

PERSONAL INFORMATION

Bayan Khalaf

• Researcher in Water Purification and Assistant Professor of Chemistry with over 7 years of work experience.

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 <https://www.linkedin.com/in/bayan-khalaf/>

 <https://www.researchgate.net/profile/Bayan-Khalaf>

 <https://scholar.google.com/citations?hl=ar&user=8w7JDaUAAAAJ>

EDUCATION

Aug. 2017 - Apr. 2021

PhD in Analytical and Physical Chemistry (Full Scholarship)

Faculty of Graduate Studies, An-Najah National University, Palestine. Grade: Excellent (3.81 out of 4). PhD Research Fellowship at Research Center Jülich, Germany. **PhD Thesis:** Purification of Water in Palestine from Persistent Pesticides Using New Synthesized Cellulose Nanoparticles.

Aug. 2014 - Apr. 2016

Master in Analytical and Physical Chemistry (Partial Scholarship)

Faculty of Graduate Studies, An-Najah National University, Palestine. Grade: Very Good (3.61 out of 4). **MSc Thesis:** Purification of Groundwater from Heavy Toxic Metals using Suspended Polydentate Supported Ligands.

Oct. 2010 - Mar. 2014

Bachelor in Chemistry (Partial Scholarship)

Faculty of Science, Arab American University, Palestine. Grade: Very Good (3.36 out of 4).

Sep. 2009 - July 2010

General Secondary Education Examination

Scientific Stream, Burqin Secondary Girls School, Palestine. Grade: Excellent (93.9 out of 100)

WORK EXPERIENCE

Jan. 2025 - Feb. 2025

Visiting Researcher

The Institute for Organic Synthesis and Photoreactivity (ISOF), National Research Council (CNR), Bologna, Italy.

Oct. 2024 - Dec. 2024

Visiting Scholar

Department of Chemistry and Biochemistry, Concordia University, Montreal, Canada.

Aug. 2021 - Feb. 2024

Assistant Professor

Nov. 2020 - Jul. 2021 &
Oct. 2016 - Feb. 2018

Lecturer

Department of Applied Chemistry, Arab American University, Jenin, Palestine.

• University Teaching Courses: Physical Chemistry I, Medical Chemistry, General Chemistry I, Chemistry for Dental Students I & II, Chemistry for Medical Sciences, Chemistry for Nursing, Pre-Chemistry, Chemistry Laboratory for Medical Students, General Chemistry Lab I & II, Medical Chemistry Lab, Chemistry Lab for Dental Students.

• Coordinating, monitoring, and writing exams for multi-section courses.

Oct. 2019 - Dec. 2019
May 2019

Visiting Researcher

Institute of Bio- and Geosciences (IBG-3) and Institute of Nuclear Chemistry (INM-5), Research Center, Jülich, Düren, Germany.

May 2018 - Aug. 2018

Lecturer

Faculty of Technology and Applied Sciences, Al-Quds Open University, Jenin, Palestine.

• University Teaching Courses: Organic Chemistry, Organic Chemistry Laboratory.

Nov. 2013 - Oct. 2016

Tutor

Teaching Chemistry Courses for High School and University Students, Jenin, Palestine.

Volunteering Work

Mar. 2022

Co-Founder

Palestine Youth Parliament for Water (Online).

Since Feb. 2020

Program Coordinator

Coordinator for External Opportunities Program (Women's Empowerment). TAMKEEN (Online).

FELLOWSHIPS & AWARDS

Aug. 2024	- Research Fellowship award granted by the National Research Council, Italy.
Mar. 2023	- Women Excellence Award in Scientific Achievements granted by the Ministry of Women's Affairs, Palestine.
June. 2022	- Extracted Research from PhD Theses Award granted by An-Najah National University, Palestine.
Mar. 2019 & June. 2022	- Two MEDRC Innovation Initiative Research Grants awarded by the Middle East Desalination Research Center, Oman.
Sep. 2018 - Mar. 2021	- MEDRC PhD Fellowship Grant in partnership between MEDRC Water Research and Palestinian Water Authority.
Mar. 2020	- Young Scientist Award granted by Lindau Nobel Laureate Meetings, Germany.
Feb. 2020	- Young Affiliate Award granted by The World Academy of Sciences (TWAS), Italy.
Jan. 2020	- Palestinian Quebec Science Bridge (PQSB) Research Grant in partnership between The Palestine Academy for Science and Technology (PALAST) in Palestine and the Fonds de Recherche Du Quebec – Nature Et Technologies (FRQNT), Santé (FRQS), Société Et Culture (FRQSC) in Canada.
Jan. 2020	- World Water Envoy Award granted by the International Water Resources Association (IWRA), France.
Feb. 2019	- First Place Award (Golden Researcher) for the Successful Completion of Golden Woman granted by TAMKEEN Foundation, Spain.
Nov. 2018	- Research Grant awarded by TAMKEEN Foundation, Spain.
July. 2018	- Palestinian German Science Bridge (PGSB) Research Fellowship Grant in Partnership between the Palestine Academy for Science and Technology and Forschungszentrum Jülich.
Aug. 2015 - Feb. 2016	- Fellowship Award for the Successful Completion of the Water Research MSc Fellowship Program in Partnership between MEDRC Water Research and the Palestinian Water Authority.

SIGNIFICANT COURSES

June 2020 - Oct. 2020	- Technical Course of Wastewater Treatment. E-Hydroaid - Water for Development Management Institute (Online).
Aug. 2020 - Sep.2020	- Training of Trainers and Facilitators 'Level I'. E-learning, Afaq Initiative (Online).
Feb. 2020 - Sep. 2020	- DAAD DIES ProGRANT Course: Proposal Writing for Research Grants, awarded by German Academic Exchange Service. (Online and Onsite). Ramallah, Palestine.
July 2020	- Designing and Planning Entrepreneurship Projects. E-learning, Afaq Initiative (Online).

PERSONAL SKILLS

Languages	Arabic (Native Speaker), English (Proficient).
Computer Knowledge	Competent with most Microsoft Office Programs (Excel, Word, PowerPoint) and e-learning systems.
Skills	<ul style="list-style-type: none">• Excellent Teaching Skills, Multitasking, Public Speaking, Leadership, Flexibility, Positivity, Teamwork, Organization, Accuracy, and speed in work completion.• Good experience in Water Treatment, Water Batch Experiments, and Synthesis of novel highly efficient, and Low-cost Adsorbents for Water Purification.• Basic Knowledge of UV, AAS, SEM, TGA, NMR, EA-IRMS, FT-IR, GC-MS, HPLC.• Basic Knowledge of Computational Chemistry (Density Functional Theory, Quantum Calculations, Gaussian program).

SIGNIFICANT SCIENTIFIC PARTICIPATIONS
(Fully Funded)

- Nominated Speaker by the Palestinian Water Authority at the International Forum: Safe Environment and Sustainable Development, 21-22 February 2024, Amman, **Jordan**.
- Nominated Speaker by the Higher Council for Innovation & Excellence, International Training Workshop: Low-Cost Technologies for Arsenic Removal from Groundwater, 5-6 September 2023. Cairo, **Egypt**.
- Invited participant to the 71st Lindau Nobel Laureate Meetings (Chemistry), 26 June - 1 July 2022. Lindau, **Germany** (online participation).
- Nominated Speaker by the Palestinian Water Authority and the Higher Council for Innovation & Excellence, Remote participation at the Hybrid International Workshop: Water Purification Technologies, Arsenic Removal from Groundwater and Integrated Water Management (IWWPT-2022), 28-30 June 2022. Gujarat, **India**.
- Invited participant in the 9th World Water Forum, 21-26 March 2022. Dakar, **Senegal**.
- Invited participant in XVII World Water Congress (World Water Envoy Award, Rapporteur, Speaker at Panel Discussions and Oral Presentations), 29 November – 3 December 2021. Daegu, **Republic of Korea**.
- Participation in the 18th Online Annual Meeting of Science and Technology in Society forum (STS forum), 2-5 October 2021.
- Oral Presentation in The Forth MEDRC Palestinian Water Research Alumina Forum: Integrated Solutions for Water and Wastewater issues to Achieve Sustainable development, 28 July 2021. Palestine Water Authority, Ramallah, **Palestine**.
- Participation in Online Workshop 'From Innovator to Business', 10-11 December 2020. Young Entrepreneurs in Science.
- Oral Presentation in The Third MEDRC Palestinian Water Research Alumina Forum: Entrepreneur of Innovative Water Solutions for Next Generation, 7 December 2020. An-Najah National University, Nablus, **Palestine**.
- Participation in IWRA Online Conference on Groundwater and Climate Change, 28-30 October 2020. International Water Resources Association.
- Participation in Online Workshop 'From Ph.D. to Innovator', 12-13 October 2020. Young Entrepreneurs in Science.
- Speaker at the Online Event 'Palestinian Researchers: Reality Examination and Facing of Challenges", 12 September 2020. Tamkeen Foundation.
- Participation in Online Arab Science Week, 15-23 August 2020.
- Participation in Virtual Phi's Research and Innovation Summit, 3-4 July 2020. Phi Science Institute.
- Participation in Online Science Days, 28 June - 1 July 2020. Lindau Nobel Laureate Meetings.
- Invited participant in Tamkeen First Winter Camp for Women to Promote and Empower Palestinian Women's Leadership, 3-10 February 2020. Istanbul, **Turkey**.
- Participation in Jülich Career Day, 8 November 2019. Research Center Jülich, Düren, **Germany**.
- Invited participant in AGYA Training Workshop 'How to Integrate Interdisciplinary Courses in Arab and German Universities', 29-31 August 2019. Amman, **Jordan**.
- Participation in AGYA Summer School in Numerical Simulation, 18-28 August 2019. Palestine Polytechnic University (Hebron, **Palestine**) and Bethlehem University (Bethlehem, **Palestine**).
- Participation in The Forth Palestinian German Science Bridge Cooperation Workshop, 7-10 April 2019. Ramallah, **Palestine**.
- Organization of The First MEDRC Palestinian Water Research Alumina Forum (Responsibilities: Head Speaker, Student Chair, and member of the Organizing and Scientific Committees, 11 December 2018. An-Najah National University, Nablus, **Palestine**.
- Poster Presentation in The Third Palestinian German Science Bridge Cooperation Workshop, 25-29 June 2018. Research Center Jülich, Düren, **Germany**.
- Participation in The Second Palestinian German Science Bridge Cooperation Workshop, 12-15 November 2017. Ramallah, **Palestine**.
- Oral Presentation in The First Falling Walls Lab in Palestine, 24 May 2017. Birzeit University, Ramallah, **Palestine**.
- Poster Presentation in The Second Palestinian International Graduate Conference on Natural, Medical and Health Sciences and Humanities (SPIGCMHSH 2017), 20 April 2017. An-Najah National University, Nablus, **Palestine**.
- Participation in The First Winter School of High Energy Physics in Palestine (WISHEPP), 13-17 November 2016. An-Najah National University, Nablus, **Palestine**.
- Oral Presentation at The Seventh Jordanian International Conference of Chemistry, 19-21 April 2016. Yarmouk University, Irbid, **Jordan**.
- Poster Presentation in The Second Palestinian International Conference on Materials Science and Nanotechnology, 23-24 March 2016. An-Najah National University, Nablus, **Palestine**.

- **Khalaf, B.**, Jodeh, S., Samhan, S. **Novel Cellulose-Based Hectocycle Nanopolymers for Arsenic Removal from Groundwater**. In: Sen Gupta, B., Martínez-Villegas, N. (eds) *Arsenic Remediation of Food and Water*. Springer, Singapore. 2024, 207-225.
https://doi.org/10.1007/978-981-97-4764-1_10
- F. E. Tabaght, K. Azzaoui, A. El Idrissi, S. Jodeh, **B. Khalaf**, L. Rhazi, R. Bellaouchi, A. Asehraou, B. Hammouti & R. Sabbahi. **Synthesis, characterization, and biodegradation studies of new cellulose-based polymers**. *Scientific reports*. 2023. 13(1), 1673.
<https://www.nature.com/articles/s41598-023-28298-5>
- **Bayan Khalaf**, Othman Hamed, Shehdeh Jodeh, Roland Bol, Ghadir Hanbali, Zaki Safi, Omar Dagdag, Avni Berisha, Subhi Samhan. **Cellulose-Based Hectocycle Nanopolymers: Synthesis, Molecular Docking and Adsorption of Difenconazole from Aqueous Medium**. *International Journal of Molecular Sciences (IJMS)*. 2021, 1-19.
<https://www.mdpi.com/1422-0067/22/11/6090>
- **Bayan Khalaf**, Shehdeh Jodeh, Othman Hamed. "Purification of Water in Palestine from Persistent Pesticides Using New Synthesized Cellulose Nanoparticles". *Repository of An-Najah National University*. 2021, 1-187.
<https://repository.najah.edu/handle/20.500.11888/16520>
- **Bayan Khalaf**, Othman Hamed, Shehdeh Jodeh, Ghadir Hanbali, Roland Bol, Omar Dagdag, Subhi Samhan. **Novel, Environment-Friendly Cellulose-Based Derivatives for Tetraconazole Removal from Aqueous Solution**. *Polymers*. 2021, 1-18.
<https://www.mdpi.com/2073-4360/13/3/450>
- Hanan Harb, Shehdeh Jodeh, A. Rasem Hasan, Subhi Samhan, **Bayan Khalaf**, Ghadir Hanbali, Omar Dagdag. "Metals content, occurrence and Distribution in soil of Al-Qilt catchment, Palestine". *GP Globalize Research Journal of Chemistry*, 2021, 9-24.
http://www.paduco.ps/sites/default/files/research/Journal_article_Harb_ea_2021_Heavy%20Metal%20Content%20Occurrence%20and%20Distribution%20in%20Soil%20of%20Al-Qilt.pdf
- Ghadir Hanbali, Shehdeh Jodeh, Othman Hamed, Roland Bol, **Bayan Khalaf**, Asma Qdemat, Subhi Samhan, Omar Dagdag. "Magnetic Multiwall Carbon Nanotube Decorated with Novel Functionalities: Synthesis and Application as Adsorbents for Lead Removal from Aqueous Medium". *Processes*, 2020, 1-18.
<https://www.mdpi.com/2227-9717/8/8/986>
- Ghadir Hanbali, Shehdeh Jodeh, Othman Hamed, Roland Bol, **Bayan Khalaf**, Asma Qdemat, Subhi Samhan. **Enhanced Ibuprofen Adsorption and Desorption on Synthesized Functionalized Magnetic Multiwall Carbon Nanotubes from Aqueous Solution**. *Materials*, 2020, 1-22.
<https://www.mdpi.com/1996-1944/13/15/3329>
- O. Dagdag, M. El Gouri, A. El Mansouri, A. Outzourhit, A. El Harfi, O. Cherkaoui, A. El Bachiri, O. Hamed, S. Jodeh, G. Hanbali, **B. Khalaf**. **Rheological and Electrical Study of a Composite Material Based on an Epoxy Polymer Containing Cyclotriphosphazene**. *Polymers*, 2020, 1-9.
<https://www.mdpi.com/2073-4360/12/4/921/htm>
- Lubna Siam, Issam AL Khatib, Fathi Anayah, Shehdeh Jodeh, Ghadir Hanbali, **Bayan Khalaf**, Abdalhadi Deghles. "Developing a Strategy to Recovering Condensate Water from Air Conditioners in Palestine". *Water*, 2019, 1-17.
<https://www.mdpi.com/2073-4441/11/8/1696>
- Omar Dagdag, Ghadir Hanbali, **Bayan Khalaf**, Shehdeh Jodeh, Ahmed El Harfi, Abdalhadi Deghles. "Dual Component Polymeric Epoxy-Polyaminoamide Based Zinc Phosphate Anticorrosive Formulation for 15CDV6 Steel". *Coatings*, 2019, 1-11.
<https://www.mdpi.com/2079-6412/9/8/463>
- Nibal Al-Batsh, Issam A. Al-Khatib, Subha Ghannam, Fathi Anayah, Shehdeh Jodeh, Ghadir Hanbali, **Bayan Khalaf**, Michael van der Valk. "Assessment of Rainwater Harvesting Systems in Poor Rural Communities: A Case Study from Yatta Area, Palestine". *Water*, 2019, 1-15.
<https://www.mdpi.com/2073-4441/11/3/585>
- Shehdeh Jodeh, Inas Ibsharat, **Bayan Khalaf**, Othman Hamed, Diana Jodeh, Dagdag Omar. "The Use of Magnetic Multiwalled Carbon Nanotubes Functionalized with Chitosan for Nitrate Removal from Wastewater". *Chemistry Africa*, 2019.321-333.
<https://link.springer.com/article/10.1007/s42250-019-00056-z>

PUBLICATIONS
(Continued)

- A. Jaafar, A. Boussaoud, S. Jodeh, K. Azzaoui, B. Hamed, R. Salghi, **B. Khalaf**, G. Hanbali, A. Rasem Hasan. "**Neutral red removal Using different techniques: Direct photolysis, UV/H₂O₂, Fenton and Photo-Fenton**". *Der Pharma Chemica*, 2016, 345- 349.

<http://derpharmachemica.com/vol8-iss18/DPC-2016-8-18-345-349.pdf>

- Shehdeh Jodeh, **Bayan Khalaf**, Smaail Radi, Said Tighadouini, Rachid Salghi, Sobhi Samhan, Diana Jodeh, Ismail Warad. A. Rasem Hasan, Ghadir Hanbaly. "**Using New Synthesized Polysiloxane Modified with Nitrophenyl as a Low Cost Adsorbents For Nickel Removal From Wastewater**". *International Journal of Application or Innovation in Engineering & Management (IJAIEM)*, 2016, 232-248.

<http://www.ijaiem.org/Volume5Issue9/IJAIEM-2016-09-25-34.pdf>

- Shehdeh Jodeh, **Bayan Khalaf**, Smaail Radi, Said Tighadouini, Rachid Salghi, Sobhi Samhan, Ismail Warad, Khalil Azzaoui, Diana Jodeh. "**Adsorption of Lead (II) from Aqueous Solution by Using Polysiloxane Surfaces Modified with Ortho-, Meta-, or Para- Nitrophenyl Moieties**". *Der Pharma Chemica*, 2016, 8(2):444-461.

<http://derpharmachemica.com/vol8-iss2/DPC-2016-8-2-444-461.pdf>

- Shehdeh Jodeh, **Bayan Khalaf**, Smaail Radi, Said Tighadouini, Rachid Salghi, Sobhi Samhan, Ismail Warad, Diana Jodeh. "**New Polysiloxane Surfaces Modified with Ortho-, Meta-, or Para-Nitrophenyl Moieties for Cadmium Removal from Water**". *Journal of Surface Engineered Materials and Advanced Technology* 6, no. 02 (2016): 18-35.

http://file.scirp.org/pdf/JSEMAT_2016040714352534.pdf