Exponent®
Engineering & Scientific Consulting

Ashley Parks, Ph.D.

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Professional Profile

Dr. Ashley Parks has a background in environmental chemistry and toxicology, including the environmental fate and effects of products, chemicals, waste, and facility discharges; evaluating contaminants in sediment, groundwater, and surface waters; monitoring water system quality and tracking usage/volume balance; and assessing potential contaminant uptake and bioavailability/bioaccumulation in organisms.

Dr. Parks has planned and executed local and regional water quality monitoring programs and field sampling events involving both sediment and water collection for organic and inorganic contaminant analysis. She has worked with local, state, and federal agencies to assist clients with wastewater, stormwater, and hazardous waste permit applications and compliance. Dr. Parks has experience helping clients better understand water quality and permitting issues, including those related to stormwater and industrial operations as well as the potential effects of chemicals used in product manufacturing during use and following disposal. She also assists clients by performing proactive facility and documentation audits to ensure proper operation, maintenance, and record keeping.

Before joining Exponent, Dr. Parks was a Scientist at Southern California Coastal Water Research Project (SCCWRP) in Costa Mesa, CA where she worked on several projects including a copper site-specific objective study using the water effect ratio (WER) method and biotic ligand model (BLM), and studies evaluating potential impacts of ocean acidification, hypoxia, and warming conditions on benthic and aquatic marine organisms. Dr. Parks also led an intercalibration study for more than ten toxicity testing laboratories and conducted sediment and water column toxicity tests using standard methods, including Toxicity Identification Evaluation (TIE) methods.

During her graduate studies and her time as a National Research Council Postdoctoral Research Associate at the U.S. Environmental Protection Agency (US EPA), Dr. Parks investigated the toxicity, bioaccumulation, biodegradability, and trophic transfer potential of single-walled carbon nanotubes (SWNT) in estuarine systems, and evaluated the concentration, form, and toxicity of copper leached from various types of pressure-treated lumber, including micronized and nano-copper azole (MCA), alkaline copper quaternary (ACQ), and chromated copper arsenate (CCA).

Academic Credentials & Professional Honors

Ph.D., Environment, Duke University, 2013

B.A., Biochemistry, University of San Diego, 2008

Student Travel Award, International Conference on the Environmental Effects of Nanoparticles and Nanomaterials, Banff, AB, CA (2012)

Student Platform Presentation Award, 3rd place, International Conference on the Environmental Effects of Nanoparticles and Nanomaterials, Clemson, SC (2010)

Student Travel Award, International Conference on the Environmental Effects of Nanoparticles and Nanomaterials, Clemson, SC (2010)

SETAC Student Travel Award, SETAC North America Meeting, New Orleans, LA (2009)

The Explorer's Club Exploration Fund Grant ($3000): "Impact of oil-derived pollutants on marine ecosystems surrounding shipwrecks off the U.S. East Coast." (2009)

Outstanding Research Award, Department of Chemistry and Biochemistry, University of San Diego, San Diego, CA (2008)

Licenses and Certifications

Integrated Toxicology & Environmental Health Program Certificate (ITEHP)

Prior Experience

Scientist, Southern California Coastal Water Research Project, 2016–2021

National Research Council Postdoctoral Research Associate, U.S. Environmental Protection Agency, Atlantic Ecology Division, Narragansett, RI, 2013–2016

Graduate Research Assistant, Duke University, 2009–2013

U.S. Environmental Protection Agency Student Services Contractor, Atlantic Ecology Division, Narragansett, RI, 2009–2012

Professional Affiliations

Society for Environmental Toxicology and Chemistry (SETAC), member since 2008

Southern California Chapter of SETAC, member since 2016, Board member 2019-2021

American Chemical Society (ACS), member since 2011

American Bar Association, Section of Environment, Energy, and Resources (ABA SEER), member since 2022

Publications

Journal Articles

Greenstein, D.J., A.N. Parks, and S.M. Bay. 2018. Using spatial and temporal variability data to optimize sediment toxicity identification evaluation (TIE) study designs. Integrated Environmental Assessment and Management 15:248-258. DOI: 10.1002/ieam.4104

Parks, A.N., M.A. Cashman, M.M. Perron, L. Portis, M.G. Cantwell, D.R. Katz, K.T. Ho, R.M. Burgess. 2018. Magnitude of acute toxicity of marine sediments amended with conventional copper and nanocopper. Environmental Toxicology 9999:1-5. DOI: 10.1002/etc.4232

Parks, A.N., M.G. Cantwell, D.R. Katz, M.A. Cashman, T.P. Luxton, K.T. Ho, R.M. Burgess. 2018. Assessing the release of copper from nanocopper-treated and conventional copper-treated lumber into marine waters I: Concentration and rates. Environmental Toxicology and Chemistry 37:1956-1968. DOI: 10.1002/etc.4141

Parks, A.N., M.G. Cantwell, D.R. Katz, M.A. Cashman, T.P. Luxton, J.G. Clar, M.M. Perron, L. Portis, K.T. Ho, R.M. Burgess. 2018. Assessing the release of copper from nanocopper-treated and conventional copper-treated lumber into marine waters II: Forms and bioavailability. Environmental Toxicology and Chemistry 37:1969-1979. DOI: 10.1002/etc.4140

Ho, K.T., L.M. Portis, A.A. Chariton, M. Pelletier, M.G. Cantwell, D.R. Katz, M.A. Cashman, A.N. Parks, J.G. Baguley, N. Conrad-Forrest, W. Boothman, T. Luxton, S.L. Simpson, S. Fogg, R.M. Burgess. 2017. Effects of micronized and nano-copper azole on marine benthic communities. Environmental Toxicology and Chemistry. DOI: 10.1002/etc.3954.

Joyce, A.S., L.M. Portis, A.N. Parks, R.M. Burgess. 2016. Evaluating the relationship between equilibrium passive sampler uptake and aquatic organism bioaccumulation. Environmental Science and Technology. 50(21):11437-11451. DOI: 10.1021/acs.est.6b03273

Parks A.N., G.T. Chandler, K.T. Ho, R.M. Burgess, P.L. Ferguson. 2015. Environmental biodegradability of [14C] single-walled carbon nanotubes by Trametes versicolor and natural microbial cultures found in New Bedford Harbor sediment and aerated wastewater treatment plant sludge. Environmental Toxicology and Chemistry. 34(2):247-251. DOI: 10.1002/etc.2791

Parks A.N., G.T. Chandler, L.M. Portis, J.C. Sullivan, M.M Perron, M.G. Cantwell, R.M. Burgess, K.T. Ho, P.L. Ferguson. 2014. Effects of single-walled carbon nanotubes on the bioavailability of PCBs in field-contaminated sediments. Nanotoxicology. 8(S1):111-117. DOI: 10.3109/17435390.2013.858794

Parks A.N., R.M. Burgess, K.T. Ho, P.L. Ferguson. 2014. On the likelihood of single-walled carbon nanotubes causing adverse marine ecological effects. Integrated Environmental Assessment and Management. 10(3):472-474. DOI: 10.1002/ieam.1540

Bisesi J.H., J. Merten, K. Liu, A.N. Parks, ARMN Afrooz, J.B.Glenn, S.J. Klaine, A.S. Kane, N.B. Saleh, P.L. Ferguson, T. Sabo-Attwood. 2014. Tracking and quantification of single-walled carbon nanotubes in fish using near infrared fluorescence. Environmental Science and Technology. 48(3):1973-1983. DOI: 10.1021/es4046023

Parks A.N., L.M. Portis, P.A. Schierz, K.M. Washburn, M.M. Perron, R.M. Burgess, K.T. Ho, G.T. Chandler, P.L. Ferguson. 2013. Bioaccumulation and toxicity of single walled carbon nanotubes to benthic organisms at the base of the marine food chain. Environmental Toxicology and Chemistry. 32(6):1270-1277. DOI: 10.1002/etc.2174

Schierz P.A., A.N. Parks, K.M. Washburn, G.T. Chandler, P.L. Ferguson. 2012. Characterization and quantitative analysis of single-walled carbon nanotubes in the aquatic environment using near infrared fluorescence spectroscopy. Environmental Science and Technology. 46(22):12262-12271. DOI: 10.1021/es301856a

Yang S., A.N. Parks, S.A. Saba, P.L. Ferguson, J. Liu. 2011. Photoluminescence from inner walls in double walled carbon nanotubes: Some do, some do not. Nano Letters. 11(10):4405-4410. DOI: 10.1021/nl2025745

Technical Reports

U.S. EPA. Guidelines for Selecting the Appropriate Bioaccumulation Model(s) for Nonionic Organic Contaminants When Assessing Risk and Remedial Effectiveness at Contaminated Sediment Sites. U.S.

Environmental Protection Agency, Washington, DC, EPA/600/R-24/086, 2024. Authors: R.M. Burgess, A.N. Parks, S.B. Kane Driscoll, M.J. Kravitz.

Parks, A.N., D.J. Greenstein, K.C. Schiff. 2021. Marina del Rey Harbor Site-Specific Objective Study. Technical Report 1220. Southern California Coastal Water Research Project. Costa Mesa, CA.

Bay, S.M., D.J. Greenstein, A.N. Parks, D.J. Gillett, W. Lao, D.W. Diehl. 2021. Sediment Quality Assessment Technical Support Manual. Technical Report 777. Southern California Coastal Water Research Project. Costa Mesa, CA.

Parks, A.N., D.J. Greenstein, K. McLaughlin, K.C. Schiff. 2020. Southern California Bight 2018 Regional Monitoring Program: Volume I. Sediment Toxicity. Technical Report 1117. Southern California Coastal Water Research Project. Costa Mesa, CA.

Bay, S.M., A.N. Parks. 2020. Occurrence and Bioaccumulation of Dissolved Organochlorines in San Diego Bay. Technical Report 1109. Southern California Coastal Water Research Project. Costa Mesa, CA.

Gillett, D.J., A.N. Parks, S.M. Bay. 2019. Calibration of the Multivariate AZTI Marine Biotic Index (M-AMBI) for Potential Inclusion into California Sediment Quality Objective Assessments in San Francisco Bay. Technical Report 1070. San Francisco Estuary Institute. Richmond, CA.

Bay, S.M., D.J. Greenstein, A.N. Parks. 2018. Spatial and Temporal Variability in Sediment Toxicity Identification Evaluations. Technical Report 1014. Southern California Coastal Water Research Project. Costa Mesa, CA.

Bay, S.M., A.N. Parks, A.R. Melwani, B.K. Greenfield. 2017. Development of a Sediment Quality Assessment Framework for Human Health Effects. Technical Report 1000. Southern California Coastal Water Research Project. Costa Mesa, CA.

Bay, S.M., D.J. Greenstein, A.N. Parks, C.Q.T. Zeeman. 2016. Assessment of Bioaccumulation in San Diego Bay. Technical Report 953. Southern California Coastal Water Research Project Authority. Costa Mesa, CA.

Presentations

Burgess, R.M., A.N. Parks, S.B. Kane Driscoll, M.J. Kravitz. 2025. Guidelines for selecting bioaccumulation models for nonionic organic contaminants when assessing risk and remedial effectiveness at contaminated sediment sites. Poster presentation at the 2025 Battelle Sediments Conference. Tampa, Florida.

Burgess, R.M., A.N. Parks, S.B. Kane Driscoll, M.J. Kravitz. 2024. Guidelines for selecting bioaccumulation models for nonionic organic contaminants when assessing risk at contaminated sediment sites. Poster presentation at the SETAC North America Meeting. Fort Worth, TX.

Paulsen S.C., T. Beneke, L. Liang, D. Lofton, A.N. Parks. 2024. Clean Water Act compliance during wet weather: Lessons and recommendations. Presentation at the Water Environment Federation Technical Exhibition and Conference (WEFTEC). New Orleans, LA.

Burgess, R.M., A.N. Parks, S.B. Kane Driscoll, M.J. Kravitz. 2024. Selecting bioaccumulation models for nonionic organic contaminants when assessing risk at contaminated sediment sites including the role of passive sampling. Platform presentation at the International Passive Sampling Workshop and Symposium. Limoges, France.

Parks, A.N., D.J. Greenstein, K.C. Schiff. 2021. Application of a copper site-specific objective study in Marina del Rey Harbor. Platform presentation at the SETAC North America Meeting. Online.

Parks A.N. 2021. Marina del Rey Harbor: Water effect ratio (WER) study. Invited speaker at the Marinas Interagency Coordinating Committee (MIACC) June 2021 Meeting. Online.

Parks, A.N., D.J. Greenstein, K. McLaughlin, K.C. Schiff. 2020. Sediment quality changes in the Southern California Bight: 1998-2018. Poster presentation at the SETAC North America Meeting. Online.

McLaughlin, K., K. Schiff, N. Bednarsek, B. Du, D. Gillett, J.F. Griffith, D.J. Greenstein, A.N. Parks, J. Smith, S. Weisberg. 2020. Regional monitoring for sediment and water quality in the urban ocean of the Southern California Bight. Platform presentation at the Ocean Sciences Meeting. San Diego, CA.

Parks A.N., D.J. Greenstein, S.M. Bay. 2019. Impacts and interaction effects of sediment contamination and ocean acidification in Eohaustorius estuarius. Poster presentation at the SETAC North America Meeting. Toronto, ON, CA.

Parks A.N., W. Lao, E.J. Wenger, K. Maruya, C. Stransky, J. Leather, J. Carilli, S.M. Bay. 2019. Influence of dissolved organochlorines on bioaccumulation in San Diego Bay, California. Poster presentation at the SETAC North America Meeting. Toronto, ON, CA.

Lao W., A.N. Parks, E.J. Wenger, K. Maruya, S.M. Bay, J. Carilli, J. Leather. 2019. Characterizing freely dissolved polychlorinated biphenyls and organochlorine pesticides in San Diego Bay (CA, USA) using polyethylene passive samplers. Poster presentation at the SETAC North America Meeting. Toronto, ON, CA.

Parks A.N. 2019. Influence of dissolved organochlorines on bioaccumulation in San Diego Bay, California. Invited speaker at the University of San Diego, Department of Chemistry and Biochemistry Summer Research Symposium. San Diego, CA.

Parks A.N., S.M. Bay. 2019. Site-specific water quality objectives: Applications of water-effect ratios. Invited speaker at the Southern California SETAC Meeting. San Diego, CA.

Greenstein D.J., A.N. Parks, S.M. Bay. 2018. Optimization of sediment toxicity identification evaluation study designs to account for spatial and temporal variability. Poster presentation at the SETAC North America Meeting. Sacramento, CA.

Bay S.M., A.N. Parks, D.J. Greenstein. 2018. Variability in sediment toxicity and TIE response: An underappreciated contributor to unknown toxicity in California bays. Poster presentation at the SETAC North America Meeting. Sacramento, CA.

Parks A.N., S.M. Bay. 2017. Assessment of sediment contaminant contribution to human health risk via bioaccumulation modeling. Platform presentation at the SETAC North America Meeting. Minneapolis, MN.

Bay S.M., D. Gillett, K. Schiff, A.N. Parks. 2017. Implementing a standardized weight of evidence approach for sediment quality assessment and management in California: Lessons learned from regional monitoring and TMDLs. Platform presentation at the SETAC North America Meeting. Minneapolis, MN.

Parks A.N. 2017. Fate and effects of engineered nanomaterials in the marine environment. Invited speaker at UC Riverside, Department of Environmental Sciences. Riverside, CA.

Parks A.N., M.A. Cashman, S. Fogg, M.G. Cantwell, D.R. Katz, K.T. Ho, R.M. Burgess. 2016. Form and toxicity of copper released into marine systems from nano-sized copper treated lumber. Poster presentation at the SETAC North America Meeting. Orlando, FL.

Parks A.N. 2016. Environmental toxicology in Southern California coastal water. Invited speaker at the Duke University ITEHP Alumni Symposium. Durham, NC.

Parks A.N., M.A. Cashman, M.G. Cantwell, D.R. Katz, K.T. Ho, R.M. Burgess. 2015. Form and toxicity of copper released into aquatic systems from conventionally and nano-sized copper treated lumber. Poster presentation at the SETAC North America Meeting. Salt Lake City, UT.

Parks A.N., M.A. Cashman, M.G. Cantwell, D.R. Katz, K.T. Ho, R.M. Burgess. 2015. Concentration and form of copper released into aquatic systems from commercial liquid and micronized pressure treated lumber. Poster presentation at the Gordon Research Conference: Environmental Nanotechnology. West Dover, VT.

Parks A.N., M.A. Cashman, M.G. Cantwell, D.R. Katz, K.T. Ho, R.M. Burgess. 2015. Concentration and form of copper released into aquatic systems from commercial liquid and micronized pressure treated lumber. Platform presentation at the SETAC Europe Meeting. Barcelona, ES.

Parks A.N., M.A. Cashman, M.G. Cantwell, D.R. Katz, K.T. Ho, R.M. Burgess. 2014. Optimizing an experimental system for assessing the copper released into aquatic systems from commercial liquid and micronized pressure treated lumber. Poster presentation at the SETAC North America Meeting. Vancouver, BC, CA.

Ho K.T., R.M. Burgess, A. Chariton, L.M. Portis, M.A. Cashman, D. Proestou, M.C. Pelletier, J. Baguley, A.N. Parks, S.L. Simpson. 2014. Effects of copper nanomaterials on marine benthic communities. Poster presentation at the SETAC North America Meeting. Vancouver, BC, CA.

Parks A.N., K. Liu, P.L. Ferguson. 2013. Biodegradability of 14C-SWNT by pure and mixed microbial cultures. Poster presentation at the SETAC North America Meeting. Nashville, TN.

Liu, K., A.N. Parks, N.B. Saleh, P.L. Ferguson. 2013. Sorption of hydrophobic organic contaminants to single-walled carbon nanotubes: Influence of nanotube electronic structure. Poster presentation at the SETAC North America Meeting. Nashville, TN.

Parks A.N., L.M. Portis, J.C. Sullivan, R.M. Burgess, K.T. Ho, M.M. Perron, G.T. Chandler, P.L. Ferguson. 2012. Single-walled carbon nanotubes decrease the toxicity and bioaccumulation of polychlorinated biphenyls in marine benthic invertebrates exposed to contaminated sediment. Poster presentation at the SETAC North America Meeting. Long Beach, CA.

Bisesi, J.H., J. Merten, A.N. Parks, P.L. Ferguson, T. Sabo-Atwood. 2012. Examining single walled carbon nanotube distribution in live fish during gavage and feeding studies using near infrared florescence detection. Platform presentation at the SETAC North America Meeting. Long Beach, CA.

Parks A.N., L.M. Portis, J.C. Sullivan, R.M. Burgess, K.T. Ho, M.M. Perron, G.T. Chandler, P.L. Ferguson. 2012. Amendment of contaminated sediment with single-walled carbon nanotubes results in reduced toxicity and bioaccumulation of polychlorinated biphenyls in marine benthic invertebrates. Poster presentation at the International Conference on the Environmental Effects of Nanoparticles and Nanomaterials. Banff, AB, CA.

Parks A.N., P.A. Schierz, R.M. Burgess, K.T. Ho, L.M. Portis, M.M. Perron, M. Pelletier, K.M. Washburn, G.T. Chandler, P.L. Ferguson. 2011. Using radiolabels for investigating the bioaccumulation and interaction effects of 14C-SWNT and 3H-Ponasterone A in Leptocheirus plumulosus. Platform presentation at the SETAC North America Meeting. Boston, MA.

Schierz, P.A., A.N. Parks, P.L. Ferguson. 2011. Novel approaches for the detection of single walled carbon nanotubes in environmental matrices. Platform presentation at the SETAC North America Meeting. Boston, MA.

Parks A.N., P.A. Schierz, R.M. Burgess, K.T. Ho, M. Pelletier, L.M. Portis, M.M. Perron, G.T. Chandler, P.L. Ferguson. 2011. Investigation into the trophic transfer and sublethal impact of single walled carbon nanotubes in a simplified estuarine benthic food chain. Poster presentation at the NC Society of

Toxicology Regional Meeting. Research Triangle Park, NC.

Parks A.N., P.A. Schierz, R.M. Burgess, K.T. Ho, M. Pelletier, L.M. Portis, M.M. Perron, G.T. Chandler, P.L. Ferguson. 2010. Trophic transfer and sublethal effects of single walled carbon nanotubes (SWNT) in an estuarine benthic food chain study. Platform presentation at the SETAC North America Meeting. Portland, OR.

Schierz, P.A., A.N. Parks, P.L. Ferguson. 2010. Field flow fractionation-NIR fluorescence spectroscopy as a promising method for detection of single-walled carbon nanotubes in environmental samples. Platform presentation at the SETAC North America Meeting. Portland, OR.

Parks A.N., P.A. Schierz, R.M. Burgess, K.T. Ho, M. Pelletier, L.M. Portis, M.M. Perron, G.T. Chandler, P.L. Ferguson. 2010. Toxicity and accumulation of single walled carbon nanotubes (SWNT) in an estuarine benthic food chain. Platform presentation at the International Conference on the Environmental Effects of Nanoparticles and Nanomaterials. Clemson, SC.

Schierz, P.A., A.N. Parks, P.L. Ferguson. 2010. Characterization and analysis of single-walled carbon nanotubes in complex matrices by asymmetric flow FFF coupled with NIRF spectroscopy. Platform presentation at the International Conference on the Environmental Effects of Nanoparticles and Nanomaterials. Clemson, SC.

Parks A.N., P.A. Schierz, R.M. Burgess, K.T. Ho, M. Pelletier, M.M. Perron, G.T. Chandler, P.L. Ferguson. 2009. Toxicity and accumulation of structurally diverse single-walled carbon nanotubes in Ampelisca abdita and Americamysis bahia. Platform presentation at the SETAC North America Meeting. New Orleans, LA.

Ferguson, P.L., P.A. Schierz, A.N. Parks, A. Moore. 2009. Analysis of single-walled carbon nanotubes in estuarine sediments by near-infrared fluorescence spectroscopy. Platform presentation at the SETAC North America Meeting. New Orleans, LA.

Bolender J.P., A.N. Parks, M. Boudrias. 2009. Analyses of three protein biomarkers as indicators of anthropogenic impacts in Chione californiensis from Magdalena Bay, BCS, Mexico. Poster presentation at the SETAC North America Meeting. New Orleans, LA.

Parks A.N., P.L. Ferguson. 2009. Characterization of single-walled carbon nanotubes in aqueous solution by near-IR fluorescence spectroscopy: The role of surfactants. Poster presentation at the University of South Carolina, Graduate Student Visitation Weekend. Columbia, SC.

Parks A.N., M.A. Boudrias, J.P. Bolender. 2008. Bioindicators of chemical stresses in clam tissues from Magdalena Bay. Poster presentation at University of San Diego Creative Collaborations. San Diego, CA.

Parks A.N., M.A. Boudrias, J.P. Bolender. 2007. Bioindicators of chemical stresses in clam tissues. Poster presentation at the American Chemical Society Western Region Meeting. San Diego, CA.

Project Experience

Reviewed draft permitting regulations for stormwater and industrial discharges for clients including a construction industry group, commercial/office space, and a commercial/entertainment complex.

Assisted with stormwater and industrial discharge permit application, compliance assistance, and review for clients including a commercial/entertainment complex, marine construction facility, and commercial/office space.

Performed site visits to evaluate site conditions and BMPs and assist clients with industrial stormwater permit compliance.

Supported experts retained on Clean Water Act litigation cases.

Assisted with permit noncompliance evaluation including reviewing Toxicity Identification Evaluations/Toxicity Reduction Evaluations (TIEs/TREs) for a marine construction facility and commercial/office space.

Evaluated plumbing systems, including drain connections, to characterize discharges and assist with permitting for a commercial/entertainment complex.

Reviewed human health hazards of the chemical inventory for a beverage manufacturing facility.

Performed health and safety reviews related to chemical and hazardous waste storage and disposal for medical facilities.

Reviewed the documentation and storage conditions of hazardous waste at a commercial/entertainment complex and medical facilities.

Reviewed historical data, sales records, and various environmental compliance documents to track potential polychlorinated biphenyl (PCB) contamination sources and environmental impacts.

Assisted in the development of the California Human Health Sediment Quality Objective (HHSQO) Assessment Framework, which links potential human health risk to sediment quality.

Planned and lead a bioaccumulation study in San Diego Bay to compare measured fish tissue PCB, DDT, chlordane, and dieldrin concentrations to estimated values from the HHSQO model.

Planned and lead a copper site-specific objective study in Marina del Rey Harbor using the water effect ratio (WER) method applied to field-collected samples and a predicted WER using the copper biotic ligand model (BLM).

Built a 20-year historical database of water quality parameters measured in freshwater systems in Los Angeles and Ventura Counties, identified data gaps in the parameters necessary to apply the freshwater copper BLM, and designed and implemented a field sampling program to fill those data gaps.

Chaired the Toxicity sub-committee of the 2018 Southern California Bight Regional Monitoring Program (Bight ’18).

Led an intercalibration study for more than ten toxicity testing laboratories and conducted sediment and water column toxicity tests using standard methods, including Toxicity Identification Evaluation (TIE) methods.

Designed and built a laboratory-based exposure system with automated controls for pH, temperature, and dissolved oxygen, to better explore the biological impacts of ocean acidification, hypoxia, and warming conditions on benthic and aquatic marine organisms.

Investigated the individual and combined impacts of sediment contamination and ocean acidification conditions on benthic organisms.

Advisory Appointments

Scientific Review Committee Member for the California State Water Board's Stream Pollution Trends Monitoring (SPoT) Program

Peer Reviews

Chemosphere

Environmental Science & Technology

Environmental Science & Technology Letters

Environmental Science: Nano

Environmental Toxicology and Chemistry

Marine Pollution Bulletin

Natural Environment Research Council-NERC