

JASON B.X. HUA

EDUCATION

Doctor of Philosophy in Civil and Environmental Engineering

University of Iowa, Iowa City, IA

August 2021 - Present

Bachelor of Science in Engineering in Civil Engineering

University of Iowa, Iowa City, IA

Honors in Civil Engineering

August 2017 - May 2021

RESEARCH EXPERIENCE

Graduate Research Assistant

August 2021 - Present

Iowa Superfund Research Program - Analytical Core, Project 4

- Lead the largest study of airborne PCBs and PCB emissions from materials in schools to date with a team of professors, research scientists, and undergraduates in collaboration with the Vermont Department of Environmental Conservation (DEC)
- Collected and extracted samples using methods such as passive air sampling, accelerated solvent extraction, and gas chromatography in tandem with mass spectrometry
- Compiled, maintained, and analyzed large datasets of PCBs and school data using R, SQL, and PgAdmin

Undergraduate Research Assistant

March 2019 - May 2021

Iowa Superfund Research Program - Analytical Core

- Conducted research with PhD candidates on polychlorinated biphenyls (PCBs) and its prevalence in food, soils, and air
- Extracted and prepared samples using methods such as accelerated solvent extraction, gel permeation chromatography, and gas chromatography in tandem with mass spectrometry

PROFESSIONAL EXPERIENCE

Civil Engineering Intern

City of Urbandale

May 2018 - August 2018

PUBLICATIONS

1. Hua J.B.X., Marek R.F., Hornbuckle K.C. (2023) Polyurethane Foam Emission Samplers to Identify Sources of Airborne Polychlorinated Biphenyls (PCBs) from Glass Block Windows and Other Room Surfaces in a Vermont School *Environmental Science & Technology* <https://doi.org/10.1021/acs.est.3c05195>
2. Bako C.M., Martinez A., Ewald J.M., **Hua J.B.X.**, Ramotowski D.J., Dong Q., Schnoor J.L., and Mattes T.E. (2022) Aerobic Bioaugmentation to Decrease Polychlorinated Biphenyl (PCB) Emissions from Contaminated Sediments to Air *Environmental Science & Technology* <https://doi.org/10.1021/acs.est.2c01043>
3. Martinez A., **Hua J.B.X.**, Haque E., Hornbuckle K.C., Thorne P.S. (2022) Occurrence and Spatial Distribution of Individual Polychlorinated Biphenyl Congeners in Residential Soil From East Chicago, Southwest Lake Michigan *Science of the Total Environment* <https://doi.org/10.1016/j.scitotenv.2022.157705>
4. Saktrakulkla P., Lan T., **Hua J.B.X.**, Marek R.F., Thorne P.S., and Hornbuckle K.C. (2020) Polychlorinated Biphenyls in Food *Environmental Science & Technology* DOI: 10.1021/acs.est.0c03632

PRESENTATIONS

1. **Hua, J.B.X.**; Marek, R.F.; Hornbuckle, K.C. “Polyurethane Foam Emission Samplers to Identify Sources of Airborne Polychlorinated Biphenyls from Glass-Block Windows and Other Room Surfaces in a Vermont School” Superfund Research Program Annual Meeting, Albuquerque, New Mexico, United States, December 2023 (poster)
2. **Hua, J.B.X.**; Marek, R.F.; Hornbuckle, K.C. “Polyurethane Foam Emission Samplers to Identify Sources of Airborne Polychlorinated Biphenyls from Glass-Block Windows and Other Room Surfaces in a Vermont School” Society of Environmental Toxicology and Chemistry, Louisville, Kentucky, United States, November 2023 (poster)
3. **Hua, J.B.X.**; Marek, R.F.; Hornbuckle, K.C. “Direct Measurement of Emissions and Their Impact on Airborne Concentrations of Polychlorinated Biphenyls (PBCs) in a Vermont School” College of Engineering Research Open House, Iowa City, Iowa, United States, April 2023 (poster)
4. **Hua, J.B.X.**; Marek, R.F.; Hornbuckle, K.C. “Emissions of polychlorinated biphenyls (PCBs) from carpet, tile, painted brick walls, and glass blocks in a school room” American Chemical Society Spring 2023, Indianapolis, Indiana, United States, March 2023 (talk)
5. **Hua, J.B.X.**; Marek, R.F.; Hornbuckle, K.C. “Data-driven strategies for airborne polychlorinated biphenyl remediation decision making in schools” Superfund Research Program Annual Meeting, Raleigh, North Carolina, United States, December 2022 (poster)
6. **Hua, J.B.X.**; Marek, R.F.; Hornbuckle, K.C. “Congener-specific vs. Aroclor analysis of polychlorinated biphenyls (PCBs) in school air” Society of Environmental Toxicology and Chemistry, Pittsburgh, Pennsylvania, United States, November 2022 (poster)
7. **Hua, J.B.X.**; Marek, R.F.; Hornbuckle, K.C. “Polychlorinated biphenyls in building material and school air” American Chemical Society Midwest Regional Meeting, Iowa City, Iowa, United States, October 2022 (talk)
8. **Hua, J.B.X.**; Hornbuckle, K.C. ”Polychlorinated biphenyl data analysis of Burlington High School, Vermont” College of Engineering Research Open House, Iowa City, Iowa, United States, April 2022 (poster)
9. **Hua, J.B.X.**; Martinez, A.; Saktrakulkla, P.; Haque, E.; Thorne, P.S.; Hornbuckle, K.C. “Occurrence and spatial distribution of polychlorinated biphenyls in urban soils from East Chicago, Indiana” College of Engineering Research Open House, Iowa City, Iowa, United States, November 2020 (talk)

CERTIFICATIONS

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| 1. Fundamentals of Engineering (FE) Exam | Passed January 2021 |
| 2. FEMA Emergency Management Institute IS-00100.c | Passed March 2021 |
| 3. FEMA Emergency Management Institute IS-00700.b | Passed May 2021 |