



Marwa Mohammad Alaqarbeh, PhD.,

Full-time lecturer

Jordan-Amman

Gender: Female.

Nationality: Jordanian.

Email: marwaqarbh@hotmail.com

marwa.aqarbeh@bau.edu.jo; marwah.aqarbeh@emp.pha.edu.jo

Title	Dr.
First name	Marwa
Name	Alaqarbeh
Current position	Full-time lecturer
Current institution(s)/site(s), country	Basic Science Department, Prince Al Hussein bin Abdullah II Academy for Civil Protection, Al-Balqa Applied University
Identifiers/ORCID	0000-0002-0879-5077
Scopus	57742532000, 58642711100

Stages	Periods and Details
PhD of Chemistry	3-Sep-2018 , (Material chemistry), University of Jordan, Amman, Jordan
McS of Chemistry	23-Dec-2009 , (organic chemistry), The Hashemite University, Zarqa, Jordan
BcS of Chemistry	19-Jun-2006 , (General chemistry), The Hashemite University, Zarqa, Jordan
Career (<i>Scientific Researcher at NARC, 13-Dec-2018-1-Oct-2023, Baq'a, Jordan</i>)	<p>I have experience designing and conducting experiments, researching scientific literature, authoring technical reports, and authoring scientific articles.</p> <p>I possess excellent analytical and communication skills and a dedicated approach to working in a highly controlled research group.</p> <p>I have experience in Nano metal oxide materials, metal nanoparticles, magnetic metal spinel ferrite nanoparticles, nanocomposite catalysis, and polymer chemistry.</p>

PROFISSIONAL EXPERIENCES

1. **Researcher** at National Agricultural Research Center (NARC), Baq'a-Jordan, (2018-2023)
2. **Quality assurance & chemistry laboratory supervisor**, Dar al-arqm School, Amman, Jordan (2011–2017).
3. **Lecturer**, Arab Community College, Amman, Jordan (Oct/2017–Dec/2018)
Taught Biochemistry and Organic chemistry.
4. **Teaching Assistance/part-time**, The University of Jordan, Amman, Jordan, (Jun/2016–Dec/2018) Taught Analytical and Organic chemistry.
5. **Teaching Assistance/part-time**, The Hashemite University, Zarqa, Jordan, (Jun/2009-Dec/2009), Taught Analytical and Organic chemistry.
6. **Research Assistance/part-time**, The Hashemite University, Zarqa, Jordan, (Jun/2009-Dec/2009)
Inorganic chemistry and Organic Synthesis

Scientific Results

I have **57 peer-reviewed published articles** as of **May 2024**, H-index = 9, cited \approx 296 times (based on Scopus).

My research interests include synthesizing Nano metal oxide materials, metal nanoparticles, magnetic metal spinal ferrite nanoparticles, nanocomposite catalysis, and polymer chemistry and using them as active materials for environmental applications for water treatment scop. Also, I have many published articles on drug design and discovery using computational and theoretical chemistry methods.

Scientific Conferences and Workshops

1. The 19th International Conference of the Union of Arab Chemists entitled “Prospects of Applied Sciences for a Better and Sustainable Life” 13-15th February 2024
2. Environment and Natural Resources: Challenges and Solutions (ENRSC2021), 30-31st May 2023, Khenifra, Morocco. [Speaker], (online).
3. The 6th International Conference of Materials and Environment 'ICME6-2022', 19- 20th December 2022, the Faculty of Sciences of Meknes, Moulay Ismail University of Meknes, Morocco. [Keynote Speaker]
4. International Conference on Applied Chemistry and Biotechnology (ICACB-2022) Al-Balqa Applied University, Al-Salt – Jordan 10-12th May 2022. [Speaker].
5. Environment and Natural Resources: Challenges and Solutions (ENRSC2021), 24-25th November 2021, Khenifra, Morocco. [Speaker], (online).
6. Impact of pollution on climate change workshop, Amman, Jordan, Seven Roses Hotel (15- 16th April 2019). [Participant].
7. We IEEE, Nanotechnology in Science and Engineering, Amman, Jordan, LeRoyal Hotel (9- 11th April 2019). [Participant].
8. IDF-MENA, Amman, Jordan, Amman, Jordan, LeRoyal Hotel (3- 6th April 2019). [Participant].
9. Workshop on using radioactive isotopes in agriculture, irrigation, and combating the effects of climate change (14-16th June 2021), Tunis. [Speaker], (online).
10. "SAFE USE OF WASTEWATER" by IWMI and Sweden Sverige, Virtual workshop, 30th May- 9th June 2021, Amman, Jordan

11. Waterloution (water innovation lab) Beirut, Beka,' Lebanon, American University Beirut, 8-20th June 2019.
12. The NANO-TECH Summer School, Technische Universität Chemnitz, Chemnitz, Germany, 25/9-2/10/2016.

Fellowship & Internship

1. Leader in Innovation Fellowship program, Royal Academy of Engineering, Newton Fund, iR&Df, 1/Feb-25/Nov/2021.
2. CEWAS Middle East, Amman, 24/Sep/2019- 10/Nov/2020.
3. Research Internship in Germany, the NANO-TECH, Technische Universität Chemnitz, Chemnitz, Germany, 25/10-16/12/2016.

PRIZES

1. American University Beirut award (5000\$) seed fund and mentorship for treatment of olive mill wastewater by magnetic iron oxide-based nanomaterial project (2019).
2. CEWAS business green environment and water sanitation innovation incubator/Jordan (3500\$).
3. Zinc-Agri Tech Hackathon for innovating olive mill wastewater treatment by magnetic separation (3000\$).

LANGUAGES

1. Arabic (native language)
2. English (v. good)

SKILLS

1. Analytical Thinking
2. Scientific Writing
3. Synthesis of organic materials
4. Using of materials characterization techniques:
IR, UV-vis, NMR, Mass Spectroscopy, DSC, TGA, BET, SEM, TEM, and EDXS.
5. Drug Design and materials toxicity programs.
6. Proven computer skills (ICDL-License)

REFERENCES

1. **Prof. Fawwaz I. Khalil.**
The University of Jordan, School of Science, Chemistry Department, Amman, Jordan. Mob: 00962 7 77423178, 00962 791958044
Email: f_khalili99@yahoo.com; fkhalili@ju.edu.jo
2. **Prof. Mohammed Wadie Bouachrine.** Moulay Ismail University, Faculty of Sciences, Molecular Chemistry and Natural Substances Laboratory, Meknes, Morocco
Mob: 00212 660736921
Email: bouachrine@gmail.com; m.bouachrine@umi.ac.ma

3. Ms. Rima Ras.

The Higher Council for Science and Technology /Industrial Research and Development Fund (iR&Df),
Director, Amman, Jordan.

Mob: 00962 7 95656533

Email: rima@hcst.gov.jo;reemaras@gmail.com

Journal Editors

Guest Editor at **Arabian Journal of Chemistry (O1, IF = 6.0)** for International Conference on Materials and Environment 'ICME6- 2022' special issue.

<https://www.sciencedirect.com/journal/arabian-journal-of-chemistry/about/call-for-papers#international-conference-on-materials-and-environment-icme6-20>

Journals Reviewer

- ChemistrySelect
- Physical Chemistry Research
- Chemistry Africa
- Journal of Biomolecular Structure and Dynamics.
- Journal of Radioanalytical and Nuclear Chemistry.

Funded Project

- DFG UDIF-HAW Towards Joint Jordanian-German Research on Water Nexus (2024). 25000 €

Selected Published Articles (2024).

M. Ouabane, K. Zak, K. Tabti, **Marwa Alaqarbeh et al.**, Molecular toxicity of nitrobenzene derivatives to tetrahymena pyriformis based on SMILES descriptors using Monte Carlo, docking, and MD simulations. (2024). *Computers in Biology and Medicine*. 169. 107880 (**IF = 7.7, Q1**)

S. Bouamrane, A. Khaldan, **Marwa Alaqarbeh et al.**, Garlic as an effective antifungal inhibitor: A combination of reverse docking, molecular dynamics simulation, ADMET screening, DFT, and retrosynthesis studies. (2024). *Arabian Journal of Chemistry*. 17(3). 105642, (**IF = 6.0, Q1**)

A. Khaldan, S. Bouamrane, R. El-mernissi, M. Ouabane, **Marwa Alaqarbeh et al.**, Design of new α -glucosidase inhibitors through a combination of 3D-QSAR, ADMET screening, molecular docking, molecular dynamics simulations and quantum studies. (2024). *Arabian Journal of Chemistry*. 17(3). 105656, (**IF = 6.0, Q1**)

J. Houssaini, M.N. Bennani, H. Ziyat, S. Arhzaf, J. Zerhouni, **Marwa Alaqarbeh**. Effect of divalent cations on the basicity and catalytic performance of layered double hydroxide heterogeneous catalyst in microwave-assisted aldol-condensation of benzaldehyde with 1-heptanal. (2024). *Chemical Physics Impact*. 8. 100569, (**IF = 2.2, Q2**)

S. El Rhabori, **Marwa Alaqarbeh et al.**, Design, 3D-QSAR, molecular docking, ADMET, molecular dynamics and MM-PBSA simulations for new anti-breast cancer agents. (2024). *Chemical Physics Impact*. 8. 100455, (**IF = 2.2, Q2**)

S. Bouamrane, A. Khaldan, **Marwa Alaqarbeh et al.**, Computational integration for antifungal 1,2,4-triazole inhibitors design: QSAR, molecular docking, molecular dynamics simulations, ADME/Tox, and retrosynthesis studies. (2024). *Chemical Physics Impact*. 8. 100502, (**IF = 2.2, Q2**)

M. Ouabane, K. Zak, **Marwa Alaqarbeh et al.**, Exploring Structure–Toxicity Relationships in Nitrobenzene and Derivatives: A Multifaceted Biochemical Investigation Using 3D–QSPR, HQSPR, Molecular Docking, and MD Simulation. (2024). *ChemistrySelect*. 9(15). e202304588 (**IF = 2.3, Q2**)

M. Ouabane, **Marwa Alaqarbeh et al.**, Quality Control of Coumarins, Furocoumarins and Polymethoxyflavones in Citrus Essential Oils: In Silico Analysis. (2024). *ChemistrySelect*. 9(5). e202303037 (**IF = 2.3, Q2**)

