12/15/14) (Chairman)
24. Isaac Roll (M.S.E.) Environmental Engineering, ASU. (August 2011 – May 2013). (Chairman)
25. Bipin Chari (M.S.) Environmental Engineering, ASU. "Analysis and Modeling of Residual Compounds in Process Streams From U.S. Wastewater Treatment Plants" (4/12/2012). (Thesis Advisor)
26. Sara Carey (M.S.) Environmental Engineering, ASU. "Policy Solutions for Limiting Environmental Release of Persistent, Bioaccumulative and Toxic Compounds." (2012). (Temporary Advisor)
27. Guozheng Li (M.S.) Biological Design, ASU (2011).
28. Meredith Lewis (M.S.E.) Environmental Engineering, ASU. (2009).
29. Christopher von Seggern (M.P.H.) Public Health, Hopkins. "Biodetection Utilizing Matrix-assisted Laser Desorption/Ionization Mass Spectrometry" (2005). (Capstone Advisor)
30. Toni Nunes (M.P.H.) Public Health, Hopkins. "Pesticides in Ground and Surface Waters of the Chesapeake Bay Watershed: Occurrence, Risks and Potential Solutions" (2007). (Capstone Advisor)
31. Sharri Hollist (M.P.H.) Public Health, Hopkins. "Incidence of Illness Associated with Recreational Water Contact: Determining and Evaluating a Potential Public Health Problem" (2005). (Capstone Advisor)

Other Graduate Students

32. Justin Kidd (Ph.D.) Environmental Engineering, ASU. "Thermal Bioremediation of Soils Containing Heavy Hydrocarbons from Petroleum Production Sites. (August 2014 – May 2015)
33. Alison D. Fox (M.S.) Technology (Environmental Management), ASU. "Use of Passive Sampling Devices for Determination of Contaminants in Sewage Sludge" (2010 - 2012). (Graduate Advisor; Incomplete Program)
34. Thomas Bruton (Ph.D.) Environmental Engineering, ASU. "Use of Nano Zerovalent Iron in Groundwater Remediation" (2009 - 2012). (Transferred to UC Berkeley)
35. Youneng Tang (Ph.D.) Environmental Engineering, ASU. "Biofilm Reduction of Oxidized Contaminants" (2/19/2011). (Committee Member)
36. Prathap Parameswaran (Ph.D.) Environmental Engineering, ASU. (2010). (Committee Member)
37. Katherine Muto (M.S.) Environmental Engineering, ASU. (2010). (Committee Member)
38. John Schloendorn (Ph.D.) Molecular and Cellular Biology, ASU. "Progress Towards Medical Bioremediation by Enzymatic Transformation of 7-Ketocholesterol and the Pyridinium Bisretinoid A2e" (2009). (Committee Member)
39. Liang Chen (M.S.) Environmental Engineering, ASU. (2009). (Committee Member)
40. Ed Hilyard (Ph.D.) Marine Biotechnology, University of Maryland, (Expected 2010) (Committee Member 2005-2009)
41. Ying Yao (M.S.) Environmental Engineering, ASU. (2009). "Development of a Novel Dechlorinating Culture" (2009). (Committee Member)
42. Talia E. A. Chalew (Ph.D.) Environmental Health Sciences, Johns Hopkins." (Interim PhD Advisor)
43. Henry Schuver (Dr.P.H.) Epidemiology, Hopkins (2007). (Committee Member)
44. Michelle Hladik (Ph.D.) Environmental Engineering, Hopkins (2005). (Committee Member)
45. Kristen Malecki Chossek (Ph.D.) Health Policy and Management, Hopkins (2005). (Committee Member)
46. Amir Sapkota (Ph.D.) Environmental Health Sciences, Hopkins (2004). (Committee Member)
47. Denise Taylor (Ph.D.) Environmental Engineering, Hopkins (2003). (Committee Member)

48. Peter D'Amato (Ph.D.) Environmental Engineering, Hopkins. "Biodegradation of Polycyclic Aromatic Hydrocarbons" (2003). (Committee Member)

Postdoctoral Researchers

49. Adam Gushgari (05/2018 – Current)
50. Arjun Venkatesan (12/2013 – 09/2016) (Currently: Stony Brook University, NY)
51. Bhagyashree Manivannan (03/2013 – 04/2014) (Currently: Affiliate Member BD-CES)
52. Manivannan Yegambaram (03/2013 – 04/2014) (Currently: Affiliate Member BD-CES)
53. Benny Pycke (02/2010 – 10/2014) (Currently: Biotechnology Industry Startup Company, Belgium)
54. Gopianth Nallani (02/2011 – 06/2011)
55. Tzu-Chiao Chao (01/2009 – 01/2011) (Currently: Faculty, University of Regina, Canada)
56. Nicole Hansmeier (12/2008 – 6/2012) (Currently: Assistant Professor, Osnabrück University, Germany)
57. Randhir Deo (04/2008 – 2012) (Currently: Assistant Professor, Grand Canyon University, Phoenix, AZ)
58. Jay Graham (02/2008 – 07/2008) (Currently: Assistant Professor, George Washington University, Washington, DC)
59. Christopher Higgins (11/2006 – 12/2007) (Currently: Tenure-track Assistant Professor, Colorado School of Mines)
60. Todd R. Miller (10/2004 – 10/2007) (Currently: Assistant Professor, University of Wisconsin, Milwaukee)
61. Amir Sapkota (11/2004 – 10/2005) (Currently: Tenure-track Assistant Professor, University of Maryland)
62. Eric S. Wisniewski (06/2003 – 08/2003) (Currently: Staff Scientist, U.S. Government)
63. Mark P. Franklin (04/2002 – 12/2003)
64. Wenming Dong (2002) (Currently: Staff Scientist, U.S. National Laboratory)
65. Guibo Xie (10/2001 – 06/2003)

Graduate Independent Projects Supervised

66. Stephen Hart (Fall 2013) Rotational Student of the Biological Design Graduate Program, "Application of the In Situ Microcosm Array in a Fractured Bedrock Aquifer Contaminated with Perchlorate"
67. Jing Chen (Fall 2013) Rotational Student of the Biological Design Graduate Program, "Determination of Contaminants in Autopsy Tissues of Alzheimer's Disease Fatalities"
68. Kristin McClellan (Fall 2010) "Review Paper on Treatability Studies"
69. Arjun Venkatesan (Fall 2010) "Analysis of compounds of emerging concern in Biosolids by GC/MS"
70. Thomas Bruton (Fall 2010) "Investigation of Fate and Transport of Zero Valent Iron Nanoparticles Using an In-Situ Microcosm Array"
71. Isaac Roll (Fall 2010) "Cost-effective, Ultra-sensitive Groundwater Monitoring for Site Remediation and Management"
72. Kristin McClellan (Spring 2010) "Demonstration Plan: Parallel In Situ Screening of Remediation Strategies for Improved Decision Making, Remedial Design, and Cost Savings"
73. Chen Zhou (Spring 2010) "Versatile Roles of Sulfate Reducing Bacteria in Contaminant Remediation"
74. Katherine Muto (Spring 2010) "Method for Detection of Chlorinated Carbanilides"
75. Edward Kruse (2007). (M.P.H.) Public Health, Hopkins. "Assessing the Impact of Point and Nonpoint Sources of Pollution on Recreational and Drinking Water Quality in the Springfield Watershed in Dominica" (2007). (Capstone Advisor)
76. Jacqueline Heilman, Johns Hopkins University Research Intern (2002) "Antimicrobial Compounds and Their Possible Breakdown Products in Biosolids"

Undergraduate Students and High School Interns

77. Jett Thies (Undergraduate Barrett Honors, ASU) (2018-2019)
78. Komal Agrawal (Undergraduate Barrett Honors, ASU) (2018-2019)
79. Alyssa Carlson (Undergraduate Research Intern, ASU) (2018)
80. Lydia Mendoza (Undergraduate Research Intern, ASU) (2018)
81. Kathleen Click (Undergraduate Research Intern, ASU) (2017-Current)
82. Adam Thompson (Undergraduate Research Intern, ASU) (2017-Current)
83. Dustin Pollard (Undergraduate Research Intern, ASU) (2017-Current)
84. Jessica Stradford (Undergraduate Research Intern, ASU) (2016)
85. Prathima Harve (Undergraduate Research Intern, ASU) (2016)
86. Elena Sacco (Undergraduate Research Intern, ASU) (2015-2016)
87. Cameron Labban (Undergraduate Research Intern, ASU) (2015-2016)
88. Miguel Zamorano (Undergraduate Research Intern, ASU) (2015)
89. Andrea Molina (COMEXUS Visiting Undergraduate Research Intern) (2015)
90. Jorge Rodriguez (Undergraduate Research Intern, ASU) (2015)
91. Alma Banuelos (Undergraduate Research Intern, ASU) (2015)
92. Nathalia da Costa (Undergraduate Research Intern, ASU) (2015)
93. Guilherme Barbosa (Undergraduate Research Intern, ASU) (2015)
94. Tamara Stojilkovic (Undergraduate Research Intern, ASU) "Use of GC-FID for Assessing the Effect of Heat, Soil Type, and Incubation Time on Loss of Hydrocarbons in Soil" (2015)
95. Mary Heckenbach (Barrett Honors College Intern, ASU) "Toxicity of Ionic Liquids (2014-2015)
96. Ivan Ruiz (Undergraduate Research Intern, ASU) (2014-2015)
97. Jessica Liu (Undergraduate Research Intern, ASU) (2014-2015)
98. Edward Reyes (Undergraduate Research Intern, ASU) (2014-2015)
99. April Cobos (B.S.) (Barrett Honors College Intern, ASU) "Antibiotics in Seafood" (2014-2015)
100. Justin Kidd (B.S.) Biology, ASU (2014)
101. Olga Epshtein (B.S.) Civil Engineering, ASU (2014)
102. Emily North (Barrett Honors College Intern, ASU) "Safety of Plastics" (2012 – 2013)
103. Chris Bean (Undergraduate Research Intern, ASU) "Environmental Research" (2013)
104. Cody Moore (Barrett Honors College Intern, ASU) "Environmental Research" (2012 – 2013)
105. Amitis Karris (High School Intern, ASU) "Environmental Research" (2013)
106. Olga Epshtein (Undergraduate Research Intern, ASU) "Modeling of the Tres Rios Wetland" (2012 – 2013)
107. Justin Kidd (Undergraduate Research Intern, ASU) "Theoretical Examination of the Bioavailability of Contaminants in Soils" (2012 – 2013)
108. Kristen Latta (Undergraduate Research Intern, ASU) "Environmental Research" (2012)
109. Patrick Trang (FURI Undergraduate Research Intern, ASU) "Programming the Nutrient Injection Module" (2009 – 2012)
110. Benjamin Duong (Undergraduate Research Intern, ASU) "Programming of a Bioremediation Device" (2009 – 2012)
111. James Fernandez (Undergraduate Research Intern, ASU) "Policy Analysis for Atrazine" (2011 – 2012)
112. David E. C. Adams (B.S.E.) Environmental Engineering, ASU. (2010). "Fluorinated Chemicals and the Impacts of Anthropogenic Use" (2010) (Honor Thesis Advisor)
113. Patrick Trang (High School Intern, ASU) "Development of a Laboratory Web Page" (2008 – 2009)
114. Benjamin Duong (High School Intern, ASU) "Development of a Laboratory Web Page" (2008 – 2009)
115. Travis Doom. (B.S.E.) Biomedical Engineering, ASU. "Nutrient Injection Unit: Subsurface Environmental Engineering with In Situ Microcosm Array Tool" (2009)

116. Erica Hartmann (Undergraduate Research Intern, Johns Hopkins) “Detection of Bioremediation Agents by MALDI Mass Spectrometry” (2006 – 2008)
117. Jocelyn Keehner (High School Intern, Johns Hopkins) “Uptake into Plants of Contaminants from Biosolids-Amended Soils” (2006)
118. Amelia DeLaquil (Undergraduate Research Intern, Johns Hopkins) “Fate of Triclosan and Triclocarban in Estuarine Sediment” (2006)
119. Anna Kalmykov (High School Intern, Johns Hopkins) (2004 – 2005)
120. Cristina Matos (Diversity Research Intern, Johns Hopkins) “*Ab Initio* and *In Situ* Comparison of Organic Wastewater Compounds as Indicators of Sewage-derived Microbes in Surface Waters” (2004)
121. Beth Links (High School Intern, Johns Hopkins) “Uptake into Plants of Contaminants from Biosolids-Amended Soils” (2004)
122. Daniel Paull (Undergraduate Research Intern, Johns Hopkins) “Detection of Triclocarban in Environmental Waters by Liquid Chromatography/Mass Spectrometry” (2003)
123. Daniel Paull (Undergraduate Research Intern, Johns Hopkins) “Detection of Antimicrobials by Liquid Chromatography/Mass Spectrometry” (2002)
124. Stephanie Burge (Research Intern, LLNL) “Optimization Study of Nitrate and Perchlorate Removal by Ion Exchange” (1999)

Technicians/Staff Employed and Co-supervised

125. Varun Kelkar (9/2017-Current)
126. Megan Maurer (3/2017-Current)
127. Guihua “Eileen” Yue (9/2015-7/2016)
128. Zach Smith (11/2014 – 8/2015)
129. Marcia Spurlock (9/2014-Current)
130. Sara Murch (11/2012 – 5/2014)
131. Kristin McClellan (4/2008 – 8/2008)
132. Thayer Young (01/2005 – 2007)
133. Tina Legler (1998 – 1999)

Awards and Honors Made to Advisees

1. Phoenix/Scottsdale Groundwater Contamination Scholarship for Environmental Science awarded to Joshua Steele, 2015-2016
2. Dean’s Fellowship awarded to Joshua Steele, 2015-Present
3. Dean’s Fellowship awarded to Adam Gushgari, 2015-Present
4. Fulbright Scholarship awarded to Hansa Done (PhD Advisee), 2015
5. 2nd Prize Winner in the Poster Competition for the presentation titled “National Biosolids Repository: A New Research Tool to Identify, Prioritize and Predict Environmental and Human Health Implications of Man-made Chemicals by A. K. Venkatesan and R. U. Halden, AZ Water Research Workshop, Phoenix, AZ, January 15, 2014; was awarded to Arjun Venkatesan, 2014
6. CNS (Center for Nanotechnology in Society) Fellowship awarded to Alizee Jenck, 2014-Present
7. Dean’s (Fulton Department) Fellowship awarded to Erin Driver, 2013-Present
8. Science Foundation Arizona (SFAZ) Graduate Research Fellowship awarded to Erin Driver, 2013-2014
9. Engineering General Scholarship awarded to Erin Driver, 2013-2014
10. National Science Foundation Graduate Research Fellowship (NSF GRFP) awarded to Hansa Done, 2012-Present
11. Fulbright Scholarship awarded to Erica Hartmann (PhD Advisee), 2012
12. Phoenix/Scottsdale Groundwater Contamination Scholarship for Environmental Science awarded to Arjun Venkatesan, 2011-2012
13. Phoenix/Scottsdale Groundwater Contamination Scholarship for Environmental Science awarded to Kristin McClellan, 2010-2011

OTHER SIGNIFICANT TEACHING ACTIVITIES AND INSTRUCTIONAL TRAINING

- 2009 Spartan Entrepreneurial Workshop, Crash Course for Faculty Entrepreneurs. ASU Sky Song, Scottsdale, September 17-19.
- 2009 Preparing Future Faculty, Conducted Mock Interviews with Graduate Students, ASU.
- 2007 Teaching Well, Saving Time. A Teaching Workshop, Johns Hopkins University, January 12, 2007.
- 2005 Extreme Course Make-overs: Using Student Evaluations to Improve Your Course. Johns Hopkins University Workshop, Bloomberg School of Public Health, January 19.
- 2004 Creating the Loop: Developing Learning Objectives and Assessment Methods. Johns Hopkins University Workshop, Bloomberg School of Public Health, July 26.
- 2004 Lecturing & Active Learning: Strategies for Excellence Johns Hopkins University Workshop, Bloomberg School of Public Health, January 13-14.
- 1998 – 2001 Mentor, Science & Technology Education Program, Lawrence Livermore National Laboratory. Supervised four undergraduate research semester (URS) and two summer students.
- 1999 – 2001 Supervisor, 40 Hour SARA/OSHA Hazardous Waste Site Operator, 8CCR5192(e)(4), Lawrence Livermore National Laboratory.
- 1996 – 1997 Participant, University of Minnesota, Graduate School. Participated in the Bush Faculty Development Program for Excellence and Diversity in Teaching Program Preparing Doctoral Candidates for Their Role as Future Faculty: Introduction to Diverse Teaching Methods, Peer-reviewed Practice Teaching, Design of Effective Courses/Exams/Homework Assignments, Acknowledging Students' Diversity and Learning Styles.
- 1993 – 1997 Teaching Assistant, University of Minnesota, Department of Civil Engineering. Organized and Conducted Laboratory Section of Graduate Courses Titled "Microbiology for Environmental Engineers" and "Groundwater Microbiology."

PARTICIPATION ON ADVISORY PANELS AND COMMITTEES

- Invited Member of the Green Science Policy Advisory Committee for the Science and Policy of Organohalogen in Consumer Products meeting, Florence Italy, August 28, 2016
- NIH Environmental Health Sciences (EHS) Research Response Network Member (2015- Present)
- Invited Member of the Advisory Board for the Center for Biodiversity Outcomes, 2015 - 2017
- Invited Session Chair, Environmental Proteomics Session, US HUPO 2015 Next Generation Proteomics Conference, Tempe, AZ, March 17, 2015
- Invited Member of the Editorial Advisory Board of the ACS Journal of Proteome Research, 2015 – 2017
- Executive Guest Editor, ACS Journal of Proteome Research, Special Issue: Environmental Impact on Health, 2014
- ACS Expert for Media Relations, American Chemical Society (ACS), 2014 – Present
<http://www.acs.org/content/acs/en/pressroom/experts.html>
<http://www.acs.org/content/acs/en/pressroom/experts/rolf-halden.html>
- Member, NIEHS Fish Advisory Information Network, National Institute of Environmental Health Sciences, June 2014 – Present
- Invited Presenter and Panel Member: Discussion Forum Microplastics in the Marine Environment & Potential Human Health Risks, National Academies, Washington, D.C., March 3, 2014
- Community Advisory Board Member, West Van Buren area WQARF Site, Phoenix, AZ,

2013 – Present

- Invited Panelist, National Association of Clean Water Agencies Pretreatment and Pollution Prevention Workshop, St. Louis, MO, May 19, 2011
- Invited Presenter at Congressional Briefing on the Safety of the Antimicrobial Triclosan, Washington, D.C., February 17, 2011
- Invited Panelist, Workshop on Environmental Estrogens and Endocrine Disrupting Compounds, sponsored by the Johnson Foundation, Wingspread, WI, May 2010
- Science Advisor, Johns Hopkins University Center for a Livable Future, 2009 – Present
- Invited Panelist, Special Symposium on Next Generation Superfund Contaminants sponsored by the National Institute of Environmental Health Sciences (NIEHS), Tucson, AZ, August 2009
- Invited Panelist, American Academy for Microbiology, "Global Antibiotic Resistance: New Approaches to an Old Problem," Fondation Merieux, Annecy, France, October 2008
- Invited Panelist, BIO 2006, World's Largest Annual International Convention on Biotechnology, Chicago, IL, Environmental Biotechnology Session, April 9-12, 2006
- Invited Speaker/Panelist, Mid-Atlantic States Section of the Air & Waste Management Association (MASS-A&WMA), Special Symposium on Emerging Environmental Issues and Policies, New Brunswick, NJ, April 6, 2006
- Invited NRC Committee Member, Dual Appointment in the Areas of Groundwater Monitoring and Chemistry, National Research Council of the National Academies. NRSB-O-05-04-A, Conduct a Technical Assessment of Ongoing and Planned Environmental Remediation and Monitoring Programs at the Los Alamos National Laboratory (LANL) and Provide Recommendations to Improve Their Technical and Cost Effectiveness and Reduce Worker, Public, and Environmental Risks, 15-Month Term Starting March, 2006
- Invited Expert Consultant, EPA Office of Inspector General, Office of Program Evaluation, Evaluation of Drinking Water Laboratory Procedures, January 19, 2006
- Invited Delegate, National Congress on Assessing and Mitigating Environmental Impacts of Emerging Contaminants – Renewable Natural Resources Foundation. Co-Sponsored by the United States Geological Survey and the Food and Drug Administration, December 1-2, 2005
- Invited Panelist, Harvard School of Public Health Risk Assessment Workshop: "Pharmaceuticals and Personal Care Products in the Environment: Emerging Threat or Unwarranted Concern?", November 10, 2005
- Special Government Employee, Food And Drug Administration, Center For Drug Evaluation And Research (CDER) Nonprescription Drugs Advisory Committee, October 2005 – October 2019
- Invited Session Chair, Groundwater Remediation Session, International Conference on Safe Water, Exploring Global Demands and Impacts of Natural Disasters, SAFEWATER 2005, San Diego, CA, October 21, 2005
- Invited Panelist/Voting Committee Member, Food And Drug Administration, Center For Drug Evaluation And Research (CDER) Nonprescription Drugs Advisory Committee. "Benefits and Hazards of Antiseptic Products Marketed for Consumer Use", October 20, 2005
- Invited Speaker and Voting Panel Member, DOE/EPA SERDP and ESTCP Expert Panel Workshop on Research and Development Needs for the Environmental Remediation Application of Molecular Biological Tools, Specialty: Proteomics, August 9-10, 2005
- Invited Panelist, Maryland Water Monitoring Council: "Ecological Restoration Assessment & Monitoring", Linthicum, MD, November 18, 2004
- Invited Committee Member, Water Environment Research Foundation (WERF) Project Advisory Committee, "Fate of Pharmaceuticals and Personal Care Products through Wastewater Treatment Processes", 2004 – 2006
- Invited Committee Member, Water Environment Research Foundation (WERF) Project Advisory Committee, "Contributions of Household Chemicals to Sewage and their Relevance to Municipal Wastewater Systems and the Environment", 2004 – 2006
- Alternate Member, Governor Ehrlich's Maryland Water Security and Wastewater Systems Advisory Council, January 2004 – December 2004

Public Interest Member, Governor Ehrlich's Maryland Department of the Environment – Maryland State Water Quality Advisory Committee (SWQAC). Selected by JHSPH Dean Al Sommer to be the Johns Hopkins Representative for this Committee, January 1, 2003 – December 31, 2005
Invited Panelist, DOE Natural and Accelerated Bioremediation Research Program (NABIR) Workshop, Warrenton, VA, March 8 – 20, 2002
Appointed Chairman of a 14-Member Task Force assembled to provide recommendations for Managing Environmental Cleanup and Research at two CA Superfund Sites, DOE New Perspectives Council, Lawrence Livermore National Laboratory, Livermore, CA, 2000

EDITORIAL ACTIVITIES

Journal Editor

ACS Journal of Proteome Research, Associate Guest Editor and Advisory Board Member (2015 – Present).

Associated Editor: Elsevier, Science of the Total Environment (2014 – 2015).

Executive Guest Editor: ACS Journal of Proteome Research (2014) Special Issue: Environmental Impact on Health.

Book Editor

Contaminants of Emerging Concern: Ecotoxicological and Human Health Considerations, 2010. American Chemical Society (ACS) Book Series. 606 pp. Oxford University Press, New York, NY. ISBN13: 9780841224964; eISBN: 9780841224971; DOI: 10.1021/bk-2010-1048

Peer Review Activities

1. American Association of Pharmaceutical Scientists (AAPS) Journal
2. American Chemical Society (ACS) Books
3. American Chemical Society (ACS) Merits Awards, Env. Chem. Division
4. Analytical Chemistry
5. Archives of Environmental Contamination and Toxicology
6. Archives of Microbiology
7. California Environmental Protection Agency
8. Chemical Reviews (ACS)
9. Chemosphere
10. Consumer Reports
11. EcoHealth
12. Ecotoxicology and Environmental Safety
13. Environmental Chemistry
14. Environmental Health Perspectives
15. Environmental Pollution
16. Environmental Research
17. Environmental Science & Technology
18. Environmental Science and Pollution Research
19. Environmental Toxicology & Chemistry
20. Environmental Technology
21. Environment International
22. EPA's Biosolids Core Risk Assessment (BCRAM) Screening Tool and User's Guide
23. Expert Review of Proteomics
24. Government of Canada: Health Canada CMP Research and Monitoring & Surveillance Program
25. Human and Ecological Risk Assessment: An International Journal
26. Integrated Environmental Assessment and Management (IEAM)
27. International Journal of Industrial Chemistry
28. Journal of Chromatography A

29. Journal of Chromatographic Science
30. Journal of Environmental Science and Health, Part B
31. Journal of Hazardous Materials
32. Journal of Proteome Research
33. Leaking Underground Storage Tank Line
34. Marine Environmental Research
35. Molecular & Cellular Proteomics
36. PLOS – Public Library of Science
37. Public Library of Science (PLOS) One
38. Renewable Natural Resources Foundation
39. Science
40. Science of the Total Environment
41. Soil & Sediment Contamination: an International Journal
42. Toxicology
43. United States Environmental Protection Agency
44. Water Research
45. Water Science & Technology

PROPOSAL REVIEW ACTIVITIES

- 2016 Research Foundation Flanders (Fonds Wetenschappelijk Onderzoek – Vlaanderen, FWO)
- 2015 NIH Small Business Innovative Research (SBIR) Phase 1 SBIR Phase, ZRG1 RPHB-C (90)
- 2015 EPA Small Business Innovative Research (SBIR) Phase 1 SBIR Phase I Toxic Chemicals, SBIR Toxic Chemicals: Non-fluorinated Coatings
- 2014/15 EPA Ad Hoc Peer-review of Risk Assessment Tool
- 2014 Department of Defense, Air Force Ad Hoc Proposal Review
- 2011 EPA Small Business Innovative Research (SBIR) Panel – Drinking Water
- 2011 NIH Study Section Community Level Health Promotion (CLHP) Ad Hoc Member
- 2011 Hudson River Foundation for Science and Environmental Research
- 2010 Water Resources Research Institutes Program, United States Geological Survey
- 2009 NIH Study Section ZRG1 HDM-B 11B, Healthcare Delivery and Methodologies-Occupational Health, Small Business Innovative Research (SBIR) Program
- 2009 NIH Study Section ZRG1 HOP E 11, Health of the Population, Small Business Innovative Research (SBIR) Program
- 2009 Water Resources Research Institutes Program, United States Geological Survey
- 2008 NIH Study Section ZRG1 HOP E 10, Health of the Population, Small Business Innovative Research (SBIR) Program
- 2007 NIH Study Section ZRG1 HOP E 10, Health of the Population, Small Business Innovative Research (SBIR) Program
- 2007 Natural Sciences and Engineering Research Council of Canada, NSERC’s Discovery Grant Program
- 2007 Caribbean Coral Reef Institute (CCRI) in Cooperation with the University of Puerto Rico – Mayagüez and the National Atmospheric and Oceanic Administration (NOAA)
- 2006 National Academies, U.S. Agency for International Development (USAID), Middle East Regional Cooperation Program (MERC)
- 2006 U.S. Environmental Protection Agency (EPA), Office of Research, Small Business Innovative Research (SBIR) Program
- 2006 International Science and Technology Center (ISTC); Science Center Programs of the U.S. Department of State
- 2005 Natural Sciences and Engineering Research Council of Canada (NSERC), Collaborative Health Research Project (CHRP) Grant Program

- 2005 Cooperative Grants Program of the U.S. Civilian Research and Development Foundation (CRDF), Co-founded and Sponsored by the National Science Foundation (NSF)
- 2004 National Science Foundation (NSF), Microbial Observatories (MO) and Microbial Interactions and Processes (MIP); RFA: NSF-04-586
- 2004 Water Environment Research Foundation (WERF), Pharmaceuticals and Personal Care Products in the Environment
- 2003 National Science Foundation (NSF), Microbial Observatories (MO) and Microbial Interactions and Processes (MIP); RFA: NSF-03-571
- 2002 International Science and Technology Center (ISTC); Science Center Programs of the U.S. Department of State

ACADEMIC SERVICE

Nationwide

Food and Drug Administration Special Government Employee, 2005-2017.
 National Institute of Environmental Health Sciences (NIEHS) Superfund Research Program, R01 Working Group, National Leader. 2012 – 2015
 Congressional Briefing, Invited Talk at U.S. Congress: Environmental Health Risks of Triclosan Capitol Hill Congressional Briefing Room, Washington, D.C., February 17, 2011

University Wide

ASU FSE-BDI Faculty Search Committee Chair (Position #46731) 2017-2018
 ASU Biological Design Graduate Program, Executive Committee Member, 2013 – Present
 ASU Biological Design Graduate Program, Chair of Admission, 2014 – 2017
 ASU/AzTE Startup Company Chief Operating Officer, ISW, LLC, 2012 – 2017
 ASU IPIRC Intellectual Property Institutional Review Committee, Member, 2011 – Present
 ASU Biodesign/AzTE Intellectual Property Advisory Committee, Member, 2011 – 2017

School Wide

ASU Environmental Engineering Curriculum Committee Member (2016-2018)
 ASU FSE Research Advisory Committee, 2016 – 2017
 ASU CESE Academic Affairs Committee, 2016 – 2017
 ASU Faculty Search Committee (Member; Process Engineering Position) 2013 – 2014
 ASU Faculty Search Committee (Member; Water Resources Position) 2013 – 2014
 ASU Faculty Search Committee (Chair; CHiR Director) 2011 – 2012
 ASU Faculty Search Committee (Chair; Air Toxics) 2011 – 2012
 ASU Fulton Undergraduate Research Initiative (FURI) Committee, 2009 – 2013
 ASU Curriculum Committee, 2009 – 2011
 ASU Grand Challenges Faculty Search Committee, 2009 – 2011
 ASU Faculty Search Committee, 2008 – 2009
 Johns Hopkins University Committee on Information Technology (CIT) Member, JHSPH, 9/2004 – 12/2007
 Faculty Representative at the Technology Transfer Retreat, JHSPH, July 23, 2004
 Johns Hopkins University Faculty Senator, Dept. of Environ. Health Sciences. Elected 9/2003 – 8/2004
 JHSPH Faculty Title Task Force. Invited Representative of the Junior Faculty, 2003
 Co-organizer of the JHSPH Junior Faculty Meetings, 2003

Division and Department

ASU Biodesign Personnel Committee, 2014 – Present
 ASU Biodesign Research & Collaboration Advancement Committee, 2011 – Present
 ASU Intellectual Property Institutional Review Committee, 2011 – 2012
 ASU Specialty Area Coordinator for Environmental and Water Resource Engineering,

2008 – 2009

JHU Academic Affairs Committee, Dept. of Environ. Health Sci., Member, 9/2004 – 8/2005

JHU Organizer of the “Exposure Assessment Session” at the EHS Annual Research Day, Mt. Washington Conference Center, Baltimore, MD, November 14, 2003

JHU Enrichment and Seminars Committee, EHS, Member, 8/2003 – 7/2004

JHU Ad-hoc Committee for Development of a Mission Statement for the Department of EHS, 2003

JHU Center for Water and Health Faculty Search Committee, Member, 2002 – 2005

Communication and Outreach

Conducted 150+ TV/Radio/Newspaper Interviews; Contributions were featured in, e.g., New York Times, Wall Street Journal, Time Magazine, Science News, and the Los Angeles Times

PROFESSIONAL ACTIVITIES

Society Memberships

American Association for the Advancement of Science (AAAS)

American Public Health Association (APHA)

American Society for Mass Spectrometry (ASMS)

American Chemical Society (ACS); ACS Expert Program Member for Media Relations

American Society for Microbiology (ASM)

American Society of Civil Engineers (ASCE)

Association of Environmental Engineering and Science Professors (AEESP)

Environmental and Water Resources Institute (EWRI)

Society of Environmental Toxicology and Chemistry (SETAC)

OTHER PROFESSIONAL ACTIVITIES

- Supervisor Certificate, 40-Hour SARA/OSHA 8CCR5192(e)(4) (1999).
- Management Certificate, University of the Pacific, 2000.
- DOE Natural and Accelerated Bioremediation Research Program (NABIR) Workshop. Warrenton, VA. Invited Panelist. March 18-20, 2002.
- Johns Hopkins School of Public Health Faculty Title Task Force. Invited Representative of the Junior Faculty, 2003
- Co-organizer of the Johns Hopkins School of Public Health Junior Faculty Meetings, 2003.
- Organizer of the “Exposure Assessment Session” at the Environmental Health Sciences Annual Research Day of the Johns Hopkins Bloomberg School of Public Health, Mount Washington Conference Center, Baltimore, MD, November 14, 2003.
- Water Environment Research Foundation (WERF) Project Advisory Committee. “Contributions of Household Chemicals to Sewage and their Relevance to Municipal Wastewater Systems and the Environment.” Invited Committee Member. 2004-2006.
- Water Environment Research Foundation (WERF) Project Advisory Committee. “Fate of Pharmaceuticals and Personal Care Products through Wastewater Treatment Processes.” Invited Committee Member. 2004-2006.
- Maryland Water Monitoring Council: “Ecological Restoration Assessment & Monitoring” Linthicum, MD. Invited Panelist. November 18, 2004.
- Governor Ehrlich’s Maryland Water Security and Wastewater Systems Advisory Council Alternate Member. 01/2004-12/2004.
- Governor Ehrlich’s Maryland Department of the Environment – Maryland State Water Quality Advisory Committee (SWQAC) Public Interest Member. Selected by JHSPH Dean Al Sommer to be the Johns Hopkins Representative for this Committee. 1/1/2003-12/31/2005.

- DOE/EPA SERDP and ESTCP Expert Panel Workshop on Research and Development Needs for the Environmental Remediation Application of Molecular Biological Tools. Invited Speaker and Voting Panel Member. Specialty: Proteomics. August 9-10, 2005.
- International Conference on Safe Water, Exploring Global Demands and Impacts of Natural Disasters, SAFEWATER 2005. San Diego, CA. Groundwater Remediation Session. Invited Session Chair. October 21, 2005.
- Harvard School of Public Health Risk Assessment Workshop: "Pharmaceuticals and Personal Care Products in the Environment: Emerging Threat or Unwarranted Concern?" Invited Panelist. November 10, 2005.
- National Congress on Assessing and Mitigating Environmental Impacts of Emerging Contaminants – Renewable Natural Resources Foundation. Co-Sponsored by the United States Geological Survey and the Food and Drug Administration. Invited Delegate. December 1-2, 2005.
- Food And Drug Administration, Center For Drug Evaluation And Research (CDER) Nonprescription Drugs Advisory Committee. "Benefits and Hazards of Antiseptic Products Marketed for Consumer Use." Invited Panelist/Voting Committee Member. October 20, 2005.
- EPA Office of Inspector General, Office of Program Evaluation, Evaluation of Drinking Water Laboratory Procedures. Invited Expert Consultant. January 19, 2006.
- Mid-Atlantic States Section of the Air & Waste Management Association (MASS-A&WMA), Special Symposium on Emerging Environmental Issues and Policies. Invited Speaker/Panelist. New Brunswick, NJ, April 6, 2006.
- Invited Panelist, BIO 2006, World's Largest Annual International Convention on Biotechnology. Chicago, IL. Environmental Biotechnology Session. April 9-12, 2006
- National Research Council of the National Academies. NRSB-O-05-04-A. Conduct a Technical Assessment of Ongoing and Planned Environmental Remediation and Monitoring Programs at the Los Alamos National Laboratory (LANL) and Provide Recommendations to Improve Their Technical and Cost Effectiveness and Reduce Worker, Public, and Environmental Risks. Invited NRC Committee Member, Dual Appointment in the Areas of Groundwater Monitoring and Chemistry. 15-Month Term Starting March, 2006.
- Panel Chair and Keynote Speaker. Reducing Our Ecological Footprint. 10th Anniversary of the Johns Hopkins Center for a Livable Future – Charting A Course To Sustainability Through Research, Education And Service, Baltimore, MD, December 6, 2006.
- Co-Organizer, Annual Conference of the Superfund Basic Research Program (SBRP) of the National Institute of Environmental Health Sciences (NIEHS). Innovative Technologies. Session Moderator and Planning Committee Member, 20th Anniversary Meeting of the Superfund Basic Research Program, Durham, NC, December 3, 2007.
- Co-Organizer, Annual Conference of the Superfund Basic Research Program (SBRP) of the National Institute of Environmental Health Sciences (NIEHS). Member of Steering Committee and Invited Speaker of Technology Transfer Session, Pacific Grove, CA, December 7-9, 2008.
- Invited Panelist, American Academy for Microbiology, "Global Antibiotic Resistance: New Approaches to an Old Problem," Fondation Merieux, Annecy, France, October 2008.
- Invited Speaker and Session Chair. Environmental Fate of Antimicrobials. Pacific Southwest Organic Residuals Symposium 2008. Sacramento, October 1-2, 2008.
- Invited Panelist, Special Symposium on Next Generation Superfund Contaminants sponsored by the National Institute of Environmental Health Sciences (NIEHS), Tucson, AZ, August 2009.
- Symposium Chair and Organizer, Pharmaceuticals, Personal Care Products and Organohalogenes in Biosolids, 238th American Chemical Society (ACS) National Meeting, Washington, DC, August 16-20, 2009.
- Symposium Chair and Organizer, Toward Sustainable Use of Organohalogenes. Spring 2010 National Meeting & Exposition of the American Chemical Society, San Francisco, CA, March 21-25, 2010.

- Symposium Chair and Organizer, Policy Options for Sustainability. Spring 2010 National Meeting & Exposition of the American Chemical Society, San Francisco, CA, March 21-25, 2010.
- Invited Panelist, Workshop on Environmental Estrogens and Endocrine Disrupting Compounds, sponsored by the Johnson Foundation, Wingspread, WI, May 2010.
- Co-Organizer, 25th Anniversary Conference of the Superfund Research Program (SRP) of the National Institute of Environmental Health Sciences (NIEHS). Scientific Session 2: Risk Assessment and Remediation. Planning Committee Member, 25th Anniversary Meeting of the Superfund Basic Research Program, Raleigh, NC, October 21-24, 2012.
- Symposium Chair and Organizer: Analytical Methods for Detecting and Prioritizing Contaminants of Concern. August 2014. 248th National Meeting & Exposition of the American Chemical Society, San Francisco, CA, August 10-14, 2014.