January 31st, 2023

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, Biodesign Center for Environmental Health Engineering
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ASU CENTER & INSTITUTE

Biodesign Institute, Tempe, AZ
Founding Director, Biodesign 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 Global Futures Scientist, Julie Ann Wrigley Global Futures Laboratory
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

ACADEMIC ASU EXPERIENCE

Co-Founder AquaVitas, LLC, Scottsdale, AZ, May 2019 – Present
Founder, OneWaterOneHealth, a Nonprofit Project, 2019 – Present
Founding Director, Center for Environmental Health Engineering (CEHE) Biodesign Institute (formerly Environmental Security), 6/2018 – Present
Founding Director, Environmental Health Engineering Mass Spectrometry Facility, 7/2013 – Present
Founding Director, Center for Environmental Security (CES), 7/2012 – 2017
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 named 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
Founder, One Water One Health, a Non-profit Project, ASU Foundation 2019
Co-Founder, AquaVitas, an ASU Startup Company, 2019 – Present, Managing Member
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 named 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 named German National Institute for Biotechnology (GBF), Braunschweig, Germany. Principal Responsibilities: Bioreactors. Supervisor: Dr. Joachim Klein. 1/1991 – 12/1991

COMMUNITY SERVICE EXPERIENCE Elected Community Advisory Board (CAB) Member of the Water Quality Assurance Revolving Fund (WQRAF) West Van Buren Site, Phoenix, AZ

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

2019 JM Kaplan Foundation Prize for Social Innovation (Focus: Environment)
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)
2012-14 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 (Google Scholar h-Index 65; >16,400 Citations)

Refereed Journal Publications (* Corresponding Author)

2023

1. Bowes, D. A.*, Erin M Driver*, Simona Kraberger, Rafaela S Fontenele, LaRinda A Holland, Jillian Wright, Bridger Johnston, Sonja Savic, Melanie Engstrom Newell, Sangeet Adhikari, Rahul Kumar, Hanah Goetz, Allison Binsfeld, Kaxandra Nessi, Payton Watkins, Akhil Mahant, Jake Zevitz, Stephanie Deitrick, Philip Brown, Richard Dalton, Chris Garcia, Rosa Inchausti, Wydale Holmes, Xiao-Jun Tian, Arvind Varsani, Efrem S Lim, Matthew Scotch, Rolf U Halden. 2023. Leveraging an established neighbourhood-level, open access wastewater monitoring network to address public health priorities: a population-based study. *The Lancet Microbe* 4 (1), e29-e37
2. Kelkar, V., Driver, E. M., Bienenstock, E. J., Palladino, A., Halden, R. U. 2023. Stability of human stress hormones and stress hormone metabolites in wastewater under oxic and anoxic conditions. *Science of The Total Environment* 857(1):159377. https://doi.org/10.1016/j.scitotenv.2022.
3. Adhikari, S., R. Kumar, E. M. Driver, D. A. Bowes, K. T. Ng, J. E. Sosa-Hernandez, M. A. Oyervides-Muñoz, E. M. Melchor-Martínez, M. Martínez-Ruiz, K. G. Coronado-Apodaca, T. Smith, A. Bhatnagar, B. J. Piper, K. L. McCall, R. Parra-Saldivar, L. P. Barron, R. U. Halden. Occurrence of Z-drugs, benzodiazepines, and ketamine in wastewater in the United States and Mexico during the Covid-19 pandemic. Science of the Total Environment 857, 159351.
4. MF Smith, SC Holland, MB Lee, JC Hu, NC Pham, RA Sullins, L. A. Holland, T. Mu, A. W. Thomas, R. Fitch, E. M. Driver, R. U Halden, M. Villegas-Gold, S. Sanders, J. L. Krauss, L. Nordstrom, M. Mulrow, M. White, V. Murugan, E. S. Lim. Baseline Sequencing Surveillance of Public Clinical Testing, Hospitals, and Community Wastewater Reveals Rapid Emergence of SARS-CoV-2 Omicron Variant of Concern in Arizona, USA. Mbio, e03101-22.
5. Faleye, T. O. C., A. Elyaderani, P. Skidmore, S. Adhikari, A. Smith, N. Kaiser, H. Sandrolini, S. Finnerty, R. U. Halden, A. Varsani, M. Scotch. Surveillance of rhinovirus diversity among a university community identifies multiple types from all three species including an unassigned rhinovirus A genotype. Influenza and Other Respiratory Viruses 17 (1), e13057.

2022

6. Tiwari, Adhikari, S., Kaya, D., Islam, M. A., Malla, B., Sherchan, S. P., Al-Mustapha, A. I., Kumar, M., Aggarwal, S., Bhattacharya, P., Bibby, K., Halden, R. U., Bivins, A., Haramoto, E., Oikarinen, S., Heikinheimo, A., & Pitkänen, T. 2022. Monkeypox outbreak: Wastewater and environmental surveillance perspective. *The Science of the Total Environment*, *856*.
7. Driver, E. M., Bowes, D. A., Halden, R. U., & Conroy-Ben, O. 2022. Implementing wastewater monitoring on American Indian reservations to assess community health indicators. *Science of The Total Environment*, *823*, 153882.
8. Delgado Vela, J., McClary-Gutierrez, J. S., Al-Faliti, M., Allan, V., Arts, P., Barbero, R.U. Halden, ... & Bibby, K. 2022. Impact of disaster research on the development of early career researchers: Lessonslearned f rom the wastewater monitoring pandemic response efforts. *Environmental Science & Technology*.
9. Adhikari, S., & Halden, R. U. 2022. Opportunities and limits of wastewater-based epidemiology for tracking global health and attainment of UN sustainable development goals. *Environment International*,107217.
10. Steele, J. C., Meng, X. Z., Venkatesan, A. K., & Halden, R. U. 2022. Comparative meta-analysis of organic contaminants in sewage sludge f rom the United States and China. *Science of The Total Environment*, 153423.
11. Wright, J., Driver, E. M., Bowes, D. A., Johnston, B., & Halden, R. U. 2022. Comparison of high-frequency in-pipe SARS-CoV-2 wastewater-based surveillance to concurrent COVID-19 random clinicaltesting on a public US university campus. *Science of The Total Environment*, 152877.
12. Faleye, T. O., Elyaderani, A., Skidmore, P., Adhikari, S., Smith, A., Kaiser, N., Sandrolini, H., Finnerty, S., Halden, R. U., Varsani, A., & Scotch, M. 2022. Surveillance of rhinovirus diversity

among a university community identifies multiple types from all three species including an unassigned rhinovirus a genotype. *Influenza and Other Respiratory Viruses*.

13. Faleye, T. O., Driver, E. M., Bowes, D. A., Holm, R. H., Talley, D., Yeager, R., Bhatnagar, A., Smith, T., Varsani, A., Halden, R. U., & Scotch, M. 2022. Detection of human, porcine and canine picornaviruses in municipal sewage sludge using pan-enterovirus amplicon-based long-read Illumina sequencing. *Emerging Microbes & Infections*, 11(1), 1339–1342.
14. Adhikari, S., Kelkar, V., Kumar, R., & Halden, R. U. 2022. Methods and challenges in the detection of microplastics and nanoplastics: A mini-review. *Polymer International*, *71*(5), 543–551.
15. Sosa-Hernández, Oyervides-Muñoz, M. A., Melchor-Martínez, E. M., Driver, E. M., Bowes, D. A., Kraberger, S., Lucero-Saucedo, S. L., Fontenele, R. S., Parra-Arroyo, L., Holland, L. A., Peña-Benavides, S. A., Newell, M. E., Martínez-Ruiz, M., Adhikari, S., Rodas-Zuluaga, L. I., Kumar, R., López-Pacheco, I. Y., Castillo-Zacarias, C., Iqbal, H. M. N., & Lim, E. S. 2022. Extensive Wastewater-Based Epidemiology as a Resourceful Tool for SARS-CoV-2 Surveillance in a Low-to-Middle-Income Country through a Successful Collaborative Quest: WBE, Mobility, and Clinical Tests. *Water.*, *14*(12).
16. Adhikari, S., Kumar, R., Driver, E. M., Perleberg, T. D., Yanez, A., Johnston, B., & Halden, R. U. 2022. Mass trends of parabens, Triclocarban and triclosan in Arizona wastewater collected after the 2017 FDA ban on antimicrobials and during the COVID-19 pandemic. *Water Research*, *222*, 118894.
17. Bowes, Driver, E. M., & Halden, R. U. 2022. A framework for wastewater sample collection from a sewage cleanout to inform building-scale wastewater-based epidemiology studies. *The Science of the Total Environment*, *836*.
18. Smith, A., Kaiser, N., Yanez, A., Perleberg, T., Elyaderani, A., Skidmore, P., Adhikari, S., Driver, E. M., Halden, R. U., Varsani, A., Scotch, M., & Faleye, T. O. 2022. Genome sequence of a microvirus recovered from wastewater in Arizona, USA, in October 2020, encodes a previously undescribed DNA-binding protein. *Microbiology Resource Announcements*.
19. Faleye, Skidmore, P. T., Elyaderani, A., Smith, A., Kaiser, N., Adhikari, S., Yanez, A., Perleberg, T., Driver, E. M., Halden, R. U., Varsani, A., & Scotch, M. 2022. Canine picornaviruses detected in wastewater in Arizona, USA 2019 and 2021. *Infection, Genetics, and Evolution*, *103*.
20. Diamond, M. B., Keshaviah, A., Bento, A. I., Conroy-Ben, O., Driver, E. M., Ensor, K. B., Halden, R. U., Hopkins, L. P., Kuhn, K. G., Moe, C. L., Rouchka, E. C., Smith, T., Stevenson, B. S., Susswein, Z., Vogel, J. R., Wolfe, M. K., Stadler, L. B., & Scarpino, S. V. 2022. Wastewater surveillance of pathogens can inform public health responses. *Nature Medicine.*, *28*(10), 1992–1995.
21. Driver, Gushgari, A. J., Steele, J. C., Bowes, D. A., & Halden, R. U. 2022. Assessing population-level stress through glucocorticoid hormone monitoring in wastewater. *The Science of the Total Environment*, *838*.
22. Collins, C. L., Kraberger, S., Fontenele, R. S., Faleye, T. O., Adams, D., Adhikari, S., Sandrolini, H., Finnerty, S., Halden, R. U., Scotch, M., & Varsani, A. 2022. Genome sequences of anelloviruses, genomovirus, and papillomavirus isolated from nasal pharyngeal swabs. *Microbiology Resource Announcements*, *11*(9).
23. Faleye, T. O., Elyaderani, A., Skidmore, P., Adhikari, S., Smith, A., Kaiser, N., Sandrolini, H., Finnerty, S., Halden, R. U., Varsani, A., & Scotch, M. 2022. Surveillance of rhinovirus diversity among a university community identifies multiple types from all three species including an unassigned rhinovirus a genotype. *Influenza and Other Respiratory Viruses*.
24. Kelkar, Driver, E. M., Bienenstock, E. J., Palladino, A., & Halden, R. U. 2022. Stability of human stress hormones and stress hormone metabolites in wastewater under oxic and anoxic conditions. *The Science of the Total Environment*.
25. Adhikari, Kumar, R., Driver, E. M., Bowes, D. A., Ng, K. T., Sosa-Hernandez, J. E., Oyervides-Muñoz, M. A., Melchor-Martínez, E. M., Martínez-Ruiz, M., Coronado-Apodaca, K. G., Smith, T., Bhatnagar, A., Piper, B. J., McCall, K. L., Parra-Saldivar, R., Barron, L. P., & Halden, R. U. 2022. Occurrence of Z-drugs, benzodiazepines, and ketamine in wastewater in the United States and Mexico during the Covid-19 pandemic. *The Science of the Total Environment*.
26. Kumar, Adhikari, S., Driver, E. M., Smith, T., Bhatnagar, A., Lorkiewicz, P. K., Xie, Z., Hoetker, J. D., & Halden, R. U. 2022. Towards a novel application of wastewater-based epidemiology in population-wide assessment of exposure to volatile organic compounds. *The Science of the Total Environment*, *845*.

27. Kumar, Adhikari, S., Driver, E., Zevitz, J., & Halden, R. U. 2022. Application of wastewater-based epidemiology for estimating population-wide human exposure to phthalate esters, bisphenols, and terephthalic acid. *The Science of the Total Environment*, *847*.

2021

28. Halden, R.U., Newell, M.E., Adhikari, S. 2021. Systematic and state-of the science review of the role of environmental factors in Amyotrophic Lateral Sclerosis (ALS) or Lou Gehrig's Disease. *Science of The Total Environment*, 152504.
29. Halden, R.U., Kumar, R., Adhikari, S. 2021. Comparison of sorption models to predict analyte loss duringsample filtration and evaluation of the impact of filtration on data quality. *Science of The Total Environment*, 152624.
30. Bade, R., White, J.M., Ghetia, M., Adiraju, S., Adhikari, S., Bijlsma, L., Boogaerts, T., Burgard, D.A., Castiglioni, S., Celma, A., Chappell, A., Covaci, A., Driver, E.M., Halden, R.U., Hernandez, F., Lee, H., Van Nujis, A.L., Oh, J.E., Castro Pineda, M.A., Salguerio-Gonzalez, N., Subedi, B., Shao, X.T., Yargeau, V., Zuccato, E., Gerber, C. 2021. A taste for new psychoactive substances: wastewater analysisstudy of 10 countries. *Environmental Science & Technology Letters*.
31. Armbuster, Y.C., Banas, B.N., Feickert, K.D., England, S.E., Moyer, E.J., Christie, E.L., Chughtai, S., Giuliani, T.J., Halden, R.U., Graham, J.H., McCall, K.L., Piper, B.J. 2021. Decline and Pronounced Regional Disparities in Medical Cocaine Usage in the United States. *Journal of Pharmacy Technology* 37 (6), 278-285.
32. Faleye, T.O.C., Adams, D., Adhikari, S., Sandrolini, H., Halden, R.U., Varsani, A., Scotch, M. 2021. Use of hemagglutinin and neuraminidase amplicon-based high-throughput sequencing with variant analysis to detect co-infection and resolve identical consensus sequences of seasonal influenza in a university setting. *BMC infectious diseases* 21 (1), 1-12.
33. Halden, R,U., Rolsky, C., Khan, F.R. 2021. Time: A Key Driver of Uncertainty When Assessing the Risk of Environmental Plastics to Human Health. *Environmental Science & Technology* 55 (19), 12766- 12769.
34. Faleye, T.O.C., Bowes, D.A., Driver, E.M., Adhikari, S., Adams, D., Varsani, A., Halden, R. U., Scotch,
35. M. 2021. Wastewater-Based Epidemiology and Long-Read Sequencing to Identify Enterovirus Circulation in Three Municipalities in Maricopa County, Arizona, Southwest United States between June and October 2020. *Viruses* 13 (9), 1803.
36. Jacobs, D., McDaniel, T., Varsani, A., Halden, R.U., Forrest, S., Lee, H. 2021. Wastewater Monitoring Raises Privacy and Ethical Considerations. IEEE Transactions on Technology and Society.
37. Halden, R.U., C. Rolsky, F.R. Khan. 2021. Time: A Key Driver of Uncertainty When Assessing the Risk of Environmental Plastics to Human Health. Environmental Science & Technology, 55(19):12766-12769. PMC8495893
38. Bowes, D.A.; Driver, E.M.; Kraberger. S.; Fontenele, R.S.; Hollans, L.A.; Wright, J.; Johnston, B.; Savic. S.; Newell, M.E.; Adhikari, S.; Kumar, R.; Goetz, H.; Binsfield, A.; Nessi, K.; Watkins, P,; Mahant, A.; Zevits, J.; Deitrick, S.; Brown, P.; Dalton, R.; Garcia, C.; Inchausti, R.; Holmes, W.; Tian, X.J.; Varsani, A. Lim, E.S.; Scotch, M.; Halden, R.U. Unrestricted Online Sharing of High-frequency, High-resolution Data on SARS-CoV-2 in Wastewater to Inform the COVID-19 Public Health Responsein Greater Tempe, Arizona. *medRxiv* 2021.07.29.21261338; doi: https://doi.org/10.1101/2021.07.29.21261338

39. Barrila, J., S.F. Sarker, N. Hansmeier, S. Yang, K. Buss, N. Briones, J. Park, R.R. Davis, R. J. Forsyth, C. M. Ott, K. Sato, C. Kosnik, A. Yang, C. Shimoda, N. Rayl, D. Ly, A. Landenberger, S. D. Wilson, N. Yamazaki, J. Steel, C. Montano, R. U. Halden, T. Cannon, S. L. Castro-Wallace, C. A. Nickerson. 2021. Evaluating the effect of spaceflight on the host–pathogen interaction between human intestinal epithelial cells and *Salmonella Typhimurium*. *Nature Publishing Journal Microgravity* 7(1):1-10.

40. Faleye, T.O.C., Adams, D., Adhikari, S. *et al.* 2021. Use of hemagglutinin and neuraminidase amplicon-based high-throughput sequencing with variant analysis to detect co-infection and resolve

identical consensus sequences of seasonal influenza in a university setting. *BMC Infect Dis* **21,** 810 (2021). https://doi.org/10.1186/s12879-021-06526-5

41. Fontenele, R.S.; Kraberger, S.; Hadfield, J.; Driver, E.M.; Bowes, D.; Holland, L. A.; Faleye, T. O. C.; Adhikari, S.; Kumar, R.; Inchausti, R.; Holmes, W. K.; Deitrick, S.; Brown, P.; Duty, D.; Smith, T.; Bhatnagar1, A.; Yeager II, R. A.; Holm, H. R.; Hoogesteijn von Reitzenstein, N.; Wheeler, E.; Dixon, K.; Constantine, T.; Wilson, M. A.; Lim, E. S.; Jiang, X.; Halden, R. U.; Scotch, M.; Varsani, A. High-throughput sequencing of SARS-CoV-2 in wastewater provides insights into circulating variants. medRxiv 2021.01.22.21250320; doi: https://doi.org/10.1101/2021.01.22.21250320.

42. McClary-Gutierrez, J. S.; Zachary T. Aanderud; Mitham Al-faliti; Claire Duvallet; Raul Gonzalez; Joe Guzman; Rochelle H. Holm; Michael A. Jahne; Rose S. Kantor; Panagis Katsivelis; Katrin Gaardbo Kuhn; Laura M. Langan; Cresten Mansfeldt; Sandra L. McLellan; Lorelay M. Mendoza Grijalva; Kevin S. Murnane; Colleen C. Naughton; Aaron I. Packman; Sotirios Paraskevopoulos; Tyler S. Radniecki; Fernando A. Roman Jr; Abhilasha Shrestha; Lauren B. Stadler; Joshua A. Steele; Brian M. Swalla; Peter Vikesland; Brian Wartell; Carol J. Wilusz; Judith Chui Ching Wong; Alexandria B. Boehm; Rolf U. Halden; Kyle Bibby; Jeseth Delgado Vela. Standardizing Data Reporting in the Research Community to Enhance the Utility of Open Data for Sars-Cov-2 Wastewater Surveillance. Environmental Science: Water Research & Technology, 2021, doi:10.1039/d1ew00235j. https://pubs.rsc.org/en/content/articlehtml/2021/ew/d1ew00235j

43. Faleye, Temitope O., E. Driver, D. Bowes, S. Adhikari, D. Adams, A. Varsani, R. U. Halden, M. Scotch Pan-Enterovirus Amplicon-Based High-Throughput Sequencing Detects the Complete Capsid of a Eva71 Genotype C1 Variant Via Wastewater-Based Epidemiology in Arizona. *Viruses*, 13(1), 2021, p. 74., doi:10.3390/v13010074. https://www.mdpi.com/1999-4915/13/1/74

44. Jacobs, D., T. McDaniel, A. Varsani, R. U. Halden, S. Forrest, H. Lee. Wastewater Monitoring Raises Privacy and Ethical Considerations. *IEEE Transactions on Technology and Society*, 2(3), 2021, pp. 116–121., doi:10.1109/tts.2021.3073886. https://ieeexplore.ieee.org/abstract/document/9406814

2020

45. Ng, K.T., Rapp-Wright, H., Egli, M., Hartmann, A., Steele, J.C., Sosa-Hernandez, J.E., Melchor-Martinez, E.M., Jacobs, M., White, Blanaid, Regan, F., Parra-Saldivar, R., Couchman, L., Halden, R.U., Barron, L.P. 2020. High-throughput multi-residue quantification of contaminants of emerging concern in wastewaters enabled using direct injection liquid chromatography-tandem mass spectrometry. *Journal of hazardous materials* 398, 122933.

46. Choi, P.M., Bowes, D.A., O'Brien, J.W., Halden, R.U., Jiang, G., Thomas, K.V., Mueller, J.F. 2020. Do food and stress biomarkers work for wastewater-based epidemiology? A critical evaluation. *Science of The Total Environment* 736, 139654.

47. Halden, R.U., Venkatesan, A.K. 2020. Moving toward a waste-free circular economy by example of biosolids. *Current Opinion in Environmental Science and Health* 14, A1-A3.

48. Halden, R.U., Venkatesan, A.K. 2020. Using national sewage sludge data for chemical ranking and prioritization. *Current Opinion in Environmental Science & Health* 14, 10-15.

49. Rolsky, C., Kelkar, V., Halden, R. U.* 2020. Nationwide mass inventory and degradation assessment of plastic contact lenses in US wastewater. *Environmental Science & Technology*, 54, 12102-12108. https://pubs.acs.org/doi/full/10.1021/acs.est.0c03121

50. Ng, K. T., H. Rapp-Wright, M. Eglo, A. Hartmann, J. Steele; J. E. Sosa-Hernandez; E. M. Melchor-Matrinez, M. Jacobs, B. White, F. Regan, R. Parra Saldivar, L. Couchman, R. U. Halden and L. Barron. 2020. High-throughput analysis of international wastewaters for contaminants of emerging concern enabled using direct injection liquid chromatography-tandem mass spectrometry. *J. Hazardous Materials*

398(5):122933.

51. Holland, L., E. Kaelin, R. Maqsood, B. Estifanos, L. Wu, A. Varsani, R. U. Halden, B. Hogue, M. Scotch, and E. Lim An 81 nucleotide deletion in SARS-CoV-2 ORF7a identified from sentinel surveillance in Arizona (Jan-Mar 2020). *J. Virology* 94(14):e00711-20. PMC7343219; https://jvi.asm.org/content/jvi/early/2020/04/30/JVI.00711-20.full.pdf

52. Scotch, M., R. U. Halden, A. Denton, H. Sandrolini, R. Fontenele, and A. Varsani. 2020. Complete genome of human respirovirus 1 from a clinical sample in Arizona. *Microbiology Resource Announcements* 9(24):e00465-20. https://mra.asm.org/content/ga/9/24/e00465-20.full.pdf

53. Hart, O. E. and Halden R.U.* 2020c. Computational analysis of SARS-CoV-2/COVID-19 surveillance by wastewater-based epidemiology locally and globally: Feasibility, economy, opportunities and challenges. *Science of the Total Environment.* 730: 138875. https://doi.org/10.1016/j.scitotenv.2020.138875

54. Driver, E.M.; Gushgari, A.; Chen, J.; Halden, R.U.* 2020. Longitudinal study of alcohol, nicotine, and caffeine consumption on a public university campus via wastewater-based epidemiology. *Science of the Total Environment. 727:138492.*

55. Hart, O. E. and Halden R.U.* 2020b. Simulated 2017 nationwide sampling at 13,940 major U.S. sewage treatment plants to assess seasonal population bias in wastewater-based epidemiology. *Science of the Total Environment.* 727: 138406. https://doi.org/10.1016/j.scitotenv.2020.138406

56. Hart, O. E. and Halden R.U.* 2020a. Modeling wastewater temperature and attenuation of sewage-borne biomarkers globally. *Water Research.* 172: 115473. doi.org/10.1016/j.watres.2020.115473

57. Hoepner, L., R. U. Halden, B. Pycke, O. Abulafia, D. Sherer and L. A Geer. 2020. Prenatal bisphenol A (BPA) exposure in a Brooklyn study of Afro-Caribbean women. *Environmental Research Communications* 2 041001. https://iopscience.iop.org/article/10.1088/2515-7620/ab8272/pdf

58. Rolsky, C., Kelkar, V., Driver, E. M., Halden, R. U.* (2020). Municipal sewage sludge as a source of microplastics in the environment. *Current Opinion in Environmental Science & Health*. 14:16-22. https://doi.org/10.1016/j.coesh.2019.12.001

2019

59. Kelkar, V. P., Rolsky, C. B., Pant, A., Green, M. D., Tongay, S., Halden, R. U.* 2019. Chemical and physical changes of microplastics during sterilization by chlorination. Water Research. https://doi.org/10.1016/j.watres.2019.114871

60. Bowes D.A., Halden R.U.* 2019. Breast cancer and dietary intake of endocrine disrupting chemicals: A review of recent literature. *Current Pathobiology Reports.* 7:41-46. https://doi.org/10.1007/s40139-019-00199-1

61. Gushgari, A. J., Venkatesan, A. K., Chen, J., Steele, J. C., Halden, R. U. 2019.* Long-term Tracking of Opioid Consumption in Two United States Cities Using Wastewater-based Epidemiology. *Water Research* 161: 171-180. https://doi.org/10.1016/j.watres.2019.06.003

62. Choy, C. A., Robison, B. H., Gagne, T. O., Erwin, B., Firl, E., Halden, R. U., Hamilton, J. A., Katija, K., Lisin, S. E., Rolsky, C., Van Houtan, K. S., 2019. The vertical distribution and biological transport of marine microplastics across the epipelagic and mesopelagic water column. *Scientific Reports*, 9(1), pp.1-9. doi: 10.1038/s41598-019-44117-2

63. Halden, R. U.*, Terlinden, E., Kraberger, S., Scotch, M., Steele, J., and A. Varsani. 2019. Tracking harmful chemicals and pathogens using the Human Health Observatory at ASU. *Online Journal of Public Health Informatics*, 11(1), e369. doi: 10.5210/ojphi.v11i1.9843.

64. Bowes, D. A. and Halden, R. U*. 2019. Theoretical evaluation of using wastewater-based epidemiology to assess the nutritional status of human populations. *Current Opinion in Environmental Science & Health* 9: 58-63. doi. 10.1016/j.coesh.2019.05.001

65. Chen, J., A. Venkatesan, Halden, R. U*. 2019. Alcohol and nicotine consumption trends in three U.S. communities determined by wastewater-based epidemiology. *Science of the Total Environment.* 656, 174-183.

66. Manivannan, B, M. Yegambaram, S. Supowit, T. G. Beach, R. U. Halden.* 2019. Assessment of Persistent, Bioaccumulative and Toxic Organic Environmental Pollutants in Liver and Adipose Tissue ofAlzheimer's Disease Patients and Age-matched Controls. *Current Alzheimer Research* 16, 1039-1049.

67. Sadaria, A. M., C. W. Labban, J. C. Steele, M. M. Maurer, R. U. Halden.* 2019. Retrospective nationwide occurrence of fipronil and its degradates in US wastewater and sewage sludge from 2001-2016. Water Research 155: 465-473. PMC6506233; NIHMS1524377; PMID: 30870636

68. Kalinowski, T., K. McClellan, T. A. Bruton, R. Krajmalnik-Brown, E. M. Driver, R. U. Halden.* 2019. Autonomous Screening of Groundwater Remediation Technologies in the Subsurface Using the In Situ Microcosm Array (ISMA). *Journal of Hazardous Materials* 367, 668-675.

69. Zhu, H., R. U. Halden, K. Kannan. 2019. A nationwide survey of the occurrence of melamine and its derivatives in archived sewage sludge from the United States. *Environmental Pollution* 245, 994-999.

70. Chen, J., X. Meng, A. Bergman, Halden, R. U*. 2019. Nationwide reconnaissance of five parabens, triclosan, triclocarban and its transformation products in sewage sludge from China. *Journal of Hazardous Materials 365*, 502-510.

71. Wang, Y., Kannan, P., Halden, R.U., Kannan, K., 2019. A Nationwide Survey of 31 Organophosphate Esters in Sewage Sludge from the United States. *Science of the Total Environment.* 666, 446-453. NIHMS1514297.

2018

72. Fahimipour, A.K., Mamaar, S., McFarland, A.G., Blaustein, R.A., Chen, J., Glawe, A.J., Kline, J., Green, J.L., Halden, R.U., Van Den Wymelenberg, K., Huttenhower, C., Hartmann, E. M*. 2018. Antimicrobial chemicals associate with microbial function and antibiotic resistance indoors. *mSystems*. 3(6):e00200-18.

73. 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*. 360:623-630.

74. 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. https://doi.org/10.1016/j.jhazmat.2018.07.073

75. 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

76. Gushgari, A. J., Halden, R. U. 2018. Critical review of major sources of human exposure to N-nitrosamines. Chemosphere 210. doi: 10.1016/j.chemosphere.2018.07.098

77. 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*, 197:627-633. https://doi.org/10.1016/j.chemosphere.2018.01.062. PMC5811353.

2017

78. Halden, R. U. et al. 2017. The Florence Statement on Triclosan and Triclocarban. *Environmental Health Perspectives* 125(6): UNSP064501. PMC5644973

79. 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

80. 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

81. 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

82. 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

83. 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

84. 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, PMC5097027

85. 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, PMC5532520

86. 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

87. 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

2016

88. 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

89. 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

90. 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.

91. 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

92. 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

93. 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

94. 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

95. 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

96. 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

97. 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

98. 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

99. 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

100. 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

101. Supowit, S. D., A. M. Sadaria, E. J. Reyes, and R. U. Halden. 2016. Mass Balance of Fipronil and TotalToxicity 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

102. 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

2015

103. Pycke, B. F. G, L. A. Geer, M. Dalloul, O, Abulafia, R. U. Halden.* 2015. Maternal and fetal exposure toparabens in a multiethnic urban U. S. population. *Environ. Int.* 84:193-200. doi: 10.1016/j.envint.2015.08.012. PMID: 26364793, PMC4613774

104. 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

105. 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

106. Venkatesan, A. K., H. Y. Done, and R. U. Halden.* 2015. United States National Sewage SludgeRepository 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

107. Venkatesan, A. K., R. U. Halden.* 2015. Effective Strategies for Monitoring and Regulating ChemicalMixtures and Contaminants Sharing Pathways of Toxicity. *Int. J. Environ. Res. Public Health* 12(9):10549-10557; doi: 10.3390/ijerph120910549. PMID: 26343697, PMC4586627

108. 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

109. 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

110. 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.

111. Roll, I. B., R. U. Halden* and B. F. G. Pycke. 2015. Indoor Air Condensate as a Novel Matrix forMonitoring Inhalable Organic Contaminants. *J. Hazard. Mater.* 288:89-96. doi: 10.1016/j.jhazmat.2015.01.043. PMID: 25706557

112. Hartmann, E. M., D. R. Colquhoun, K. J. Schwab, and R. U. Halden.* 2015. Absolute Quantification ofNorovirus 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

113. 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

114. 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

115. 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

116. 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

117. Halden, R. U.,* E.M. Hartmann, N. D. Denslow, P. A. Haynes and J. LaBaer. 2015. Recent Advances inProteomics 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

118. Done, H. Y., and R. U. Halden.* 2015. Reconnaissance of 47 Antibiotics and Associated Microbial Risksin 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

119. 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 EnvironmentalEtiology. *Environ. Res.* 136:470-481. doi: 10.1016/j.envres.2014.09.031. PMID: 25460669, PMC4279852

120. 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

121. 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

122. 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

123. 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

124. 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.

125. Venkatesan, A. K. and R. U. Halden.* 2014. Loss and In Situ Production of Perfluoroalkyl Chemicals inOutdoor Biosolids-soil Mesocosms. *Environ. Res.* 132:321–327. doi: 10.1016/j.envres.2014.04.024. PMID: 24834828, PMC4122524

126. 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

127. 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. PMC4135310

128. 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.

129. Halden, R. U.* 2014. On the Need and Speed of Regulating Triclosan and Triclocarban in the United States. *Environ. Sci. Technol.* 2014 Apr 1;48(7):3603−3611. doi: 10.1021/es500495p. PMID: 24588513, PMC3974611 ES&T Cover & Feature.

130. Venkatesan A. K. and R. U. Halden.* 2014. Brominated flame retardants in U.S. biosolids from the EPA national sewage sludge survey and chemical persistence in outdoor soil mesocosms. *Water Res.* 55:133-142. doi: 10.1016/j.watres.2014.02.021. PMID: 24607311, PMC4013270

131. Venkatesan A. K. and R. U. Halden.* 2014. Wastewater Treatment Plants as Chemical Observatories to Forecast Ecological and Human Health Risks of Manmade Chemicals. *Sci. Rep.* 4:3731. doi: 10.1038/srep03731. PMID: 24429544, PMC3893653

132. Venkatesan A. K. and R. U. Halden.* 2014. Contribution of Polybrominated Dibenzo-p-dioxins and Dibenzofurans (PBDD/Fs) to the Toxic Equivalency of Dioxin-like Compounds in Archived Biosolids from the U.S. EPA's 2001 National Sewage Sludge Survey. *Environ. Sci. Technol.* 48(18):10843-9; 48(18):10843-10849. doi: 10.1021/es503110j. PMID: 25157505, PMC4167052

133. Marsalla, J., B-O. Kim, and R. U. Halden.* 2013. Analysis of Crop Rotations in the U.S. Breadbasket Using Legumes as an Alternative to Industrially-Produced Fertilizer. *J. Agric. Sci. Appl.* 2(3):169-174. doi: 10.14511/jasa.2013.020306.

134. Deo, R. P. and R. U. Halden.* 2013. Pharmaceuticals in the Built and Natural Water Environment of the United States. *Water* 5(3):1346-1365. doi: 10.3390/w5031346.

135. Doudrick, K., N., Corson, G. Oberdorster, A. C. Elder, P. Herckes, R. U. Halden, and P. Westerhoff. 2013. Extraction and Quantification of Carbon Nanotubes in Biological Matrices with Application to Rat Lung Tissue. *ACS Nano* 7(10);8849-8856. doi: 10.1021/nn403302s. PMID: 23992048, PMC3908926

136. Dong, H.-P., E. Williams, D.-Z.Wang, Z.-X. Xie 3, R.-C. Hsia, A. Jenck, R. U. Halden, F. Chen, A. R. Place. 2013. Responses of *Nannochloropsis oceanica* IMET1 to Long-term Nitrogen Starvation and Recovery. *Plant Physiol.* 162(2):1110-1126. doi: 10.1104/pp.113.214320. PMID: 23637339, PMC3668043

137. Scotch, M, B. Baarson, R. Beard, R. Lauder, A. Varman, and R. U. Halden. 2013. Examining the Differences in Format and Characteristics of Zoonotic Virus Surveillance Data on State Agency Websites. *J. Med. Internet Res.* 15(4). doi: 10.2196/jmir.2487. PMID: 23628771, PMC3650930

138. Venkatesan, A. K. and R. U. Halden.* 2013. National Inventory of Perfluoroalkyl Substances in Archived U.S. Biosolids from the 2001 EPA National Sewage Sludge Survey. *J. Hazard. Mater.* 252-253:413-418. doi: 10.1016/j.jhazmat.2013.03.016. NIHMS 464002 PMID: 23562984, PMC3776589

139. Ziv-El, M., T. Kalinowski, R. Krajmalnik-Brown and R. U. Halden.* 2013. Simultaneous Determination of Chlorinated Ethenes and Ethene in Groundwater using Automated Headspace Solid Phase Microextraction. *J. Chromatogr. Sci.* 52(2):137-142. doi: 10.1093/chromsci/bms258. PMID: 23377651

140. North, E. J. and R. U. Halden.* 2013. Plastics and Environmental Health: The Road Ahead. Invited paper at *Rev. Environ. Health* 28(1):1-8. doi: 10.1515/reveh-2012-0030. PMID: 23337043, PMC3791860

141. Venkatesan A. K. and R. U. Halden.* 2013. National Inventory of Alkylphenol Ethoxylate Compounds in U.S. Biosolids and Chemical Fate in Outdoor Soil Mesocosms. *Environ. Pollut.* 174:189-193. DOI: 10.1016/j.envpol.2012.11.012 PMID: 23274446, PMC3552055

142. Love, D. C., R. U. Halden, M. F. Davis, and K. E. Nachman. 2012. Response to Comment on Feather Meal: A Previously Unrecognized Route for Reentry into the Food Supply of Multiple Pharmaceuticals and Personal Care Products (PPCPs). *Environ. Sci. Technol*., 46(24):13557-13558. doi: 10.1021/es304181c.

143. Love, D. C., R. U. Halden, M. F. Davis, and K. E. Nachman. 2012. Response to Comment on Feather Meal: A Previously Unrecognized Route for Reentry into the Food Supply of Multiple Pharmaceuticals and Personal Care Products (PPCPs). *Environ. Sci. Technol*., 46(23):13026-13027. doi: 10.1021/es304180x.

144. Chari, B. P. and R. U. Halden.* 2012. Predicting the Concentration Range of Unmonitored Chemicals in Wastewater-dominated Streams and in Run-off from Biosolids-amended soils. *Sci. Total Environ.* 440:314-320. doi: 10.1016/j.scitotenv.2012.05.042. PMID: 22682556, PMC3496017

145. Kalinowski, T.* and R. U. Halden. 2012. Can Stress Enhance Phytoremediation of Polychlorinated Biphenyls? *Environ. Eng. Sci.* 29(12):1047-1052. doi: 10.1089/ees.2012.0089. PMID: 23236249, PMC3516413

146. Hartmann. E. M., and R. U. Halden.* 2012. Analytical Methods for the Detection of Viruses in Food by Example of CCL-3 Bioagents. *Anal. Bioanal. Chem.* 404(9):2527-2537. doi: 10.1007/s00216-012-5974- y. PMID: 22526652

147. Pycke, B. F. G., T.-C. Chao, P. Herckes, P. Westerhoff and R. U. Halden.* 2012. Beyond nC_{60}: Strategies for Identification of Transformation Products of Fullerene Oxidation in Aquatic and Biological Samples. *Anal. Bioanal. Chem.* 404(9) (2012):2583-2595. doi: 10.1007/s00216-012-6090-8. PMID:

22644149, PMC3725142

148. Chari, B. P., and R. U. Halden.* 2012. Validation of Mega Composite Sampling and Nationwide Mass Inventories for 26 Previously Unmonitored Contaminants in Archived Biosolids from the U.S National Biosolids Repository. *Water Res.* 46(15):4814-4824; doi: 10.1016/j.watres.2012.06.017. PMID: 22789759, PMC3579625

149. Delgado, A., P. Parameswaran, D. Fajardo-Williams, R. U. Halden, and R. Krajmalnik-Brown.* 2012. Role of Bicarbonate as a pH Buffer and Electron Sink in Microbial Dechlorination of Chloroethenes. *Micro. Cell Fact.* 11:128. doi: 10.1186/1475-2859-11-128. PMID: 22974059, PMC3511292

150. Ziv-El, M., S. C. Popat, K. Cai, R. U. Halden, R. Krajmalnik-Brown, and B. E. Rittmann*. 2012. Managing Methanogens and Homoacetogens to Promote Reductive Dechlorination of Trichloroethene with Direct Delivery of H_2 in a Membrane Biofilm Reactor. *Biotechnol. Bioeng.* 109(9):2200-2210. doi: 10.1002/bit.24487. PMID: 22392141

151. Ziv-El, M., S. C. Popat, P. Parameswaran, D. W. Kang, A. Polasko, R. U. Halden, B. E. Rittmann, and R. Krajmalnik-Brown.* 2012. Using Electron Balances and Molecular Techniques to Assess Trichoroethene-induced Shifts to a Dechlorinating Microbial Community. *Biotechnol. Bioeng.* 109(9):2230-2239. doi: 10.1002/bit.24504. PMID: 22447387

152. Venkatesan, A. K., B. F. G. Pycke, L. B. Barber, K. E. Lee, and R. U. Halden.* 2012. Occurrence of Triclosan, Triclocarban, and Its Lesser Chlorinated Congeners in Minnesota Freshwater Sediments Collected Near Wastewater Treatment Plants. *J. Hazard. Mater.* 229-230:29-35. doi: 10.1016/j.jhazmat.2012.05.049. PMID: 22742731, PMC3401314

153. Ziv-El, M., A. G. Delgado, Y. Yao, K. Muto, D.-W. Kang, R. U. Halden, R. Krajmalnik-Brown.* 2012. Development and Characterization of DehaloR^2, a Novel Anaerobic Microbial Consortium Performing Rapid Dechlorination of TCE to Ethene. *Appl. Microbiol. Biotechnol.* 95(1):273-274. doi: 10.1007/s00253-011-3388-y. PMID: 21667274

154. Hartmann. E. M., J. P. Badalamenti, R. Krajmalnik-Brown, and R. U. Halden.* 2012. Quantitative PCR for Tracking Megaplasmid-borne Biodegradation Potential of a Model Sphingomonad. *Appl. Environ. Microbiol.* 78(12):4493-6. doi: 10.1128/AEM.00715-12. PMID: 22492441, PMC3370553

155. Love, D. C., R. U. Halden, M. F. Davis, and K. E. Nachman. 2012. Response to Comment on Feather Meal: A Previously Unrecognized Route for Reentry into the Food Supply of Multiple Pharmaceuticals and Personal Care Products (PPCPs). *Environ. Sci. Technol*., 46(10):5631-5631. doi: 10.1021/es301528a.

156. Hansmeier, N., T.-C. Chao, L. R. Goldman, F. R. Witter, and R. U. Halden*. 2012. Prioritization of Biomarker Targets in Human Umbilical Cord Blood: Identification of Proteins in Infant Blood Serving as Validated Biomarkers in Adults. *Environ. Health Perspect.* 120(5):764-769. doi: 10.1289/ehp.1104190. PMID: 22538116, PMC3346780

157. Love, R. C., R. U. Halden, M. F. Davis and K. E. Nachman. 2012. Feather Meal: a Previously Unrecognized Route for Reentry into the Food Supply of Multiple Pharmaceuticals and Personal Care Products (PPCPs). *Environ. Sci. Technol.* 46(7):3795-3802. doi: 10.1021/es203970e. PMID: 22435972

158. Wells, E. M.,* L.R. Goldman, J. M. Jarrett, B. J. Apelberg, J. B. Herbstman, K. L. Caldwell, R. U. Halden, and F. R. Witter. 2012. Selenium and Maternal Blood Pressure During Childbirth. *J. Expo. Sci. Environ. Epidemiol.* 22(2):191-197. doi: 10.1038/jes.2011.42. PMID: 22108761, PMC3661205

159. Gray, E. P, T. A. Bruton, C. P. Higgins, R. U. Halden, P. Westerhoff, and J. F. Ranville. 2012. Analysis of Gold Nanoparticle Mixtures: a Comparison of Hydrodynamic Chromatography (HDC) and

Asymmetrical Flow Field-Flow Fractionation (AF4) Coupled to ICP-MS. *J. Analyt. Atomic Spectrometry* 27(9):1532-1539. doi: 10.1039/c2ja30069a.

160. Colquhoun, D., E. M. Hartmann, and R. U. Halden.* 2012. Proteomic Profiling of the Dioxin-Degrading Bacterium *Sphingomonas wittichii* RW1. *J. Biomed. Biotech.* Vol 2012, Article ID 408690, 9 pages. doi: 10.1155/2012/408690. PMID: 23091346, PMC3468919

161. Novak, P. J., W. A. Arnold, V. S. Blazer, R. U. Halden, R. D. Klaper, D. W. Kolpin, D. Kriebel, N. G. Love, D. Martinovic-Weigelt, H. B. Patisaul, S. A. Snyder, F. S. vom Saal, A. V. Weisbrod, and D. L. Swackhamer. 2011. On the Need for a National (US) Research Program to Elucidate the Potential Riskso Human Health and the Environment Posed by Contaminants of Emerging Concern. *Environ. Sci. Technol.* 45(9):3829-3830. doi: 10.1021/es200744f. PMID: 21438522

162. Novak, P. J. with Contributing Authors: W. A. Arnold, V. S. Blazer, R. U. Halden, R. D. Klaper, D. W. Kolpin, D. Kriebel, N. G. Love, D. Martinovic-Weigelt, H. B. Patisaul, S. A. Snyder, F. S. vom Saal, A. V. Weisbrod, and D. L. Swackhamer. 2011. Unite to Assess Contaminant Risk. *Nature* 471(7340):578. doi: 10.1038/471578a. (See http://www.nature.com.ezproxy1.lib.asu.edu/nature/journal/v471/n7340/extref/471578a-s1.pdf for full list of authors).

163. Chao, T.-C., G. Song, N. Hansmeier, P. Westerhoff, P. Herckes, R. U. Halden.* 2011. Characterization and Liquid Chromatography-MS/MS based quantification of hydroxylated fullerenes. *Anal. Chem.* 83(5):1777-1783. doi: 10.1021/ac1031379. PMID: 21294534, PMC3118260

164. Wells, E. M.,* B. J. J. M. Jarrett, Y. H. Li, K. L. Caldwell, J. R. Hibbeln, B. J. Apelberg, J. Herbstman, R. U. Halden, F. R. Witter and L. R. Goldman. 2011. Body Burdens and Descriptors of Mercury, Lead, Selenium and Copper Among Newborns at an Urban Hospital. *Environ. Res.* 111(3):411-417. doi:10.1016/j.envres.2010.12.009. PMID: 21277575, PMC3064741

165. Wells, E. M.,* A. Navas-Acien, J. B. Herbstman, B. J. Apelberg, E. K. Silbergeld, K. L. Caldwell, R. L. Jones, R. U. Halden, F. R. Witter, and L. R. Goldman. 2011. Low-level lead exposure and elevated blood pressure during pregnancy. *Environ. Health Perspect.* 119(5):664-669. doi: 10.1289/ehp.1002666. PMID: 21292600, PMC3094418

166. Neta, G.,* L. R. Goldman, D. Barr, A. Sjödin, N. Fedarko, B. J. Apelberg, F. R. Witter, R. U. Halden. 2011. Fetal exposure to chlordane and permethrin mixtures in relation to inflammatory cytokines and birth outcomes. *Environ. Sci. Technol.* 45(4):1680-1687. doi: 10.1021/es103417j. PMID: 21235202, PMC3085719

167. Benn, T. M.*, B. F. G. Pycke, P. Herckes, P. Westerhoff, and R. U. Halden. 2011. Evaluation of Extraction Methods for the Quantification of Aqueous Fullerenes in Urine. *Anal. Bioanal. Chem.* 399(4):1631-1639. doi: 10.1007/s00216-010-4465-2. PMID: 21153587, PMC3711233

168. W. P. Ela,* D. L. Sedlak, M. A. Barlaz, H. F. Henry, D. D. G. Muir, D. L. Swackhamer, E. J. Weber, R. G. Arnold, L. Ferguson, J. A. Field, E. T. Furlong, J. P. Giesy, R. U. Halden, T. Henry, R. A. Hites, K. C. Hornbuckle, P. H. Howard, R. G. Luthy, A. K. Meyer, A. E. Sáez, F. S. vom Saal, C. D. Vulpe, and M. R. Wiesner. 2011. Toward Identifying the Next Generation of Superfund and Hazardous Waste Site Contaminants. *Environ. Health Perspect.*119(1):6-10. doi: 10.1289/ehp.1002497. PMID: 21205582, PMC3018501

169. Higgins, C. P.,* Z. J. Paesani, T. E. A. Chalew, R. U. Halden, L. Hundal. 2011. Persistence of Triclocarban and Triclosan in Soils after Land Application of Biosolids and Bioaccumulation in *Eisenia foetida*. *Environ. Toxicol. Chem.* 30(3):556-563. doi: 10.1002/etc.416. PMID: 21128266, PMC3034821

170. Pycke, B. F. G., T. M. Benn, P. Herckes, P. Westerhoff, and R. U. Halden*. 2011. Strategies for Quantifying C60 Fullerenes in Environmental and Biological Samples and Implications for Toxicological Studies in Environmental Health and Ecotoxicology. *Trends Analyt. Chem.* 30(1):44-57. doi: 10.1016/j.trac.2010.08.005. PMID: 21359100, PMC3045199

171. Walters, E., K. McClellan and R. U. Halden.* 2010. Occurrence and loss over three years of 72 pharmaceuticals and personal care products from biosolids-soil mixtures in outdoor mesocosms. *Water Res.* 44(20):6011-6020. doi: 10.1016/j.watres.2010.07.051. PMID: 20728197, PMC2991390

172. Miller, T. R., A. L. Delcher, S. L. Salzberg, E. Saunders, J. C. Detter, and R. U. Halden.* 2010. Genome Sequence of the Dioxin Mineralizing Bacterium *Sphingomonas wittichii* RW1. *J. Bacteriol.* 192(22):6101-6102. doi: 10.1128/jb.01030-10. PMID: 20833805, PMC2976435

173. Miller, T. R., D. R. Colquhoun, and R. U. Halden.* 2010. Identification of Wastewater Bacteria Involved in the Degradation of Triclocarban and its Non-Chlorinated Congener. *J. Hazard. Mat.* 183(1-3):766-772. doi: 10.1016/j.jhazmat.2010.07.092. PMID: 20727675, PMC2939305

174. Deo, R. P. and R. U. Halden.* 2010. *In Silico* Screening for Unmonitored, Potentially Problematic High Production Volume (HPV) Chemicals Prone to Accumulate in Biosolids. *J. Environ. Monitor.* 12(10):1840-1845. doi: 10.1039/c001559h. PMID: 20721409

175. Guerrero-Preston, R., L. Goldman, L. Brebi-Mieville, C. Ili-Gangas, C. LeBron, M. Hernández-Arroyo, F. R. Witter, B. J. Apelberg, M. Roystacher, A. Jaffe, R. U. Halden, and D. Sidransky. 2010. Global DNA hypomethylation is associated with in utero exposure to cotinine and perfluorinated alkyl compounds. *Epigenetics* 5(6):539-546. doi: 10.4161/epi.5.6.12378. PMID: 20523118, PMC3322495

176. Neta, G., L. R. Goldman,* D. Barr, A. Sjödin, B. J. Apelberg, J. Herbstman, F. R. Witter and R. U. Halden. 2010. Distribution and determinants of pesticide mixtures in cord serum using principal component analysis. *Environ. Sci. Technol.* 44(14):5641–5648. doi: 10.1021/es1009778. PMID: 20550184

177. Hartmann. E. M., D. R. Colquhoun and R. U. Halden.* 2010. Identification of Putative Biomarkers for Toluene-Degrading Burkholderia and Pseudomonads using Matrix-Assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry and Peptide Mass Fingerprinting. *Biosci. Biotechnol. Biochem.* 74(7):1470-1472. doi: 10.1271/bbb.100064. PMID: 20622441

178. Chao, T.-C., Hansmeier, N. and R. U. Halden.* 2010. Towards proteome standards: The use of absolute quantitation in high-throughput biomarker discovery. *J. Proteomics* 73(*8*):1641-1646. doi: 10.1016/j.jprot.2010.04.004. PMID: 20399287, PMC2885480

179. Halden, R. U.* 2010. Plastics and Health Risks. *Annu. Rev. Public Health.* 31:179-194. doi: 10.1146/annurev.publhealth.012809.103714. PMID: 20070188

180. Deo, R. P. and R. U. Halden.* 2010. Comment on "The removal of pharmaceuticals, personal care products, endocrine disruptors and illicit drugs during wastewater treatment and its impact on the quality of receiving waters. *Water Res.* 44(8):2685-2687. doi: 10.1016/j.watres.2009.11.040. PMID: 20022620

181. Deo, R. P. and R. U. Halden.* 2010. Effect of sample filtration on the quality of monitoring data reported for organic compounds during wastewater treatment. *J. Environ. Monit.* 12:478-483. doi: 10.1039/b919076g. PMID: 20145890

182. McClellan K. and R. U. Halden.* 2010. Pharmaceuticals and Personal Care Products in Archived U.S. Biosolids from the 2001 EPA National Sewage Sludge Survey. *Water Res.* 44(2):658-668. doi: 10.1016/j.watres.2009.12.032. PMID: 20106500, PMC2827628

183. Zhao, Y., K. Wang, H.-W. Ackermann, R. U. Halden, N. Jiao, and F. Chen.* 2010. Searching for a "Hidden" Prophage in a Marine Bacterium. *Appl. Environ. Microbiol.* 76(2):589-595. doi: 10.1128/AEM.01450-09. PMID: 19948862, PMC2805234

184. Deo, R. P. and R. U. Halden.* 2009. Empirical Model for Predicting Concentrations of Refractory Hydrophobic Organic Compounds in Digested Sludge from Municipal Wastewater Treatment Plants. *Environ. Chem.* 6:544-550. doi: 10.1071/EN09063. PMID: 20161626, PMC2813041

185. Higgins, C. P.*, Z. J. Paesani, T. E. A. Chalew, and R. U. Halden. 2009. Bioaccumulation of Triclocarban in *Lumbriculus variegates*. *Environ. Toxicol. Chem.* 28(12):2580-2586. doi: 10.1897/09-013.1. PMID: 19655999, PMC2796485

186. Heidler J. and R. U. Halden.* 2009. Fate of Organohalogens in U.S. Wastewater Treatment Plants and Estimated Chemical Releases to Soils Nationwide from Biosolids Recycling. *J. Environ. Monit.* 11:2207-2215. doi: 10.1039/B914324F. PMID: 20024018, PMC2802102

187. Colquhoun, D. R., L. R. Goldman, R. N. Cole, M. Gucek, M. Mansharamani, F. R. Witter, B. J. Apelberg, and R. U. Halden.* 2009. Global Screening of Human Cord Blood Proteomes for Biomarkers of Toxic Exposure. *Environ. Health Perspect.* 117(5):832-838. doi: 10.1289/ehp.11816. PMID: 19478969, PMC2685849

188. Von Seggern, C., and R. U. Halden.* 2009. Detection of bioterrorism agents and related public health threats utilising matrix-assisted laser desorption/ionisation mass spectrometry (MALDI-MS). *Int. J. Health Sci.* 2(2):199

189. Halden,* R. U. 2009. Book Review: "Pharma-Ecology – The Occurrence and Fate of Pharmaceuticals and Personal Care Products in the Environment" by Patrick K. Jjimba. *Environ. Health Perspect.* 117(4):A172. PMC2679632

190. Zhang, Y., N. Jiao, D. R. Colquhoun, R. U. Halden, and F. Cheng.* 2009. Protein Modifications Related to Phage Resistance in a Marine Roseobacter. *Aquatic Microbial Ecology.* 55(2):203-207. doi: 10.3354/ame01304.

191. Chalew, T. and R. U. Halden.* 2009. Environmental Exposure of Aquatic and Terrestrial Biota to Triclosan and Triclocarban. *J. Am. Water Res. Assoc.* 45(1):4-13. doi: 10.1111/j.1752-1688.2008.00284.x. PMID: 20046971, PMC2684649

192. Herbstman, J. B., A. Sjödin, B. J. Apelberg, F. R. Witter, R. U. Halden, D. G. Patterson, Jr., S. R. Panny, L. L. Needham and L. R. Goldman.* 2008. Birth Delivery Mode Modifies the Associations between Prenatal PCB and PBDE and Neonatal Thyroid Hormone Levels. *Environ. Health Perspect.* 116(10):1376-1382. doi: 10.1289/ehp.11379. PMID: 18941581, PMC2569098

193. Heidler, J. and R. U. Halden.* 2008. *Critical Review.* Meta-analysis of Mass Balances for Monitoring Chemical Fate during Wastewater Treatment. *Environ. Sci. Technol.* 42(17):6324-6332. doi: 10.1021/es703008y. PMID: 18800497, PMC2665886

194. Rittmann, B. E.,* R. Krajmalnik-Brown, and R. U. Halden. 2008. Pre-genomic, Genomic and Post-genomic Study of Microbial Communities Involved in Bioenergy. *Nat. Rev. Microbiol.* 6(8):604-612; doi: 10.1038/nrmicro1939. PMID: 18604223

195. Halden, R. U.* 2008. PCPs persist for decades. TRAC-Trends In Analytical Chemistry 27(6):VI.

196. Apelberg B. J., L. R. Goldman, R. U. Halden, F. R. Witter, J. B. Herbstman and L. L. Needham. 2008. Perfluoroalkane acids: Apelberg et al. respond. *Environ. Health Perspect.* 116(6):A238-A239. doi: 10.1289/ehp.11036R. PMC2430254

197. Miller, T. R., J. Heidler, S. N. Chillrud, A. DeLaquil, J. C. Ritchie, J. N. Mihalic, and R. U. Halden.* 2008. Fate of Triclosan and Triclocarban in Estuarine Sediment. *Environ. Sci. Technol*. 2008 Jun 15;42(12):4570-4576 PMID: 18605588, PMC2483538

198. Young, T.A., J. Heidler, C. R. Matos-Pérez, A. Sapkota, T. Toler, K. E. Gibson, K. J. Schwab and R. U. Halden.* 2008. *Ab Initio* and *In Situ* Comparison of Organic Wastewater Compounds as Indicators of Sewage-derived Microbes in Surface Waters. *Environ. Sci. Technol*. 42(9):3335-3340 PMID: 18522115

199. Kim, S. R., R. U. Halden, and T. J. Buckley.* 2008. Polycyclic Aromatic Hydrocarbons in Human Milk of Nonsmoking U.S. Women. *Environ. Sci. Technol*. 42(7); 2663-2667 PMID: 18505013

200. Herbstman J. B., Sjödin A., Apelberg B. J., Witter F. R., Patterson D. G., Halden, R. U., Jones, R. S., Park, A., Zhang, Y., Heidler, J., Needham, L. L., and L. R. Goldman.* 2007. Determinants of Prenatal Exposure to Polychlorinated Biphenyls (PCBs) and Polybrominated Diphenyl Ethers (PBDEs) in an Urban Population. *Environ. Health Perspect.* 115(12):1794-1800 PMID: 18087602, PMC2137116

201. Apelberg B. J., F. R.Witter, J. B. Herbstman, A. M. Calafat, R. U. Halden, L. L. Needham, and L. R. Goldman. 2007. Cord serum concentrations of perfluorooctane sulfonate (PFOS) and perfluorooctanoate (PFOA) in relation to weight and size at birth. *Environ. Health Perspect*. 115(11):1670-6 PMID: 18008002, PMC2072847

202. Apelberg, B. J., L. R. Goldman,* A. M. Calafat, J. B. Herbstman, Z. Kuklenyik, J. Heidler, L. L. Needham, R. U. Halden, and F. R. Witter. 2007. Determinants of Fetal Exposure to Perfluorinated Compounds. *Environ. Sci. Technol*. 41(11):3891-3897. doi: 10.1021/es0700911. PMID: 17612165

203. Miller, T. R., M. P. Franklin, and R. U. Halden.* 2007. Bacterial Community Analysis of Shallow Groundwater Undergoing Sequential Anaerobic and Aerobic Chloroethene Biotransformation. *FEMS Microbiol. Ecol.* 60(2):299-311 PMID: 17386036

204. Kim, S. R., R. U. Halden, and T. J. Buckley.* 2007. Volatile Organic Compounds in Human Milk: Methods and Measurements. *Environ. Sci. Technol.* 41(5):1662-1667. doi: 10.1021/es062362y. PMID: 17396657

205. Heidler, J., and R. U. Halden.* 2007. Mass Balance Assessment of Triclosan Removal During Conventional Sewage Treatment. *Chemosphere* 66(2):362-369. doi: 10.1016/j.chemosphere.2006.04.066. PMID: 16766013

206. Sapkota, A., J. Heidler, and R. U. Halden.* 2007. Detection of Triclocarban and Two Co-Contaminating Chlorocarbanilides in U.S. Aquatic Environments Using Isotope Dilution Liquid Chromatography Tandem Mass Spectrometry. *Environ. Res.* 103(1):21-29. doi: 10.1016/j.envres.2006.03.006. PMID: 16678153

207. Dong, W., G. Xie, M. P. Franklin, T. Palmateer Oxenberg, T. R. Miller, E. J. Bouwer, W. P. Ball, and R. U. Halden.* 2006. Sorption and Bioreduction of Hexavalent Uranium at a Military Facility by the Chesapeake Bay. *Environ. Pollut.* 142(1):132-142. doi: 10.1016/j.envpol.2005.09.008. PMID: 16297514

208. Heidler, J., A. Sapkota, and R. U. Halden.* 2006. Partitioning, Persistence, and Accumulation in Digested Sludge of the Topical Antiseptic Triclocarban During Wastewater Treatment. *Environ. Sci. Technol.* 40(11):3634-3639. doi: 10.1021/es052245n. PMID: 16786704, PMC2768036 [4th Most Accessed Article in ES&T, April—June, 2006; 20th for the year 2006]

209. Halden, R. U.* 2006. Comment on "Accumulation of Contaminants in Fish from Wastewater Treatment Wetlands." *Environ. Sci. Technol.* 40(11):3437. doi: 10.1021/es052474+. PMID: 16749718

210. Halden, R. U.* 2006. Comment on "Biological Removal of Polychlorinated Dibenzo-*p*-dioxins from Incinerator Fly Ash by *Sphingomonas wittichii* RW1" by I.-H. Nam, Y.-M. Kim, B.-H. Kim, K. Murugesan, and Y.-S. Chang. *Water Res.* 40(9):1918-1920 PMID: 16620903

211. Colquhoun, D. R., Schwab, K. J., Cole, R. N., and R. U. Halden.* 2006. Detection of Norovirus Capsid Protein in Authentic Standards and in Stool Extract by Matrix-Assisted Laser Desorption Ionization and Nanospray Mass Spectrometry. *Appl. Environ. Microbiol.* 72(4):2749-2755. doi: 10.1128/AEM.72.4.2749-2755.2006. PMID: 16597979, PMC1449043

212. Sapkota, A., R. U. Halden, J. Groopman, F. Dominici, and T. J. Buckley.* 2006. Urinary Biomarkers of 1,3-Butadiene in Environmental Settings Using Liquid Chromatography Isotope Dilution Tandem Mass Spectrometry. *Chem. Biol. Interact.* 160(1):70-79. doi: 10.1016/j.cbi.2005.12.006. PMID: 16423335

213. Naples, J. M.*, C. Shiff, and R. U. Halden. 2005. Reduction of Infectivity of Schistosome Cercariae by Application of Cercariacidal Oil to Water. *Am. J. Trop. Med. Hyg.* 73(5):956-961. PMID: 16282311

214. Halden, R. U.* and D. H. Paull. 2005. Response to Comment on "Co-Occurrence of Triclocarban and Triclosan in U.S. Water Resources." *Environ. Sci. Technol.* 39(16):6335-6336. doi: 10.1021/es058014y.

215. Halden, R.U.*, D. R. Colquhoun, and E. S. Wisniewski. 2005. Identification and Phenotypic Characterization of *Sphingomonas wittichii* Strain RW1 by Peptide Mass Fingerprinting Using Matrix-assisted Laser Desorption/Ionization—Time of Flight Mass Spectrometry. *Appl. Environ. Microbiol.* 71(5):2442-2451. doi: 10.1128/AEM.71.5.2442-2451.2005. PMID: 15870332, PMC1087565

216. Halden, R. U.* and D. H. Paull. 2005. Co-Occurrence of Triclocarban and Triclosan in U.S. Water Resources. *Environ. Sci. Technol.* 39(6):1420-1426. doi: 10.1021/es049071e. PMID: 15819193

217. Halden, R. U.* and D. H. Paull. 2004. Analysis of Triclocarban in Aquatic Samples by Liquid Chromatography Electrospray Ionization Mass Spectrometry. *Environ. Sci. Technol.* 38(18):4849-4855 PMID: 15487795

218. Vancheeswaran, S., S. Yu, P. Daley, R. U. Halden, K. J. Williamson, J. D. Ingle Jr., and L. Semprini. 2003. Intrinsic Remediation of Trichloroethene Driven by Tetraalkoxysilanes as Co-contaminants: Results from Microcosm and Field Studies. *Remediation* 13(2):7-25.

219. Lowe, M., E. L. Madsen, K. Schindler, C. Smith, S. Emrich, F. T. Robb, and R. U. Halden.* 2002. Geochemistry and Microbial Diversity of a Trichloroethene-Contaminated Superfund Site Undergoing In Situ Reductive Dechlorination. *FEMS Microbiol. Ecol.* 40(2):123-134. doi: 10.1111/j.1574-6941.2002.tb00944.x. PMID: 19709219

220. Kane, S. R.,* H. R. Beller, T. C. Legler, C. J. Koester, R. U. Halden, and A. M. Happel. 2001. Aerobic Metabolism of Methyl *tert*-Butyl Ether by Aquifer Bacteria. *Appl. Environ. Microbiol.* 67(12):5824- 5829. doi: 10.1128/AEM.67.12.5824-5829.2001. PMID: 11722940, PMC93377

221. Halden, R. U.*, A. M. Happel, and S. R. Schoen. 2001. Evaluation of Standard Methods for the Analysis of Methyl tert-Butyl Ether and Related Oxygenates in Gasoline-Contaminated Groundwater. *Environ. Sci. Technol.* 35(7):1469-1474 PMID: 11348088

222. Koester, C. J.,* H. R. Beller, and R. U. Halden. 2000. Analysis of Perchlorate in Groundwater by Electrospray Ionization Mass Spectrometry/Mass Spectrometry. *Environ. Sci. Technol.* 34(9):1862-1864. doi: 10.1021/es991209j.

223. Halden, R. U., B. G. Halden, and D. F. Dwyer.* 2000. Transformation of Mono- and Dichlorinated Phenoxybenzoates by Phenoxybenzoate-dioxygenase in Pseudomonas pseudoalcaligenes Strain POB310 and a Modified, Diarylether-Mineralizing Bacterium. *Biotechnol. Bioeng.* 69(1):107-112. doi: 10.1002/(SICI)1097-0290(20000705)69:1<107::AID-BIT13>3.0.CO;2-T. PMID: 10820337

224. Halden, R. U., S. M. Tepp, B. G. Halden, and D. F. Dwyer.* 1999. Degradation of 3 -Phenoxybenzoic Acid in Soil by Pseudomonas pseudoalcaligenes Strain POB310 (pPOB) and Two Modified Pseudomonas Strains. *Appl. Environ. Microbiol.* 65(8):3354-3359. PMID: 10427019, PMC91504

225. Halden, R. U., B. G. Halden, and D. F. Dwyer.* 1999. Removal of Dibenzofuran, Dibenzo-p-Dioxin, and 2-Chlorodibenzo-p-Dioxin from Soils Inoculated with Sphingomonas sp. Strain RW1. *Appl. Environ. Microbiol.* 65(5):2246-2249. PMID: 10224029, PMC91326

226. Vancheeswaran, S., R. U. Halden, K. J. Williamson, J. D. Ingle Jr., and L. Semprini.* 1999. Abiotic and Biological Transformation of Tetraalkoxysilanes and TCE, c-DCE Cometabolism Driven by Tetrabutoxysilane-Degrading Microorganisms. *Environ. Sci. Technol.* 33(7):1077-1085. doi: 10.1021/es981021k.

227. Halden, R. U., and D. F. Dwyer.* 1997. Biodegradation of Dioxin-Related Compounds: A Review. *Bioremediation J.* 1(1): 11-25. doi: 10.1080/10889869709351314.

PUBLICATIONS
BOOKS

1. Halden, R. U. 2020. *Environment*. Object Lessons Series. Bloomsbury Publisher, New York City, NY. 192 pages. ISBN 9781501361913.

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

PUBLICATIONS
BOOK CHAPTERS

1. Cook, C. R., and Halden, R. U.* 2020. Ecological and Health Issues of Plastic Waste. *In:* Plastic Waste and Recycling - Environmental Impact, Societal Issues, Prevention, and Solutions. ISBN 978 - 0-12-817880-5, DOI: 10.1016/B978-0-12-817880-5.00020-7.

2. Venkatesan, A. K, Chen, J., Driver, E. M., Gushgari, A., Halden, R. U. 2019. Assessing The Potential to Monitor Plant-based Diet Trends in Communities Using a Wastewater-Based Epidemiology Approach. ACS Symposium Series: "Wastewater-Based Epidemiology: Estimating Community Drug Consumption" doi: 10.1021/bk-2019-1319.ch010

3. Sadaria, A. K., S. D. Supowit, and R. U. Halden.* Fate of Neonicotinoid Pesticides during Wastewater and Wetland Treatment. 2016. In: *Assessing Transformation Products of Chemicals by Non-Target and Suspect Screening – Strategies and Workflows, Volume 1.* American Chemical Society (ACS) Symposium Series, Vol. 1241. Pages 121-131. Washington, DC. ISBN13: 9780841231931; eISBN: 9780841231924; DOI: 10.1021/bk-2016-1241.ch008.

4. Hartmann. E. M. and R. U. Halden.* 2010. Challenges of Detecting Bioterrorism Agents in Complex Matrices. NATO. In: *Detection of Biological Agents for the Prevention of Bioterrorism (*Editor: J. H. Banoub). Proceedings of the NATO Advanced Research Workshop on Detection of Biological Agents for the Prevention of Bioterrorism, Terme di Spezzano, Italy, June 26 - July 2, 2009 Series: NATO Science for Peace and Security Series A: Chemistry and Biology, Proceeding. ISBN 978-90-481-9814-6.

5. Halden, R. U.* An Introduction to Contaminants of Emerging Concern. 2010. In: Halden, R. U. (Ed.), *ACS Book Series Vol. 1048. Contaminants of Emerging Concern: Ecotoxicological and Human Health Considerations.* American Chemical Society (ACS) Book Series. Pages 1-6. Oxford University Press, New York, NY. ISBN13: 9780841224964; eISBN: 9780841224971; DOI: 10.1021/bk-2010-1048

6. Bruton, T., A. Alboloushi, B. de la Garza, B., B.-O. Kim, and R. U. Halden.* 2010. Fate of Caffeine in the Environment and Ecotoxicological Considerations. In: Halden, R. U. (Ed.), *ACS Book Series Vol. 1048. Contaminants of Emerging Concern: Ecotoxicological and Human Health Considerations.* American Chemical Society (ACS) Book Series. Pages 257-273. Oxford University Press, New York, NY. ISBN13: 9780841224964; eISBN: 9780841224971; DOI: 10.1021/bk-2010-1048

7. Daugherty, E. N., A. V. Ontiveros-Valenica, J. S. Rice, M. J. Wiest and R. U. Halden.* 2010. Impact of Point-of-Use Water Softening on Sustainable Water Reclamation: Case Study of the Greater Phoenix Area. In: Halden, R. U. (Ed.), *ACS Book Series Vol. 1048. Contaminants of Emerging Concern: Ecotoxicological and Human Health Considerations.* American Chemical Society (ACS) Book Series. Pages 497-518. Oxford University Press, New York, NY. ISBN13: 9780841224964; eISBN: 9780841224971; DOI: 10.1021/bk-2010-1048

8. Weir, A., Moiles, W. E., Brockman, B., Mattick, C. S., McClellan, K., L. Gerwe, R. P. Deo and R. U. Halden.* 2010. Concentrations of Hydrophobic Organic Pollutants in U.S. Wastewater Treatment Plants and in Receiving Surface Waters Modeled from EPA Biosolids Monitoring Data. In: Halden, R. U. (Ed.), *ACS Book Series Vol. 1048. Contaminants of Emerging Concern: Ecotoxicological and Human Health Considerations.* American Chemical Society (ACS) Book Series. Pages 421-436. Oxford University Press, New York, NY. ISBN13: 9780841224964; eISBN: 9780841224971; DOI: 10.1021/bk-2010-1048

9. Adams, D. E. C. and R. U. Halden.* 2010. Fluorinated Chemicals and the Impacts of Anthropogenic Use. In: Halden, R. U. (Ed.), *ACS Book Series Vol. 1048. Contaminants of Emerging Concern: Ecotoxicological and Human Health Considerations.* American Chemical Society (ACS) Book Series. Pages 539-560. Oxford University Press, New York, NY. ISBN13: 9780841224964; eISBN: 9780841224971; DOI: 10.1021/bk-2010-1048

10. Walters, E., and R. U. Halden.* 2010. Potential Implications of Amending Agricultural Soils with Biosolids. In: Halden, R. U. (Ed.), *ACS Book Series Vol. 1048. Contaminants of Emerging Concern: Ecotoxicological and Human Health Considerations.* American Chemical Society (ACS) Book Series. Pages 319-336. Oxford University Press, New York, NY. ISBN13: 9780841224964; eISBN: 9780841224971; DOI: 10.1021/bk-2010-1048

11. McClellan, K. and R. U. Halden.* 2010. Pharmaceuticals and Personal Care Products in U.S. Biosolids. In: Halden, R. U. (Ed.), *ACS Book Series Vol. 1048. Contaminants of Emerging Concern: Ecotoxicological and Human Health Considerations.* American Chemical Society (ACS) Book Series. Pages 199-211. Oxford University Press, New York, NY. ISBN13: 9780841224964; eISBN: 9780841224971; DOI: 10.1021/bk-2010-1048

12. Doudrick, K. D., D. B. Jones, T. Kalinowski, E. M. Hartmann, and R. U. Halden.* 2010. Assessment of the Contribution of Triclosan to Dioxin Emissions from Sludge Incineration in the U.S. Using a Mathematical Model. In: Halden, R. U. (Ed.), *ACS Book Series Vol. 1048. Contaminants of Emerging Concern: Ecotoxicological and Human Health Considerations.* American Chemical Society (ACS) Book Series. Pages 469-481. Oxford University Press, New York, NY. ISBN13: 9780841224964; eISBN: 9780841224971; DOI: 10.1021/bk-2010-1048

13. Deo, R. P. and R. U. Halden.* 2010. Empirical Models for Predicting the Occurrence and Concentration of Organic Chemicals in Biosolids. In: Halden, R. U. (Ed.), *ACS Book Series Vol. 1048. Contaminants of Emerging Concern: Ecotoxicological and Human Health Considerations.* American Chemical Society (ACS) Book Series. Pages 385-395. Oxford University Press, New York, NY. ISBN13: 9780841224964; eISBN: 9780841224971; DOI: 10.1021/bk-2010-1048

14. Madrid, V. M.,* Z. Demir, R. U. Halden, S. Gregory, and J. Valett. 2002. A Geospatial Model for Remedial Design Optimization and Performance Evaluation. Paper 1A-03, in: A.R. Gavaskar and A.S.C. Chen (Eds.), Remediation of Chlorinated and Recalcitrant Compounds-2002. ISBN 1-57477-132-9, Battelle Press, Columbus, OH.

PUBLICATIONS
MONOGRAPHS

1. Halden, R. U.* 2010. Plastics and Health Risks. *Annual Reviews of Public Health.* 31:179-194. DOI:10.1146/annurev.publhealth.012809.103714. PMID 20070188.

PUBLICATIONS
REFEREED REPORTS AND TECHNICAL MANUALS

1. Halden, R. U. and I. B. Roll. ESTCP Final Report (Project 201122): Cost-Effective, Ultra-Sensitive Groundwater Monitoring for Site Remediation and Management**.** Department of Defense Environmental Security Technology Certification Program (Released: December, 2015) https://www.serdp-estcp.org/content/download/35248/338542/file/ER-201122-FR.pdf

2. Halden, R. U. and I. B. Roll. ESTCP Cost and Performance Report (Project 201122), Cost-Effective, Ultra-Sensitive Groundwater Monitoring for Site Remediation and Management**.** Department of Defense Environmental Security Technology Certification Program (Released: September, 2015) https://www.serdp-estcp.org/content/download/36801/351726/file/ER-201122-CP.pdf

3. Halden, R. U. and I. B. Roll. Guidance Document and Standard Operating Procedures (Project 201122): Cost-Effective, Ultra-Sensitive Groundwater Monitoring for Site Remediation and Management**.** Department of Defense Environmental Security Technology Certification Program (Released: September 2015) https://www.serdp-estcp.org/content/download/35371/339588/file/ER-201122-SOP.pdf

4. Halden, R. U. and I. B. Roll. ER201122 Project Summary Presentation: Cost-Effective, Ultra-Sensitive Groundwater Monitoring for Site Remediation and Management**.** Department of Defense Environmental Security Technology Certification Program (Released: September 2015)

https://www.serdp-estcp.org/Program-Areas/Environmental-Restoration/Contaminated-Groundwater/Monitoring/ER-201122/ER-201122-Project-Summary-Presentation

5. Halden, R. U., K. McClellan and T. Kalinowski. ESTCP Project 200914, Final Report. Parallel *In Situ* Screening of Remediation Strategies for Improved Decision Making, Remedial Design, and Cost Savings. Department of Defense Environmental Security Technology Certification Program, November 2012 (Released: December, 2013) http://www.serdp.org/content/download/22644/231506/file/ER-200914-FR.pdf

6. Halden, R. U., K. McClellan and T. Kalinowski. ESTCP Project 200914, Cost and Performance Report. Parallel *In Situ* Screening of Remediation Strategies for Improved Decision Making, Remedial Design, and Cost Savings. Department of Defense Environmental Security Technology Certification Program, November 2012 (Released: December, 2013) http://www.serdp.org/content/download/22642/231491/file/ER-200914-CP.pdf

7. Halden, R. U., K. McClellan, T. Kalinowski. 2012. Draft Final Report - Parallel *In Situ* Screening of Remediation Strategies for Improved Decision Making, Remedial Design, and Cost Savings; ESTCP DOD Project ER-200914. Environmental Security and Technology Certification Program, 133 pp, Department of Defense, November 2012.

8. Halden, R. U., I. Roll. 2011. Site Selection Memorandum for ESTCP DOD Project ER-201122. Environmental Security and Technology Certification Program, 7 pp, Department of Defense, December 2011.

9. Halden, R. U. (Contributor). 2009. Antibiotic Resistance: An Ecological Perspective on an Old Problem. A Report from the American Academy of Microbiology. Online at http://academy.asm.org/images/stories/colloquia_images/antibiotic_resistance.jpg. 32 pp.

10. Halden, R. U. (Contributing Author). 2009. White Paper: Pesticides in the Maryland Chesapeake Bay Watershed. Published by the Maryland Pesticide Network. Published Online at http://www.mdpestnet.org/publications/MPN-2009WhitePaper.pdf. 38 Pages.

11. Halden, R. U. (Contributing Author). 2008. Putting Meat on the Table: Industrial Farm Animal Production in America—A Report of the Pew Commission on Industrial Farm Animal Production. http://www.ncifap.org/_images/PCIFAPFin.pdf.

12. Halden, R. U. (Contributing Author). 2007. Plans and Practices for Groundwater Protection at the Los Alamos National Laboratory—Final Report—Committee for the Technical Assessment of Environmental Programs at the Los Alamos National Laboratory Nuclear and Radiation Studies Board Division of Earth and Life Studies. ISBN-10: 0-309-10619-2. 60 Pages. National Research Council of The National Academies, The National Academies Press, Washington, D.C.

13. Halden, R. U. (Contributing Author). 2006. Plans and Practices for Groundwater Protection at the Los Alamos National Laboratory—Interim Status Report—Committee for the Technical Assessment of Environmental Programs at the Los Alamos National Laboratory Nuclear and Radiation Studies Board Division of Earth and Life Studies, ISBN-10: 0-309-10391-6. National Research Council of The National Academies, The National Academies Press, Washington, D.C.

14. Halden, R. U. (Contributing Author). 2006. SERDP/ESTCP Strategic Plan Guiding Future Investments in Molecular Biological Tools (MBT). Final Report. pp. 1-64. http://docs.serdp-estcp.org/viewfile.cfm?Doc=MBT%20Workshop%20Report%2E.pdf.

15. Madrid, V. M., Demir, Z., Gregory, S., Valett, J., and R. U. Halden. 2003. A Geospatial Model for Remedial Design Optimization and Performance Evaluation. UCRL-JC-147302. http://www.osti.gov/servlets/purl/15005954-fMH8E0/native/.

16. Gregory, S., V. Madrid, L. Ferry, R. U. Halden, and Z. Demir. 2002. Interim Remedial Design for the Building 834 Operable Unit Treatment Facility at Lawrence Livermore National Laboratory Site 300. UCRL-AR-144919 February 2002 (273 pp).

17. Halden, R.U. (Contributor). 2001. Remedial Design Work Plan for Interim Remedies at Lawrence Livermore National Laboratory Site 300. Lawrence Livermore National Laboratory, Livermore, CA. UCRL-AR-143563. http://www-envirinfo.llnl.gov/AR-143563.pdf

18. Halden, R.U., and J. P. Ziagos. 2000. Supplemental Deployment Plan for Bioremediation and Natural Attenuation to Achieve In Situ Restoration of Chloroethene-Contaminated Groundwater at LLNL's Building 834 Operable Unit, Site 300, CA. Lawrence Livermore National Laboratory, Livermore, CA. 41 pp. UCRL-AR-136513. http://www-erd.llnl.gov/library/AR-136513.pdf

19. Halden, R.U. (Contributor). 1999. Draft Site-Wide Feasibility Study, LLNL Site 300.

20. Burge, S. and R. U. Halden. 1999. Optimization Study of Nitrate and Perchlorate Removal from Groundwater by Ion Exchange. LLNL, UCRL-ID-135639. pp 1-97. http://clu-in.org/download/contaminantfocus/perchlorate/LLNL1.pdf.

21. Burge S. and R. U. Halden. 1999. Nitrate and Perchlorate Removal from Groundwater by Ion Exchange. UCRL- ID-135639.

22. Happel, A. M., E. H. Beckenbach, and R. U. Halden. 1998. An Evaluation of MTBE Impacts to California Ground Water Resources. UCRL-AR-130897. http://geotracker.swrcb.ca.gov/Reports.htm.

PUBLICATIONS
THESES

1. Halden, R. U. Engineered In Situ Biodegradation of Dioxins and Related Compounds. Ph.D. Thesis. University of Minnesota, Department of Civil Engineering, Minneapolis, MN (1997).

2. Halden, R. U. Biotransformation of Polychlorinated Dibenzo-p-Dioxins, Dibenzofurans, and Diphenyl Ethers. M.S. Thesis. University of Minnesota, Department of Civil Engineering, Minneapolis, MN (1994).

3. Halden, R. U. Mikrobiologische Untersuchung einer lösungsmittelabbauenden mikrobiellen Mischkultur aus einem Festbettreaktor zur biologischen Abluftreinigung. M.S. Thesis (Diplomarbeit). Technische Universität Carolina-Wilhelmina Braunschweig, Braunschweig, Germany (1991).

PUBLICATIONS
NON-REFEREED CONFERENCE PUBLICATIONS

1. Withycombe Keeler, L., Halden, R.U. and C. Selin (2018). The Future of Wastewater Sensing Guide. Center for Nanotechnology and Society, Arizona State University. 19 pp. Handle: http://hdl.handle.net/2286/R.I.49794.

2. Halden, R. U. and I. B. Roll. (Contributing Authors). 2011. Monitoring Waste in Groundwater (Without All the Waste). Arab Water World Magazine 35(5):94.

3. Herbstman J. B., A. Sjödin, D. G. Paterson, B. J. Apelberg., F. R. Witter, R. U. Halden, J. Heidler, L. L. Needham, L. R. Goldman. 2005. PCBs and PBDEs and Thyroid Hormone Levels in Umbilical Cord Blood in an Urban U.S. Population: A Feasibility Study. *Organohalogen Compounds*, 2005. CD-ROM ID: 2171.

4. Halden, R. U. (Contributing Author). Sewage in Baltimore. 2003. Annual Report of the Baltimore Sanitary Sewer Oversight Coalition (BSSOC). http://www.jhsph.edu/Dept/EHS/Faculty/Halden/Full_BSSOC_Report_2003.pdf

5. Halden, R. U., B. G. Fischer, and D. F. Dwyer: Degradation of Carboxydiphenyl Ether Via Bioaugmentation. Proceedings of the North Amer. Water & Environment Congress, ASCE, Somerset, NJ, pp. 2395-2401 (1996).

6. Halden, R. U., G. W. Mundfrom, E. G. Peters, and D. F. Dwyer: Monitoring the Fate and Activity of Diaryl Ether-Degrading Bacteria in Soil. 50th Purdue Industrial Waste Conference Proceedings, Ann Arbor Press, Inc., Chelsea, Michigan, pp. 57-64 (1995).

INNOVATION
PATENTS AWARDED

1. Halden, R. U., E Kavazanjian, AM Jenck, N Hamdan, T Hoelen. 2020. Methods and systems for in situ temporary containment of shallow contaminated soils.US Patent 10,399,130.

2. Halden, R. U. and I. B. Roll. 2019. Devices and methods for determination of bioavailability of pollutants. US Patent 10,571,373.

3. Halden, R. U., Roll, I. B. Devices and Methods for Determination of Bioavailability of Pollutants. U.S. Patent 9,683,921. Date of Patent, June 20, 2017.

4. Halden, R. U., Kavazanjian, E., Jenck, A. M., Hamdan, N., Hoelen, T. U.S. Patent 15,744,358. Methods and Systems for In Situ Temporary Containment of Shallow Soils for Remediation and Resource Extraction. Date of Patent, July 18, 2016.

5. Halden, R. U., U.S. Methods and Systems for Ultra-Trace Analysis of Liquids. U.S. Patent 9,341,609. Date of Patent, May 17, 2016.

6. Halden, R. U. U.S. Patent 9,341,609. Methods and Systems for Ultra-Trace Analysis of Liquids. Date of Patent, May 17, 2016.

7. Halden, R. U. U.S. Patent 8,815,536. Methods and Systems for Sampling, Screening, and Diagnosis. Date of Patent, August 26, 2014.

8. Halden, R. U. US Patent 8,691,582. Methods and Systems for Fluid Examination and Remediation, April 8, 2014.

9. Halden, R. U. US Patent 8,323,921. Method and Apparatus for Environmental Monitoring and Bioprospecting, December 4, 2012.

10. Halden, R. U. US Patent 8,338,182, 2012. Methods and Systems for Fluid Examination and Remediation, December 25, 2012.

11. Halden, R. U. US Patent 7,662,618. Method and Apparatus for Environmental Monitoring and Bioprospecting February 16, 2010.

PROVISIONAL AND PENDING PATENT APPLICATIONS

12. Venkatesan, A. and Halden, R. U. Methods and Systems for pH Treatment and Extraction of Leachable Resources and Pollutants from Sludge. U.S. Patent App. 15/093,539. 2016.

13. Halden, R. U., E. Kavazanjian, A. M. Jenck, N. Hamdan and R. Hoelen. Methods and Systems for In Situ Temporary Containment of Shallow Contaminated Soils. Filed July, 22, 2015. Case # M15-144L.

14. Pycke, B. F. G., I. B. Roll and R. U. Halden. Methods and Systems for Monitoring Airborne Contaminants using Atmospheric Condensate. Filed December 2, 2013. Case # M14-109L.

15. Pycke, B. F. G., and R. U. Halden. Methods and Systems for Treatment of Waterborne Contaminants. Filed December 2, 2013. Case # M13-119L.

16. Halden, R. U. Methods and Systems for Protein Amplification. Provisional Patent Application, Arizona State University. Filed January, 2013. Case # M13-110L.

17. Halden, R. U. Methods and Systems for Surface Sediment Risk Assessment and Remedial Design. Provisional Patent Application, Arizona State University. Filed January, 2013. Case # M13-118L.

18. Halden, R. U., T. J. Buckley and M. Scotch. Method and Systems for Risk Assessment and Risk Communication. Arizona State University. Filed March 13, 2012. Case # M12_120P.

19. Halden, R. U., T. R. Miller and D. R. Colquhoun. Biomaterials and Methods for Managing Pollution with Phenyl Urea Compounds. Case M11_76L. Provisional Patent Application, Arizona State University. Filed on May 25, 2011.

20. Halden, R. U. Method for the Determination of Kinetic Rates. Provisional Patent Application, Arizona State University. Filed on May 2, 2011. Case # M11_077L.

21. Halden, R. U. and I. B. Roll. Devices and Methods for the Determination of the Bioavailability of Pollutants. Arizona State University. Filed April 19, 2011. Case # M11_082L. Published April 17, 2014. US 2014/0102182 A1

22. Halden, R. U. Method for Improving Air Quality and Limiting Human Toxic Exposures from Combustion Engine Exhaust Case M11_78P. ASU Provisional Patent Application Filed in January, 2011.

23. Halden, R. U., N. Hansmeier. Method and device for repeated probing of frozen biofluid samples." Case M11_74L. ASU Provisional Patent Application Filed on January 4, 2011.

24. Krajmalnik-Brown, R., J. Wilson, and R. U. Halden. Methods and Systems for Tracking Bioremediation Processes, Case M11-047L. Provisional Patent Application, Arizona State University, 2011.

25. Halden, R. U. Method and Apparatus for Environmental Monitoring and Bioprospecting. Japanese Patent No. 4580383. Patent issued on September 3, 2010 and will expire on March 10, 2024.

26. Halden, R. U. Methods and Systems for Ultra-trace Analysis of Environmental Waters, Provisional Patent Application, Arizona State University. Filed May 5, 2010.

27. Halden, R. U. Methods and Systems for Fluid Examination and Remediation, PCT Patent Application, Arizona State University. Filed February 2010. U.S Patent Issued on December 25, 2012. U.S. Patent Number US 8691582 B2.

28. Halden, R. U. Global Screening of Human Cord Blood Proteomes for Biomarkers of Toxic Exposure and Effect. Provisional Patent Application, Filed December 2009. U.S. Provisional Patent Application No. 61/265,565

29. Rittmann, B. E., H.-S. Lee, C. Torres, A. G. Delgado, R. Krajmalnik-Brown, and R. U. Halden, Reduction of chlorinated compounds and toxic substances in groundwater and soils by H2 supply generated from microbial electrolysis cells (MECs). Provisional Patent Application, Arizona State University. Filed September 2009.

30. Krajmalnik-Brown, R. and R. U. Halden. Microbial Cultures and Methods For Anaerobic Bioremediation". Provisional Patent Application, Arizona State University. Filed June 2009.

31. Halden, R. U. Methods and Systems for Ground and Surface Water Sampling and Analysis. PCT International Patent Application No. PCT/US2009/01076, JHU. Filed February 20, 2009.

32. Halden, R. U. Rapid Identification of Microbial Genotypes and Phenotypes. PCT International Patent Application No. PCT/US2009/0033692005/076887, JHU. Filed February 4, 2005.

33. Halden, R. U. Methods and Systems for Sampling, Screening, and Diagnosis. PCT International Patent Application No. PCT/US2005/003369 and 20070161076, JHU. Filed February 4, 2005; Issued May 12, 2014 as U.S. Application No. 10/587,927.

34. Halden, R. U. US Patent 7,662,618: Method and Apparatus for Environmental Monitoring and Bioprospecting. Filed March 10, 2004, JHU, Issued February 16, 2010.

35. Halden, R. U. Method and Apparatus for Environmental Monitoring and Bioprospecting. PCT International Patent Application No. PCT/US2004/007335 and 20040180334, JHU. Filed March 10, 2004.

PUBLICATIONS
REFEREED CONFERENCE PRESENTATIONS

1. Kumar, R., S. Adhikari, E. M. Driver, D. A. Bowes, K. T. Ng, J. E. Sosa-Hernandez, R. Parra-Saldivar, L. P. Barron, R. U. Halden. Trends in consumption of prescription and illicit drugs in USA and Mexico during the COVID-19 pandemic using wastewater-based epidemiology. American Chemical Society National Meeting, Spring 2022, San Diego, California, United States.
2. Kumar, R., S. Adhikari, E. M. Driver, T. Smith, A. Bhatnagar, P. Lorkiewicz, Z. Xie, D. Hoetker, R. U. Halden. Community-wide assessment of exposure to volatile organic compounds: A proof of concept study. American Chemical Society National Meeting, Spring 2022, San Diego, California, United States.

3. Wright, J., Driver, E.M., Bowes, D.A., Johnston, B., Halden, R.U. (2021). Comparison of High-frequency In-Pipe SARS-CoV-2 Wastewater-Based Surveillance to Concurrent COVID-19 Random Clinical Testing on a Public U.S. University Campus. Science of the Total Environment (accepted 12/30/21).
4. Bade, R., White, J.M., Ghetia, M., Adiraju, S., Adhikari, S., Bijlsma, L., Boorgaerts, Burgard, D.A., Castiglioni, S., Celma, A., Chappell, A., Covaci, A., Driver, E.M., Halden, R.U., Lee, H.J., Nuijs., A.L.N.v., Oh, J.E., Castro, M.A.P., Salgueiro-Gonzalez, N., Subedi, B., Wang, D., Yargeau, V., Zuccato, E., Gerber, C. (2021). Monitoring new psychoactive substances in 12 countries over the new year period: Case studies over 2019-20 and 2020-21, Testing the Waters Conference, Customs House, Brisbane, Australia.
5. Bade, R., White, J.M., Ghetia, M., Adiraju, S., Adhikari, S., Bijlsma, L., Boorgaerts, Burgard, D.A., Castiglioni, S., Celma, A., Chappell, A., Covaci, A., Driver, E.M., Halden, R.U., Lee, H.J., Nuijs., A.L.N.v., Oh, J.E., Castro, M.A.P., Salgueiro-Gonzalez, N., Subedi, B., Wang, D., Yargeau, V., Zuccato, E., Gerber, C. (2021). Wastewater analysis to monitor and detect new psychoactive substances: case studies from 12 Countries over 2019-20 and 2020-21, Eight International Conference on Psychoactive Substances, Online Session.
6. Jacobs DR, McDaniel T, Varsani A, Halden RU, Forrest S, Lee H. Recovering Human Genome Information from Wastewater: The Need for an Ethical Framework. IEEE Society on Implications of Technology; Nov 12-Nov 15, 2020; Virtual. Abstract 44.
7. Adhikari, S., Steele, J. C., Driver, E. M., Halden, R. U., Assessing the impact of the 2017 FDA ban of antimicrobials on the quality of reclaimed wastewater and biosolids in the United States. Society of Environmental Toxicology and Chemistry, Europe, Dublin, May 6, 2020
8. Rolsky, C., Kelkar, V., Halden, R. U. Methods to detect microplastics and nanoplastics in human tissue. American Chemical Society Annual Meeting. Philadelphia, PA, March 23, 2020.
9. Bowes, D. A., Halden, R. U. Wastewater-based epidemiology to assess population nutritional status. Invited presentation to BASIS High School Seniors during a Biodesign Institute Tour at Arizona State University, Tempe, AZ, January 29, 2020.
10. Driver, E. M., Halden, R. U., Conroy-Ben, O. Culturally appropriate monitoring of substance abuse in Native American communities. Doing Research in Indigenous Communities. Tempe, AZ, November 5, 2019.
11. Rolsky, C., Kelkar, V., Driver, E. M., Halden, R. U. Municipal sewage sludge as a source of microplastics in the environment. Society of Environmental Toxicology and Chemistry annual meeting. Toronto, Ontario, November 5, 2019.
12. Carlson, A., Driver, E. M., Gushgari, A. J., Halden, R. U. Narcotics consumption trends in 2018 at a Southwestern U.S. university campus tracked by wastewater-based epidemiology. American Institute of Chemical Engineers Annual Meeting, Orlando, FL, November 11, 2019.
13. Bowes, D. A., Halden, R. U. Identification and analysis of wastewater-borne human nutritional biomarkers. Testing the Waters, Foshan, China, October 31, 2019.
14. Steele, J. C., Driver, E. M., Bowes, D. A., Halden, R. U. Using participatory research to develop an online WBE dashboard to address the United States opioid epidemic. Testing the Waters. Presentation. Guangzhou, China, October 31, 2019.
15. Bowes, D. A., Driver, E. M., Halden, R. U. Integrating wastewater-based epidemiology into adolescent education to improve community health. Testing the Waters, Foshan, China, October 31, 2019.
16. Driver, E. M., Gushgari, A. J., Halden R. U. *In situ* active sampling to assess community exposure using wastewater-based epidemiology. Testing the Waters, Foshan, China, October 31, 2019.
17. Driver, E.M., Gushgari, A. J., Steele, J.C., Halden R.U. Expanding wastewater-based epidemiology by using glucocorticoid hormones to assess population stress. Testing the Waters, Foshan, China, October 31, 2019.

18. Gushgari, A. J., Steele J. C., Driver, E. M., Halden, R. U. Transferring technology from academia to the marketplace: The AquaVitas case study. Testing the Waters, Foshan, China, October 31, 2019.
19. Biyani, N., Halden R. Breaking the wall of wasting resources. Falling Walls Lab, Phoenix, AZ, October 4, 2019.
20. Driver, E. M., Bowes, D. A., Halden, R. U. Poster: Piping in new information on population health. Arizona Wellbeing Commons, Tempe, Arizona, September 27, 2019.
21. Bowes, D. A., Halden, R. U. Dietary intake of estrogen-mimicking endocrine disruptors and breast cancer. American Chemical Society Annual Meeting, San Diego, CA, August 29, 2019.
22. Driver, E. M., Bowes, D. A., Halden, R. U. New methods in Wastewater-based epidemiology: Plant-based dietary trends and *in situ* active sample collection. American Chemical Society Annual Meeting, San Diego, CA, August 26, 2019.
23. Kelkar, V., Steele, J. C., Halden, R. U. Meta-analysis of nationwide loadings from human excreta of emerging contaminants to Indian aquatic and terrestrial environments. American Chemical Society Annual Meeting, San Diego, CA, August 25, 2019.
24. Rolsky, C., Kelkar, V., Driver, E. M., Halden, R. U. Municipal sewage sludge as a source of microplastics in the environment. American Chemical Society Annual Meeting. San Diego, CA. August 2019.
25. Bowes, D. A., Halden, R. U. Identification and analysis of human nutritional biomarkers utilizing wastewater-based epidemiology. American Society for Nutrition Annual Meeting, Baltimore, MD, June 11, 2019.
26. Biyani, N., Halden R. U. Forecasting the latent value of elements in sewage sludge: A comparison between EU, US & China. Association of Environmental Engineering & Science Professors, Phoenix, AZ, May 16, 2019.
27. Kelkar, V., Driver, E. M., Hamilton, K., Halden, R. U. Removal of parabens and antimicrobials wastewater treatment plants across the U.S. Association of Environmental Engineering and Science Professors, Research and Education Conference, Tempe, AZ, May 15, 2019.
28. Driver, E. M., Gushgari, A. J., Steele, J. C., Halden R. U. Expanding wastewater-based epidemiology by using glucocorticoid hormones in sewage as indicators of population stress. Association of Environmental Engineering and Science Professors, Research and Education Conference, Tempe, AZ, May 15, 2019.
29. Jreissat, M. R., Adhikari, S., Brown, K. E., Campbell, A., Yap, X. J., Lin, W., Sebastiao, B. A., Halden, R. U., Modeling reforestation and afforestation strategies to attain carbon dioxide targets in the global atmosphere. Association of Environmental and Science Professors, Research and Education Conference, May 15, 2019.
30. Carlson, A., Driver, E. M., Gushgari, A. J., Halden, R. U. Tracking narcotics consumption at a Southwester U.S. university campus by wastewater-based epidemiology from January 2018 to May 2018. Association of Environmental Engineers & Science Professionals Annual Meeting, Tempe, AZ, May 15, 2019.
31. Click, K. G., Gushgari, A. J., Driver, E. M., Steele, J. C., Halden, R. U. Tracking opioid consumption in 2017-2018 in two U.S. cites by wastewater-based urban metabolism metrology. Association of Environmental Engineers & Science Professionals Annual Meeting, Tempe, AZ, May 15, 2019.
32. Bowes, D. A., Halden, R. U. Endocrine disrupting dietary compounds and breast cancer: A review. Association of Environmental Engineering & Science Professors, Research and Education Conference, Tempe, Arizona, May 14, 2019.
33. Carlson, A., Driver, E. M., Gushgari, A. J., Halden, R. U. Tracking trends consumption of narcotics at a Southwestern U.S. university campus by wastewater-based epidemiology from January 2018 to May 2018. AZ Water Association Annual Conference, Phoenix, AZ, April 17, 2019.
34. Kelkar, V., Driver, E. M., Halden, R. U. Removal of parabens and antimicrobials wastewater treatment plants across the U.S. AZ Water Association Annual Conference, Phoenix, AZ, April 16, 2019.

35. Driver, E. M., Bowes, D. A., Steele, J. C., Gushgari, A. J., Kelkar, V., Halden R. U. Longitudinal assessment of opioid consumption in Tempe, Arizona by wastewater-based epidemiology. Biodesign Fusion, Phoenix, AZ, March 22, 2019.
36. Driver, E. M., Gushgari, A. J., Steele, J. C., Halden R. U. Tracking population stress via analysis of wastewater-borne glucocorticoid hormones. American Chemical Society Annual Meeting, Boston, MA, August 23, 2018.
37. Gushgari, A. J., Driver, E. M., Steele J. C., Halden, R. U. Wastewater-based epidemiological tracking of narcotic use at a Southwestern U.S. university. American Chemical Society Annual Meeting, Boston, MA, August 23, 2018.
38. Rolsky, C., Kelkar, V., Halden, R. U., Tongay, S., Green, M. 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.
39. Driver, E. M., Gushgari, A. J., Chen J, Pollard, D, Maurer, M. M., Steele, J. C., Halden, R. U. Urban Metabolism Metrology: Employing Wastewater to Obtain Near Real-time Metrics for Community Health and Security. Pittsburg Conference on Analytical Chemistry and Applied Spectroscopy, Orlando, FL, February 28, 2018.
40. Biyani, N., Halden R. U. The latent value of elements in Chinese sludge. 8th Annual Graduate Research Symposium & Reception, School of Sustainable Engineering and the Built Environment, Phoenix, AZ, January 24, 2018.
41. Halden, R. U. Panelist and Invited Speaker, Arizona Wellbeing Commons, Tempe, AZ, September 7, 2018.
42. Venkatesan, A., Halden, R. U. Analytical challenges and alternatives for monitoring opioid consumption in communities using wastewater-based epidemiology. American Chemical Society Annual Meeting, Boston, MA, August 23, 2018.
43. Rolsky, C., Kelkar, V., Halden, R. U., Tongay, S., Green, M. 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.
44. Driver, E. M., Gushgari, A., Steele, J. C., Halden, R. U. Tracking population stress via analysis of wastewater-borne Glucocotricoid hormones. American Chemical Society Annual Meeting, Boston, MA, August 22, 2018.
45. Gushgari, A., Driver, E. M., Steele, J. C., Halden, R. U. Wastewater-based epidemiological tracking of narcotic use at a Southwestern U.S. university. American Chemical Society Annual Meeting, Boston, MA, August 20, 2018.
46. Gushgari, A. J., Halden, R. U. Urban Metabolism Metrology: Tracking Drug Abuse Through Wastewater Monitoring. SSEBE Graduate Research Symposium, Tempe, AZ. February 16, 2018.
47. Halden, R. U. Sustaining Human Health, Biodesign Institute, Tempe, AZ, March 3, 2018.
48. Biyani, N., Halden, R. U. Forecasting the Latent Value of Elements contained in Sewage Sludge: A Comparison Between EU, US and China. SSEBE Graduate Research Symposium, Tempe, AZ. February 16, 2018.
49. Kelkar, V., Rolsky, C., Pant, A., Green, M., Tongay, S., Halden, R. U. Chemical and Physical Changes of Microplastics During Wastewater Chlorination. SSEBE Graduate Research Symposium, Tempe, AZ. February 16, 2018.
50. Maurer, M. M., Driver, E. M., Gushgari, A. J., Steele, J. C., Halden, R. U. The Human Health Observatory (HHO) at ASU – A New Resource for Creating Healthy Cities. Arizona Wellbeing Commons Kickoff Conference, Tempe, AZ. September 6, 2017.
51. Steele, J. C., Driver, E. MN., Gushgari, A. J. and Halden, R. U. Urban Metabolism Metrology: Employing Wastewater to Obtain Near Real-time Metrics for Community Health and Security. GSP PLUS Alliance Symposium, Sydney, Australia, July 2017.
52. K.D. Moran, R.A. Sutton, A.M. Sadaria, R.U. Halden. San Francisco Bay Area Wastewater Monitoring Reveals Previously Unidentified Pathway for Pet Spot on Flea Treatments to Reach Estuaries. American Chemical Society Spring Meeting, San Francisco, CA. April 2017.
53. Steele, J. C. and Halden, R. U. Comparative Analysis of Organic Pollutants in Sewage Sludge from China and the United States. AZ Water Luncheon Symposium, Tempe, AZ, February 14, 2017.

54. Venkatesan, A. K. and R. U. Halden. 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.
55. 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
56. Chen, J., B. F. G. Pycke, B. J. Brownawell, C. A. Kinney, E. T. Furlong, D. W. Kolpin and R. U. Halden. Occurrence and Estrogenic Burden of Five Parabens in Sewage Sludge from the United States, SETAC North America 37th Annual Meeting, Orlando, FL, November 6-10, 2016
57. Chen, J. and R. U. Halden. A meta-analysis of parabens in sewage sludge, SETAC North America 37th Annual Meeting, Orlando, FL, November 6-10, 2016
58. Sadaria, A. M.; R. A. Sutton, K. D. Moran; J. Teerlink and R. U. Halden. Occurrence and Mass Balance of Fipronil and Its Degradates in Wastewater and Biosolids of Eight Wastewater Treatment Plants in Northern California, SETAC North America 37th Annual Meeting, Orlando, FL, November 6-10, 2016
59. Sadaria, A. M.; R. A. Sutton; K. D. Moran and R. U. Halden. Mass Balance Assessment for Neonicotinoids During Wastewater Treatment and Nationwide Occurrence in United States Wastewater, SETAC North America 37th Annual Meeting, Orlando, FL, November 6-10, 2016
60. Barcelo, D., B. Zonja, A. Navarro and R. U. Halden. Pharmaceuticals and organic consumer chemicals in Sewage Sludge: Concentrations in Biosolids from Spain vs. the USA and China, Malmo Sweden,
61. Sadaria, A. M., S. D. Supowit and R. U. Halden. Occurrence and Mass Balances of Neonicotinoid and Phenylpyrazole Insecticides During Conventional Wastewater Treatment, 252nd ACS National Meeting, Philadelphia, PA, August 21-25, 2016
62. Sadaria, A. M., R. Sutton, K. E. Moran and R. U. Halden. Molar Distribution and Correlation Between Fipronil and Its Degradates in Wastewater and Biosolids of Eight California Wastewater Treatment Plants, 252nd ACS National Meeting, Philadelphia, PA, August 21-25, 2016
63. Sadaria, A. M., R. Sutton, K. E. Moran and R. U. Halden. Detection of Imidacloprid, Fipronil and Its Degradates in Wastewater and Biosolids of Eight Wastewater Treatment Plants in Northern California, 252nd ACS National Meeting, Philadelphia, PA, August 21-25, 2016
64. Steele, J. C., X. Meng, A. K. Venkatesan and R. U. Halden. Comparative anlaysis of organic contaminants in sewage sludge from the United States and China, 252nd ACS National Meeting, Philadelphia, PA
65. Chen, J. and R. U. Halden. Meta-analysis on parabens in sewage sludge, 252nd ACS National Meeting, Philadelphia, PA
66. Driver, E. M., I. B. Roll, S. D. Supowit and R. U. Halden. *In Situ* and Down-hole Diagnostic Tools for Site Characterizaiton and Remediation, 252nd ACS National Meeting, Philadelphia, PA
67. Venkatesan, A. K. and R. U. Halden. Application of urban metabolism metrology to monitor chemical consumption, exposures, and population health in U. S. communities, 252nd ACS National Meeting, Philadelphia, PA, August 21-25, 2016
68. Venkatesan, A. K., J. C. Steele and R. U. Halden. Recurring U.S. National Wastewater Treatment Plant Survey and the Human Health Observatory at Arizona State University, 252nd ACS National Meeting, Philadelphia, PA, August 21-25, 2016.
69. 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. https://www.acs.org/content/acs/en/meetings/national-meeting/about/meetings-archive/opening-session/urban-metabolism-metrology.html
70. Halden, R. U. Seminar: Research on Urban Diagnostics at Arizona State Univesity Biodesign Institute, ICRA (Institut Catalia de Recerca de l'Aigua, July 4, 2016
71. Venkatesan, A. K. and R. U. Halden. Urban metabolism: a noninvasive and cost-effective approach to monitor environmental and population health, The 5th Annual SLOAN MoBE (Microbiology of the Built Environment) Conference, University of Colorado Boulder, Boulder, CO, June 1 -3, 2016.

72. Driver, E. M., R. U. Halden, M. Charles, J. Roberts, P. Dollar and P. Hurst. Comparative Analysis of Continuous-flow Column Treatability Study and Pilot Field-Scale Treatment Implementation from a Perchloroethylene-Impacted Fractured Bedrock Site, Tenth International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Palm Springs, CA, May 22-26, 2016.
73. Driver, E. M., J. Roberts, P. Dollar, M. Charles, P. Hurst and R. U. Halden. Comparative Meta-Analysis and Experimental Kinetic Investigation of Column and Batch Bottle Microcosm Treatability Studies Informing In Situ Groundwater Remedial Design, AZ Water Association Poster Competition, Glendale, AZ , May 11, 2016.
74. Sadaria, A. M., S. D. Supowit, and R. U. Halden. Occurrence and Fate of Neonicotinoid and Phenylpyrazole Insecticides in Urban Wastewater Infrastructure, AZ Water Association Poster Competition, Glendale, AZ, May 11, 2016.
75. Rolsky, C. and R. U. Halden. Non-invasive fecal analysis to evaluate stress in vulnerable marine animals, 2016 Salish Sea Ecosystem Conference, Vancouver, British Columbia, Boston, MA, April 13-15, 2016.
76. Denslow, N. D., V. D. Dang, K. J. Kroll, S. D. Supowit and R. U. Halden. Organochlorine Contamination of Fish in Lake Apopka, Society of Toxicology 55th Annual Meeting, New Orleans, LA, March 13-17, 2016
77. Halden, R. U. Diagnosing Cities and the Urban Water Cycle. UChem Seminar, EAWAG, Dubendort, Switzerland, January 22, 2016
78. Dang, V. D., K. J. Kroll, S. D. Supowit, R. U. Halden and N. D. Denslow. Molecular changes in fathead minnows induced by single and multiple contaminant exposures, NIEHS SRP Annual Meeting 2015, San Juan, Puerto Rico, November 17-20, 2015
79. Supowit, S. D., V. D. Dang, K. J. Kroll, I. B. Roll, N. D. Denslow and R. U. Halden. Development and Validation of a Novel Dual Phase Water Sampler to Monitor Trace Level Phenylpyrazole Pesticides, NIEHS SRP Annual Meeting 2015, San Juan, Puerto Rico, November 17-20, 2015.
80. Sadaria, A. M., S. D. Supowit, E. Reyes and R. U. Halden. Fate of Six Neonicotinoids During Full-scale Wastewater Treatment and Passage Through and Engineered Wetland, SETAC North America 36th Annual Meeting, Salt Lake City, UT, November 1-5, 2015.
81. Dang, V. D., K. J. Kroll, S. D. Supowit, R. U. Halden and N. D. Denslow. Tissue distribution of organochlorine pesticides (OCPs) in largemouth bass (Micropterus salmoides): case studies with a single oral dose and wild fish, SETAC North America 36th Annual Meeting, Salt Lake City, UT, November 1-5, 2015.
82. Dang, V. D., K. J. Kroll, S. D. Supowit, R. U. Halden and N. D. Denslow. Bioavailability of organochlorine chemicals and molecular changes in fathead minnows from single and complex mixture exposures, SETAC North America 36th Annual Meeting, Salt Lake City, UT, November 1-5, 2015.
83. Epshtein, O. D. J. Tallman, S. G. Hart, E. Kavazanjian and R. U. Halden. Modeling the pollution prevention benefits of adding biochar to erosion-prone agricultural soils, oral presentation at the 58th Annual Association of Engineering and Environmental Geologists Annual Meeting, Pittsburgh, PA, September 20-26, 2015.
84. Sadaria, A. M., S. D. Supowit, E. Reyes and R. U. Halden. Fate of Six Neonicotinoids During Full-scale Wastewater Treatment and Passage Through and Engineered Wetland, Arizona Hydrological Society 2015 Annual Water Reuse Symposium, Phoenix, AZ, September 16-19, 2015.
85. Done, H. Y. and R. U. Halden. Novel Method for Simultaneous Detection in Biosolids of 11 Antibiotics of Common Use in Human Health and Animal Husbandry, 250th American Chemical Society National Meeting, Boston, MA, August 16-20, 2015.
86. Rolsky, C. and R. U. Halden. Microplastic Pollutants in the Aquatic and Marine Environment, 250th American Chemical Society National Meeting, Boston, MA, August 16-20, 2015.
87. Gushgari, A. J., R. U. Halden and A. K. Venkatesan. Occurrence of Carcinogenic N-Nitrosamines in Freshwater Sediments Collected Near Wastewater Treatment Plants, 250th American Chemical Society National Meeting, Boston, MA, August 16-20, 2015.

88. Venkatesan, A. K. and R. U. Halden. Modeling the Leachability of pH-dependent Ionizable Organic Contaminants from Municipal Sewage Sludge, 250th American Chemical Society National Meeting, Boston, MA, August 16-20, 2015.
89. Roll, I. B., E. M. Driver and R. U. Halden. Time-Integrated, Active Sampling over 28 Days in a Contaminated Coastal Aquifer, 250th American Chemical Society National Meeting, Boston, MA, August 16-20, 2015.
90. Roll, I. B., E. M. Driver and R. U. Halden. Diurnal Fluctuations in Groundwater Concentrations of Hexavalent chromium in a Coastal Aquifer, 250th American Chemical Society National Meeting, Boston, MA, August 16-20, 2015.
91. Dang, V. D., K. J. Kroll, S. D. Supowit, R. U. Halden and N. D. Denslow. Gene Expression Microarray Analysis of Fish Exposed to Organohalide Pollutants in a Feeding, 250th American Chemical Society National Meeting, Boston, MA, August 16-20, 2015.
92. Rolsky, C. and R. U. Halden. Non-invasive fecal analysis: A novel tool to assess environmental stress in aquatic and marine wildlife, 250th American Chemical Society National Meeting, Boston, MA, August 16-20, 2015.
93. Heckenbach, M. E. and R. U. Halden. Meta-Analysis of Ionic Liquid Literature and Toxicology, 250th American Chemical Society National Meeting, Boston, MA, August 16-20, 2015.
94. Supowit, S. D., A. M. Sadaria, E. J. Reyes and R. U. Halden. Mass Balance of Fipronil in a Wastewater Treatment Train and Engineering Wetland, 250th American Chemical Society National Meeting, Boston, MA, August 16-20, 2015.
95. Driver, E. M., J. Roberts, P. Dollar, M. Charles, P. Hurst and R. U. Halden. Analysis of Continuous-Flow Column and Batch Bottle Microcosm Perchloroethylene Biodegradation Treatability Studies, 250th American Chemical Society National Meeting, Boston, MA, August 16-20, 2015.
96. Sadaria, A. M., S. D. Supowit, E. Reyes and R. U. Halden. Fate of Six Neonicotinoids During Full-scale Wastewater Treatment and Passage Through an Engineered Wetland, 250th American Chemical Society National Meeting, Boston, MA, August 16-20, 2015.
97. Supowit, S. D., A. M. Sadaria, E. J. Reyes and R. U. Halden. Mass Balance of Fipronil in a Wastewater Treatment Train and Engineering Wetland, 250th American Chemical Society National Meeting, Boston, MA, August 16-20, 2015.
98. Sadaria, A. M., S. D. Supowit, E. Reyes and R. U. Halden. Fate of Six Neonicotinoids During Full-scale Wastewater Treatment and Passage Through an Engineered Wetland, Arizona Water Reuse Symposium, Flagstaff, AZ, July 26-28, 2015.
99. 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.
100. 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.
101. Sadaria, A. M., S. D. Supowit, E. Reyes and R. U. Halden, Fate of Six Neonicotinoids During Full-scale Wastewater Treatment and Passage Through an Engineered Wetland, SETAC Europe 25th Annual Meeting, Barcelona, Spain, May 3-7, 2015.
102. 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.
103. Done, H. Y., A. K. Venkatesan and R. U. Halden. Antibiotics as Environmental Contaminants in Aquaculture and Terrestrial Agriculture, SETAC Europe 25th Annual Meeting, Barcelona, Spain, May 3-7, 2015.
104. Rolsky, C. and R. U. Halden. Non-invasive fecal analysis: A novel tool to assess environmental stress in aquatic and marine wildlife, SETAC Europe 25th Annual Meeting, Barcelona, Spain, May 3-7, 2015.

105. Waxenbaum, J., B. F. G Pycke, D. M. Sherer, O. Abulafia, R. U. Halden and L. A. Geer. Birth Outcomes Assessment from Fetal Exposure to Environmental Chemicals in an Urban Immigrant Population in Brooklyn, New York, SUNY Downstate Research Day, Brooklyn, NY, April 2, 2015.
106. 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.
107. 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
108. 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.
109. 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
110. 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.
111. 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.
112. 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.
113. Jenck, A. M., D. Lake, and R. U. Halden. Development of a proteomic-based analytical method for the isolation and identification of *Coccidioides* spp. proteins detectable in human blood plasma. 248th American Chemical Society National Meeting and Exposition, San Francisco, CA, August 10-14, 2014.
114. Supowit, S. D., I. B. Roll, V. D. Dang, K. J. Kroll, N. D. Denslow, and R. U. Halden. Active sorbtive sampling for bioavailability: The *in situ* sampler for bioavailability assessment (IS2B). 248th American Chemical Society National Meeting and Exposition, San Francisco, CA, August 10-14, 2014.
115. Pycke, B. F. G., L. A. Geer, M. Dalloul, O. Abulafia, and R. U. Halden. Human biomonitoring of prenatal exposure to triclosan and triclocarban in a multiethnic urban population from Brooklyn, New York. 248th American Chemical Society National Meeting and Exposition, San Francisco, CA, August 10-14, 2014.
116. Halden, R. U. Waste epidemiology: Taking the chemical pulse of a nation at the sewer by example of the United States. 248th American Chemical Society National Meeting and Exposition, San Francisco, CA, August 10-14, 2014.
117. Kidd, J., Pycke, B. F. G., and R. U. Halden. Thermal treatment for mobilization and co-metabolic degradation of weathered heavy hydrocarbons in the vadose zone. 248 th American Chemical Society National Meeting and Exposition, San Francisco, CA, August 10-14, 2014.
118. Done, H. Y., and R. U. Halden. Antibiotics and Aquaculture: Detected Residues and Microbial Resistance Risks. 248th American Chemical Society National Meeting and Exposition, San Francisco, CA, August 10-14, 2014.
119. Pycke, B. F. G., I. Roll, D. Kolpin, C. Kinney, B. Brownawell, E. Furlong, and R. U. Halden. Determination of Metabolites in U.S. Biosolids to Assess Removal of Parent Antimicrobials

in the Built Environment. 9th Battelle International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA, May 19-22, 2014.

120. Done, H. Y., B. F. G. Pycke, and R. U. Halden. Antibiotic Residue Screening in United States Seafood. SETAC Europe 24th Annual Meeting, Basel, Switzerland, May 11-15, 2014.

121. Halden, R. U. Taking the Chemical Pulse of a Nation by Example of the U.S.A. SETAC Europe 24th Annual Meeting, Basel, Switzerland, May 11-15, 2014.Thomas, J., L. A. Geer, B. F.G. Pycke, M. Dalloul, O. Abulafia, and R. U. Halden. Maternal Exposure to EDCs from Consumer Products: Comparison of Levels in a Caribbean Immigrant Population in the U.S. to National and Global Levels. 5th Annual CUGH Conference. Washington, D.C., May 10-12, 2014.

122. Epshtein, O., D. Childers, and R. U. Halden. Cracking the Black Box of Treatment Wetlands. Arizona Water Association (AZ Water) 87th Annual Conference, Glendale, AZ, May 7-9, 2014.

123. Jenck, A. and R. U. Halden. Development of a Proteomic-based Diagnostic Tool for Valley Fever Infection Through the Isolation and Identification of Coccidioides Proteins Detectable in Blood Plasma. 58th Annual Coccidioidomycosis Study Group Meeting in Phoenix, AZ, April 5, 2014.

124. Thomas, J., B. F. G. Pycke, R. U. Halden, M. Dalloul, O. Abulafia, and L. A. Geer. Maternal Exposure to Endocrine Disrupting Compounds from Consumer Products: Comparison of Levels in a Caribbean Immigrant Population in Brooklyn, NY to National and Global Levels. Brooklyn, NY, April 2, 2014.

125. Venkatesan, A. K., and R. U. Halden. National Sewage Sludge Repository at Arizona State University: A Chemical Observatory to Identify and Prioritize Chemicals of Concern to Environmental and Human Health. WATERCON IWEA 2014 Joint Conference and Expo, Springfield, IL, March 17-20, 2014.

126. Supowit, S. D, V. D. Dang, I. B. Roll, K. J. Kroll, N. D. Denslow, and R. U. Halden. Sampling for Bioavailability Using Solid Phase Extraction - the In Situ Sampler for Bioavailability (IS2B). 2014 Arizona State University Civil and Environmental Engineering Graduate Student Poster Symposium, Tempe, AZ. March 6, 2014.

127. Charles, M. N., C., A. Delgado, D. Fajardo-Williams, B. F. G. Pycke, R. Krajmalnik-Brown, G. Elliott, K. Wolf and R. U. Halden. Investigating the use of the "*In Situ* Microcosm Array" (ISMA) technology for site-specific remediation of dissolved chlorinated solvents in groundwater. 2014 Arizona State University Civil and Environmental Engineering Graduate Student Poster Symposium, Tempe, AZ. March 6, 2014.

128. Venkatesan, A. K., and R. U. Halden. National Biosolids Repository: A New Research Tool to Identify, Prioritize and Predict Environmental and Human Health Implications of Man-made Chemicals. 2014 AZ Water Research Workshop, Phoenix, AZ. January 15, 2014. (Winner of 2nd Prize in Poster Competition).

129. Charles, M. N., C., A. Delgado, D. Fajardo-Williams, B. F. G. Pycke, R. Krajmalnik-Brown, G. Elliott, K. Wolf and R. U. Halden. Investigating the use of the "*In Situ* Microcosm Array" (ISMA) technology for site-specific remediation of dissolved chlorinated solvents in groundwater. 2014 AZ Water Research Workshop, Phoenix, AZ. January 15, 2014.

130. Geer, L. A., B. F. G. Pycke, and R. U. Halden. Analysis of Maternal Urine, Amniotic Fluid and Cord Blood for Exploring Fetal Exposure to Endocrine Disrupting Compounds and Potentially Associated Adverse Health Outcomes. SETAC North America 34th Annual Meeting, Nashville, TN, November 17-21, 2013.

131. Supowit, S. D.., V. D. Dang, K. J. Kroll, N. D. Denslow and R. U. Halden. Active sampling for bioavailability using solid phase extraction as a surrogate for body burden - the *in situ* sampler for bioavailability assessment (IS2B). SETAC North America 34th Annual Meeting, Nashville, TN, November 17-21, 2013.

132. Kroll, K. J., V. D. Dang, S. D. Supowit, C. J. Martyniuk, D. Barber, R. Conrow, R. U. Halden, and N. D. Denslow. Evaluation of distribution of *p,p'*-DDE and dieldrin in largemouth bass exposed to the chemicals by gavage. SETAC North America 34th Annual Meeting, Nashville, TN, November 17-21, 2013.

133. Dang, V. D., K. J. Kroll, S. D. Supowit, R. U. Halden, and N. D. Denslow. Linking Bioavailability to Bioactivity of Persistent Contaminants in Fish. SETAC North America 34th Annual Meeting, Nashville, TN, November 17-21, 2013.
134. Halden, R. U., S. D. Supowit, V. D. Dang, K. J. Kroll, and N. D. Denslow. *In Situ* Sampler for Assessing Contaminant Bioavailability and Toxicity in Sediments. 26th Annual Meeting of the Superfund Research Program, Baton Rouge, LA, October 15-17, 2013.
135. Supowit, S. D., V. D. Dang, K. J. Kroll, N. D. Denslow and R. U. Halden. Assessing Contaminant Bioavailability Using the *In Situ* Sampler for Bioavailability (IS2B). Annual Meeting of the Superfund Research Program, Baton Rouge, LA, October 15-17, 2013.
136. Dang, V. D., K. J. Kroll, S. D. Supowit, R. U. Halden and N. D. Denslow. Evaluating Bioavailability of Persistent Organic Compounds via a Trophic Transfer. Annual Meeting of the Superfund Research Program, Baton Rouge, LA, October 15-17, 2013.
137. 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* Sample for Bioavailability (IS2B) Poster Presentation. Annual Meeting of the Superfund Research Program, Baton Rouge, LA, October 15-17, 2013.
138. Venkatesan, A. K. and R. U. Halden. Mass Flows of Contaminants of Emerging Concern in U.S. Biosolids and Chemical Fate in Outdoor Soil Mesocosms. 15th International Conference of the Pacific Basin Consortium; Honolulu, Hawaii, September 24-27, 2013.
139. Pycke, B F. G., L. A. Geer, and R. U. Halden. Prenatal Exposure to Endocrine Disrupting Compounds in a Predominantly Caribbean Immigrant Community. 15 th International Conference of the Pacific Basin Consortium; Honolulu, Hawaii, September 24-27, 2013.
140. McClellan, K., T. Kalinowski, R. U. Halden. "*In Situ* Microcosm Array – A New Tool for Remedial Design". AquaConSoil, Barcelona, Spain, April 16-19 2013.
141. 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.
142. McClellan, K., T. Kalinowski, T. A. Bruton, I. B. Roll, R. U. Halden. Bringing The Lab To The Field - The In Situ Microcosm Array. DECHEMA International Environmental Remediation Symposium. Frankfurt am Main, Germany, November 26-27, 2012.
143. 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.
144. 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.
145. 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.
146. North, E. J. and R. U. Halden. Exploring Opportunities and Obstacles in Society's Transition to Environmentally Sustainable Plastics. SETAC North America 33 rd Annual Meeting, Long Beach, CA, November 11-15, 2012.
147. 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.
148. 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.
149. 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.

150. 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.
151. 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.
152. 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.
153. 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.
154. 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.
155. 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.
156. 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.
157. 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. coli22nd Annual Meeting of the American Society for Microbiology (ASM) San Francisco, June 19-22, 2012.
158. 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.
159. 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.
160. 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.
161. 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.
162. 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.
163. 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.
164. 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.

165. 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.
166. 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.
167. 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.
168. 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.
169. 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.
170. 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.
171. Halden, R. U. Biosolids: A Diagnostic Matrix Foretelling Exposures in the Anthroposphere. 3 rd International Conference on Occurrence, Fate, Effects, and Analysis of Emerging Contaminants in the Environment, Copenhagen, Denmark, August 23-26, 2011.
172. 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.
173. 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.
174. 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.
175. 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.
176. 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.
177. 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.
178. 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.
179. 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.

180. 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.
181. 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.
182. 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.
183. 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.
184. 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.
185. 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.
186. 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.
187. 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.
188. 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.
189. 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.
190. 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.
191. 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.
192. Halden, R. U. Sustainable Management of Hazardous Mixtures. A Proposal. Arizona Department of Environmental Quality, Phoenix, AZ, August 13, 2010.
193. 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.
194. 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.

195. 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.
196. 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.
197. 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.
198. 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.
199. 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.
200. 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.
201. 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.
202. 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.
203. 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.
204. 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.
205. Halden, R. U. Toward Sustainable Use of Organohalogens. Spring 2010 National Meeting & Exposition of the American Chemical Society, San Francisco, CA, March 21-25, 2010.
206. 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.
207. 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.
208. 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.
209. 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.
210. 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.
211. Halden, R. U. *In Situ* Downhole Technology for Commercialization. First ASU Spartan Workshop for Technology Commercialization, Scottsdale, AZ, September 19, 2009.
212. 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.

213. 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.
214. 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.
215. 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.
216. 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.
217. 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.
218. 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.
219. 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.
220. 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.
221. Doom, T. R. and Halden, R. U.: BME Capstone Design Project Presentation. Tempe, May 1, 2009.
222. 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.
223. 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.
224. 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.
225. Higgins, C. P., Z. J. Paesani, T. E. A. Chalew, and R. U. Halden. Bioaccumulation of Triclocarban in Lumbriculus variegates. SETAC Meeting, November 2008.
226. 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.
227. 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.
228. 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.
229. 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.
230. 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.

231. 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.
232. 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.
233. 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.
234. 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.
235. Miller, T. R., Salzberg, S. L., Eisen, J. A., and R. U. Halden. Comparative Sequence Analysis of Catabolic Megaplasmids from *Sphingomonas wittichii* RW1 and Related Bioremediation Agents. 107th ASM General Meeting, Toronto, Ontario, Canada, May 21-25, 2007.
236. Miller, T. R., Salzberg, S. L., and R. U. Halden. Sequence Analysis of Megaplasmids from the Dioxin Mineralizing Bacterium *Sphingomonas wittichii* RW1. Joint Genome Institute User Conference, Walnut Creek, CA, March 28-31, 2007.
237. 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.
238. Goldman, L. R., B. J. Apelberg, J. B. Herbstman, R. U. Halden, F. R. Witter, A. M. Calafat, Z. Kuklenyik, L. L. Needham. Possible Etiologies of PFAA-Induced Developmental Effects: Reflections from a Pediatric Perspective. Society of Toxicology Conference: Current Concepts in Toxicology—Perfluorinalkyl Acids and Related Chemistries: Toxicokinetics and Mode-of-Action Workshop. Arlington, VA, February 14-16, 2007.
239. 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.
240. 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.
241. 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.
242. 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.
243. 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.
244. 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.
245. 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.

246. 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.
247. 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.
248. 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.
249. 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.
250. 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.
251. 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
252. 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
253. 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.
254. 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.
255. Halden, R. U.: Innovative Method for Environmental Monitoring and Bioprospecting. 8 th In Situ and On-Site Bioremediation Symposium, Baltimore, MD, June 6-9, 2005.
256. 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.
257. 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.
258. 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.
259. 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.
260. 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.
261. 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
262. 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.

263. 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.
264. 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.
265. 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.
266. 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.
267. 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.
268. 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.
269. 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
270. 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.
271. Halden, R. U.: Microarrays for Bioremediation. Presenter and Session Moderator. DOE-NABIR PI Workshop, Warrenton, VA, 2002.
272. 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.
273. 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.
274. 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.
275. 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.
276. 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.
277. Ziagos, J. P., and R. U. Halden: Implementing "Green" Technology to Achieve Cleanup Goals. 12th National DOE Technology Information Exchange Workshop, Atlanta, GA, 2000.
278. 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.
279. 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.

280. 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.
281. 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.
282. 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.
283. 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.
284. 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.
285. 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.
286. 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.
287. Rhodes, I., J. Milazzo, L. Brzuzy, 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.
288. 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.
289. Halden, R. U., and D. F. Dwyer: Biodegradation of Dioxins in Soils. 4 th International Battelle Bioremediation Symposium, New Orleans, LA, 1997.
290. Halden, R. U.: A Kinetic Analysis of Dioxin Degradation in Bioaugmented Soils. 5th Environmental Science & Engineering Conference, Minneapolis, MN, 1997.
291. 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.
292. 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.
293. 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.
294. 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.
295. 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.
296. 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.
297. 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.
298. 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.

299. 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. Halden, R. U. Invited Keynote Speaker. COVID-19 Surveillance Using Wastewater-based Epidemiology. 2020 Arizona Sanitarians' Conference, Arizona Department of Health Services, Phoenix, AZ, November 4, 2020.
2. Halden, R. U. Invited webinar. Wastewater-based Epidemiology (WBE) for Decision Making During the COVID-19 Pandemic. 2020 Fall Conference of the Washington Association of Sewer & Water Districts (WASWD), September 18, 2020.
3. Halden, R. U. Invited webinar. Human Health Observatory at Arizona State University. Navajo Nation Health Department, August 19, 2020.
4. Halden, R. U. Invited webinar. World's First Wastewater-Informed Online Dashboards for the Opioid & COVID-19 Epidemics. Oak Ridge Associated Universities (ORAU) Seminar Series: Surveillance for SARS-CoV-2 Using Wastewater—A Leading Edge Indicator. July 21, 2020.
5. Halden, R. U. Invited webinar. Wastewater-based Epidemiology for the Navajo Nation. Navajo Nation Chinle Chapter, August 11, 2020.
6. Halden, R.U. Invited webinar. Opportunities for Improving Population Health, Emergency Response, and Health Equality in Arizona. AZ Forward, June 11, 2020.
7. Halden, R.U. and A. Gushgari. Invited Speakers. How can wastewater be used to address the opioids crisis? The efficacy of participatory longitudinal wastewater analysis through a municipal-academic partnership in Tempe, Arizona. Arizona Capitol – ASU Science Day, Phoenix, AZ, April 11, 2020.
8. Halden, R.U. Invited Speaker and Panelist. National Academy of Sciences Conference. Arizona State University, Tempe, AZ. December 9, 2019.
9. Halden, R.U. Invited Keynote Speaker. California Conference of Directors of Environmental Health (CCDEH) Conference, Lake Tahoe, CA. October 1st, 2019.
10. Halden, R.U. Invited Speaker. Arizona Wellbeing Conference, Tempe, AZ, September 27, 2019.
11. Halden, R.U. Invited Speaker. American Chemical Society. Chemical Expert Team. San Diego, CA. August 25, 2019.
12. Halden, R.U. Invited Speaker. British Broadcasting Company, San Francisco. Filming of Documentaty. August 15, 2019.
13. Halden, R.U. Invited Speaker. Global Consortium for Sustainability Outcomes Conference. Mexico City, Mexico. June 10, 2019.
14. Halden, R.U. Invited Speaker. Global Consortium for Sustainability Outcomes Conference. Mexico City, Mexico. June 10, 2019.
15. Halden, R.U. Invited Speaker. MDB Conference. Arizona State University, Tempe, AZ. May 2 nd, 2019.
16. Halden, R.U. Invited Speaker. TEDx Talk. Gammage Auditorium, Arizona State University, Tempe, AZ. March 25, 2019.
17. Halden, R.U. Invited Speaker. RCR Workshop. Arizona State University, Tempe, AZ. February 20, 2019.
18. Halden, R.U. Invited Keynote Speaker. 46th Annual Pretreatment, Pollution Prevention & Stormwater Conference, EPA, Monterey, CA. February 11, 2019.
19. Halden, R.U. Invited Talk. Opioid Town Hall Meeting. Invited Panelist. Tempe History Museum, Tempe, AZ. February 2, 2019.
20. Halden, R.U. Invited Talk. Tracking harmful chemicals and pathogens using the Human Health Observatory at ASU, Arizona State University, Health Surveillance Conference, AZ. January 30, 2019.

21. Halden, R.U. Invited Talk. City of Tempe Townhall Meeting on Fighting the Opioid Epidemic. Tempe, AZ, February 2, 2019. https://www.tempe.gov/Home/Components/Calendar/Event/59624/
22. Halden, R.U. Invited Talk. Environmental Defense Fund Science Day, Menlo Park, CA. January 29, 2019.
23. Halden, R.U. Invited Webinar. Urban Metabolism Metrology: a powerful approach for tracking narcotic use and emerging pathogens in populations around the world. International Society of Disease Surveillance, Boston, MA. October 26, 2018.
24. Halden, R.U. Invited Talk. Human Health Observatory at ASU Wastewater-based Epidemiology & Population Health Assessment. Maricopa County Office of Epidemiology Annual Meeting, Phoenix, AZ. October 24, 2018.
25. Halden, R.U. Invited Talk. Human Health Observatory at ASU Wastewater-based Epidemiology & Population Health Assessment. Maricopa County Office of Epidemiology Annual Meeting, Phoenix, AZ. October 24, 2018.
26. Halden, R.U. Invited Talk: Opiods in Water, Science Salon, Tempe, September 25, 2018.
27. Halden, R. U. and L. Withycome Keeler. Invited Webinar. Monitoring and Managing Population Health – Ethical Considerations. ASU Lincoln Center for Applied Ethics, Arizona State University. https://vimeo.com/287156886
28. Halden, R.U. Invited Talk: Innovations in Bevahioral Health through Environmental Engineering. Arizona Wellbeing Commons, Phoenix, September 7, 2018.
29. Halden, R.U. Invited Talk: The Human Health Observatory. Irish EPA Workshop, Dublin City Unniversity, Dublin, Ireland, April 19, 2018.
30. Halden, R. U. Invited Talk. Urban Metabolism Metrology and Sewage Epidemiology. U.S. Environmental Protection Agency Headquarters, Office of Water, Wasthington, DC., December 8, 2017.
31. Halden, R. U. Invited Keynote Speaker. The Human Health Observatory – A New Resource for Creating Healthy Cities. 2017 Sanitarians' Conference, Arizona Department of Health Services, Phoenix, AZ, November 2, 2017.
32. 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, Wasthington, DC. October 25, 2017.
33. Halden, R. U. Invited Webinar: Sewage Testing for Drugs, Alcohol and Nicotine Concentrations, New York, NY. July 24, 2017.
34. 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.
35. Halden, R. U. Invited Talk. Delivered by M. Maurer. Office of the Director of National Security (ODNI), Washington, DC, June 22, 2017.
36. 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.
37. Halden, R. U. Invited Talk: Research Projects at Arizona State University's Biodesign Center for Environmental Health Engineering, Flagstaff, AZ, May 22, 2017.
38. Halden, R. U. Invited Talk: Diagnosing Cities. ASU Downtown Campus, Arizona Biomedical Collaborative Building, Phoenix, AZ, April 27, 2017.
39. Halden, R. U. Invited Talk: Urban Metabolism Metrology and Sewage Epidemiology Panel. ASU Downtown Campus, ABC1, Phoenix, AZ, April 25, 2017.
40. Halden, R. U. Invited Keynote: Diagnosing Cities – From Hazard Discovery to Nationwide Chemical Ban and Beyond, AZ Water Luncheon, Tempe, AZ, February 14, 2017.
41. Halden, R. U. Invited Talk: Diagnosing the Health of Urban Populations, Ethics@Noon, Arizona State University, Tempe, AZ, February 8, 2017.
42. 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.
43. 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.

44. Halden, R. U. Invited Talk: Down the Drain, Spirit of the Senses, The Biodesign Institute at Arizona State University, Tempe, AZ, October 27, 2016
45. 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
46. 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
47. Halden, R. U. Invited Panelist: Marine Plastics: What's the Catch?, The Monterey Bay Aquarium Sustainable Foods Institute, Monterey, CA, August 18-19, 2016
48. 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
49. 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
50. 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
51. 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
52. Halden, R. U. Invited Talk: Diagnosing Cities and the Urban Water Cycle, UChem Seminar, EAWAG, Duebendorf, Switzerland, January 22, 2016
53. Halden, R. U. Invited Talk: Urban Metabolism Metrology & Human Health, Parsons School of Design, New York, NY November 9, 2015
54. 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.
55. Withycombe Keeler, L., R. U. Halden, C. Selin, et al. 2015. Future of Wastewater Sensing – Workshop & Guidance Document. Arizona State University, November 1, 2015. https://repository.asu.edu/items/49794
56. Halden, R. U. Invited Talk: Real-time Sustainability Assessment Using Urban Wastewater, San Francisco Bay Area Pollution Prevention Group, Oakland, CA, June 3, 2015.
57. Halden, R. U. Invited Talk: Toward Sustainability Using Data from Your Sewer, Google Inc, Mountain View, CA, June 2, 2015.
58. 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. Future of Wastewater Sensing – Workshop & Guide. Arizona State University,
59. 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.
60. Halden, R. U. Invited Talk: Regulating Chemicals in the Future by Learning from the Past, Green Science Policy Workshop, Berkeley, CA, February 12, 2015.
61. 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.
62. 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.

63. 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.
64. 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.
65. 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.
66. 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.
67. 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.
68. 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.
69. 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.
70. 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.
71. 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).
72. Halden, R. U. Antimicrobials, Antimicrobial Resistance and New Risk Assessment Tools. SETAC North America 33rd Annual Meeting, Long Beach, CA, November 11-15, 2012.
73. Halden, R. U. Understanding and Minimizing the Health Risks of Plastics. SETAC North America 33rd Annual Meeting, Long Beach, CA, November 11-15, 2012.
74. Kalinowski T., K. McClellan and R. U. Halden. An Emerging Remediation Technology: The I*n 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).
75. 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.
76. 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/
77. 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/
78. Halden, R. U. Invited Member of 5-Expert Panel Discussion. *Feed 8 Billion.* Arizona State University, Tempe Campus, AZ, February 2, 2012.
79. 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.
80. 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.

81. 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.
82. 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.
83. 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.
84. 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.
85. 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.
86. 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.
87. 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.
88. 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.
89. Halden, R. U. Invited Talk: In Situ Microcosm Array and In Situ Sampling Technologies for Technology Transfer. ASU Biodesign Institute, April 21, 2011.
90. Halden, R. U. Invited Talk: Sustainable Chemistry & Human Health in the 21st Century. U.S. EPA Emerging Chemicals Workgroup. Presented on April 6, 2011.
91. 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.
92. 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.
93. 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.
94. Halden, R. U. Invited Talk: Sustainable Chemistry and Human Health, *The Wiseguise* Seminar Series, Scottsdale, AZ, November 19, 2010.
95. 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.
96. 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.
97. Halden, R. U. Invited Presentation. The SUMMIT Project. CHiR-Arizona HealthQuery Stakeholder Meeting, ASU Biomedical Campus, Phoenix, AZ, September 20, 2010.
98. 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.

99. 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.
100. Halden, R. U.: Chemicals of Emerging Concern in the U.S. Environment. American Chemical Society Meeting, Las Vegas, November 10, 2009.
101. 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.
102. 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.
103. 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.
104. 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.
105. 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.
106. 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.
107. 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.
108. 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.
109. 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.
110. 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.
111. 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.
112. 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.
113. 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.

114. Halden, R. U.: Work Plan for Field Deployment of the *In Situ* Microcosm Array Technology, Lawrence Livermore National Laboratory, Livermore, CA, July 11, 2008.
115. 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.
116. Halden, R. U.: Field Deployment of the *In Situ* Microcosm Array Technology, Lawrence Livermore National Laboratory, Livermore, CA, February 25, 2008.
117. 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.
118. 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.
119. Halden, R. U.: Forensic Tools for Environmental Assessment and Remediation. University of Delaware, Newark, DE, Department of Civil and Environmental Engineering, October 19, 2007.
120. 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.
121. 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.
122. 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.
123. 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.
124. 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.
125. 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.
126. 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.
127. 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.
128. 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.
129. 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.
130. 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.
131. 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.

132. 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.
133. 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.
134. 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/
135. 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.
136. Halden, R. U.: Contemporary Technologies for Combating Emerging Contaminants. Biodesign Institute, Center for Environmental Biotechnology. Tempe, AZ, October 12, 2006.
137. 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.
138. Halden, R. U.: Novel Approaches in Environmental Biotechnology. Arizona State University. Tempe, AZ, August 16, 2006.
139. 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.
140. 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.
141. Halden, R. U.: Environmental Fate of Persistent Antiseptic Compounds. Southern Nevada Water Authority. Las Vegas, NV, February 9, 2006.
142. Halden, R. U.: A Novel Tool in Environmental Restoration: Proteomics-enabled In Situ Microcosm Array. Lawrence Livermore National Laboratory, CA, February 6, 2006.
143. 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.
144. Halden, R. U.: Environmental Exposure to Persistent Antimicrobial Compounds – A Human Health Concern? Municipal Institute of Medical Research, Barcelona, Spain, November 18, 2005.
145. 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.
146. 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.
147. 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.
148. 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.
149. 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.

150. 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.
151. Halden, R. U.: Proteomics in Bioremediation: Opportunities and Challenges. University of Maryland, Department of Chemistry and Biochemistry. College Park, MD, September 9, 2005.
152. Halden, R. U.: Potential Application of Proteomics. DoD SERDP/ESTCP Molecular Biological Tools Workshop, Charlottesville, VA, August 9, 2005.
153. Halden, R. U.: Fate of Personal Care Products During Wastewater Treatment. 35 th 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.
154. 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.
155. 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.
156. 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.
157. Halden, R. U.: Polychlorinated Antimicrobials as Indicators of Sewage Spills. Presented at the American Chemical Society Meeting, Maryland Chapter, Baltimore, MD, February 23, 2005.
158. Halden, R. U.: Triclocarban: A New Contaminant in Baltimore Streams. Maryland State Water Quality Advisory Committee (SWQAC), Baltimore, MD, December 3, 2004.
159. 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.
160. Halden, R. U.: Antimicrobials Signal High Levels of Pathogens in Baltimore Streams. Herring Run Watershed Association Annual Meeting, Baltimore, MD, November 16, 2004.
161. 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.
162. Halden, R. U.: JHU Center for Water and Health On-going Research. Chesapeake Bay Foundation Research Retreat, Port Isobel, VA, October 3, 2004.
163. 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.
164. Halden, R. U.: Pharmaceuticals and Personal Care Products in the Environment. Chesapeake Biological Laboratory, University of Maryland, Solomon, MD, September 9, 2004.
165. 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.
166. Halden, R. U.: Chemical Analysis and Treatment of Perchlorate. Aberdeen Proving Ground, MD, July 23, 2002.
167. Halden, R. U.: Aberdeen Proving Grounds Environmental Research. National Defense Industrial Association TACOM – ARDEC Technical Symposium, Rockaway, NJ, April 10, 2002.
168. Halden, R. U.: Pharmaceuticals in U.S. Streams – A Public Health Concern? Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, March 27, 2002.
169. Halden, R. U.: Microcontaminants in Food and Water. Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, March 12, 2002.
170. Halden, R. U.: Toxins as Modifiers of Human Vulnerability to Disease. University of Pennsylvania, 2002 Health-Environment Symposium, Hershey, PA, March 7, 2002.

171. 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.
172. 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.
173. Halden, R. U.: Detection and Bioremediation of Fuel Oxygenates, Perchlorate and Trichloroethene. University of Minnesota, School of Public Health, Minneapolis, MN, August 21, 2001.
174. 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.
175. 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.
176. 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.
177. Halden, R. U.: The Building 834 Study Area at Site 300, CA. Idaho National Engineering and Environmental Laboratory, Idaho Falls, ID, September 9, 1999.
178. 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.
179. 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.
180. 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 6/03/2019 – 5/31/2023
HHS: National Institutes of Health (NIH) U01 LM013129
Bioinformatics Framework for Wastewater-based Surveillance of Infectious Diseases
The major goal is to develop a broadly applicable bioinformatics framework and to demonstrate in a case study how monitoring of municipal wastewater can contribute to U.S. public health decision making.
Role: PI: Halden $ 3,666,691.00

Halden 5/15/2022-5/14/2025
Arizona Board of Regents LTR 5/5/2022
TRIF: Inventorying and Prioritizing Risks Posed by Abandoned Arizona Mining Sites
The major goal is (?)
Role: PI: Halden $ 741,470.00

Halden 9/01/2021 – 11/30/2022
Arizona State University Foundation (ASUF) / Rockefeller Foundation G09898-300
OneWaterOneHealth: Broadening the Reach of WBE COVID-19 Surveillance for Tribal Nations
The major goal of this project is designed to address these structural limitations (i) by using a combination of passive and active samplers that collect time / flow-composited wastewater samples and (ii) by deploying these samplers in strategic locations where tribal communities congregate (e.g., community centers), and (iii) by operating samplers and disseminating the data collected with Native American students at Arizona State University who will be supported through this program as part-time hourly workers.
Role: PI: Halden $ 500,000.00

Halden 9/15/2022 – 2/29/2024
National Science Foundation (NSF) 2200161
PIPP Phase I: Computational foundations for bio-social modeling of unseen pandemics
The major goal is (?)
Role: Co-I: Halden $ 897,531.00

Halden 4/01/2022 – 3/1/2027
Boston Fusion Corp / DOD-DARPA: Defense Sciences Office (DSO) BF-5051-SK001
REsilience & Stability In DENse Terrains (RESIDENT)
The major goal is to develop a detailed conceptual ontology of indicators capturing universal aspects of urban stability; ensure ontology encompasses indicators from multiple urban services, population sentiment, and functions in the absence of traditional urban services (i.e., poor urban areas). Extend the ontology considering the results of the Base. Develop an inventory of nonconventional indicators capturing universal aspects of urban stability; demonstrate detectability and informational value via modeling and measurement in archived samples. Develop metrics quantifying accuracy and performance characteristics. Increase the data pool by performing additional indicator measurements in archived and fresh wastewater. Develop conceptual quantitative models and metrics. Research techniques/models to forecast/predict future levels of stability and resilience given recent historical data.
Role: Co-I: Halden $ 420,040.00

Halden 10/01/2022 – 9/30/2024
Arizona State University Foundation (ASUF) / Institute for Mental Health Research FP00033898
Using wastewater epidemiology and hospital discharge data to examine COVID-related changes in drug use and problems
Role: Co-I: Halden $ 124,886.00

Halden 8/01/2022 – 7/31/2025
University of Notre Dame / National Science Foundation (NSF) 204597ASU
RCN: Wastewater Surveillance for SARS-CoV-2 and Emerging Public Health Threats
The major goal (?)
Role: PI: Halden $ 51,051.00

Halden 4/01/2022 – 3/1/2027
National Institutes of Health (NIH) R01DA055853-01
Innovative Data Sources and Data Dissemination Strategies to Combat Opioid Misuse
The major goal is to demonstrate the capacity of WBE to monitor opioid and other drug consumption at a more localized level by example of the city of Tempe.
Role: PI: Halden $ 3,655,896

Halden 5/01/2022 – 4/1/2025
National Science Foundation 2150715
Rapid Automated Materials Inventory of Existing Buildings for Advanced Occupational Health and Emergency Response
Role: PI: Halden $ 407,436

Halden 7/01/2022 – 6/1/2027
National Institutes of Health (NIH) FP00030858
Impact of Environmental Change on Cardiovascular Health Assessed at the Population Level
Role: PI: Halden $ 3,762,105

Halden 3/01/2022 – 9/1/2023
National Science Foundation FP00030578
PIPP Phase I: Computational foundations for bio-social modeling of unseen pandemics

The major goal is to develop a scientific architecture to iteratively predict the trajectory of potential future pandemics through the stages from pre-emergence, localized emergence, and widescale human-to-human transmission.
Role: PI: Halden $ 1,323,466

Halden 1/01/2022 – 12/1/2024
University of Notre Dame (Prime: NSF) FP00031124
RCN: Wastewater Surveillance for SARS-CoV-2 and Emerging Public Health Threats
The major goal is to organize US and international researchers interested in or practicing wastewater-based epidemiology.
Role: PI: Halden $ _

Halden (16.7% Effort) 1/01/2021 – 12/31/2022
HHS: National Institutes of Health (NIH) 1U01DA053976-01
Wastewater Analysis of SARS CoV-2 in Tribal Communities
The major goal is to reduce infections, morbidity and mortality from COVID-19 in Tribal Communities.
Role: PI: Halden (Multi-PI: O. Conroy-Ben, K. Hamilton) $2,800,280

Halden (16.7% Effort) 3U01LM013129-02S2 12/21/2021 – 11/30/2022
HHS: National Institutes of Health (NIH) 1U01DA053976-01
Bioinformatics Framework for Wastewater-based Surveillance of Infectious Diseases
The major goal is to sequence SARS-CoV-2 Variants from Across the U.S.
(Competitive Supplement to award 1R01LM013129-01)
Role: PI: Halden (Multi-PI: M. Scotch, A. Varsani) $2,059,129

Halden (0.12% Effort) 7/01/2021 – 6/31/2026
HHS: National Institutes of Health (NIH) T32 DA039772
Research Training in Drug Abuse Prevention: Closing the Research-Practice Gap
Training grant to combat drug addiction.
Role: Co-I: Halden $2,294,493

Halden (20% Effort) 06/1/2019 – 5/30/2023
National Library of Medicine, NIH 1R01LM013129-01
Bioinformatics Framework for Wastewater-based Surveillance of Infectious Diseases.
This Project will Create an Atlas and Early-Warning System for Viruses.
Role: Contact-PI: Halden, co-PIs: Varsani and Scotch $1,532,874

Halden (8.3% Effort) 07/01/2021 – 6/30/2024
National Science Foundation, NSF 2115075
CICI:UCSS:Improving the Privacy and Security of Data for Wastewater-based Epidemiology
This Project Will Help Build Capacity in Data Privacy and Security Related to Wastewater-based Epidemiology
Role: PI: Halden (Co-PI: S. Forrest). $499,592

Halden (8.3% Effort) 8/01/2021 – 7/31/2022
Herbert W. Hoover Foundation
This Project Seeks to Determine the Presence of Microplastics in Human Tissue
Detecting Plastics in the Olfactory Pathway: A Feasibility Study
Role: ASU PI: Halden $50,000

Halden (5% Effort) 9/01/2021 – 5/31/2022
Rockefeller Foundation
OneWaterOneHealth: Broadening the Reach of WBE COVID-19 Surveillance for Tribal Nations
Role: ASU PI: Halden (co-PI Conroy-Ben) $505,115

Halden 11/01/2019 – 12/1/2022
J.M. Kaplan Fund
OneWaterOneHealth
Role: ASU PI: Halden (co-PI Conroy-Ben) $150,000

Halden (8.3% Effort) Hoover
Catena Foundation
OneWaterOneHealth / Native American Health: Building Public Health Capacity
This Project Will Help Build Capacity for Indigenous Population to Monitor SARS-CoV-2 in Wastewater
Role: PI: Halden (Co-PIs Conroy-Ben, Driver). $374,899

Halden (1% Effort) 9/01/2021 – 12/31/2021
ASU Office of the President
Pilot Study Tracking 40 Viruses Including SARS-CoV-2 Variants
The major goal is to track SARS-CoV-2 variants and related respiratory viruses in wastewater.
Role: PI: Halden (Multi-PI: E. Lim) $140,000

Halden (8.3% Effort) 08/01/2020 – 7/31/2021
National Science Foundation, NSF 2038087
EAGER: RCN: Wastewater Surveillance of SARS-CoV-2
This Project Will Organize US Researchers Studying SARS-CoV-2 in Wastewater
Role: Co-PI: Halden (PI: Bibby; Co-PIs Boehm, Delgado Vega). $299,995

Halden (8.3% Effort) 05/01/2020 – 4/30/2021
National Science Foundation, NSF 2028564
RAPID: COVID-19's Impact on the Urban Environment, Behavior, and Wellbeing:
This Project Will Track SARS-CoV-2 and Markers of Human Health in Wastewater
Role: PI: Halden, co-PIs: Varsani and Scotch $199,998

Halden (4% Effort) 07/15/2020 – 6/30/2021
National Science Foundation, NSF 2038372
RAPID: Tribal capacity to evaluate COVID-19 using wastewater-based epidemiology
This Project Will Track SARS-CoV-2 in wastewater of Tribal Communities across the U.S.
Role: Co-I (PIs: Conroy-Ben, Muenich, Driver) $199,998

Halden (20% Effort) 06/1/2020 – 5/30/2021
National Library of Medicine, NIH 1R01LM013129-01 Supplement
Bioinformatics Framework for Wastewater-based Surveillance of Infectious Diseases.
This Project will Create an Atlas and Early-Warning System for Viruses.
Role: Contact-PI: Halden, co-PIs: Varsani and Scotch $75,000

Halden (5%) 01/01/2020 – 12/31/2021
(Boston Fusion - DARPA) Palladino/Bienenstock (PIs)
REsilience & Stability In DENse Terrains (RESIDENT)
The goal of the project is to help assess and improve the resilience of human populations to internal and external stressors using social science approaches and wastewater-based epidemiology (WBE).
Role: Contract-I at ASU $449,999

Halden (8%) 03/01/2020 – 6/30/2021

Plastic Oceans International
Assessment of Plastics as Environmental Pollutants
The goal of the project is to determine the inventory of plastic pollutants in the environment, animals, and humans.
Role: PI: Halden $35,000

Halden (8%) 10/01/2019 – 9/31/2022
J. M. Kaplan Fund - One Water One Health Project
The goal of this project is to leverage wastewater-based epidemiology to promote environmental justice.
Role: PI: Halden $175,000

Halden (8%) 05/01/2020 – 12/30/2021
Flinn Foundation
Jumpstarting Economic Recovery from COVID-19 in the United States
The goal of this project is to foster wastewater-based epidemiology as a biotechnology practiced in AZ.
Role: PI: Halden $25,000

Halden (0.0% Effort) 07/1/2018 – 6/30/2019
Global Consortium for Sustainability Outcomes (GCSO)
Facilitating Evidence-based Decision-making in Global SustainabilityInternational Project.
Role: PI: Halden $100,000

Halden (0.0% Effort) 07/1/2018 – 6/30/2020
City of Tempe, Arizona
Wastewater Data Analytics
Role: PI: Halden (50% Tempe/50% ASU) $106,000

Halden (0.0% Effort) 01/1/2016 – 12/31/2018
Occurrence and Impact of Phthalates in the Irish Environment. European EPA.
International Project. Executed in Ireland.
Role: USA PI: Halden; Project PI: Jennifer Lawler €350,000 (~$130,000/y)

Halden (% Effort) NSF 1531991 9/15/2015 – 8/31/2018
MRI: Acquisition of Cryo-EM for Southwest Regional Center
NSF-BIO: Division of Biological Infrastructure (DBI)
Role: Co-I with John Spence (PI) $2,825,509

Halden (% Effort) 1/1/2018 – 12/31/2018
FSE Seed Grant
NSF-BIO: Division of Biological Infrastructure (DBI)
Role: Co-PI with Otakye Conroy-Ben (PI) $15,000

Halden (% Effort) 1/1/2018 – 12/31/2018
The Nature Conservancy
Role: (PI) $5,023

Halden (% Effort) 6/1/2017 – 5/31/2018
Monterey Bay Research Institute (MBARI)
NSF-BIO: Division of Biological Infrastructure (DBI)
Role: PI $5,000

Halden (0.0% Effort) 8/12/2017 – 12/31/2017
The Fingerprints of Plastic in Monterey Bay Pelagic Food Webs

Monterey Bay Aquarium Research Institute
Role: Contract PI

Halden (0.0% Effort) 08/1/2016 – 07/31/2017
2016 Toxics Release Inventory (TRI) University Challenge, Academic Partner, 2016-2017
Role: PI (100% Recognition)

Halden (0.0% Effort) 09/1/2015 – 08/31/2017
Biology and Built Environment (BioBE) Center Renewal
Role: PI (100% Recognition) $44,551

Halden (0% Effort) 01/01/2014 – 03/15/2016
In Situ Delivery of Remediation Agents
Chevron.
Role: PI (60% Recognition) $127,450 of $2M Total

Halden (3% Effort) 01/1/2014 – 03/15/2016
Thermal *In Situ R*emediation of Weathered Heavy Hydrocarbons
Chevron.
Role: PI (100% Recognition) $141,700 of $2M Total

Halden (15.7% Effort) 09/20/2011 – 07/31/2016
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) $830,943

Halden (15.7% Effort) 05/04/2011 – 12/31/2015
DoD ESTCP Project 201122
Cost-effective, Ultra-sensitive Groundwater Monitoring for Site Remediation and Management
Role: PI (100% Recognition) $1,151,519

Halden (8.33% Effort) 07/15/2015 – 09/30/2015
U.S. Army Dense Urban Area (DUA) Planning
Role: PI (50% Recognition) $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) 08/1/2013 – 07/31/2015
NIEHS-R01 Supplement 3R01ES020889-03S1
In Situ 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) $42,597

Halden (8.3% Effort) 05/01/2013 – 08/31/2014
Salt River Project (SRP)
In Situ Bioremediation – An Innovative Approach for Elevated Chlorinated Volatile Organic Compounds in Groundwater
Role: PI (100% Recognition) $60,000

Halden (0% Effort) 05/1/2012 – 06/30/2017
Piper Charitable Trust
Center for Environmental Health Engineering/AZ Public Health Observatory
Role: PI (100% Recognition) $750,000

Halden (0% Effort) 05/24/2013 – 12/31/2015
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) $140,000 subcontract of $450K Total

Halden (0% Effort) 01/1/2013 – 12/30/2013
TRIF Biodesign
Mass Spectrometry Recharge Facility Trial Run
Role: PI. (0% Recognition) $60,000

Halden (0% Effort) 03/1/2012 – 02/28/2013
NASA 2012-T72247
Analysis of Hormones, Steroids, Pharmaceuticals, and Personal Care Products in Water, Wastewater and Preserved Urine Samples
Role: PI. (100% Recognition) $15,000

WRF Water Research Foundation 9/30/2010 – 8/31/2012
(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) $334,000 ($84,000 match. funds)

NIH-NIEHS-RC2 1RC2ES018801-01 9/30/2009 – 7/31/2011
(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) $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) 03/01/2009 – 12/31/2013
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) $1,060,125

Halden (16.6% Effort) 02/01/2008 – 12/31/2011
Biocides in the U.S. Environment.
Role: Sole PI. (100% Recognition) $373,031

Halden (0% Effort) 02/01/2008 – 12/31/2011

Anonymous Gift, JHU
Hopkins Graduate Student Initiative
Role: Sole PI. (100% Recognition) $131,468

Halden (0% Effort) 08/12/2009 – 07/31/2012
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) $228,164

Halden (0% Effort) 08/12/2009 – 07/21/2012
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) $152,843

Halden (0% Effort) 09/28/2009 – 09/27/2012
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) $109,375

Halden (16.6% Effort) 09/28/2006 – 07/31/2012
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) $624,261

Halden (8.3% Effort) 01/01/2008 – 04/30/2009
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) $30,000

Halden (0% Effort) 07/01/2007 – 06/30/2010
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) $155,250

Salt River Project (SRP) Halden (8.3% Effort) 06/01/2011 – 5/30/2012
In Situ Bioremediation – An Innovative Approach for Elevated Chlorinated Volatile Organic Compounds in Groundwater
Role: Sole PI. (100% Recognition) $75,000

Halden (0% Effort) 01/01/2007 – 12/31/2009
DOE BER Genome Sequencing Program Free Genome Sequencing
Genome Sequencing of the Dioxin-Mineralizing Bacterium *Sphingomonas wittichii* RW1
Sequencing and Annotation of the Genome of a Dioxin-Metabolizing Bacterium.

Role: Sole PI. (100% Recognition) ~$100,000

Halden (PI: Ketner) 03/01/2007 – 2/28/2009
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) $35,000

Halden (PI: Schwab; Co-PI: Halden, Graczyk) R83300201 04/01/2006 – 12/31/2008
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) $600,000

Halden (PI: Lawrence; Co-PI: Silbergeld, Schwab, Halden) 10/01/2005 - 12/31/2007
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) $423,000 (JHU of $2.4M total)

Halden 10/01/2005 – 09/30/2006
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) $10,000

Halden (PI: Goldman) 10/01/2005 – 09/30/2006
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) $20,000

Halden 01/01/2005 – 06/30/2007
JHSPH-Faculty Research Initiative
Carcinogens in Biosolids as Determinants of Human Morbidity and Mortality
Creation of a Nationwide Repository and Database for Application of Municipal Sludge (Biosolids) in Agriculture.
Role: PI. (100% Recognition) $50,000

Halden 01/1/2006 – 07/30/2006
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) $14,995

Halden 9/1/2004 – 8/31/2005
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) $20,000

Halden 06/01/2004 – 05/30/2005
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) $150,000

Halden 06/01/2004 – 05/30/2005
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) $250,000

Halden (PI: Buckley; Co-PI: Halden) 11/1/2004 – 10/30/2005
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) $20,000

Halden 11/1/2003 – 10/31/2004
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) $25,000

Halden 9/1/2003 – 8/31/2004
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.
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 Chlororethenes 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 (77378) Lecture (3 credit). Fall 2021. Enrollment: 21; 63 Credit Hours.

HON494 Sustainable Environ. Biotechnologies (77576) (3 credits). Fall 2021. Enrollment: 5; 15 Credit Hours.

CEE470 Biological Design Seminar (77378) Lecture (3 credit). Fall 2019. Enrollment: 21; 63 Credit Hours.

CEE570	Biological Design Seminar (77379) Lecture (3 credit). Fall 2019. Enrollment: 3; 9 Credit Hours.
HON494	Sustainable Environ. Biotechnologies (77576) (3 credits). Fall 2019. Enrollment: 5; 15 Credit Hours.
BDE598	Biological Design Seminar (77235) Lecture (1 credit). Fall 2019. Enrollment: 17; 17 Credit Hours.
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.
E2 Camp	Taught one module of ASU101 at Fall 2018 Freshman Camp in Prescott, AZ
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), 4th Term, 2006/07. Enrollment: 12.
182.852 Air, Water, and Food Toxics (3 credits), 3rd 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), 4th Term, 2005/06. Enrollment: 13.
182.639 Introductory Principles of Water Quality Engineering for Public Health Water (3 credits). Highest-ranked Course of the 2nd 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, 3rd 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. Melanie Newell (PhD) Biological Design, ASU. (August 2020 – May 2024). (Chairman)
2. Indrayudh (Indro) Mondal, Environ. Engineering, ASU (August 2019 – May 2023). (Chairman)

GRADUATE STUDENTS SUPERVISION; COMPLETED

Ph.D. Students (<u>Degree Awarded)</u>

1. Nivedita Biyani (Ph.D.), Environ. Engineering, ASU (August 2017 – November 2022). (Chairman). Solutions for Sewage Sludge Reclamation and Plastic Waste Reduction.
2. Devin Bowes (Ph.D.) Biological Design, ASU. (August 2018 – February 23, 2022). (Chairman)
3. Joshua Steele (Ph.D.), Environ. Engineering, ASU. (August 2015 – April 12, 2022). (Chairman)
4. Sangeet Adhikari (Ph.D.), Environ. Engineering, ASU (August 2018 – February 16, 2022). (Chairman)
5. Varun Kelkar (Ph.D.), Environ. Engineering, ASU (Aug 2017 – November 4, 2021). (Chairman)
6. Charles Rolsky (Ph.D.), Biology, ASU. Role of Microplastics as Anthropogenic Pollutants of Global Ecosystems. (August 2014 – June 2020). (Chairman)
7. Olga Hart (Ph.D.), Biological Design, ASU. (August 2015 – October 2019). (Chairman)
8. Erin Driver (Ph.D.) Environmental Engineering, ASU. "Methods and Devices for Evaluating Environmental Remediation Progress and Population Health." (August 2013 – October 2018). (Chairman)
9. 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)
10. Adam Gushgari (Ph.D.), Environmental Engineering, ASU. "Tracking chemical indicators of human health in the urban water environment (August 2015 – May 2018) (Chairman)
11. Akash Sadaria (Ph.D.), Environmental Engineering, ASU. (August 2015 – May 2017).
12. Isaac Roll (Ph.D.) Environmental Engineering, ASU. "Novel Integrative Methods for Sampling Environmental Contaminants" (August 2011 – December 2015). (Chairman)
13. Samuel Supowit (Ph.D.) Environmental Engineering, ASU. "Occurrence, detection, and fate of fiproles in engineered waterways." (August 2011 – December 2015). (Chairman)
14. Hansa Done (Ph.D) Biological Design, ASU. "Antibiotics as Environmental Pollutants: Detection, Method Development, and Associated Antibiotic Resistance Issues," (August 2011 - December 2015). (Chairman)
15. 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)
16. 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)
17. Erica M. Hartmann (Ph.D.) Biological Design, ASU. "Application of Proteomic Mass Spectrometry in Bioremediation" (8/2008 – 6/2012). (Chairman)
18. 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)
19. Jochen Heidler (Ph.D.) Environmental Health Sciences, Johns Hopkins. (Chairman) "Environmental Fate of Persistent Biocides and Human Exposure" (2007).
20. David R. Colquhoun (Ph.D.) Environmental Health Sciences, Johns Hopkins. "Public Health Applications of Quantitative Protein Biomarkers" (2007). (Chairman)
21. Tanya Oxenberg (Ph.D.) Environmental Engineering, Hopkins. "Subsurface Transformation of Depleted Uranium at Aberdeen Proving Ground, Maryland" (2006). (Co-Advisor)
22. 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)

<u>GRADUATE STUDENTS SUPERVISED; COMPLETED</u>
M.S., M.S.E, and M.P.H. Students (<u>Degree Awarded)</u>

23. Cayla Cook, (M.S. Thesis) Environmental Engineering, ASU. "Meta-analysis of Error Sources in the Determination of Micro- and Nanoplastics." (August 2017 – December 2018). (Chairman)

24. 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 - May 2017). (Chairman)
25. 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)
26. 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)
27. Samuel Supowit (M.S. Environmental Engineering, ASU. "Occurrence, detection, and fate of fiproles in engineered waterways." (August 2011 – December 2014). (Chairman)
28. Maurissa Charles (M.S.E.) Environmental Engineering, ASU. (12/15/14) (Chairman)
29. Isaac Roll (M.S.E.) Environmental Engineering, ASU. (August 2011 – May 2013). (Chairman)
30. 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)
31. Thomas Bruton (M.S.) Environmental Engineering, ASU. (2012).
32. Sara Carey (M.S.) Environmental Engineering, ASU. "Policy Solutions for Limiting Environmental Release of Persistent, Bioaccumulative and Toxic Compounds." (2012). (Temporary Advisor)
33. Guozheng Li (M.S.) Biological Design, ASU (2011).
34. Meredith Lewis (M.S.E.) Environmental Engineering, ASU. (2009).
35. Christopher von Seggern (M.P.H.) Public Health, Hopkins. "Biodetection Utilizing Matrix-assisted Laser Desorption/Ionization Mass Spectrometry" (2005). (Capstone Advisor)
36. 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)
37. 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

38. Justin Kidd (Ph.D.) Environmental Engineering, ASU. "Thermal Bioremediation of Soils Containing Heavy Hydrocarbons from Petroleum Production Sites. (August 2014 – May 2015)
39. 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)
40. Thomas Bruton (Ph.D.) Environmental Engineering, ASU. "Use of Nano Zerovalent Iron in Groundwater Remediation" (2009 - 2012). (Transferred to UC Berkeley)
41. Youneng Tang (Ph.D.) Environmental Engineering, ASU. Biofilm Reduction of Oxidized Contaminants" (2/19/2011). (Committee Member)
42. Prathap Parameswaran (Ph.D.) Environmental Engineering, ASU. (2010). (Committee Member)
43. Katherine Muto (M.S.) Environmental Engineering, ASU. (2010). (Committee Member)
44. 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)
45. Liang Chen (M.S.) Environmental Engineering, ASU. (2009). (Committee Member)
46. Ed Hilyard (Ph.D.) Marine Biotechnology, University of Maryland, (Expected 2010) (Committee Member 2005-2009)
47. Ying Yao (M.S.) Environmental Engineering, ASU. (2009). "Development of a Novel Dechlorinating Culture" (2009). (Committee Member)
48. Talia E. A. Chalew (Ph.D.) Environmental Health Sciences, Johns Hopkins." (Interim PhD Advisor)
49. Henry Schuver (Dr.P.H.) Epidemiology, Hopkins (2007). (Committee Member)

50. Michelle Hladik (Ph.D.) Environmental Engineering, Hopkins (2005). (Committee Member)
51. Kristen Malecki Chossek (Ph.D.) Health Policy and Management, Hopkins (2005). (Committee Member)
52. Amir Sapkota (Ph.D.) Environmental Health Sciences, Hopkins (2004). (Committee Member)
53. Denise Taylor (Ph.D.) Environmental Engineering, Hopkins (2003). (Committee Member)
54. Peter D'Amato (Ph.D.) Environmental Engineering, Hopkins. "Biodegradation of Polycyclic Aromatic Hydrocarbons" (2003). (Committee Member)

Postdoctoral Researchers

55. Katherine Henke (2022 – Current)
56. Erin Driver (10/2018 – Current)
57. Devin Bowes (06/2022-Current)
58. Rahul Kumar (2020 – 6/2021)
59. Adam Gushgari (05/2018 – 2019)
60. Arjun Venkatesan (12/2013 – 09/2016) (Currently: Stony Brook University, NY)
61. Bhagyashree Manivannan (03/2013 – 04/2014) (Currently: Affiliate Member BD-CES)
62. Manivannan Yegambaram (03/2013 – 04/2014) (Currently: Affiliate Member BD-CES)
63. Benny Pycke 02/2010 – 10/2014) (Currently: Biotechnology Industry Startup Company, Belgium)
64. Gopianth Nallani (02/2011 – 06/2011)
65. Tzu-Chiao Chao (01/2009 – 01/2011) (Currently: Faculty, University of Regina, Canada)
66. Nicole Hansmeier (12/2008 – 6/2012) (Currently: Assistant Professor, Osnabrück University, Germany)
67. Randhir Deo (04/2008 – 2012) (Currently: Assistant Professor, Grand Canyon University, Phoenix, AZ)
68. Jay Graham (02/2008 – 07/2008) (Currently: Assistant Professor, George Washington University, Washington, DC)
69. Christopher Higgins (11/2006 – 12/2007) (Currently: Tenure-track Assistant Professor, Colorado School of Mines)
70. Todd R. Miller (10/2004 – 10/2007) (Currently: Assistant Professor, University of Wisconsin, Milwaukee)
71. Amir Sapkota (11/2004 – 10/2005) (Currently: Tenure-track Assistant Professor, University of Maryland)
72. Eric S. Wisniewski (06/2003 – 08/2003) (Currently: Staff Scientist, U.S. Government)
66. Mark P. Franklin (04/2002 – 12/2003)
73. Wenming Dong (2002) (Currently: Staff Scientist, U.S. National Laboratory)
68. Guibo Xie (10/2001 – 06/2003)

Graduate Independent Projects Supervised

74. 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"
75. Jing Chen (Fall 2013) Rotational Student of the Biological Design Graduate Program, "Determination of Contaminants in Autopsy Tissues of Alzheimer's Disease Fatalities"
76. Kristin McClellan (Fall 2010) "Review Paper on Treatability Studies"
77. Arjun Venkatesan (Fall 2010) "Analysis of compounds of emerging concern in Biosolids by GC/MS"
78. Thomas Bruton (Fall 2010) "Investigation of Fate and Transport of Zero Valent Iron Nanoparticles Using an In-Situ Microcosm Array"
79. Isaac Roll (Fall 2010) "Cost-effective, Ultra-sensitive Groundwater Monitoring for Site Remediation and Management"
80. Kristin McClellan (Spring 2010) "Demonstration Plan: Parallel In Situ Screening of Remediation Strategies for Improved Decision Making, Remedial Design, and Cost Savings"
81. Chen Zhou (Spring 2010) "Versatile Roles of Sulfate Reducing Bacteria in Contaminant Remediation"

82. Katherine Muto (Spring 2010) "Method for Detection of Chlorinated Carbanilides"
83. 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)
84. Jacqueline Heilman, Johns Hopkins University Research Intern (2002) "Antimicrobial Compounds and Their Possible Breakdown Products in Biosolids"

Undergraduate Students and High School Interns

1. Ayesha Babbrah (Undergraduate Research Intern, ASU) (2022)
2. Jake Zevitz (Undergraduate Barrett Honors & Undergraduate Research Intern, ASU) (2022)
3. Megan Groves (Undergraduate Research Intern, ASU) (2022)
4. Akhil Mahant (Undergraduate Research Intern, ASU) (2022)
5. Gabriel Zdrale (Undergraduate Research Intern, ASU) (2022)
6. Sonja Savic (Undergraduate Research Intern, ASU) (2022)
7. Anumitha Aravindan (Undergraduate Research Intern, ASU) (2022)
8. Lucien Dieter (Undergraduate Research Intern, ASU) (2021)
9. Dona John (Undergradutate Research Intern, ASU) (2021)
10. Jasmine Nguyen (Undergraduate Research Intern, ASU) (2021)
11. Paula Aguilar (Undergraduate Research Intern, ASU) (2021)
12. Nicole Kaiser (Undergraduate Research Intern, ASU) (2021)
13. Hannah Collins (Undergraduate Research Intern, ASU) (2021)
14. Abriana Smith (Undergraduate Research Intern, ASU) (2021)
15. Abigail Oliva (Undergraduate Research Intern, ASU) (2021)
16. Jillian Wright (Undergraduate Barrett Honors, ASU) (2019-4/15/2021) “Monitoring SARS-CoV-2 Through Wastewater-Based Epidemiology and COVID-19 Clinical Testing Data on a Large US University Campus”
17. Megan Koehler (Undergraduate Barrett Honors, ASU) (2020-4/1/2021) “Carbon Neutrality and the Challenges to Limiting CO_2 Emissions from Air Travel at the Largest U.S. University Campus”
18. Jett Thies (Undergraduate Barrett Honors, ASU) (2018-2019)
19. Komal Agrawal (Undergraduate Barrett Honors, ASU) (2018-2019)
20. Alyssa Carlson (Undergraduate Research Intern, ASU) (2018)
21. Lydia Mendoza (Undergraduate Research Intern, ASU) (2018)
22. Kathleen Click (Undergraduate Research Intern, ASU) (2017-Current)
23. Adam Thompson (Undergraduate Research Intern, ASU) (2017-Current)
24. Dustin Pollard (Undergraduate Research Intern, ASU) (2017-Current)
25. Jessica Stradford (Undergraduate Research Intern, ASU) (2016)
26. Prathima Harve (Undergraduate Research Intern, ASU) (2016)
27. Elena Sacco (Undergraduate Research Intern, ASU) (2015-2016)
28. Cameron Labban (Undergraduate Research Intern, ASU) (2015-2016)
29. Miguel Zamorano (Undergraduate Research Intern, ASU) (2015)
30. Andrea Molina (COMEXUS Visiting Undergraduate Research Intern) (2015)
31. Jorge Rodriguez (Undergraduate Research Intern, ASU) (2015)
32. Alma Banuelos (Undergraduate Research Intern, ASU) (2015)
33. Nathalia da Costa (Undergraduate Research Intern, ASU) (2015)
34. Guilherme Barbosa 0(Undergraduate Research Intern, ASU) (2015)
35. 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)
36. Mary Heckenbach (Barrett Honors College Intern, ASU) “Toxicity of Ionic Liquids (2014 - 2015)
37. Ivan Ruiz (Undergraduate Research Intern, ASU) (2014-2015)
38. Jessica Liu (Undergraduate Research Intern, ASU) (2014-2015)
39. Edward Reyes (Undergraduate Research Intern, ASU) (2014-2015)

40. April Cobos (B.S.) (Barrett Honors College Intern, ASU) "Antibiotics in Seafood" (2014-2015)
41. Justin Kidd (B.S.) Biology, ASU (2014)
42. Olga Epshtein (B.S.) Civil Engineering, ASU (2014)
43. Emily North (Barrett Honors College Intern, ASU) "Safety of Plastics" (2012 – 2013)
44. Chris Bean (Undergraduate Research Intern, ASU) "Environmental Research" (2013)
45. Cody Moore (Barrett Honors College Intern, ASU) "Environmental Research" (2012 – 2013)
46. Amitis Karris (High School Intern, ASU) "Environmental Research" (2013)
47. Olga Epshtein (Undergraduate Research Intern, ASU) "Modeling of the Tres Rios Wetland" (2012 - 2013)
48. Justin Kidd (Undergraduate Research Intern, ASU) "Theoretical Examination of the Bioavailability of Contaminants in Soils" (2012 - 2013)
49. Kristen Latta (Undergraduate Research Intern, ASU) "Environmental Research" (2012)
50. Patrick Trang (FURI Undergraduate Research Intern, ASU) "Programming the Nutrient Injection Module" (2009 – 2012)
51. Benjamin Duong (Undergraduate Research Intern, ASU) "Programming of a Bioremediation Device" (2009 – 2012)
52. James Fernandez (Undergraduate Research Intern, ASU) "Policy Analysis for Atrazine" (2011 – 2012)
53. David E. C. Adams (B.S.E.) Environmental Engineering, ASU. (2010). "Fluorinated Chemicals and the Impacts of Anthropogenic Use" (2010) (Honor Thesis Advisor)
54. Patrick Trang (High School Intern, ASU) "Development of a Laboratory Web Page" (2008 – 2009)
55. Benjamin Duong (High School Intern, ASU) "Development of a Laboratory Web Page" (2008 – 2009)
56. Travis Doom. (B.S.E.) Biomedical Engineering, ASU. "Nutrient Injection Unit: Subsurface Environmental Engineering with In Situ Microcosm Array Tool" (2009)
57. Erica Hartmann (Undergraduate Research Intern, Johns Hopkins) "Detection of Bioremediation Agents by MALDI Mass Spectrometry" (2006 – 2008)
58. Jocelyn Keehner (High School Intern, Johns Hopkins) "Uptake into Plants of Contaminants from Biosolids-Amended Soils" (2006)
59. Amelia DeLaquil (Undergraduate Research Intern, Johns Hopkins) "Fate of Triclosan and Triclocarban in Estuarine Sediment" (2006)
60. Anna Kalmykov (High School Intern, Johns Hopkins) (2004 – 2005)
61. 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)
62. Beth Links (High School Intern, Johns Hopkins) "Uptake into Plants of Contaminants from Biosolids-Amended Soils" (2004)
63. Daniel Paull (Undergraduate Research Intern, Johns Hopkins) "Detection of Triclocarban in Environmental Waters by Liquid Chromatography/Mass Spectrometry)" (2003)
64. Daniel Paull (Undergraduate Research Intern, Johns Hopkins) "Detection of Antimicrobials by Liquid Chromatography/Mass Spectrometry)" (2002)
65. Stephanie Burge (Research Intern, LLNL) "Optimization Study of Nitrate and Perchlorate Removal by Ion Exchange" (1999)

Technicians/Staff Employed and Co-supervised

1. Allan Yanaz (2021-Current)
2. Tyler Perleberg (2021-Current)
53. Megan Maurer (3/2017 - 2019)
54. Guihua "Eileen" Yue (9/2015-7/2016)
55. Zach Smith (11/2014 – 8/2015)
56. Marcia Spurlock (9/2014-Current)
57. Sara Murch (11/2012 – 5/2014)
58. Kristin McClellan (4/2008 – 8/2008)
59. Thayer Young (01/2005 – 2007)

60. 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

United States Environmental Protection Agency (EPA) Scientific Advisory Board Member (2022 -)
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
Invited Member of the Editorial Advisory Board of the ACS Journal of Proteome Research, 2015 – 2017
Invited Member of the Green Science Policy Advisory Committee for the Science and Policy of Organohalogens in Consumer Products meeting, Florence Italy, August 28, 2016NIH 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
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 2008Invited 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, 2005Invited Panelist/Voting Committee Member, Food And Drug Administration, Center For Drug Evaluation And Research (CDER) Nonprescription Drugs Advisory Committee. "Benefits andHazards 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

Guest Editor, *Current Opinion in Environmental Science & Health Journal* (COESH). Special Issue: Biosolids, 2018 – Present.

ACS Journal of Proteome Research, Associate Guest Editor and Advisory Board Member (2015 – 2018).

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 (ASC) Book Series. 606 pp. Oxford University Press, New York, NY. ISBN13: 9780841224964; eISBN: 9780841224971; DOI: 10.1021/bk-2010-1048

Peer Review Activities

1. Addiction
2. American Association of Pharmaceutical Scientists (AAPS) Journal
3. American Chemical Society (ACS) Books
4. American Chemical Society (ACS) Merits Awards, Env. Chem. Division
5. Analytical Chemistry
6. Archives of Environmental Contamination and Toxicology

7. Archives of Microbiology
8. California Environmental Protection Agency
9. Case Studies in Chemical and Environmental Engineering
10. Chemical Reviews (ACS)
11. Chemosphere
12. Consumer Reports
13. EcoHealth
14. Ecotoxicology and Environmental Safety
15. Environmental Chemistry
16. Environmental Health Perspectives
17. Environmental Pollution
18. Environmental Research
19. Environmental Science & Technology
20. Environmental Science and Pollution Research
21. Environmental Toxicology & Chemistry
22. Environmental Technology
23. Environment International
24. EPA's Biosolids Core Risk Assessment (BCRAM) Screening Tool and User's Guide
25. Expert Review of Proteomics
26. Government of Canada: Health Canada CMP Research and Monitoring & Surveillance Program
27. Human and Ecological Risk Assessment: An International Journal
28. Integrated Environmental Assessment and Management (IEAM)
29. International Journal of Industrial Chemistry
30. Journal of Chromatography A
31. Journal of Chromatographic Science
32. Journal of Environmental Science and Health, Part B
33. Journal of Hazardous Materials
34. Journal of Proteome Research
35. Leaking Underground Storage Tank Line
36. Marine Environmental Research
37. Molecular & Cellular Proteomics
38. PLOS – Public Library of Science
39. Public Library of Science (PLOS) One
40. Renewable Natural Resources Foundation
41. Science
42. Science of the Total Environment
43. Soil & Sediment Contamination: an International Journal
44. Toxicology
45. United States Environmental Protection Agency
46. Water Research
47. Water Science & Technology

PROPOSAL REVIEW ACTIVITIES

2022 Innovative Data Sources and Data Dissemination Strategies to Combat Opiod Misuse, NIH
2021 Detecting Plastics in the Olfactory Pathway: A Feasibility Study, University of Miami
2021 OneWaterOneHealth: Broadening the Reach of WBE COVID-19 Surveillance for Tribal Nations, Rockefeller Foundation
2021 Wasterwater Analysis of SARS CoV-2 in Tribal Communities, NIH
2021 Research Training in Drug Abuse Prevention: Closing the Research-Practice Gap, NIH
2021 CICI:UCSS:Improving the Privacy and Security of Data for Wastewater-based Epidemiology, National Science Foundation

2021 SCC-IRG JST: Wasterwater-Based Epidemiology for Community Health Monitoring towards Pandemic Resilience, National Science Foundation
2020 Jumpstarting Arizona's Economic Recovery from COVID-19 Using Biotechnology-Informed, Evidence-Based Public Health Decision-Making, Flinn Foundation
2020 One WaterOne Health, Catena Foundation
2019 Bioinformatics Framework for Wastewater-based Surveillance of Infectious Diseases, NIH
2019 REsilience & Stability In DENse Terrains (RESIDENT), Boston Fusion Corp
2016 Research Foundation Flanders (Fonds Wetenschapplijk 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

Invited Expert for Media Relations, Expert Program, American Chemical Society (ACS) (2014 – Present)
Invited Advisory Board Member, Parsons Healthy Materials Laboratory (HML), Parsons School of Design, New York, NY 2018 – Present.
Invited Advisory Board Member, Healthy Affordable Materials Project (HAMP), Parsons School of Design, New York, NY 2015 – Present.
ASU Startup Company, One Water One Health Non-profit Project, Biodesign Institute and Skysong 2018 – Present)
ASU Startup Company, AquaVitas, LLC. For-profit Company, Biodesign Institute and Skysong; CEO: Dr. Gushgari; May 2019 – Present). Halden: Chief Business Development Officer.

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 Chemical & Environmental Characterization (CEC) Governance Board (2018 – Present)
ASU IPIRC Intellectual Property Institutional Review Committee, Member, 2011 – Present
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/Skysong Startup Business Development, AWARE, and One Water One Health (2018 -)
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 Affaires 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 250+ 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

Examplatory Media Interviews Conducted in a representative Calendar Year (2018) Reaching >1.87 Billion Subscribers with an Advertisement EquivalencyValue of >$400,000

1. 1/10/2018 ASU Podcast
2. 2/12/2018 State Press Interview, Raw water
3. 2/22/2018 TV Filming at Phoenix Wastewater Treatment Plant
4. 2/23/2018 Deutsche Welle. German Radio Station
5. 3/1/2018 3TV Interview, Opioids
6. 3/28/2018 C&EN Interview
7. 5/1/2018 Bloomberg Law Interview
8. 5/22/2018 KJZZ Radio Interview
9. 5/23/2018 Nature Medicine Interview
10. 5/23/2018 ACS Interview
11. 5/24/2018 City of Tempe, Interview & Photoshoot
12. 5/24/2018 ABC15 TV Interview, Opioids
13. 5/25/2018 BBC Documentary Interview
14. 5/25/2018 KTAR News Interview
15. 5/29/2018 Herald Dispatch Interview, Bottled Water
16. 5/29/2018 State Press Interview, Opioids
17. 5/29/2018 Buzzfeed, U.S. Ban of Antimicrobial Compounds
18. 5/30/2018 NBC Universal Interview
19. 5/30/2018 12 News TV interview
20. 6/7/2018 Bloomberg News, 1,4 Dioxane
21. 6/19/2018 Nature Medicine Interview, Wastewater Analytics
22. 7/3/2018 NBC News Interview, Opioids
23. 7/20/2018 Live Science Interview, Egyptian Archeaology & Human Health
24. 7/20/2018 USA Today Interview, Plastic Pollution
25. 7/23/2018 Prevention Magazine, Plastics and Food Storage
26. 8/13/2018 Smithsonian Interview, Wastewater Analytics
27. 8/14/2018 King 5 News Interview, Contact Lenses
28. 8/14/2018 New York Times, Contact Lenses
29. 8/14/2018 Scientific American, Contact Lenses
30. 8/15/2018 The Atlantic, Interview, Contact Lenses
31. 8/16/2018 Time Magazine, Contact Lenses
32. 8/16/2018 USA Today, Contact Lenses
33. 8/17/2018 BBC London, Contact Lenses
34. 8/17/2018 KJZZ Radio, Contact Lenses
35. 8/17/2018 CBC Toronto, Contact Lenses
36. 8/17/2018 Mother Jones, Contact Lenses

37. 8/19/2018 BBC Radio Interview, Plastic Pollution
38. 8/20/2018 Newsweek, Contact Lenses
39. 8/20/2018 City News Canada Radio/TV, Contact Lenses
40. 8/20/2018 ACS Press Conference, Contact Lenses
41. 8/20/2018 Popular Science, Contact Lenses
42. 8/20/2018 NPR Radio, Here and Now, Contact Lenses
43. 8/20/2018 Earther, Contact Lenses
44. 8/20/2018 Google News, Contact Lenses
45. 8/20/2018 Brazilian TV station, contact lenses
46. 8/27/2018 Ethics @ ASU, TV Podcast
47. 8/29/2018 USA Today, Plastic Pollution
48. 9/4/2018 Primary Care Optometry News, Contact Lenses
49. 9/12/2018 Fox TV Interview
50. 9/12/2018 ASU Now Interview, Plastic Pollution
51. 9/12/2018 GRIST, Plastic Pollution
52. 9/13/2018 Neo.Life Interview, Antimicrobials
53. 10/5/2018 ASU Podcast Recording
54. 10/17/2018 Life Science Interview, Cremation Pollution/Cannibalism
55. 10/24/2018 NBC Interview
56. 10/25/2018 How Stuff Works, Microplastics
57. 10/29/2018 Healthline News, Plastic Exposure
58. 10/3/2018 USA Today, Ocean Pollution
59. 11/30/2018 Nature, Interview, Virus Surveillance

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.
- 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 Organohalogens in Biosolids, 238th American Chemical Society (ACS) National Meeting, Washington, DC, August 16-20, 2009.
- Symposium Chair and Organizer, Toward Sustainable Use of Organohalogens. 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.