

# Malihe Moazeni, Ph.D.

## Assistant Professor of Environmental Health Engineering

Environment Research Center | Isfahan University of Medical Sciences | Isfahan, Iran

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## ACADEMIC PROFILE

Assistant Professor of Environmental Health Engineering with expertise in water and wastewater treatment, advanced oxidation processes, environmental risk assessment, GIS and remote sensing, climate-change impacts on water quality, environmental health modelling, nanomaterial synthesis, and circular economy. Experienced in leading and collaborating on funded research projects, publishing in peer-reviewed international journals, teaching undergraduate and graduate courses, and reviewing for high-impact scientific journals.

## EDUCATION

**Ph.D. in Environmental Health Engineering** 2022

*Isfahan University of Medical Sciences, Iran*

Dissertation: Evaluation of the synthesis and efficiency of eco-friendly composites for degradation and detoxification of antibacterial compounds from water sources in the presence of peroxymonosulfate.

**M.Sc. in Environmental Health Engineering** 2017

*Isfahan University of Medical Sciences, Iran*

Thesis: Detection of enteroviruses and total and fecal coliforms in wastewater treatment units of Isfahan city.

**B.Sc. in Environmental Health Engineering** 2013

*Isfahan University of Medical Sciences, Iran*

## ACADEMIC AND RESEARCH EXPERIENCE

**Assistant Professor of Environmental Health Engineering** 2024-Present

*Environmental Health Research Center, Isfahan University of Medical Sciences*

**Postdoctoral Fellow** Completed July 2024

*Shahid Chamran Project, Iran National Elite Foundation and Isfahan University of Medical Sciences*

Project: Predicting surface water quality using climate modelling with an artificial intelligence approach in Isfahan province for three decades.

## RESEARCH INTERESTS

Water and wastewater treatment

Advanced oxidation processes

Emerging contaminants and antibacterial compounds

Triclosan degradation and risk assessment

Environmental health risk assessment  
Climate change and water quality modelling  
GIS and remote sensing in environmental health  
Nanomaterial synthesis  
Circular economy  
Environmental psychology  
Systematic review and meta-analysis

## PUBLICATIONS AND SCHOLARLY WORKS

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### Peer-Reviewed Journal Articles

1. Ebrahimi, A., Jannesary F., Lin, K-Y A., **Moazeni, M.**, (2026). GIS-based assessment of groundwater suitability for agricultural irrigation in central Iran. *Journal of Hydro-environment Research*.
2. Kadkhodaie, N., Ebrahimi, A., **Moazeni, M.**, Fatehizadeh, A., & Rtimi, S. (2025). Graphene oxide nanocomposite decorated zeolitic imidazolate framework-8 as an effective sorbent for acid orange 10 dye removal. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*.
3. Ebrahimi, A., Lin, K.-Y. A., & **Moazeni, M.** (2025). A heterostructure MIL-101(Fe)/graphene oxide peroxymonosulfate catalyst for triclosan degradation: Response surface methodology and evolutionary-based adaptive neuro-fuzzy inference system models. *Environmental Technology & Innovation*.
4. **Moazeni, M.**, Sayedipour, M., Lin, K.-Y. A., & Ebrahimi, A. (2025). A long-period assessment of climate change impact on river water quality in the central region of Iran. *International Journal of Environmental Science and Technology*.
5. Ebrahimi, A., Lin, K.-Y. A., & **Moazeni, M.** (2024). A comparative investigation on the decomposition of triclosan via synthesized heterogeneous nano-catalysts in the presence of peroxymonosulfate. *Catalysis Communications*.
6. Ebrahimi, A., Ebrahimpour, K., Mohammadi, F., & **Moazeni, M.** (2023). Ecotoxicological and human health risk assessment of triclosan antibacterial agent from municipal wastewater treatment plants. *Journal of Water and Health*.
7. **Moazeni, M.**, Ebrahimpour, K., Mohammadi, F., Heidari, Z., & Ebrahimi, A. (2023). Human health risk assessment of triclosan in water: Spatial analysis of a drinking water system. *Environmental Monitoring and Assessment*.
8. Attarian, E., Mohammadi, F., Ebrahimpour, K., **Moazeni, M.**, Maracy, M. R., Ebrahimi, A., & Kelishadi, R. (2023). Health risk assessment of exposure to triclosan in pregnant women using Monte Carlo simulation techniques: Based on biomonitoring data. *Journal of Environmental Science and Health, Part C*.
9. **Moazeni, M.**, Maracy, M. R., Ghazavi, R., Bedia, J., Lin, K.-Y. A., & Ebrahimi, A. (2023). Removal of triclosan from aqueous matrices: A systematic review with detailed meta-analysis. *Journal of Molecular Liquids*.
10. **Moazeni, M.**, Rahimi, M., & Ebrahimi, A. (2023). What are the effects of climate variables on COVID-19 pandemic? A systematic review and current update. *Advanced Biomedical Research*.
11. **Moazeni, M.**, Ebrahimpour, K., Etebari, M., Bedia, J., Lin, K.-Y. A., & Ebrahimi, A. (2022). Cobalt ferrite/MIL-101(Fe)/graphene oxide heterostructures coupled with peroxymonosulfate for triclosan degradation. *Journal of Water Process Engineering*.

12. Attarian, E., Ebrahimpour, K., Maracy, M. R., Daniali, S. S., Shoshtari-Yeganeh, B., **Moazeni, M.**, Ebrahimi, A., & Kelishadi, R. (2022). Effect of maternal triclosan exposure on neonatal thyroid-stimulating hormone levels: A cross-sectional study. *Journal of Environmental and Public Health*.
13. **Moazeni, M.**, Hashemian, S. M., Sillanpää, M., Ebrahimi, A., & Kim, K.-H. (2022). A heterogeneous peroxymonosulfate catalyst built by Fe-based metal-organic framework for dye degradation. *Journal of Environmental Management*.
14. **Moazeni, M.**, Maracy, M. R., Dehdashti, B., & Ebrahimi, A. (2021). Spatiotemporal analysis of COVID-19, air pollution, climate, and meteorological conditions in a metropolitan region of Iran. *Environmental Science and Pollution Research*.
15. **Moazeni, M.**, Gholipour, S., Mahaki, B., & Ebrahimi, A. (2021). Short-term impact of two kinds of vegetables on exogenous total nitrate and nitrite intake: Is antibacterial mouthwash influential? *International Journal of Preventive Medicine*.
16. Esteki, F., Karimi, H., **Moazeni, M.**, Esfandiari, Z., Zarean, M., & Pourzamani, H. (2020). Risk assessment of phthalate compounds in bottled water consumed in Isfahan, Iran. *Journal of Food Quality and Hazards Control*.
17. Maracy, M. R., Jaffary, F., Ebrahimi, A., Sokhanvari, F., Heidari, A., Sharifian-Koupaiee, H., Fadaei, R., Ramazanpour, J., & **Moazeni, M.** (2020). GIS-based risk mapping of cutaneous leishmaniasis: A survey in an endemic area of Central Iran. *Environmental Science and Pollution Research*.
18. **Moazeni, M.**, Heidari, Z., Gholipour, S., Ghaisari, L., Sillanpää, M., & Ebrahimi, A. (2020). Dietary intake and health risk assessment of nitrate, nitrite, and nitrosamines: A Bayesian analysis and Monte Carlo simulation. *Environmental Science and Pollution Research*.
19. Pourzamani, H., Keshavarz, M., **Moazeni, M.**, Heidari, Z., & Zarean, M. (2020). Effect of common storage conditions on the release of phthalate contaminants of bottled water in polyethylene terephthalate: A chemical analysis and human health risk assessment. *International Journal of Environmental Health Engineering*.
20. **Moazeni, M.**, Parastar, S., Mahdavi, M., & Ebrahimi, A. (2020). Evaluation efficiency of Iranian natural zeolites and synthetic resin to remove lead ions from aqueous solutions. *Applied Water Science*.
21. Ebrahimi, A., Karimpoor, E., Godazandehha, Z., Heidari, Z., Zarean, M., & **Moazeni, M.** (2017). Exposure assessment of total mercury: A probabilistic-approach study based on consumption of canned fish. *Journal of Environmental Health and Sustainable Development*.
22. Ebrahimi, A., Zarean, M., Teimouria, F., & **Moazeni, M.** (2017). Degradation of low concentrations of formaldehyde in sono-catalytic ozonation advanced oxidation processes using zero-valent iron. *International Journal of Engineering*.
23. **Moazeni, M.**, Ebrahimi, A., Rafiei, N., & Pourzamani, H. R. (2017). Removal of lead ions from aqueous solution by nano zero-valent iron. *Health Scope*.
24. **Moazeni, M.**, Nikaeen, M., Hadi, M., Moghim, S., Mouhebat, L., Hatamzadeh, M., & Hassanzadeh, A. (2017). Estimation of health risks caused by exposure to enteroviruses from agricultural application of wastewater effluents. *Water Research*.
25. Ebrahimi, A., **Moazeni, M.**, Esfandiari, Z., Estaki, F., Samani Majd, A. M., Mirlohi, M., Abdi Moghadam, Z., Falahati, M., & Pourzamani, H. (2016). Qualitative evaluation of bottled water stored in polyethylene terephthalate based on organic chemical compounds. *Anuário do Instituto de Geociências*.

26. **Moazeni, M.**, Ebrahimi, A., Atefi, M., Mahaki, B., & Rastegari, H. A. (2014). Determination of nitrate and nitrite exposure and their health risk assessment in 21 brands of bottled waters in Isfahan's market in 2013. *International Journal of Environmental Health Engineering*.
27. **Moazeni, M.**, Atefi, M., Ebrahimi, A., Razmjoo, P., & Vahid Dastjerdi, M. (2014). Evaluation of chemical and microbiological quality in 21 brands of Iranian bottled drinking waters in 2012: A comparison study on label and real contents. *Journal of Environmental and Public Health*.
28. Pourgheysari, H., **Moazeni, M.**, & Ebrahimi, A. (2012). Heavy metal content in edible salts in Isfahan and estimation of their daily intake via salt consumption. *International Journal of Environmental Health Engineering*.

### **Persian Journal Articles**

1. Gholipour, S., Shamsizadeh, Z., Moazeni, M., & Nikaeen, M. (2020). Environmental aspects of coronavirus transmission: A narrative review. *Isfahan Medical School Journal*.
2. Nikaeen, M., Sadegh, M., Gholipour, S., & Moazeni, M. (2019). Investigation of adenoviruses and enteroviruses in wastewater treatment plants. *Health System Research*.
3. Moazeni, M., Ebrahimi, A., Rafiei, N., & Pourzamani, H. R. (2017). Removal of arsenic and hexavalent chromium from aqueous solutions using zero-valent iron nanoparticles and determination of adsorption isotherms. *Health System Research*.
4. Ali, R., Nikaeen, M., Hatamzadeh, M., Moazeni, M., Khan Ahmad, H., & Shahriari, A. (2016). The role of hospital wastewater in spreading antibiotic-resistant bacteria and genes to the environment. *Environmental Health Engineering Journal*.
5. Pourgheysari, H., Moazeni, M., Ebrahimi, A., & Khodabakhshi, A. (2013). Determination of heavy metal contamination values in edible salts available in Isfahan market in 2010. *Tohid Health Journal*.

### **Book**

Moazeni, M. (2016). *Application of ArcGIS 9.3 Geographic Information System in Health Sciences*. Isfahan University of Medical Sciences.

### **SELECTED CONFERENCE PRESENTATIONS**

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*A complete list of conference presentations is available upon request.*

1. Moazeni, M. (2025). The Assessment of Future Water Quality Under Climate Change Using Artificial Intelligence Modelling. Presented at the East Asian Medical Students' Conference (EAMSC), Egypt. Poster presentation.
2. Moazeni, M. (2024). Health risk assessment of triclosan exposure through piped water consumption in Isfahan. Presented at the *8th Annual International Congress on Agriculture, Natural Resources, Environment and Tourism of Iran, Islamic Art University of Tabriz, Iran*. Poster presentation.
3. Moazeni, M. (2024). Investigation of antibacterial compound degradation from water by PMS in the presence of MOF-containing nanocatalyst. Presented at the *5th Iran Water and Wastewater Engineering Science Congress, Isfahan University, Iran*. Best Speech Award.
4. Moazeni, M. (2023). Synthesis and application of a novel cobalt ferrite nanocatalyst in removing an important antimicrobial compound from water. Presented at the *3rd International Conference on New Technologies in Science, Amol New Technologies Specialized University, Iran*. Oral presentation.

5. Moazeni, M. (2020). Survey of lettuce consumption on total nitrate and nitrite in consumers' saliva and urine: A case study in Isfahan. Presented at the *4th International and 22nd National Environmental Health and Sustainable Development Conference, Shahid Sadoughi University of Yazd, Iran*. Best Poster Award.
6. Moazeni, M. (2017). Seasonal circulation of enteroviruses in treated wastewater and correlation with bacterial indicators. Presented at the *2nd International and 20th National Environmental Health and Sustainable Development Conference, Shahid Sadoughi University of Yazd, Iran*. Best Poster Award.

## SELECTED RESEARCH PROJECTS AND GRANTS

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*A complete list of funded and collaborative research projects is available upon request.*

**Principal Investigator** | *Prediction of Agricultural Irrigation Water Quality Index under Climate Change Influence in Isfahan Province in the Next 70 Years*, Research and Technology Vice-Chancellor, Isfahan University of Medical Sciences, 2024.

**Postdoctoral Researcher** | *Prediction of Surface Water Quality Using Climate Modelling with an Artificial Intelligence Approach in Isfahan Province for Three Decades*, Shahid Chamran Project, Iran National Elite Foundation and Isfahan University of Medical Sciences, 2022-2024.

**Principal Investigator / Doctoral Research Project** | *Synthesis and Efficiency Investigation of Eco-Friendly Composites in the Degradation and Detoxification of Antibacterial Compounds from Aqueous Sources in the Presence of Peroxymonosulfate*, Isfahan University of Medical Sciences, 2019-2022.

**Collaborator** | *Assessment of Health Vulnerability to Climate Change and Determination of Strategic Actions in the Islamic Republic of Iran*, World Health Organization and Center for Environmental and Occupational Health, Ministry of Health and Medical Education, 2020.

**Collaborator** | *Mapping COVID-19 Disease Incidence and Its Relationship with Weather Conditions in Isfahan Province Using Geographic Information System*, Isfahan University of Medical Sciences, 2020.

**Principal Investigator** | *Measurement of Radioactive Material Emissions in Raw Wastewater Samples from Nuclear Medicine Centres and Wastewater Treatment Plants*, Isfahan University of Medical Sciences, 2016.

**Principal Investigator** | *Investigation of Bacterial and Chemical Pollution Indicators in Bottled Mineral Waters in Isfahan City*, Isfahan University of Medical Sciences, 2014.

## TEACHING EXPERIENCE

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### **Isfahan University of Medical Sciences**

*Undergraduate and graduate teaching experience*

GIS Application in Environmental Health

Remote Sensing and GIS Application

SPSS Software

Environmental Health Principles

Environmental Principles

Practical GIS Training

### **Professional Training Center**

*Teaching experience*

Industrial Wastes

Computer Applications in HSE

Technical Language

## SELECTED AWARDS AND HONOURS

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Third rank, selected Ph.D. dissertation, Iranian Environmental Health Festival, 2024

Second rank, selected Ph.D. dissertation, Iran Water and Wastewater Association Festival, 2023

Selected among the top 10% achievements, 3rd International Science and Technology Competition of Mustafa Fund, 2023

Shahid Chamran Award, National Elite Foundation, 2022

Selected for human capital recruitment project in executive organizations, National Elite Foundation, 2022

Outstanding Researcher Student, Ministry of Health and Medical Education, 2022

First rank in Ph.D. degree, Environmental Health Engineering, Isfahan University of Medical Sciences, 2017-2022

Alborz Foundation Award, 2021

Technology grant, Isfahan Science and Research City, based on Ph.D. thesis, 2020-2022

Third rank, selected M.Sc. dissertation, Iranian Environmental Health Festival, 2018

## PEER REVIEW AND EDITORIAL ACTIVITIES

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Served as a reviewer for several peer-reviewed international and national journals in environmental health, water treatment, pollution control, public health, and environmental engineering. Selected journals include: Chemical Engineering Journal; Journal of Water Process Engineering; Environmental Technology & Innovation; Journal of Water and Health; Marine Pollution Bulletin; Environmental Pollution; Journal of Environmental Management; BMC Public Health; Ecotoxicology and Environmental Safety; Process Safety and Environmental Protection; International Journal of Environmental Health Engineering; and Health System Research.

*A complete list of peer-review activities is available upon request.*

## SELECTED ACADEMIC SERVICE AND MEMBERSHIPS

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Member, Water Governance Think Tank subgroup, Youth Think Tanks of Iranian Islamic Progress Model Center, 2022-Present

Member, Water Working Group, Center for Wise Management, National Elite Foundation of Isfahan Province, 2022-Present

Member, Cochrane, 2022-Present

Member, Student Research Committee, School of Health, Isfahan University of Medical Sciences, 2017-2022

Secretary, Student Research Committee, School of Health, Isfahan University of Medical Sciences, 2010-2012

*Additional academic service activities are available upon request.*

## TECHNICAL SKILLS AND EXPERTISE

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**Laboratory and Analytical Skills:** Water and wastewater quality analysis; chemical analyses including nitrate, nitrite, turbidity, dissolved oxygen, and titration methods; microbiological analyses including total coliform, fecal coliform, and intestinal virus detection; cell culture, PCR, ELISA, and MTT toxicity assay; GC/MS instrumental analysis; spectrophotometric analysis using DR-5000; synthesis of organic and

inorganic nanoparticles; advanced oxidation processes and adsorption experiments; environmental remediation of water and soil.

**Software and Data Analysis:** ArcGIS, ENVI, Google Earth Engine, SPSS, STATA, JASP, GraphPad Prism, SigmaPlot, RevMan, CMA, Design Expert, Minitab, Statistica, MATLAB, EPANET, STOAT, AutoCAD, OriginPro, Microsoft Office, EndNote, and Mendeley.

**Research Methods:** Environmental and human health risk assessment; microbial and chemical risk assessment; systematic review and meta-analysis; GIS-based environmental mapping; climate change and water quality modelling; experimental design and process optimization.

*Additional certificates and professional training records are available upon request.*

## **ADDITIONAL ACTIVITIES**

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Additional cultural, executive, and student leadership activities are available upon request.

## **REFERENCES**

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Available upon request.