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PROFESSIONAL APPOINTMENTS

Assistant Professor Columbia University in the City of New York Department of Earth and Environmental Engineering	01/2024 – Date
Assistant Professor University of California, Irvine Department of Civil and Environmental Engineering	07/2018 – 12/2023
National Research Council Postdoctoral Research Associate US Environmental Protection Agency (EPA) NHEERL/AED, Narragansett, RI	10/2016 – 06/2018
Postdoctoral Scholar University of California, Santa Barbara Center for Environmental Implications of Nanotechnology	06/2015 – 09/2016

EDUCATION

PhD	University of California, Santa Barbara Bren School of Environmental Science & Management	2015
MESM	University of California, Santa Barbara Bren School of Environmental Science & Management	2011
BS	Obafemi Awolowo University, Ile-Ife, Nigeria Department of Microbiology	2006

PEER-REVIEWED PUBLICATIONS (* = authors contributed equally)

- J74 Salawu, O. A.; Han, Z.; Senéhi, N. L.; Roback, S. L.; **Adeleye, A. S.** (2025). Determination of household wastewater PFAS composition and concentrations via neighborhood sampling. *Journal of Hazardous Materials*, 498, 139834. <https://doi.org/10.1016/j.jhazmat.2025.139834>
- J73 Tang, J.; Eltaweil, A. S.; **Adeleye, A. S.**; Jacobson, A. R.; Britt, D. W.; McLean, J. E.; Su, Y. (2025). Tracking the translocation of nanoplastic from soil to plant: Comparison of different analytical techniques. *Journal of Hazardous Materials*, 488, 137357. <https://doi.org/10.1016/j.jhazmat.2025.137357>

- J72 Han, Z.; **Adeleye, A. S.** (2024). Mechanistic insight into the synergistic removal of metallic and nonmetallic co-contaminants in water by iron nanoparticles. *ACS ES&T Water*, 4 (7):3099–3109. <https://doi.org/10.1021/acsestwater.4c00441>
- J71 Keller, A. A.; Li, W.; Floyd, Y.; Bae, J.; Clemens, K. M.; Thomas, E.; Han, Z.; **Adeleye, A. S.** (2024). Elimination of microplastics, PFAS, and PPCPs from biosolids via pyrolysis to produce biochar: feasibility and techno-economic analysis. *Science of the Total Environment*, 947, 174773. <https://doi.org/10.1016/j.scitotenv.2024.174773>
- J70 Salawu, O. A.; Olivares, C. I.; **Adeleye, A. S.** (2024). Adsorption of PFAS onto secondary microplastics: A mechanistic study. *Journal of Hazardous Materials*, 470, 134185. <https://doi.org/10.1016/j.jhazmat.2024.134185>
- J69 Das, T. K.; Han, Z.; Banerjee, S.; Raoelison, O. D.; **Adeleye, A. S.**; Mohanty, S. K. (2024). PFAS release from the subsurface and capillary fringe during managed aquifer recharge. *Environmental Pollution*, 343, 123166. <https://doi.org/10.1016/j.envpol.2023.123166>
- J68 Rico, C. M.; Wagner, D. C.; Ofoegbu, P. C.; Kirwa, N. J.; Clubb, P.; Coates, K.; Zenobio, J. E.; **Adeleye, A. S.** (2024). Toxicity assessment of perfluorooctanesulfonic acid (PFOS) on a spontaneous plant, velvetleaf (*Abutilon theophrasti*), via metabolomics. *Science of the Total Environment*, 907, 167894. <https://doi.org/10.1016/j.scitotenv.2023.167894>
- J67 Hu, P.; Li, H.; Tan, Y.; **Adeleye, A. S.**; Hao, T. (2024). Enhanced electrochemical treatment of humic acids and metal ions in leachate concentrate: Experimental and molecular mechanism investigations. *Journal of Hazardous Materials*, 462, 132774. <https://doi.org/10.1016/j.jhazmat.2023.132774>
- J66 Han, Z.*; Oyeyemi, B. F.*; Zenobio, J. E.; Salawu, O. A.; **Adeleye, A. S.** (2023). Perfluorooctanoic acid dominates the molecular-level effects of a mixture of equal masses of perfluorooctanoic acid and perfluorooctane sulfonic acid in earthworm. *Journal of Hazardous Materials*, 457, 131718. <https://doi.org/10.1016/j.jhazmat.2023.131718>
- J65 Alli, Y. A.; Oladoye, P. O.; Matebese, F.; Senehi, N. L.; Alimi, O. A.; Ogunlaja, A. S.; Abdi, F. F.; Anuar, H.; **Adeleye, A. S.**; Philippot, K. (2023). Step-scheme photocatalysts: Promising hybrid nanomaterials for optimum conversion of CO₂. *Nano Today*, 53, 102006. <https://doi.org/10.1016/j.nantod.2023.102006>
- J64 Vignardi, C. P.*; **Adeleye, A. S.***; Mohsen, K.; Oranu, E.; Miller, R. J.; Keller, A. A.; Holden, P. A.; Lenihan, H. S.* (2023). Aging of copper nanoparticles in the marine environment regulates toxicity for a coastal phytoplankton species. *Environmental Science & Technology*, 57 (17):6989–6998. <https://doi.org/10.1021/acs.est.2c07953>
- J63 Alli, Y. A.; Ejeromedoghene, O.; Bankole, M. O.; Alimi, O. A.; Omotola, E. O.; Olanrewaju, C. A.; Philippot, K.; **Adeleye, A. S.**; Ogunlaja, A. S. (2023). Nanomaterials as Catalysts for CO₂ Transformation into Value-added products: A Review. *Science of the Total Environment*, 868, 161547. <https://doi.org/10.1016/j.scitotenv.2023.161547>
- J62 Ogunkunle, C. O.; Balogun, G. Y.; Olatunji, O. A.; Han, Z.; **Adeleye, A. S.**; Awe, A. A.; Fatoba, P. O. (2023). Foliar application of nanoceria attenuated cadmium stress in okra (*Abelmoschus*

- esculentus* L.). *Journal of Hazardous Materials*, 445, 130567. <https://doi.org/10.1016/j.jhazmat.2022.130567>
- J61 Zenobio, J. E.; Salawu, O. A.; Han, Z.; **Adeleye, A. S.** (2022). Adsorption of per- and polyfluoroalkyl substances (PFAS) to containers. *Journal of Hazardous Materials Advances*, 7, 100130. <https://doi.org/10.1016/j.hazadv.2022.100130>
- J60 Shi, N.; Yan, X.; **Adeleye, A. S.**; Zhang, X.; Zhou, D.; Zhao, L. (2022). Effects of WS₂ nanosheets on N₂-fixing cyanobacteria: ROS overproduction, cell membrane damage, and cell metabolic reprogramming. *Science of the Total Environment*, 849, 157706. <https://doi.org/10.1016/j.scitotenv.2022.157706>
- J59 Ofoegbu, C. P.; Wagner, D. C.; Abolade, O.; Clubb, P.; Dobbs, Z.; Sayers, I.; Zenobio, J. E.; **Adeleye, A. S.**; Rico, C. M. (2022). Impacts of perfluorooctanesulfonic acid on plant biometrics and grain metabolomics of wheat (*Triticum aestivum* L.). *Journal of Hazardous Materials Advances*, 7, 100131. <https://doi.org/10.1016/j.hazadv.2022.100131>
- J58 Salawu, O. A.; Han, Z.; **Adeleye, A. S.** (2022). Shrimp waste-derived porous carbon adsorbent: Performance, mechanism, and application of machine learning. *Journal of Hazardous Materials* 437, 129266. <https://doi.org/10.1016/j.jhazmat.2022.129266>
- J57 Hu, P.; Shao, J.; Qian, G.; **Adeleye, A. S.**; Hao, T. (2022). Removal of tetracycline by aerobic granular sludge from marine aquaculture wastewater: a molecular dynamics investigation. *Bioresource Technology*, 355, 127286. <https://doi.org/10.1016/j.biortech.2022.127286>
- J56 Giroux M.; Zahra, Z.; Salawu, O. A.; Burgess, R. M.; Ho, K. T.; **Adeleye, A. S.** (2022). Assessing the Environmental Effects Related to Quantum Dot Structure, Function, Synthesis and Exposure. *Environmental Science: Nano*, 9, 867-910. <https://doi.org/10.1039/D1EN00712B> (Selected as the Cover-page article for the Issue)
- J55 **Adeleye, A. S.**; Xue, J.; Zhao, Y.; Taylor, A. A.; Zenobio, J. E.; Sun, Y.; Han, Z.; Salawu, O. A.; Zhu, Y. (2022). Abundance, fate, and effects of pharmaceuticals and personal care products in aquatic environments. *Journal of Hazardous Materials*, 424:127284. <https://doi.org/10.1016/j.jhazmat.2021.127284>
- J54 Liu, C.; Liang, Z.; **Adeleye, A. S.**; Cui, F.; Zhao, Z. (2021). Formation of N-nitrosodimethylamine (NDMA) from tetracycline antibiotics during the disinfection of ammonium-containing water: The role of antibiotics dissociation and active chlorine species. *Science of the Total Environment*, 798:149071. <https://doi.org/10.1016/j.scitotenv.2021.149071>
- J53 Bandehali, S.; Parvizian, F.; Ruan, H.; Moghadassi, A.; Shen, J.; Figoli, A.; **Adeleye, A. S.**; Hilal, N.; Matsuura, T.; Drioli, E.; Hosseini, S. M. (2021). A planned review on designing of high-performance nanocomposite nanofiltration membranes for pollutants removal from water. *Journal of Industrial and Engineering Chemistry*, 101:78–125. <https://doi.org/10.1016/j.jiec.2021.06.022>
- J52 Bandehali, S.; Parvizian, F.; Hosseini, S. M.; Matsuura, T.; Drioli, E.; Shen, J.; Moghadassi, A.; **Adeleye, A. S.** (2021). Planning of smart gating membranes for water treatment. *Chemosphere*, 238:131207. <https://doi.org/10.1016/j.chemosphere.2021.131207>

- J51 Han, Z.; Salawu, O. A.; Zenobio, J. E.; Zhao, Y.; **Adeleye, A. S.** (2021). Emerging investigator series: immobilization of arsenic in soil by nanoscale zerovalent iron: role of sulfidation and application of machine learning. *Environmental Science: Nano*, 8:619–633. <https://doi.org/10.1039/D0EN01202E>
- J50. Su, Y.; Jassby, D.; Zhang, Y.; Keller, A. A.; **Adeleye, A. S.** (2020). Comparison of the colloidal stability, mobility, and performance of nanoscale zerovalent iron and sulfidated derivatives. *Journal of Hazardous Materials*, 396:122691. <https://doi.org/10.1016/j.jhazmat.2020.122691>
- J49. Miller, R. J.; **Adeleye, A. S.**; Page, H. M.; Kui, L.; Keller, A. A.; Lenihan, H. S. (2020). Nano and traditional copper and zinc antifouling coatings: metal release and impact on marine sessile invertebrate communities. *Journal of Nanoparticle Research*, 22:129. <https://doi.org/10.1007/s11051-020-04875-x>
- J48. Sahebi, S.; Sheikhi, M.; Ramavandi, B.; Ahmadi, M.; Zhao, S.; **Adeleye, A. S.**; Shabani, Z.; Mohammadi, T. (2020). Sustainable management of saline oily wastewater via forward osmosis using aquaporin membrane. *Process Safety and Environmental Protection*, 138:199–207. <https://doi.org/10.1016/j.psep.2020.03.013>
- J47. Khan, B.; **Adeleye, A. S.**; Burgess, R. M.; Russo, S. M.; Ho, K. T. (2019). Effects of graphene oxide nanomaterial exposures on the marine bivalve, *Crassostrea virginica*. *Aquatic Toxicology*, 216:105297. <https://doi.org/10.1016/j.aquatox.2019.105297>
- J46. **Adeleye, A. S.**; Ho, K. T.; Zhang, M.; Li, Y.; Burgess, R. M. (2019). Fate and transformation of graphene oxide in estuarine and marine waters. *Environmental Science & Technology*, 53 (10):5858–5867. <https://doi.org/10.1021/acs.est.8b06485>
- J45. Foroutan, R.; Mohammadi, R.; **Adeleye, A. S.**; Farjadfard, S.; Esvandi, Z.; Arfaeina, H.; Sorial, G. A.; Ramavandi, B.; Sahebi, S. (2019). Efficient arsenic(V) removal from contaminated water using natural clay and clay composite adsorbents. *Environmental Science and Pollution Research*, 26 :29748–29762. <https://doi.org/10.1007/s11356-019-06070-5>
- J44. Du, T.; Adeleye, A. S.; Zhang, T.; Yang, N.; Hao, R.; Li, Y.; Song, W.; Chen, W. (2019). Effects of ozone and produced hydroxyl radicals on the transformation of graphene oxide in aqueous media. *Environmental Science: Nano*, 8 (6) :2484–2494. <https://doi.org/10.1039/C9EN00361D>
- J43. Su, Y.; Ashworth, V.; Kim, C.; **Adeleye, A. S.**; Rolshausen, P.; Roper, C.; White, J.; Jassby, D. (2019). Delivery, uptake, fate, and transport of engineered nanoparticles in plants: a critical review and data analysis. *Environmental Science: Nano*, 8 (6) :2311–2331. <https://doi.org/10.1039/C9EN00461K>
- J42. Khan, B; **Adeleye, A. S.**; Burgess, R. M.; Smolowitz, R.; Russo, S. M.; Ho, K. T. (2019). A 72-hour exposure study with Eastern oysters, *Crassostrea virginica*, and the nanomaterial graphene oxide. *Environmental Toxicology and Chemistry*, 38 (4):820–830. <https://doi.org/10.1002/etc.4367>
- J41. Huang, Y.*; **Adeleye, A. S.***; Zhao, L.; Minakova, A. S.; Anumol, T.; Keller, A. A. (2019). Antioxidant response of cucumber (*Cucumis sativus*) exposed to nano copper pesticide: Quantitative determination via LC-MS/MS. *Food Chemistry*, 270:47–52. <https://doi.org/10.1016/j.foodchem.2018.07.069>

- J40 Du, T.; **Adeleye, A. S.**; Zhang, T.; Jiang, C.; Zhang, M.; Wang, H.; Li, Y.; Keller, A. A.; Chen, W. (2018). Influence of light wavelength on the photoactivity, physicochemical transformation, and fate of graphene oxide in aqueous media. *Environmental Science: Nano*, 52 (5):2590–2603. <https://doi.org/10.1039/C8EN00593A>
- J39 Wang, X.; **Adeleye, A. S.**; Wang, H.; Zhang, M.; Liu, M.; Wang, Y.; Li, Y.; Keller, A. A. (2018). Interactions between polybrominated diphenyl ethers (PBDEs) and TiO₂ nanoparticle in artificial and natural waters. *Water Research*, 146:98–108. <https://doi.org/10.1016/j.watres.2018.09.019>
- J38 **Adeleye, A. S.**; Pokhrel, S.; Mädler, L.; Keller, A. A. (2018). Influence of nanoparticle doping on the colloidal stability and toxicity of copper oxide nanoparticles in synthetic and natural waters. *Water Research*, 132:12–22. <https://doi.org/10.1016/j.watres.2017.12.069>
- J37 Goodwin Jr., D. G.*; **Adeleye, A. S.***; Sun, L.; Ho, K.; Burgess, R.; Petersen, E. J. (2018). Detection and Quantification of graphene family nanomaterials in the environment. *Environmental Science & Technology*, 52 (8):4491–4513. <https://doi.org/10.1021/acs.est.7b04938>
- J36 Su, Y.; Qian, D.; **Adeleye, A. S.**; Zhang, J.; Zhou, X.; Jassby, D.; Zhang, Y. Impact of ageing on the fate of molybdate-zerovalent iron nanohybrid and its subsequent effect on Cyanobacteria (*Microcystis aeruginosa*) growth in aqueous media. *Water Research*, 140:135–147. <https://doi.org/10.1016/j.watres.2018.04.037>
- J35 **Adeleye, A. S.**; Wang, X.; Wang, F.; Hao, R.; Song, W.; Li, Y. (2018). Photoreactivity of graphene oxide (GO) in aqueous system: Reactive oxygen species formation and bisphenol A degradation. *Chemosphere*, 195:344–350. <https://doi.org/10.1016/j.chemosphere.2017.12.095>
- J34 Stevenson, L. M.; **Adeleye, A. S.**; Su, Y.; Zhang, Y.; Keller, A. A.; Nisbet, R. M. (2017). Remediation of cadmium toxicity by sulfidized nano-iron: the importance of organic material. *ACS Nano*, 11 (10):10558–10567. <https://doi.org/10.1021/acsnano.7b05970>
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- J31 Zhao, L.; Hu, Q.; H, Y.; Fulton, A. N.; Hannah-Bick, C.; **Adeleye, A. S.**; Keller, A. A. (2017). Activation of antioxidant and detoxification gene expression in cucumber plants exposed to a Cu(OH)₂ nanopesticide. *Environmental Science: Nano*, 4: 1750–1750. <https://doi.org/10.1039/C7EN00358G>
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- J29 Stevenson, L. M.; Krattenmaker, K. E.; Johnson, E.; Bowers, A. J.; **Adeleye, A. S.**; McCauley, E.; Nisbet, R. M. (2017). Standardized toxicity testing may underestimate nanotoxicity:

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- J24 Zhao, L.; Hu, J.; Huang, Y.; Wang, H.; **Adeleye, A. S.**; Ortiz, C.; Keller, A. A. (2017) ¹H NMR and GC-MS based metabolomics reveal nano-Cu altered cucumber (*Cucumis sativus*) fruit nutritional supply. *Plant Physiology and Biochemistry*, 110:138–146. <https://doi.org/10.1016/j.plaphy.2016.02.010>
- J23 **Adeleye, A. S.**; Keller, A. A. (2016). Interactions between algal extracellular polymeric substances and commercial TiO₂ nanoparticles in aqueous media. *Environmental Science & Technology*, 50 (22):12258–12265. <https://doi.org/10.1021/acs.est.6b03684>
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- J20 Zhao, L.; Ortiz, C.; **Adeleye, A. S.**; Hu, Q.; Zhou, H.; Huang, Y.; Keller, A. A. (2016). Metabolomics to detect response of lettuce (*Lactuca sativa*) to Cu(OH)₂ nano-pesticides: Oxidative stress response and detoxification mechanisms. *Environmental Science & Technology*, 50 (17):9697–9707. <https://doi.org/10.1021/acs.est.6b02763>
- J19 Zhao, L.; Huang, Y.; Zhou, H.; Hu, Q.; **Adeleye, A. S.**; Wang, H.; Ortiz, C.; Mazer, S. J.; Keller, A. A. (2016). GC-TOF-MS based metabolomics and ICP-MS based metallomics of cucumber (*Cucumis sativus*) fruits reveal alteration of metabolites profile and biological pathway disruption induced by nano copper. *Environmental Science: Nano*, 3:1114 – 1123. <https://doi.org/10.1039/C6EN00093B>
- J18 **Adeleye, A. S.***; Stevenson, L. M.*; Su, Y.*; Nisbet, R. M.; Zhang, Y.; Keller, A. A. (2016). Influence of phytoplankton on fate and effects of modified zero-valent iron nanoparticles. *Environmental Science & Technology*, 50 (11):5597–5605. <https://doi.org/10.1021/acs.est.5b06251>

- J17 Du, T.; Wang, Y.; Yang, X.; Wang, W.; Guo, H.; Xiong, X.; Gao, R.; Wuli, X.; **Adeleye, A. S.**; Li, Y. (2016). Mechanisms and kinetics study on the trihalomethanes formation with carbon nanoparticle precursors. *Chemosphere*, 154 (0):391–397. <https://doi.org/10.1016/j.chemosphere.2016.04.002>
- J16 Su, Y.; **Adeleye, A. S.**; Huang, Y.; Zhou, X.; Keller, A. A.; Zhang, Y. (2016). Direct synthesis of novel and reactive sulfide-modified nano iron through nanoparticle seeding for improved cadmium-contaminated water treatment. *Scientific Reports*, 6:24358. <https://doi.org/10.1038/srep24358>
- J15 **Adeleye, A. S.**; Conway, J. R.; Garner, K.; Huang, Y.; Su, Y.; Keller, A. A. (2016). Engineered nanomaterials for water treatment and remediation: Costs, benefits, and applicability. *Chemical Engineering Journal*, 286:640–662. <https://doi.org/10.1016/j.cej.2015.10.105> (Cover-page article for Issue 286)
- J14 Torres-Duarte, C.; **Adeleye, A. S.**; Pokhrel, S.; Mädler, L.; Keller, A. A.; Cherr, G. N (2016). Developmental effects of two different copper oxide nanomaterials in sea urchin (*Lytechinus pictus*) embryos. *Nanotoxicology*, 10 (6):671–679. <https://doi.org/10.3109/17435390.2015.1107145>
- J13 Zhao, L.; Huang, Y.; Hu, J.; Hongjun, Z.; **Adeleye, A. S.**; Keller, A. A. (2016). ¹H NMR and GC-MS based metabolomics reveal defense and detoxification mechanism of cucumber plant under nano-Cu stress. *Environmental Science & Technology*, 50 (4):2000–2010. <https://doi.org/10.1021/acs.est.5b05011>
- J12 Wang, H.; **Adeleye, A. S.**; Huang, Y.; Li, F; Keller, A. A. (2015). Heteroaggregation of nanoparticles with biocolloids and geocolloids. *Advances in Colloid and Interface Science*, 226 (0), 24–36. <https://doi.org/10.1016/j.cis.2015.07.002>
- J11 **Adeleye, A. S.**; Conway, J. R.; Perez, T.; Rutten, P.; Keller A. A. (2014). Influence of extracellular polymeric substances on the long-term fate, dissolution and speciation of copper-based nanoparticles. *Environmental Science & Technology*, 48 (21):12561–12568. <https://doi.org/10.1021/es5033426>
- J10 Su, Y.; **Adeleye, A. S.**; Keller, A. A.; Huang, Y.; Dai, C.; Zhou, X.; Zhang, Y. (2015). Magnetic sulfide-modified nanoscale zerovalent iron (S-nZVI) for dissolved metal ion removal. *Water Research*, 74:47–57. <https://doi.org/10.1016/j.watres.2015.02.004>
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- J8 Hong, J.; Rico, C.; Zhao, L.; **Adeleye, A. S.**; Keller, A. A.; Peralta-Videa, J.; Gardea-Torresday, J. (2015). Toxic effects of copper-based nanoparticles or compounds to lettuce (*Lactuca sativa*) and alfalfa (*Medicago sativa*). *Environmental Science: Processes & Impacts*, 17 (1):177–185. <https://doi.org/10.1039/C4EM00551A>
- J7 Aceves Bueno, E.; **Adeleye, A. S.**; Bradley, D.; Brandt, W.; Callery, P.; Feraud, M.; Garner, K.; et al. (2015). Citizen science as an approach for overcoming insufficient monitoring and inadequate stakeholder buy-in in adaptive management: Criteria and evidence. *Ecosystems*, 18(3):493–506. <https://doi.org/10.1007/s10021-015-9842-4>

- J6 **Adeleye, A. S.**; Keller, A.A. (2014). Long-term colloidal stability and metal leaching of single wall carbon nanotubes: Effect of temperature and extracellular polymeric substances. *Water Research*, 49:236–250. <https://doi.org/10.1016/j.watres.2013.11.032>
- J5 Priester, J.; Van De Werfhorst, L.; Ge, Y.; **Adeleye, A. S.**; Tomar, S.; Tom, L.; M. Piceno, Y.; Andersen, G.; Holden, P. (2014). Effects of TiO₂ and Ag nanoparticles on polyhydroxybutyrate biosynthesis by activated sludge bacteria. *Environmental Science & Technology*, 48 (24):14712–14720. <https://doi.org/10.1021/es504117x>
- J4 Su, Y.; **Adeleye, A. S.**; Huang, Y.; Sun, X.; Dai, C.; Zhou, X.; Zhang, Y.; Keller, A. A. (2014). Simultaneous removal of cadmium and nitrate in aqueous media by nanoscale zerovalent iron (nZVI) and Au doped nZVI particles. *Water Research*, 63:102–111. <https://doi.org/10.1016/j.watres.2014.06.008>
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- J2 **Adeleye, A. S.**; Keller A. A.; Miller, R. J.; Lenihan, H. S. (2013). Persistence of commercial nanoscaled zero-valent iron (nZVI) and by-products. *Journal of Nanoparticle Research*, 15:1418. <https://doi.org/10.1007/s11051-013-1418-7>
- J1 Bennett, S.; **Adeleye, A. S.**; Ji, Z.; Keller, A. A. (2013). Stability, metal leaching, photoactivity and toxicity in freshwater systems of commercial single wall carbon nanotubes. *Water Research*, 47(12):4074–4085. <https://doi.org/10.1016/j.watres.2012.12.039>

NON-PEER-REVIEWED PUBLICATIONS

- N2 **Adeleye, A. S.**; Gude, V. G.; Ladner, D. A. (2025). AEESP Spotlight: Early 2025. *Environmental Engineering Science*, 42(2):51–52. <https://doi.org/10.1089/ees.2025.0009>
- N1 **Adeleye, A. S.**; Deng, B.; Gude, V. G.; Ladner, D. A. (2024). AEESP Spotlight: Early 2024. *Environmental Engineering Science*, 41(2):41–42. <https://doi.org/10.1089/ees.2024.0005>

BOOK CHAPTERS

- C1 Han, Z.; **Adeleye, A. S.**; Keller, A. A. (2021). Engineered nanomaterials for water treatment. In *Reference Module in Materials Science and Materials Engineering*, Elsevier. ISBN 9780128035818. <https://doi.org/10.1016/B978-0-12-822425-0.00041-5>

FELLOWSHIPS, AWARDS & HONORS

Agilent Early Career Professor Award (AECPA) Agilent Technologies	2024
Emerging Investigator Award Sustainable Nanotechnology Organization	2022
C&EN's 2022 Talented 12 Award Chemical & Engineering News	2022
2021-2022 Hellman Fellowship Award Society of Hellman Fellows	2021
Emerging Investigator Paper Award Environmental Science: Nano	2021
Excellence in Review Award Environmental Science & Technology (ES&T)	2019
Peer Review Awards (Top 1% in Environment/Ecology) Publons' Global Peer Review Awards	2018
Certificate of Outstanding Contribution in Reviewing Science of the Total Environment (STOTEN)	2018
National Research Council (NRC) Research Associateship National Academies of Sciences Engineering and Medicine	2016
Best Academic Young Researcher Presentation Award 2016 National Environmental Monitoring Conference (NEMC)	2016
Student Merit Award, ENM Specialty Group Society for Risk Analysis (SRA)	2015
Travel Award Society for Risk Analysis (SRA)	2015
Graduate Student Award American Chemical Society (ACS) Division of Environmental Chemistry	2015
Dean's Fellowship University of California, Santa Barbara	2014
Student Travel Award Sustainable Nanotechnology Organization (SNO)	2013
Student Travel Grant American Geophysical Union (AGU)	2013

Earth Research Institute Travel Award University of California, Santa Barbara	2013
Symposium Award American Chemical Society (ACS) Division of Environmental Chemistry	2012
Michael J. Connell Memorial Fellowship Bren School of Environmental Science & Management, UCSB	2012
Student Travel Award Sustainable Nanotechnology Organization (SNO)	2012
Certificate of Merit American Chemical Society (ACS) Division of Environmental Chemistry	2012
Michael J. Connell Memorial Fellowship Bren School of Environmental Science & Management, UCSB	2010
Sustainable Energy Development Fellowship Global Sustainable Electricity Partnership	2009
Best Graduating Student in Department of Microbiology Obafemi Awolowo University, Ile-Ife, Nigeria	2006
Best Graduating Student in Faculty of Science Obafemi Awolowo University, Ile-Ife, Nigeria	2006

INVITED RESEARCH TALKS

Adeleye, A. S. “Per- and polyfluoroalkyl substances in household wastewater and advanced treatment technologies” Presented at the Department of Civil and Environmental Engineering, New Jersey Institute of Technology, November 3, 2025

Adeleye, A. S. “What Can Nanotechnology Contribute to the Closer-to-Zero Initiative?” Presented at the 2025 Environmental Nanotechnology Gordon Research Conference, Newry, ME, June 4, 2025

Adeleye, A. S. “Controlling metal mobility at the soil-plant interface using nanotechnology” Presented at the 2025 NSLS-II and CFN User’ Meeting, Brookhaven National Laboratory, Upton, NY, April 28, 2025

Adeleye, A. S. “The Potential of Nanoscale Iron to Contribute to the "Closer-to-Zero" Goal” Presented at The Connecticut Agricultural Experiment Station (CAES) Seminar Series, January 22, 2025

Adeleye, A. S. “PFAS: Where are they coming from? What are the significant sources?” Presented at the California Stormwater Quality Association (CASQA) Seminar Series, July 11, 2024 (Virtual)

Adeleye, A. S. “How much PFAS are in wastewater generated at homes?” Presented at the Department of Chemistry, City University of New York/ Lehman College, City University of New York, April 10, 2024

Adeleye, A. S. “How much per- and polyfluoroalkyl substances (PFAS) do households contribute to municipal wastewater?” Presented during the "Speaking of Water" Colloquium by Water UCI, University of California, Irvine, March 8, 2024 (Virtual)

Adeleye, A. S. “Translating classroom science education to real-world solutions: The heavy metal example”. Presented during the 33rd Leonard A. Ford Lectureship at Department of Biochemistry, Chemistry, & Geology, Minnesota State University, Mankato, September 18, 2023

Adeleye, A. S. “Using basic chemistry concepts to address the global problem of heavy metals in food”. Presented during the 33rd Leonard A. Ford Lectureship at Department of Biochemistry, Chemistry, & Geology, Minnesota State University, Mankato, September 18, 2023

Adeleye, A. S. “Role of iron chemistry in the ‘Closer to Zero’ initiative”. Presented at the Bren School of Environmental Science & Management, University of California, Santa Barbara, May 21, 2023

Adeleye, A. S. “Metal(loid) immobilization in agricultural systems using nanosized iron”. Presented at the Civil, Architectural and Environmental Engineering (CAEE) Department, Drexel University, May 16, 2023 (Virtual)

Adeleye, A. S. “Adsorption of PFAS to microplastics in aquatic systems: Role of water chemistry and plastic aging”. Presented at the Southern California Academy of Sciences Annual Meeting, May 5, 2023, Santa Barbara, CA

Adeleye, A. S. “Determining the contribution of households to PFAS loading in raw wastewater.” Presented to the Ramboll California PFAS BD Team Meeting, April 18, 2023 (Virtual)

Adeleye, A. S. “What’s Next in NanoEHS: The Young Professional’s Perspective”. Panel member for the National Nanotechnology Initiative (NNI) Public NanoEHS Webinar, March 28, 2023

Adeleye, A. S. “The role of nanosized iron particles in achieving the ‘Closer to Zero’ initiative”. Presented at the School of Civil & Environmental Engineering, and Construction Management, The University of Texas at San Antonio, March 24, 2023 (Virtual)

Adeleye, A. S. “Addressing the problem of metal contamination in agricultural systems using nanoscale iron and machine learning”. Presented at the Online Academic Salon on Environmental Health of Nankai University, China, February 21, 2023 (Virtual)

Adeleye, A. S. “The past, present, and (one) future of environmental nanoremediation”. A plenary presented at the 11th Sustainable Nanotechnology Organization (SNO) Conference, November 3–5, 2022, Austin, TX

Adeleye, A. S. “Synergistic removal of water contaminants by nanoparticulate iron and application of artificial neural network”. Presented at the 11th Sustainable Nanotechnology Organization (SNO) Conference, November 3–5, 2022, Austin, TX

Adeleye, A. S. “The role of nanoscale zerovalent iron in achieving the ‘Closer to Zero’ initiative”. Presented at the Department of Earth & Environmental Engineering, Columbia University, October 27, 2022

Adeleye, A. S. “Kinetics and Thermodynamics of Interactions between Microplastics and PFAS in Water”. Presented at the REMTEC & Emerging Contaminants Summit, October 4 – 6, 2022, Westminster, CO

Adeleye, A. S. “Pollution control in agricultural systems using nanoscale iron and machine learning”. Presented at the Department of Civil, Structural and Environmental Engineering, University at Houston, September 9, 2022 (Virtual)

Adeleye, A. S. “Sustainable nanoremediation for agricultural systems”. Presented at the Department of Civil, Structural and Environmental Engineering, The University at Buffalo, April 1, 2022 (Virtual)

Adeleye, A. S. “Using chemical and mathematical approaches to improve the sustainability of nanoremediation”. Presented at Ira A. Fulton Schools of Engineering, Arizona State University, December 7, 2021 (Virtual)

Adeleye, A. S. “Improving the sustainability of nanoremediation through chemical and mathematical approaches”. Presented at the 10th Sustainable Nanotechnology Conference, November 3–5, 2021 (Virtual)

Adeleye, A. S. “Immobilization of arsenic in soil using iron nanoparticles: chemistry, performance, and environmental impact”. Presented at Department of Civil, Architectural & Environmental Engineering, North Carolina A & T University, April 16, 2021 (Virtual)

Adeleye, A. S. “Advances towards the practical realization of environmental nano-remediation.” Presented at Air & Waste Management Association’s (AWMA) Nanotechnology Technical Coordinating Committee Webinar, October 30, 2020

Adeleye, A. S. “Green chemistry approaches for improving the sustainability of pollution remediation”. Presented at Bren School of Environmental Science & Management, University of California, Santa Barbara, June 1, 2020 (Virtual)

Adeleye, A. S. “Transformation of graphene oxide in natural waters and engineered systems.” Presented at the 2D Nanomaterials for Human Health and the Environment workshop, November 6, 2019, San Diego, CA

Adeleye, A. S. “Environmental application and implication of nanotechnology.” Presented at the monthly Orange County American Chemical Society Meeting, March 28, 2019, Irvine, CA

Adeleye, A. S. “Biogeochemistry of engineered nanomaterials in natural waters”. Presented at Civil and Environmental Engineering Department, University of California at Irvine, February 2, 2018, Irvine, CA

Adeleye, A. S. “Environmental applications and implications of engineered nanomaterials: Influence of biogeochemical interactions”. Presented at Civil and Environmental Engineering Department, University of Pittsburgh, January 19, 2018, Pittsburgh, PA

Adeleye, A. S. “Influence of biogeochemical interactions on the fate and transformations of engineered nanomaterials in the environment”. Presented at Chemistry Department, University of Central Florida, October 9, 2017, Orlando, FL

Adeleye, A. S.; Keller, A. A. “Release and detection of nanosized copper from a commercial antifouling paint”. Invited presentation at the 26th Annual International Conference on Soil, Water, Energy, and Air, March 21–24, 2016, San Diego, CA

Adeleye, A. S.; Stevenson, L. M.; Su, Y.; Nisbet, R. M.; Zhang, Y.; Keller, A. A. “Influence of phytoplankton and their organic matter on fate and effects of iron nanoparticles”. Invited presentation at the Environmental Nanotechnology Gordon Research Seminar, June 20–21, 2015, West Dover, VT

CONFERENCE PRESENTATIONS

Cookson, E. S.; Detwiler, R. L.; Han, Z.; **Adeleye, A. S.** “Irreversible sorption and dynamic partitioning of PFAS in wetland sediments”. Presented at the American Geophysical Union 2025 Fall Meeting, December 15–19, 2025, New Orleans, LA

Adeleye, A. S.; Han, Z.; Lee, S.; White, J. C. “Arsenic immobilization and removal from an agricultural soil using nanosized iron: The influence of phosphate”. Presented at the 14th Sustainable Nanotechnology Organization (SNO) Conference, November 7–9, 2025, San Diego, CA

Lee, S.; **Adeleye, A. S.** Mechanistic study on the influence of phosphate on arsenate immobilization by nanosized iron particles in soil. Presented at the American Chemical Society National Fall 2025 Meeting, August 17–21, 2025, Washington, D.C.

Sharma, S.; Dimkpa, C.; **Adeleye, A. S.;** Hsiao, B.; Fiarbrother, H.; White, J. Small solutions to a huge problem: The potential of cellulose microfibers and nano zerovalent iron to reduce heavy metal uptake in food crops. Presented at the American Chemical Society National Fall 2025 Meeting, August 17–21, 2025, Washington, D.C.

Lee, S.; Mitchell, E. K.; Czekaj, E. A.; **Adeleye, A. S.** Applicability of nanotechnology for remediating heavy metal-contaminated agricultural soils. Presented at the American Chemical Society National Fall 2025 Meeting, August 17–21, 2025, Washington, D.C.

Cookson, E. S.; Han, Z.; Detwiler, R. L.; **Adeleye, A. S.** “Quantifying low concentration in-situ field partitioning of PFAS in vadose zone sediments”. Presented at InterPore2025, May 19–22, 2025, Albuquerque, NM

Adeleye, A. S.; Han, Z.; White, J. C. “Silica-coating of nanoscale iron prevents arsenic bioaccumulation in lettuce (*Lactuca sativa*)”. Presented at the 13th Sustainable Nanotechnology Organization (SNO) Conference, November 8–10, 2024, Providence, RI

Adeleye, A. S.; Han, Z.; White, J. C. “2023-67017-40721 PARTNERSHIP: Nanoparticulate soil amendments for achieving Closer to Zero via metal(loid) encapsulation”. Presented at the Nanoscale Science and Engineering for Agriculture and Food Systems Gordon Research Conference, June 23–28, 2024, Manchester, NH

Adeleye, A. S.; Han, Z. “Iron-based amendments decrease bioaccumulation of arsenic in lettuce grown in contaminated soil”. Presented at the American Chemical Society National Spring 2024 Meeting, March 17–21, 2024, New Orleans, LA

Adeleye, A. S.; Senehi, N.; Salawu, O.; Han, Z. “How much PFAS does an individual contribute to municipal wastewater?”. Presented at the American Chemical Society National Spring 2024 Meeting, March 17–21, 2024, New Orleans, LA

Han, Z.; **Adeleye, A. S.** “Mechanisms of arsenic immobilization by iron nanoparticles in a cultivated soil: Arsenic speciation and the role of iron sulfidation”. Presented at the American Chemical Society National Spring 2024 Meeting, March 17–21, 2024, New Orleans, LA

Cookson, E. S.; Han, Z.; **Adeleye, A. S.**; Detwiler, R. L. Insights into historical concentrations and partitioning of PFAS from secondary sources in a large urban watershed. Presented at the AGU Fall Meeting, December 11–15, 2023, San Francisco, CA

Han, Z.; **Adeleye, A. S.** “Iron nanoparticles immobilized arsenic in a cultivated soil and decreased its uptake from soil by lettuce”. Presented at the 12th Sustainable Nanotechnology Organization (SNO) Conference, November 10–12, 2023, Marina del Rey, CA

Lai, J-W; Han, Z.; **Adeleye, A. S.** “Iron-based nanoparticles and nano-hybrids immobilized arsenic and lead in mining-impacted soil”. Presented at the 12th Sustainable Nanotechnology Organization (SNO) Conference, November 10–12, 2023, Marina del Rey, CA

Salawu, O. A.; **Adeleye, A. S.** “Influence of water chemistry and microplastics ageing on the adsorption of per- and polyfluoroalkyl substances to secondary microplastics”. Presented at the American Chemical Society National Fall 2023 Meeting, August 13–17, 2023, San Francisco, CA

White, J. C.; Ali, A.; Dhankher, O. P.; Sharma, S.; Ma, C.; **Adeleye, A. S.**; Xing, B. “Nanoscale soil amendments to decrease toxic metal accumulation in and toxicity to food crops”. Presented at the American Chemical Society National Fall 2023 Meeting, August 13–17, 2023, San Francisco, CA

Adeleye, A. S.; Han, Z.; Senehi, N. L. “Multiscale approach to assessing the contribution of households to PFAS in raw wastewater”. Presented at the 2023 AEESP Research and Education Conference, June 20–23, 2023, Boston, MA

Han, Z.; Zenobio, J. E.; Salawu, O. A.; **Adeleye, A. S.** “Adsorption of per- and polyfluoroalkyl substances (PFAS) onto containers: Role of container polymer, solution type, and temperature”. Presented at the 2023 AEESP Research and Education Conference, June 20–23, 2023, Boston, MA

Adeleye, A. S.; Han, Z. “Understanding the pathway of arsenic immobilization in cultivated soils by nanoscale iron”. Presented at the Environmental Nanotechnology Gordon Research Conference, June 4–9, 2023, Newry, ME

Mohanty, S.K.; Das, T.; Han, Z.; Banerjee, S.; **Adeleye, A.S.** PFAS release from the capillary fringe under groundwater fluctuation. Presented at The University Consortium Annual Meeting (Virtual), May 31-June 2, 2023

Cookson, E. S.; Detwiler, R. L.; Han, Z.; **Adeleye, A. S.** Measuring the distribution of PFAS in sediments to infer historical surface water concentrations. Presented at the AGU Fall Meeting, December 12–16, 2022, Chicago, IL

Adeleye, A. S.; Zenobio, J. E.; Salawu, O. A. “Adsorption capacity and thermodynamics of interactions between microplastics and PFAS in water”. Presented at the 11th Sustainable Nanotechnology Organization (SNO) Conference, November 3–5, 2022, Austin, TX

Khan, B.; Zahra, Z.; Holohan, B. A.; Ward, J. E.; **Adeleye, A. S.**; Langknecht, T.; Burgess, R. M.; Ho, K. T. Effects of micro- and nano-scale plastic exposures in blue mussels, *Mytilus edulis*. Presented at the SETAC North America 43rd Annual Meeting, November 13–17, 2022, Pittsburgh, PA

Ogunkunle, C. O.; Balogun, G. Y.; Han, Z.; **Adeleye, A. S.**; Awe, A. A.; Fatoba, P. O. Foliar exposure of Cd-stressed okra plants to CeO₂-NPs unaltered Cd bioaccumulation but declined fruit Cd contents and enhanced fruit nutritional quality by modulating stress enzymes. Presented at the SETAC North America 43rd Annual Meeting, November 13–17, 2022, Pittsburgh, PA

Adeleye, A. S.; Han, Z.; Oyeyemi, B. F.; Zenobio, J. E. “Adsorption capacity and thermodynamics of interactions between microplastics and PFAS in water.” Presented at the 11th Sustainable Nanotechnology Organization (SNO) Conference, November 3–5, 2022, Austin, TX

Adeleye, A. S.; Han, Z.; Oyeyemi, B. F.; Zenobio, J. E. “Impact of per- and polyfluoroalkyl substances (PFAS) contamination in soil on the survival and metabolomic profile of *Eisenia fetida*”. Presented at the 2022 AEESP Research and Education Conference, June 28–30, 2022, St. Louis, MS

Senehi, N. L.; Zenobio, J. E.; Salawu, O. A.; Han, Z.; **Adeleye, A. S.** “Global trends in contributions and compositions of PFAS in wastewater by discharger type”. Presented at the 2022 AEESP Research and Education Conference, June 28–30, 2022, St. Louis, MS

Salawu, O. A.; **Adeleye, A. S.** “Roles of compounds and water chemistries in the adsorption of per- and polyfluoroalkyl substances to microplastics”. Presented at the 2022 AEESP Research and Education Conference, June 28–30, 2022, St. Louis, MS

Han, Z.; **Adeleye, A. S.** “Enhanced simultaneous removal of dissolved copper and phosphate by nanoscale iron”. Presented at the 2022 AEESP Research and Education Conference, June 28–30, 2022, St. Louis, MS

Zenobio, J. E.; Han, Z.; **Adeleye, A. S.** “Interactions between microplastics and per- and polyfluoroalkyl substances (PFAS): Implications in terrestrial environments”. Presented at the 2022 Emerging Contaminants in the Environment Conference, April 27–28, 2022, (Virtual)

Salawu, O. A.; Han, Z.; Senehi, N. L.; **Adeleye, A. S.** “Multiscale approach to assessing PFAS from residences into the sewershed”. Presented at Water UCI’s Speaking of Water 2022, March 30, 2022, Irvine, CA

Salawu, O. A.; **Adeleye, A. S.** “Interactions between secondary microplastics and per- and polyfluoroalkyl substances”. Presented at the 263rd American Chemical Society National Meeting, March 20–24, 2022, San Diego, CA

Han, Z.; **Adeleye, A. S.** “Simultaneous removal of copper and phosphate by pristine and modified nanoscale zero-valent iron: Mechanisms and application of machine learning”. Presented at the 10th Sustainable Nanotechnology Conference, November 3–5, 2021, (Virtual)

Salawu, O. A.; Han, Z.; Zenobio, J.; **Adeleye, A. S.** “Experimental and DFT studies of the adsorptive properties of porous carbon derived from shrimp shell”. Presented at the 262nd American Chemical Society National Meeting, August 22–26, 2021, Atlanta, GA

Han, Z.; **Adeleye, A. S.** “Simultaneous removal copper and phosphate in aqueous media by pristine and sulfidated nanoscale zero-valent iron: Application of artificial neural network”. Presented at the 262nd American Chemical Society National Meeting, August 22–26, 2021, Atlanta, GA

Han, Z.; Salawu, O. A.; Zenobio, J.; Zhao, Y.; **Adeleye, A. S.** “Effect of sulfidation on the application and ecotoxicity of nanoscale zero-valent iron in soil”. Presented at the 262nd American Chemical Society National Meeting, August 22–26, 2021, Atlanta, GA

Han, Z.; Salawu, O. A.; Zenobio, J.; Zhao, Y.; **Adeleye, A. S.** “Sustainability of arsenic immobilization in soil by iron nanoparticles and application of machine learning”. Presented at the 2021 Remediation Technology (REMTEC) Summit (Virtual), March 9 – 11, 2021 (*Won 3rd Place in the RemTEC 2021 Student Competition*).

Han, Z.; Zhao, Y.; **Adeleye, A. S.** “Remediation of arsenic-contaminated soil by nanoscale zero-valent iron (nZVI) and the biocompatibility of the treatment process: The importance of sulfidation”. Presented at the 2nd Pan-American Nanotechnology Conference, March 4 – 7, 2020, Aguas de Lindoia, São Paulo, Brazil

Salawu, O.A.; Zeng, J.; Zenobio, J.; **Adeleye, A. S.** "Synthesis of manganese-iron oxide nanoparticles embedded on nitrogen-modified porous carbon for selective adsorption of perfluorooctanesulfonate (PFOS) and its precursor from water". Presented at the 2nd Pan-American Nanotechnology Conference, March 4 – 7, 2020, Aguas de Lindoia, São Paulo, Brazil

Salawu, O.A.; **Adeleye, A. S.**; Chanbasha, B. “Biosynthesized silver nanoparticles and electrospun silver-nanoparticle-polyacrylonitrile nanohybrid for mercury (II) adsorption at low concentration”. Presented at the 2nd Pan-American Nanotechnology Conference, March 4 – 7, 2020, Aguas de Lindoia, São Paulo, Brazil

Zhao, Y.; Han, Z.; **Adeleye, A. S.** “Influence of sulfidation of nanoscale zerovalent iron (NZVI) on ciprofloxacin removal”. Presented at the 2nd Pan-American Nanotechnology Conference, March 4-7, 2020, Aguas de Lindoia, São Paulo, Brazil

Adeleye, A. S.; Zhang, M.; Du, T.; Li, Y. “Physicochemical transformation of graphene oxide in aquatic environments”. Presented at the 8th Sustainable Nanotechnology Organization (SNO) Conference, November 7–9, 2019, San Diego, CA, USA

Sun, Y.; Han, Z.; Xue, J.; Zhu, Y.; Zhao, Y.; Zenobio J. E.; **Adeleye, A. S.** “Pharmaceuticals in wastewater treatment plants: Presence, abundance, and fate”. Presented at the 258th American Chemical Society National Meeting, August 25–29, 2019, San Diego, CA (*Won the Environmental Chemistry Division's Certificate of Merit*).

Han, Z.; Zhu, Y.; Sun, Y.; Xue, J.; Zhao, Y.; Zenobio J. E.; **Adeleye, A. S.** “Review of the use of conventional and emerging technologies for removing pharmaceuticals from wastewater”. Presented at the 258th American Chemical Society National Meeting, August 25–29, 2019, San Diego, CA

Adeleye, A. S.; Ho, K. T.; Li, Y.; Zhang, M.; Burgess, R. M. “Long-term transformation of graphene oxide in estuarine and marine waters”. Presented at the Environmental Nanotechnology Gordon Research Conference, June 2–7, 2019, Newry, ME

Li, Y.; **Adeleye, A. S.**; Du, T.; Yang, N.; Zhang, M.; Keller, A. A.; Chen, W. “Carbon nanomaterials transformation during the water and wastewater treatment”. Presented at the Environmental Nanotechnology Gordon Research Conference, June 2–7, 2019, Newry, ME

Adeleye, A. S.; Du, T.; Zhang, M.; Keller, A. A.; Li, Y. “Influence of light wavelength on the photoactivity and fate of graphene oxide in aqueous media”. Presented at the 7th Sustainable Nanotechnology Organization (SNO) Conference, November 8–10, 2018, Washington DC

Khan, B.; **Adeleye, A. S.**; Burgess, R. M.; Ho, K. T.; Smolowitz, R.; Russo, S. “Bivalve responses to graphene oxide nanoparticle exposures”. Presented at the Society of Environmental Toxicology and Chemistry North America 39th Annual Meeting, November 4–9, 2018, Sacramento, CA

Adeleye, A. S.; Minakova, A.; Keller, A. A. “Analysis of the transformation of Cu₂O nanoparticles in natural seawater”. Presented at the 256th American Chemical Society National Meeting, August 19–23, 2018, Boston, MA

Adeleye, A. S.; Burgess, R. M.; Ho, K. T. “Colloidal stability and reduction of graphene oxide in marine waters”. Presented at the 255th American Chemical Society National Meeting, March 18–22, 2018, New Orleans, LA

Khan, B.; **Adeleye, A. S.**; Russo, S.; Burgess, R. M.; Ho, K. T. “A 72-hour graphene oxide nanoparticle exposure study with eastern oysters”. Presented at the National Shellfisheries Association 110th Annual Meeting, March 18–23, 2018, Seattle, WA

Adeleye, A. S.; Ho, K. T.; Burgess, R. M. “Fate and transformation of graphene oxide in marine systems”. Presented at the 6th Sustainable Nanotechnology Organization (SNO) Conference, November 5–7, 2017, Los Angeles, CA

Vignardi, C.; **Adeleye, A. S.**; Oranu, E. A.; Miller, R. J.; Keller, A. A.; Lenihan, H. S. “The toxicity of copper nanoparticles varies with aging in different aquatic environments”. Presented at the 6th Sustainable Nanotechnology Organization (SNO) Conference, November 5–7, 2017, Los Angeles, CA

Adeleye, A. S.; Keller, A. A.; Pokhrel, S.; Lutz, M. “Synthesis and environmental implication of copper nanohybrids in natural waters”. Presented at the 2017 National Environmental Monitoring Conference (NEMC), August 7–11, 2017, Washington DC

Huang, Y.; Zhao, L.; **Adeleye, A. S.**; Anumol, T.; Keller, A. A. “Determination and quantitative of plant metabolites by using triple quadrupole liquid chromatography coupled to mass spectrometry”. Presented at the 253rd American Chemical Society National Meeting, April 2–6, 2017, San Francisco, CA

Adeleye, A. S.; Keller, A. A. “Release and Detection of Nanosized Copper from a Commercial Antifouling Paint”. Presented at the 2016 National Environmental Monitoring Conference (NEMC), August 8–12, 2016, Orange County, CA

Won the *Best Academic Young Researcher Presentation Award*

Keller, A. A.; Su, Y.; **Adeleye, A. S.**; Zhou, X.; Zhang, Y. “Novel magnetic sulfide modified nanoscale zerovalent iron with film-like structure for metal removal”. Presented at the 251st American Chemical Society National Meeting, March 13–17, 2016, San Diego, CA

Adeleye, A. S.; Keller, A. A. “Adsorption of algal extracellular polymeric substances to TiO₂ nanoparticles: Effects on surface properties and fate of nanoparticles”. Presented at the Society for Risk Analysis (SRA) 2015 Annual Meeting, December 6–10, 2015, Arlington, VA
Abstract won the SRA *ENM Specialty Group Student Merit Award*

Keller, A. A.; **Adeleye, A. S.;** Huang, Y.; Garner, K. “Overview of innovative remediation of emerging contaminants”. Presented at American Geophysical Union Fall Meeting, December 14–18, 2015, San Francisco, CA

Adeleye, A. S.; Lin, S.; Nel, A.; Keller, A. A. “Experimental release and aquatic toxicity of copper (nano)particles from marine paints”. Presented at the 4th Sustainable Nanotechnology Organization Conference, November 8–10, 2015, Portland, OR

Adeleye, A. S.; Keller, A. A. “Influence of phytoplankton on fate, transformations, and effects of iron nanoparticles”. Presented at the 250th American Chemical Society National Meeting, August 16–20, 2015, Boston, MA

Keller, A. A.; Wang, H.; **Adeleye, A. S.;** Huang, Y. “Heteroaggregation of nanoparticles with biocolloids and geocolloids”. Presented at the 250th American Chemical Society National Meeting, August 16–20, 2015, Boston, MA

Adeleye, A. S.; Tao, M.; Keller, A. A. “Long term release of nanoparticulate copper from an antifouling paint”. Presented at the Environmental Nanotechnology Gordon Research Conference, June 21–26, 2015, West Dover, VT

Adeleye, A. S.; Stevenson, L. M.; Su, Y.; Nisbet, R. M.; Zhang, Y.; Keller, A. A. “Effect of freshwater algal growth stage on physicochemical properties, transformations, and toxicity of iron nanoparticles”. Presented at the Society of Environmental Toxicology and Chemistry Europe 25th Annual Meeting, May 3–7, 2015, Barcelona, Spain

Adeleye, A. S.; Keller, A. A. “Effect of extracellular polymeric substances on the fate and transformation of engineered nanomaterials”. Presented at the 249th American Chemical Society National Meeting, March 22–26, 2015, Denver, CO

Adeleye, A. S.; Tao, M.; Keller, A. A. “Release of nanosized copper particles from an antifouling paint”. Presented at the Society of Environmental Toxicology and Chemistry North America 35th Annual Meeting, November 9–13, 2014, Vancouver, Canada

Adeleye, A. S.; Keller, A. A. “Long-term dissolution of copper-based nanoparticles in aqueous media: Effects of extracellular polymeric substances, pH, and ionic strength”. Presented at the 248th American Chemical Society National Meeting, August 10–14, 2014, San Francisco, CA

Adeleye, A. S.; Keller, A. A. “Influence of extracellular polymeric substances on CuO nanoparticle dissolution and colloidal stability”. Presented at the American Geophysical Union Fall Meeting, December 9–13, 2013, San Francisco, CA

Adeleye, A. S.; Keller, A. A. “Extracellular polymeric substances stabilize carbon nanotubes in aqueous phase”. Presented at the 2nd Sustainable Nanotechnology Organization Conference, November 3–5, 2013, Santa Barbara, CA

Adeleye, A. S.; Keller, A. A.; Miller, R. J.; Lenihan, H. S. “Persistence of commercial nanoscale zero-valent iron (nZVI) and its by-products”. Presented at the 244th American Chemical Society National Meeting, August 19–23, 2012, Philadelphia, PA
Won a *Symposium Award* for the presentation

Adeleye, A. S.; Keller, A. A. “Long-term colloidal stability and metal leachate of carbon nanotubes in natural waters”. Presented at the 1st Sustainable Nanotechnology Organization Conference, November 4–6, 2012, Arlington, VA

Adeleye, A. S.; Huang, D.; Layton, Z.; Twining, J.; Paladugu, S. “A condensed EH&S reference for nanotechnology startups (CERNS)”. Presented at the International Conference on Environmental Implications of Nanotechnology, May 9–10, 2011, Durham, NC

TEACHING (UGL = Undergraduate level; Grad = Graduate level)

Instructor, Columbia University, New York

- | | |
|---|-------------|
| • EAEE 2100 A Better Planet By Design (UGL) | 2024 – Date |
| • EAEE 4103 Environmental Soil Chemistry (UGL/Grad) | 2025 – Date |

Instructor, University of California, Irvine

- | | |
|---|-------------|
| • ENGRCEE 162 Introduction to Environmental Chemistry (UGL) | 2019 – 2023 |
| • ENGRCEE 262 Environmental Chemistry II (Grad) | 2019 – 2023 |
| • ENGRCEE 60 Contemporary and Emerging Environmental Challenges (UGL) | 2020 – 2023 |

GRADUATE STUDENT MENTORING

Ph. D. Committees

Name	Date Completed	Role	Current Position
Omobayo Salawu	2023	Chair	Senior R&D Lab Chemist, Lummus Technology
Ziwei Han	2024	Chair	Scientist at Enthalpy Analytical
Suhyun Lee	In progress	Chair	N/A
Kwasi Kyere-Yeboah	In progress	Chair	N/A

M. S. Committees (Thesis-Based; at Columbia University unless specified otherwise)

Name	Date Completed	Role
Ziwei Han (UCI)	2020	Chair
Preston Clubb (MSU)	2024	Committee member
Sarah Center	2024	Chair
Tong Li	2025	Chair
Runze Tian	2025	Chair

POSTDOCTORAL RESEARCHERS MENTORING

Name	Dates	Current Position
Jingyi Zhou	2026-Date	N/A
Aidan Meese	2025-Date	N/A
Jenny Zenobio Euribe	2019-2021	Environmental Engineer at Jacobs

OTHER RESEARCH MENTORING (UG = Undergraduate student)

Name	Project Title	Date	Role
Rama Bedri	Enhancing phytoremediation of heavy metal-contaminated soils	2025	PI
Emily Mitchell	Enhancing the mobility of arsenate with nanoscale hydroxyapatite	2025	PI
Elizabeth Czekaj	Modifying biochar for short-chain PFAS adsorption	2025	PI
Naomi Senehi	Survey of PFAS in residential wastewater	2021-23	PI
Zachary Wharton (UG)	A factorial design analysis of arsenic removal using nanoscale zero-valent iron (<i>Honors Thesis</i>)	2022-23	PI
Adriana Varela (UG)	Influence of polyethylene microplastics in the uptake of PFAS by earthworms.	2021-22	PI
Yurong Zhu (UG)	Influence of per- and polyfluoroalkyl substances on the colloidal stability of TiO ₂ nanoparticles	2018-21	PI
Junya Zeng	Synthesis of nitrogen- and sulfur-modified activated carbon for sulfanamide removal	2019-20	PI
Jie Xue	Quantification of microplastics in Southern California drinking water	2018-20	PI

UNIVERSITY COMMITTEES AND APPOINTMENTS

Earth & Environmental Engineering Department, Columbia University
Member, Graduate Affairs Committee (2026-Date)

Lecturer Search Committee (2024, 2025)

Fu Foundation School of Engineering and Applied Science, Columbia University
Member, SURE Cohort Selection Committee (2025-Date)

Civil & Environmental Engineering Department, University of California, Irvine
Associate Director, Water and Energy Nexus (WEX) Center (2022-2023)

Chair, Diversity, Equity, and Inclusion Committee (2022-Date)

Member, Laboratory Committee (2020-2022)

Faculty Search Committee (2020, 2021, 2022)

LEADERSHIP, SERVICE, AND PROFESSIONAL ACTIVITIES

Service

Associate Chair of the Publication Committee, Association of Environmental Engineering and Science Professors (AEESP; 2026-Date)

Member of the Publication Committee, Association of Environmental Engineering and Science Professors (AEESP; 2023-Date)

Academic Advisory Board member for the Annual Rising Black Scientists Awards. Presented by Cell Press, Cell Signaling Technology, and the Elsevier Foundation (2023, 2024)

Project Advisory Committee member for the Water Research Foundation (2023-2024)

U.S. co-chair for the U.S.-EU Nanotechnology Community of Research (COR) on Ecotoxicity (2018-2021)

Conference/Symposia organization

Co-chair of “Sources, fate, and effects of nano/microplastics” Session. Organized at the 14th Sustainable Nanotechnology Organization (SNO) Conference, November 7–9, 2025, San Diego, CA

Co-chair of “Tackling World Hunger Convergent Chemistry Community” Symposium. Organized at the American Chemical Society National Meeting, March 23–27, 2025, San Diego, CA

Co-chair of “NanoSustainability” Session. Invited to co-chair the session at the 13th Sustainable Nanotechnology Organization (SNO) Conference, November 8–10, 2024, Providence, RI

Conference co-chair of 12th Sustainable Nanotechnology Organization (SNO) Conference, November 10–12, 2023, Marina del Rey, CA

Co-chair of “Fate and transport” Session. Invited to co-chair the session at the 11th Sustainable Nanotechnology Organization (SNO) Conference, November 3–5, 2022, Austin, TX

Co-chair of “Advanced (Nano)Materials, Membranes & Manufacturing for Water Treatment and Reuse” Symposium. Organized at the 263rd American Chemical Society National Meeting, March 20–24, 2022, San Diego, CA

Co-chair of “Fate and transport” Session. Invited to chair the session at the 10th Sustainable Nanotechnology Organization (SNO) Conference (Virtual), November 3–5, 2021

Co-chair of “Assessing Mixtures – Nanoplastics and Beyond” Breakout Discussion. Organized at the 9th Annual U.S.-EU NanoEHS Community of Research Workshop (Virtual), September 16–17, 2020

Co-chair of “Tribute to Arturo Keller” Session. Invited to chair the session at the 8th Sustainable Nanotechnology Organization (SNO) Conference, November 7–9, 2019, San Diego, CA

Co-chair of “Emerging Contaminants in Wastewater” Symposium. Organized at the 258th American Chemical Society National Meeting, August 25–29, 2019, San Diego, CA

Co-chair of “Nanotoxicology” Session. Invited to chair the session at the 7th Sustainable Nanotechnology Organization (SNO) Conference, November 8–10, 2018, Washington, DC

Co-chair of “Environmental Nanometrology” Symposium. Organized at the 256th American Chemical Society National Meeting, August 19–23, 2018, Boston, MA

Co-chair of “Advances in the Transformations, Implications, and Metrology of Carbonaceous Nanomaterials in the Environment” Symposium. Organized at the 255th American Chemical Society National Meeting, March 18–22, 2018, New Orleans, LA

Journal Editing and Advisory Board Membership

Associate Editor for *Journal of Hazardous Materials* (2024 – Date)

Associate Editor for *Journal of Nanoparticle Research* (2021 – 2023)

Member, Early Career Editorial Advisory Board for *Environmental Science & Technology* (2023 – Date)

Member, Early Career Advisory Board for *Journal of Hazardous Materials* (2020 – 2022)

Guest Editor for the Special Issue “Identification, fate, risk assessment, and treatment of emerging contaminants in urban environments” for *Journal of Hazardous Materials Advances* (2022)

Guest Editor for the Special Issue “Application of Engineered Nanomaterials for Environmental Remediation and Water Treatment” for *Molecules* (2020)

Scientific reviewing

Journals: ACS ES&T Water; ACS Sustainable Chemistry & Engineering; Aquatic Toxicology; Chemosphere; Colloids and Surfaces A: Physicochemical and Engineering Aspects; Data; Environmental Pollution; Environmental Science: Nano; Environmental Science & Pollution Research; Environmental Science & Technology; Environmental Toxicology & Chemistry; Environments; International Journal of Environmental Research and Public Health; Journal of Hazardous Materials; Journal of Nanoparticle Research; Langmuir; Molecules; NanoImpact; Nanoscale Research Letters; Nature Nanotechnology; RSC Advances; Science of the Total Environment; Trends in Environmental Analytical Chemistry; Water; Water Research

Organizations: Panel Reviewer for National Science Foundation (Division of Chemical, Bioengineering, Environmental and Transport Systems; Convergence Accelerator Program); The Deutsche Forschungsgemeinschaft, DFG (German Research Foundation; Geosciences); Ministry of Science and Technology of the State of Israel (MOST); Environmental Research and Education Foundation (EREF)

Affiliations

American Chemical Society (ACS)

American Association for the Advancement of Science (AAAS)

Association of Environmental Engineering and Science Professors (AEESP)

Sustainable Nanotechnology Organization (SNO)