

Roqaya Alamiry

Curriculum Vitae

Personal Details

Name: Roqaya Alamiry

Nationality: UAE

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Academic Qualifications

- PhD in Environmental Engineering, Khalifa University - 2018-2022
- M.Sc. in Water and Environmental Engineering, Masdar Institute - 2015-2017
- B.Sc. in Biotechnology, Sharjah University - 2010-2014

Employment History

- Assistant Professor – Head of Marine Biology Department (2024-Present)
- Khorfakkan University, College of Marine Sciences & Aquatic Biology
- Doctoral Researcher (2018 – 2022)
- Khalifa University, Environmental Engineering
- Applied research projects in one of the top research facilities in the MENA region.
- Assisting students and research scientists on their technical experiments.
- Actively involved in CMAT research center renovation activities at Khalifa University.
- Undergraduate Instructor/Teaching Assistant (2018-2022)
- Khalifa University, Engineering department
- Instructor: Engineering design course (Spring 2021)
- Teaching Assistant: Solid mechanics (Fall 2018)
- Teaching Assistant (2018 – 2022)
- Johns Hopkins University, Johns Hopkins Center for Talented Youth (CTY). Working on courses outline, planning class activities, and evaluating student's performance.
- Participated in organizing the 1st online-based Mawhibatna program for talented high school students (2020).
- Courses: Engineering design, Microeconomics, Exploring the universe, and Forensic biology
- Research Assistant (2015 – 2017)
- Masdar Institute, Water and Environmental Engineering

- Part of MSc. Graduate program, Water and Environmental Engineering (Masdar Institute, Abu Dhabi)
- Science Teacher (2014 – 2015)
- Ministry of Education, Sharjah, Khorfakkan
- Part time teacher for grade 7 and grade 9 students. Responsibilities involved: teaching, proctoring and correcting exams
- Intern (2013 – 2014)
- Masdar Institute
- Project title: Isolation and Characterization of Microalgae from UAE Deserts. Under supervision of Dr.Hector Hernandez

Professional Membership & Activities

- MSA Early Career Researchers 2021 – present Membrane Society of Australia, Australia
- International Water Association (IWA), UK – 2023 – present

Teaching Experience

- The cell & It's Functions, Ecology & Evolution, Microbiology, University of Khorfakkan
- Engineering Design, Khalifa University

Research Interests

- Development of polymeric Membranes with Potential Application in Water Treatment (e.g., oil removal, organic/inorganic pollutants removal, micro-plastic separation etc.
- Isolation and Characterization of Hydrocarbon Degrading Bacteria from Seawater Biofouling mitigation
- Microbial Biodiversity
- Marine Ecology and preservation Brine management
- Environmental and sociopolitical aspects of desalination plants
- Microplastic in marine environment

Research Publications (Books, Journals & Conferences papers)

- Ghazal, A., Shaheen, A., AlBlooshi, S., Almehrzi, M., **Ismail, R. A.**, AlAmoodi, N., Hong, S., & AlMarzooqi, F. (2024). Plasmonic titanium nitride-based membranes for solar-driven domestic wastewater distillation treatment. *Chemical Engineering Journal*, 484, 149594. <https://doi.org/10.1016/j.cej.2024.149594>
- Almanassra, I. W., Abushawish, A., Jaber, L., Awayssa, O., Shanableh, A., Atieh, M. A., & **Ismail, R. A.** (2025). Synthetic shale gas produced water pre-treatment via ultrafiltration membranes enhanced with polydopamine-coated hydroxylated 2D boron nitride nanosheets. *Desalination*, 607, 118812. <https://doi.org/10.1016/j.desal.2025.118812>

- Awayssa, O., **Ismail, R. A.**, Hilal-AlNaqbi, A., & Al Ahmad, M. (2025). Electrical circuit model for sensing water quality analysis. *Water*, 17(15), 2345. <https://doi.org/10.3390/w17152345>
- AlBlooshi, S., Lalwani, S., Zhang, T. J., Alamoodi, N., **Ismail, R. A.**, & AlMarzooqi, F. (2025). Mitigating effects of heavy metal ions in wastewater with enhanced stability in hydrogen generation. *Journal of Electroanalytical Chemistry*, 986, 119094. <https://doi.org/10.1016/j.jelechem.2024.119094>
- **Ismail, R. A.**, Kumar, M., Khanzada, N., Thomas, N., An, A. K., & Arafat, H. A. (2022). Hybrid ultrafiltration and nanofiltration membranes tailored by quaternized polydopamine (QSiPD) lead to enhanced removal of protein, salts, and dye from water. *Desalination*, 539, 115954. <https://doi.org/10.1016/j.desal.2022.115954>
- Kumar, M., Sreedhar, N., Thomas, N., Mavukkandy, M. O., **Ismail, R. A.**, Aminabhavi, T. M., & Arafat, H. A. (2021). Polydopamine-coated graphene oxide nanosheets embedded in sulfonated poly(ether sulfone) hybrid UF membranes with superior antifouling properties for water treatment. *Chemical Engineering Journal*, 421, 129772. <https://doi.org/10.1016/j.cej.2021.129772>
- Ibrahim, Y., **Ismail, R. A.**, Ogungbenro, A. E., Pankratz, T. M., Banat, F., & Arafat, H. A. (2021). The sociopolitical factors impacting the adoption and proliferation of desalination: A critical review. *Desalination*, 498, 114798. <https://doi.org/10.1016/j.desal.2020.114798>
- **Ismail, R. A.**, Kumar, M., Thomas, N., An, A. K., & Arafat, H. A. (2021). Multifunctional hybrid UF membrane from poly(ether sulfone) and quaternized polydopamine anchored reduced graphene oxide nanohybrid for water treatment. *Journal of Membrane Science*, 639, 119779. <https://doi.org/10.1016/j.memsci.2021.119779>
- **Ismail, R. A.**, Kumar, M., & Arafat, H. A. (2023). *Unleashing the Power of Polydopamine: Combating HA Fouling in Ultrafiltration Systems*. International Conference on Sustainable Energy-Water-Environment Nexus in Desert Climates (ICSEWEN'23), Doha, Qatar, Oct–Nov 30–2, 2023.
- **Ismail, R. A.**, Kumar, M., & Arafat, H. A. (2023). *Utilizing Polydopamine for Enhanced Antifouling Performance in Ultrafiltration Systems*. The International Conference on Desalination, Environment and Sustainability (IDEAS24), Abu Dhabi, UAE, Jan 22–23, 2024.
- **Ismail, R. A.**, Kumar, M., & Arafat, H. A. (2022). *Zwitterionic Polydopamine as an Antifouling Agent in Ultrafiltration System*. 11th International Membrane Science and Technology Conference (IMSTIC2022), Membrane Society of Australia, Dec 4–8, 2022.
- **Ismail, R. A.**, Kumar, M., Khanzada, N., Thomas, N., An, A. K., & Arafat, H. A. (2021). *Quaternized Polydopamine Mediated Antibacterial and Antifouling Poly(ether sulfone) Hybrid UF Membranes for Enhanced Removal of Protein, Dye, and Salts*. 8th MSA Early Career Researcher Online Membrane Symposium (MSA ECR21), Membrane Society of Australia, Nov 25, 2021.
- **Ismail, R. A.** (2024, November 7). *Characterization and Bioremediation Potential of Novel Biosurfactant-Producing Bacterial Strains from Oil-Contaminated Seawater in the UAE*. DESE Conference, UAE.
- Ibrahim, Y., **Ismail, R. A.**, Ogungbenro, A. E., Pankratz, T. M., Banat, F., & Arafat, H. A. (2019). *The sociopolitical factors impacting the adoption and proliferation of desalination: SWOT Analysis Approach*. IDA World Congress – Crossroads to Sustainability, Dubai, UAE.

- **Ismail, R. A., & Hernandez, H. (2017).** *Isolation and Characterization of Hydrocarbon Degrading Bacteria from UAE Seawater*. Fifth International Conference on Water, Energy and Environment (ICWEE), American University of Sharjah, UAE.

Peer Review Activities

- Desalination and Water Treatment Journal
- Applied Surface Science Journal
- Chemical Engineering Journal
- Journal of Membrane and Separation Technology
- Journal of Membrane and Separation Technology
- Membranes
- MDPI Journal

Research, Teaching Grants

- A competitive internal research grant from the **University of Khorfakkan (UKF)** through the **University Research Board (URB)** under project reference **V.C.A.A./T.D. 0002/2023**.
The project, titled **“Microplastic Investigation Project,”** was awarded a total funding amount of **AED ~80,000** in **2023**.
This research focuses on the assessment and characterization of microplastics in marine environments, supporting UKF’s strategic goal of advancing research in marine sustainability and environmental protection.

Awards and Recognitions

- The **Highly Competitive Graduate Research Buhooth Scholarship** awarded by **Khalifa University**, supporting outstanding doctoral research potential.
- The **Best PhD Research Award** presented by the **University of Technology Sydney** during the *8th MSA Early Career Researcher Conference (ECR21)* in Australia.
- The **Best Oral Presentation Award (2nd Place)** at the *Biotechnology Exhibition Awards* organized by the **University of Sharjah**, recognizing excellence in scientific communication.
- The **Outstanding Undergraduate Award for Academic Excellence** from the **University of Sharjah – College of Sciences**, acknowledging exceptional academic performance and leadership as an undergraduate student.

University & Community Services

A. Media & Public Engagements

Date	Activity	Role	Description	Beneficiaries
10 Oct 2025	Abu Dhabi TV Interview	Guest Speaker	Featured segment on <i>University of Khorfakkan participation in the IUCN World Conservation Congress 2025</i>	UAE Public, Environmental Stakeholders
Aug 2025	Sharjah TV Documentary	Interviewee	Appeared in a documentary about <i>Marine Biodiversity in Khorfakkan and the Sea of Oman</i>	Public, Students, Environmental Community
Oct 2025	<i>Al Sharqiya Magazine</i> (Vol. 73)	Contributor	Article/interview highlighting <i>Marine Research Initiatives and Community Impact</i>	Public, Students
Sep 2025	<i>Sharjah International Government Communication Forum (IGCF)</i>	Panel Speaker	Invited by <i>Sharjah Fisheries Authority</i> to discuss <i>Marine Sustainability and Environmental Communication</i>	Students, Professionals, Government Entities
2023–2024 (Various)	Environment & Protected Areas Authority (EPAA) Events	Participant / Speaker	Participated in environmental awareness campaigns and served as <i>Guest Speaker on Marine Environmental Protection</i>	Schools, University Students, General Public

B. Educational & University Outreach Activities

Date	Activity	Role	Description	Beneficiaries
4 Oct 2022	Freshmen Orientation Day	Organizer / Speaker	Welcomed and introduced new students to university life	Newly Admitted Students
24 Nov 2022	Symposium: <i>Marine Biodiversity in the UAE</i>	Speaker	Represented the University of Khorfakkan at a public symposium	UKF Students, Faculty, Local Community
1–2 Feb 2023	UKF Open Day	Representative	Presented the Marine Biology Program and research opportunities	Prospective Students & Parents

8–14 Mar 2023	University of Exeter Academic Visit	Coordinator	Strengthened the UoK–UoE partnership and field research collaboration	Marine Biology Students & Faculty
16 May 2023	Education Interface Exhibition (ADNEC, Abu Dhabi)	Representative	Promoted UKF’s Marine Biology Program to national and private high schools	High School Students
2025–Present	National Debate Competition	Faculty Mentor / Judge	Supporting student teams and representing UKF in inter-university debate events	UKF Students, UAE Universities
2025–Present	SUCN Committee (Sharjah–UNESCO Collaboration Network)	Member	Supporting <i>South–South Cooperation & Sustainability Initiatives (2026–2030)</i>	Youth, Community Partners, International Collaborators

C. University Committees & Academic Service

Committee	Role	Duration	Description
Central Academic Appointment Committee	<i>Secretary & Member</i>	2024 – Present	Overseeing faculty recruitment, promotion, and appointment processes across colleges
Teaching & Learning Committee	<i>Secretary</i>	2024	Supporting innovative teaching practices, assessment alignment, and blended learning integration
Procurement Committee	Member	Ongoing	Reviewing and approving college and central lab procurement requests