Academic CV

1. Personal Information

Name: Shahad Abdulkareem Raheem

Academic Title: Lecturer

Affiliation: Al-Qasim Green University/College of Engineering/ Department of Civil Engineering

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2. Profile

Lecturer in Environmental Engineering with a PhD degree and research expertise in adsorption-based water treatment. Specialized in the development of advanced adsorbent materials including magnetic biochar and LDH-based core–shell nanocomposites for the removal of heavy metals and emerging contaminants. Experienced in experimental design, statistical modeling (RSM), and adsorption isotherm/kinetic analysis.

3. Education

- PhD in Environmental Engineering – [University of Baghdad], Iraq – [2026]
- MSc in Environmental Engineering – [University of Babylon], Iraq – [2020]
- BSc in Environmental Engineering – [University of Babylon], Iraq – [2012]

4. Academic Experience

- Lecturer – [Al-Qasim Green University] – [2014–Present]

Teaching undergraduate courses, supervising student projects, and conducting research in adsorption and water treatment.

5. Research Interests

- Adsorption of heavy metals.
- Magnetic biochar synthesis and modification.
- LDH-based nanocomposites.
- Core–shell materials.
- Water and wastewater treatment technologies.

- Emerging contaminants.
- Fixed-bed column adsorption.
- Breakthrough curve modeling.
- Adsorption isotherms and kinetics.
- Response Surface Methodology (RSM).

6. Publications

Synthesis, characterization, and applications of layered double hydroxides nanocomposites for the adsorption of organic and inorganic contaminants from an aqueous solution: an …
SA Raheem, AA Mohammed
Results in Surfaces and Interfaces, 2025

Optimization of heavy metals removal from wastewater by magnetic nano-zeolite using response surface methodology
HA Shamkhi, MJ Abdulhasan, SA Raheem, HAM Al-Zubaidi, ASK Janabi
Desalination and Water Treatment 306, 63-74, 2023

Comparative study of iron removal from groundwater using low cost adsorbents
SA Raheem, EJ Kadhim, MJ Abdulhasan
Journal of Ecological Engineering 23 (11), 18-23, 2022

Optimization of response surface methodology for removal of cadmium ions from wastewater using low cost materials
RA Mohammed, MJ Abdulhasan, SA Raheem, AI Alwared, ...
Journal of Ecological Engineering 24 (8), 146-156, 2023

Surface-water purification using cellulose paper impregnated with silver nanoparticles
SA Raheem, AH Alfatlawi
Drinking Water Engineering and Science 14 (1), 95-102, 2021

Efficient removal of Cd (II) and Pb (II) on NiFeAl-LDH@ Polystyrene nanocomposite in single and binary systems: Optimization, kinetic and isotherm studies
SA Raheem, AA Mohammed
Case Studies in Chemical and Environmental Engineering, 101285, 2025

Inactivation of Enterococcus Faecalis in Drinking Water using Silver Nanoparticles Embedded Paper
AH Al-Fatlawi, SA Raheem
Indian Journal of Forensic Medicine & Toxicology 14 (1), 1117, 2020

Evaluating the efficiency of Chlorella vulgaris and Spirulina microalgae in wastewater remediation under different light conditions
OH Saleh, SA Raheem, SL Abbas, MJ Abdulhasan, ...
Journal homepage: http://iieta. org/journals/ijdne 18 (6), 1533-1538, 2023

Adsorptive Removal of Cd (II) Ions using Core-Shell Polystyrene@ NiFeAl-LDH Nanocomposite: Optimization, Isotherm, and Kinetics Study
SA Raheem, AA Mohammed
Bulletin of Chemical Reaction Engineering & Catalysis 21 (1), 51-67, 2026

Synthesis of NiFeAl-LDH@ polystyrene nanocomposite by recycling styrofoam waste for the adsorption of pb (II) ions from an aqueous solution: optimization, isotherm, kinetic …
SA Raheem, AA Mohammed
Nanotechnology for Environmental Engineering 11 (1), 5, 2026

7. Reviewer Experience

- Verified Reviewer – Web of Science (Publons)/ Web of Science ResearcherIDAES-6218-2022
- Reviewer for [Journal of Environmental Chemical Engineering, Journal of Water Process Engineering, Asian Food Science Journal, Journal of Advances in Microbiology]

8. Skills

- Laboratory Techniques: Adsorption experiments, material synthesis
- Characterization: FTIR, XRD, SEM-EDS, BET
- Software: Minitab, Origin, Excel, R/RStudio, Design Expert .
- Modeling: Isotherm, kinetic, thermodynamic analysis

9. Languages

- Arabic – Native
- English – Professional