

Curriculum Vitae



Ayat Bozeya (Bouzieh)

Full Time Instructor/ Assistant Prof. B

Jordan University of Science and Technology (JUST)/ Irbid, Jordan

Contact Information:

Institute of Nanotechnology / Jordan University of Science and Technology, Irbid, Jordan

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Academic qualification:

- PhD in Applied Physical Chemistry, The University of Jordan, Amman, Jordan. July 2018
GPA: 3.69/4.00 (Excellent)
- M.S in Applied Physical Chemistry, The University of Jordan, Amman, Jordan May 2008
GPA: 3.68 / 4.00 (Excellent)
- BS in Chemistry, The University of Jordan, Amman, Jordan. June 2001
GPA: 3.16 / 4.00 (Very Good)

PhD. Research :

Dissertation Title: The Effect of Carbon Nanotubes Functionalization on Structure and Properties of Polymer / Carbon Nanotube Nanocomposites

M.S Research :

Thesis Title: Method Development for Analysis of Linear and Branched Alkyl Benzene Sulfonates and Comparison of their Phase Behavior in Water and Oil Ternary Systems

Experience summary:

- Institute of Nanotechnology, Jordan University of Science and Technology, Full Time Instructor/Assistant Prof. B, March 2019 – Present
- HMCSR, University of Jordan, Amman, Jordan, Researcher, Sep. 2013-Dec. 2018
- HMCSR, University of Jordan, Amman, Jordan, Lab Supervisor, July 2009- Sep. 2013
- University of Jordan, Amman, Jordan, Research assistant, June 2008-June 2009
- University of Jordan, Amman, Jordan, Graduate Teaching & Research Assistant, Feb. 2005 – May 2007
- Governmental Schools, Zarqa, Jordan, Chemistry Teacher (part time) April – June 2005 and Sep. – Dec. 2004

- Baraem Um Almoamenin School (Private School), Zarqa, Jordan, Teacherfor Science and Math, August 2003- June 2004
- University of Jordan, Amman, Jordan, Research assistant, March – June 2003
- Alshomoo Private School, United Arab Emirates, Abu Dhabi, ScienceTeacher (American Syllabus) August – Sep. 2002
- University of Jordan, Amman, Jordan, Research assistant, Oct. – Dec.2001

Publications:/ Published

1. **Bozeyya A.**, Makableh Y. F., Al-Mezead L. A., Abu-Zurayk R. **(2023)** Wet Ball Milling and Hot Press for the Preparation of UHMWPE /Modified MWCNTs Nanocomposite with Enhanced Mechanical and Thermal Properties, Polymer Bulletin, <https://doi.org/10.1007/s00289-023-04790-w>
2. Abu-Daloo M. A., **Bozeyya A.**, Sawalmeh Z., Albiss B., Alnairat N., Abu-Zurayk R. **(2023)** Antifouling polymeric nanocomposite membrane based on interfacial polymerization of polyamide enhanced with green TiO₂ nanoparticles for water desalination, PeerJ Analytical Chemistry 5:e26 <https://doi.org/10.7717/peerj-achem.26>
3. **Bozeyya A.**, Makableh Y.F., Abu Hammam H., Alnasra I., AlRawashder T. **2022**, Synthesis and Characterization of Ultra-High Molecular Weight Polyethylene/ Silicon Carbide Nanocomposite, Silicon, <https://doi.org/10.1007/s12633-022-02224-2>
4. Makableh Y. F., **Bozeyya A.**, Alnasra I., AlRawashder T., Abu Hammam H., **2022**, Investigation of the structure and tensile strength of ultrahigh molecular weight polyethylene and amide functionalized single-walled carbon nanotubes nanocomposites, Polymer Bulletin Journal, <https://doi.org/10.1007/s00289-023-04681-0>
5. Makableh Y. F., **Bozeyya A.**, AlRawashder T., Alnasra I., Abu Hammam H., **2022**, Mechanical, Thermal and Structural Properties of Ultrahigh Molecular Weight Polyethylen/ Amide-MWCNT Nanocomposite, Advances in Natural Sciences: Nanoscience and Nanotechnology, 13(1), 015011.
6. Diaan Al-Domi, **Bozeyya A.**, Al-Fandi M., **2022**, Development of an insulin nano-delivery system through buccal administration, **Current Drug Delivery**, doi: 10.2174/1567201819666220112121115. Epub ahead of print. PMID: 35023456.
7. Al Bawab A., **Bozeyya A.**, Abu Zurayk R., Makableh Y.F., Khalaf A., **2022**, Enhanced Thermal and Structural Properties of UHMWPE/ CNT Nanocomposite Sheets Prepared by Using Melt Compounding Technique, Polym. Bull. 80, 12433–12445 (2023). <https://doi.org/10.1007/s00289-022-04645-w>

8. **Bozeyya A.**, Makableh Y.F., Abu Zurayk R., Khalaf A., Al Bawab A. (2021) Thermal and Structural Properties of High Density Polyethylene/ Carbon Nanotube Nanocomposites: A Comparison Study, **Chemosensors**, **9**, 136. <https://doi.org/10.3390/chemosensors9060136>
9. Moqbel S., Abu Zurayk R., **Bozeyya A.**, Al sisan R. (2020) Assessment of sustainable recycling at The University of Jordan, **International Journal of Sustainability in Higher Education**, **21(6)**, 1111-1129.
10. Naser R.A., Abbas H., Khalaf A., Bozeyya A., Jamil T. (2020) Nano-sized $Ga_{2-x}Cu_xZr_{2-x}W_xO_7$ for Malachite green decolorization under visible light, **Desalination and Water Treatment**, **183**, 389-403.
11. Al Bawab A., Al-Hunaiti A., Abu Mallouh S., Bozeyya A., Abu Zurayk R., Hussein T. (2020) Contamination of Plants, Soil and Building Stones at a Roman Heritage Archaeological Site in an Urban Area, **Fresenius Environmental Bulletin**, **29(3)**, 1322-1333.
12. Al Bawab A., Ghannam N., Abu Zurak R., **Bozeyya A.**, Abu Malouh S., Al-Rawashdeh, N., Abu Dalo M., (2018) Olive Mill Wastewater Remediation by Granular Activated Carbon Impregnated with Active Materials, **Fresenius Environmental Bulletin**, **27(4)**, 2118-2126.
13. Al Bawab A., Ghanam N., Abu Malouh S., **Bozeyya A.**, Abu Zurak R., Alshawawreh, F., Odeh F., Al-Ajlouni Y., Abu Dalo M., (2018) Olive mill wastewater treatment in Jordan: A Review, **IOP Conf. Series: Materials Science and Engineering 305** (2018) 012002 doi:10.1088/1757-899X/305/1/012002.
14. Al Bawab A., **Bozeyya A.**, Abu Malouh S., Abu-Irmaileh, B., Ismail D., Abu Zurak R. (2018) The Dead Sea Mud & Salt: A Review of its Characterization, Contaminants & Beneficial Effects, **IOP Conf. Series: Materials Science and Engineering 305** (2018) 012003 doi:10.1088/1757-899X/305/1/012003.
15. Al Bawab A., Al Adarbeh N., El Khalili M., **Bozeyya A.** (2017) Restoration and Rehabilitation of the Roman Nymphaeum in Amman: "Nymphaeum Archeological Park", **Proceeding Monubasin 10 conf.** Chapter 34, pp. 321-330.
16. Odeh F., **Bozeyya A.**, Al Bawab A. (2017) Exploring new nano-materials for the consolidation of Cultural Heritage, **Proceeding Monubasin 10 conf. Chapter 20**, pp. 199-206.

17. Al Bawab A., Al-Omari R., Abd-Allah R. **Bozeya A.**, Abu Zurak R., (2017) The Application of a Modified Sol- Gel Silica Coating for the Protection of Corrode Roman Soda-Lime Silica Glass: An Experimental and Analytical Study, **Proceeding, Monubasin 10 conf. Chapter 19, pp. 189-198**
18. Abu-Zurayk R., **Bozeya A.**, Abu-Irmaileh B., Abu-Mallouh S., Al-Dujaili A., Al Bawab, A. (2017) Assessment and Treatment Optimization of Some Heavy Metals in the Dead Sea Mud, **J Soil Sed. Contam. 26(4), 364-376.**
19. Sharar M., **Bozeya, A.**, Al-Banna, L., Al-Bawab, A. (2017) Fungicidal and Nematicidal Activities for Essential Oils Formulated in Janus Emulsion, **Green Chemistry Letters and Reviews, 10(3), 121-128**
20. Al Bawab, A. Abu Dalo M, Alshawawreh, F., Al-Rawashdeh, N. A. F., **Bozeya, A.** (2017) Separation of soluble phenolic compounds from olive mill wastewater (OMW) using modified surfactant, **Journal of Fresenius Environmental Bulletin, 26(3), 1949-1958.**
21. Al Bawab A., Abd-Allah R., Al-Hamati H., Odeh F., **Bozeya A.**, (2017), Consolidation of Archaeological Basalt Stone: A New Experimental Protocol by Using Different Dispersion Formulation, **IJCS, 8(2),187-198**
22. Al Bawab A., Odeh F Na'es M., Al Ashqar H., **Bozeya A.**, Hamati H., Sharar M., Abdallah R. (2013) Conservation Materials and Archaeometry Techniques in Jordan (2000 – 2012): A Review, 9th International Symposium on the Conservation of Monuments in the Mediterranean Basin. Improvements in Conservation and Rehabilitation, Integrated Methodologies, June 3-5 2014, Ankara, Turkey, pp. 873-887.
23. Abu-Zurayk, R.A., **Bozeya, A.**, Abu-Irmaileh, B., Abu-Mallouh, S., Al Bawab, A., and Al-Dujaili, A. H. (2017), Assessment of some Heavy Metals in the Dead Sea Mud and Treatment Optimization, **Soil and Sediment Contamination: An International Journal**, DOI:10.1080/15320383.2017.1313193
24. Al Bawab, A. Abu Dalo M, Alshawawreh, F., Al-Rawashdeh, N. A. F., **Bozeya, A.** (2017) Separation of soluble phenolic compounds from olive mill wastewater (OMW) using modified surfactant, **Journal of Fresenius Environmental Bulletin, 26(3), 1949-1958**

25. Hamadneh I, Abu-Zurayk R, Abu-Irmaileh B, **Bozeya A**, Al-Dujaili A. (2015) Adsorptive performance comparison of surfactant and fatty hydroxamic acid modified bentonite for Pb (II) removal from aqueous solutions, **Clay Minerals**, **50**: 485-496.
26. Al-Bawab A., **Bozeya A.**, Hasinovic H., and Friberg S. E., (2015) Three-Phase Surfactant-less Emulsions, **Arabian Journal of Chemistry**, **8**, 246-254.
27. Al Bawab A., **Bozeya A.**, Odeh F. (2014) Effect of Surfactant Tail Structure on Phase Behavior of Branched and Linear Alkylbenzene Sulfonate in Water and Oil Ternary Systems, **GSTF International Journal of Chemical Sciences (JChem)**, 1(2), 32-39
28. Odeh F. , Al Bawab A. Fayyad M., **Bozeya A.** (2013) Surfactant Enhanced Olive Oil Mill Wastewater Remediation, **International Conference on Environmental Science and Development – ICESD, APCBEE Procedia**
29. Bozeya A. , Al-Bawab A., Friberg S. E., Ge L., Guo R. (2013) Some Experiments on Complex Spontaneous Emulsification in the System Water-Benzene-Ethanol, **Colloid and Polymer Science**, **291**, 1933-1938.
30. **Bozeya A.** , Al-Bawab A., Friberg S. E., Ge L., Guo R. (2013) Spontaneous Emulsification Between Incompatible Aqueous Solutions in the Water/Ethanol/Benzene System, **Journal of Colloid and Interface Science**, **395(1)**, 161-165.
31. Al-Bawab A., **Bozeya A.** Friberg S. E., Ge L., Guo R., (2013) Spontaneous Emulsification in the System Water/Benzene/Ethanol: Phase Equilibria and Emulsification Mechanism, **Colloid and Surfaces; A**, **418**, 1-6.
32. Al Bawab A., Abdallah R., **Bozeya A.**, Odeh F., Al Ashqar H., (2012) Jordan Conservation of Cultural Heritage in ERA, **Progress in Cultural Heritage Preservation-EUROMED 2012**, 295-300
33. **Bozeya A.** , Al-Bawab A., Friberg S. E., Miller C. A. (2013) Spontaneous Emulsification and Phase Equilibria in the System Water, Ethanol and Benzene, **J. Disp. Sci. Tech.**, **34(10)**, 1429-1436.
34. **Bozeya A.** , Al-Bawab A., Friberg S. E., Guo R. (2011) Equilibration in a Geranyl Acetate Emulsion, **Colloid & surfaces; A**, **373 (1-3)**, 110-115

35. Al-Bawab A., **Bozeya A.**, Friberg S. E., Aikens, P. A. (2010) Geranyl Acetate Emulsions; Surfactant Association Structures and Stability, **J. Disp. Sci. Tech.**, **31(5)**, 606-610
36. Friberg S. E., Al-Bawab A., **Bozeya A.**, Aikens, P. A. (2009) Geranyl Acetate Emulsions; Surfactant Association Structures and Emulsion Inversion, **J. Colloid Interfac. Sci.**, **336 (1)** 345-351
37. Al-Bawab A., Odeh F., **Bozeya A.**, Aikens, P. A., Friberg S. E. (2009) A Comparison between Experimental and Estimated Evaporation Path from Emulsions, **Flavors & Fragrances**, **24**, 155-159
38. Friberg S. E., Al-Bawab A., Odeh F., **Bozeya A.**, Aikens, P. A., (2009) Emulsion Evaporation Path. A First Comparison of Experimental and Calculated Values, **Colloid & surfaces; A**, **338 (1-3)**, 102-106
39. **Bozeya A.**, Al-Bawab A., Fayyad M., 2009, Method development for analysis of Linear and Branched alkyl benzene sulfonates , **Fresen. Environ. Bull.**, **18, (5)**, 590-600.
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Publications:/ Submitted and in Preparation

1. Abu-Zurayk R., Nour Alnairat N., Bozeya A., Khalaf A., Abu Dalo D. (2024) Enhanced Properties of PVDF Membranes Using Green AgNanoclay Nanocomposite, **Submitted** (Materials Research Express)
2. Al Dabbas T,H, Bozeya A. (2024) Modeling Release Scaffolds For Spinal Cord Tissue Regeneration After Injury Using COSOL Simulation, **Submitted**
3. Abu El Samen F., Al Momani O., **Bozeya A.**, Alananbeh K.M. (2023), Green synthesis of silver nanoparticles using Prosopis juliflora (Sw.) DC. 2 leaves extract and their effect on plant pathogenic fungi, **Submitted** (Frontiers in Chemistry, Section Nanoscience)
4. Algoraee A., Alshorman A., **Bozeya A.**, Khnouf R. (2023) An Improved PVA-κCA Strain Sensor Hydrogel Utilizing Interfacial Polymerization of Polyaniline Nanofibers. **Submitted**
5. Abu-Zurayk R., Nour Alnairat N., Bozeya A., Khalaf A., Abu Dalo D. (2024) preparation and characterization of PVDF/ ZnO nanocomposite membranes, **in preparation**
6. Bawa'neh H., Lababneh B., Malkawi A., Ayat Bozeya A. (2024) Investigation of Aluminum (Al 6061-T6)/Graphene/Bentonite Hybrid Nanocomposite Mechanical Properties with Finite Element Analysis Study, **In Preparation**
7. Bozeya A., Alnairat N., Abu-Zurayk R. (2024) preparation and characterization of Cellulose/ CNT nanocomposite membranes, **in preparation**

Participation in conferences:

- "UHMWPE /MWCNTs Nanocomposite Prepared by Wet Ball Milling and Hot Press" Jordanian Chemistry Conference JCC18, Sep. 12-13 **2023**, Hashemite University, Zarqa, Jordan.
- "The Multidisciplinary Nature of Nanotechnology" Prospects for Chemical and Pharmaceutical Industries (ICPCPI-2022), Nov. 15-16 **2022**, Isra University, Jordan.
- "Nanoroyalty" Prospects for Chemical and Pharmaceutical Industries (ICPCPI-2022), Nov. 15-16 **2022**, Isra University, Jordan.
- "Structural and Mechanical Properties of Ultra High Molecular Weight Polyethylene/SiC Nanocomposite" International Conference on Applied Chemistry and Biotechnology (ICACB-2022), May 10-12 **2022**, Al-Balqa Applied University, Al Salt Jordan.
- "Research Interests and Contributions in Nanotechnology" Jordan Nano Symposium, March 16-18, **2021**, Virtual Symposium.
- "The Effect of Functionalization of Carbon Nanotubes on the properties of HDPE/CNT nanocomposites". The first international conference on current nanotechnology and its application (ICCNA – 2018), April 10-12, 2018, JUST, Irbid, Jordan.
- "The Effect of Acid Treatment on the Functionalization of Single Walled Carbon Nanotubes by Using Sonication Method" (IIEC 2017), Nov. 14-16, 2017, JUST, Irbid, Jordan.
- Production of fuel from waste plastics using nano catalysts. International conference of chemistry biosciences and 15th Jordanian chemical conference (ICCB 2017), April, 5-6, 2017.
- "Effect of Surfactant Tail Structure on Phase Behavior of Branched and Linear Alkylbenzene Sulfonate in Water and Oil Ternary Systems" 17th Arab Chemistry Conference (ACC17), Tunisia, March 2015
- "Surfactant Enhanced Olive Oil Mill Wastewater Remediation" Water in the Arab world, status, Challenges and opportunities (WAWCO 2014), Amman Jordan Feb 2014

- "Method Development for Analysis of Linear and Branched Alkyl Benzene Sulfonates and Comparison of their Phase Behavior in Water and Oil Ternary systems" International conference of young chemists (ICYC 2012), April 2012, The University of Jordan, Amman, Jordan
- "Method Development for Analysis of Linear and Branched Alkyl Benzene Sulfonates and Comparison of their Phase Behavior in Water and Oil Ternary systems" 9th Jordanian Chemical Conference, Hashemite University, JORDAN, April 2009 (presentation)
- "Surfactant Enhanced Polluted and Waste Water Remediation" 6th Jordanian International Conference of Chemistry, Yarmouk University, Irbid, Jordan, April 2011 (poster)

Attending Conferences & Workshop:

- Water-Academia Collaboration Taskforce Kickoff workshop, 27 Nov. 2023, Just, Irbid, Jordan.
- Focus Group on Greening in Higher Education meeting, 17 Nov. 2023, online
- Workshop "How to use the course quality control system", 14 Nov. 2023, JUST, Jordan.
- Statistical analysis for beginners using SPSS, 30 Oct. – 2 Nov. (12 hours), Shoman Research Fund, Amman, Jordan.
- The ninth Economic Conference "Jordan's role in the fertilizer industry: Its development: opportunities and challenges" 19th Aug. 2023, Petra University, Amman, Jordan.
- "Chemical Security Risk Assessment Training for Jordanian Academic Institutions" workshop, Sandia National Laboratories, 10-12 Sep. 2023, Royal Scientific Society, Amman, Jordan.
- "Chemical Security Risk Assessment Training for Jordanian Academic Institutions" workshop, Sandia National Laboratories, online course, 30 May – 13 July 2023.
- "The SESAME 18th Users Meeting" 4-5 May 2023, SESAME (Synchrotron-light for Experimental Science and Applications in the Middle East), Al-Sult, Jordan.
- Training Workshop on Modern Spectroscopic Techniques and their Application in Research, 12-14 March 2023, COMSTECH-The University of Jordan, Amman, Jordan.

- The 1st International Conference of the Faculty of Sciences & Faculty of Pharmacy at Isra University & The 17th Jordanian Chemistry Conference (JCC17)“ Prospects for Chemical and Pharmaceutical Industries” (ICPCPI), 15-16 Nov. 2022, Isra University, Amman, Jordan.
- Science Debate: Can Jordanian adapt Climate Change, National Agriculture Research Center, Amman, Jordan, 11 Oct. 2022.
- The Eighth Economic Conference "Economics of Energy, Water, Food Security and Natural Resources"24th Sep. 2022, Petra University, Amman, Jordan.
- 4th Annual MEDRC Water Research Forum 2022 Water Security for Sustainable Development Sunday, 12th June 2022, (8:30 AM- 4:00 PM), Movenpick - Amman, Jordan.
- The Tenth Conference on Scientific Research in Jordan, 17th Nov. 2021, Al-Ahliyya Amman University, Amman, Jordan.
- Global Scholars Achieving Career Success (GSACS) (Introduction to Virtual Exchange in GSACS, SDGs, Experiential Learning and Career Success in GSACS, Technology and Language Equity in GSACS, Approaching Assessment and Scholarship on GSACS), LaGuardia Community College, CUNY, online workshop, 14th, 22nd, 26th, 28th July 2021.
- How to select the right Journal, Emerald Publishing, March 2021, Virtual workshop
- Statistical Data Analysis Using SPSS, Academic Development and Quality Assurance Center, JUST, 14-15 February 2021
- Basics of Distance Education, Academic Development and Quality Assurance Center, JUST, 10-11 February 2021
- Raising Students? Engagement in Remote Learning Environment, Queen Rania Teacher Academy, Amman, Jordan, 7th and 14th January, 2021.
- Jordan Chemical Inventory Management Course, Sandia National Laboratories, New Mexico, USA, 22 Nov. – 24 Dec. 2020
- Exams and Assessment, Academic Development and Quality Assurance Center, JUST, 25-Oct. – 1- Nov. 2020.

- Laboratory Quality Management Systems, Aurum Biotech Biotechnology Services, 27 July 2020.
- " E-Learning Basics, Academic Development and Quality Assurance Center, JUST, 23-26 July 2020.
- Conservation of the 2nd century Roman Nymphaem in Amman Phase 2workshop, Amman Jordan, March 2018
- Scientific Research Support Fund Scientific Day, Amman Jordan, March2018
- Water & food analytics / Merck Seminar , Amman, Jordan, Nov. 2017
- 4th National Erasmus+ info day, Amman, Jordan, Oct. 2017
- Writing research proposals (Erasmus+), Amman, Jordan, Nov. 2017
- Academic women and research, Amman, Jordan, May, 2017
- Pharmacy third conference, "Recent trends in postgraduate research" Amman, Jordan, April, 2017
- Workshop with the title "anti-narcotic assistance", Amman, Jordan, Feb.2017
- Using social media in teaching and learning workshop, Amman, Jordan, Dec. 2016
- Project Opening ceremony for the Restoration and Rehabilitation of the Roman Nymphaeum in Amman (phase II), Amman, Jordan, Nov 2016
- Ion chromatography & Raman spectroscopy, Amman, Jordan, Oct. 2016
- Proposal Writing for H2020 EU funding opportunities, Amman, Jordan, Sep. 2016
- Electronic content management workshop, Amman, Jordan, May, 2016
- ProGRANT: Proposal Writing for Research Grants, First phase of the DAAD DIES ProGRANT Proposal Writing for Research Grants held from March 8th – 12th 2015, Second phase of the DAAD DIES ProGRANT Proposal Writing for Research Grants held from September 6th – 10th 2015, Amman, Jordan.

- Horizon 2020 Opportunities for Jordanian Organizations Involved in Botanical or Agriculture Research, Amman International Hotel, Amman, Jordan, Jan, 2014
- JOCHERA Final Conference, Hamdi Mango Center for Scientific Research, Amman, Jordan, Nov., 2013
- Metrology in Chemistry- Implementing the Technical Requirements of ISO/IEC 17024, Hamdi Mango Center for Scientific Research, Sep., 2013
- IPR and Technology Transfer Training and One to One Sessions, Hamdi Mango Center for Scientific Research, Amman, Jordan, June, 2013
- JOCHERA Study Tour, Middle East Technical University, Ankara, Turkey, March, 2013-04-29
- The Seventh World Archaeological Congress, The Dead Sea, Jordan, January 2013
- JOCHERA Study tour, Politecnico di Torino University, Turin, Italy, November 2012
- International Conference on Mediterranean Countries and EU Opportunities in Research, Development and Innovation, Oct., 2012
- Jordan's Cultural Heritage Symposium, HMCSR/ UJ, Amman, Jordan, June, 2012
- FP7 Capacity Building Workshop and One to one session, Hamdi Mango Center for Scientific Research, Amman, Jordan, June, 2013
- Integrating Jordan into the European Research Area (IJERA) project ENVIRONMENT workshop, the Higher Council for Science and Technology, June 2012
- Geopolymers from Jordanian raw materials workshop, Amman, Jordan April 2012
- Second phase of Capacity Building project Workshops (Building database on national regional and international funding agencies, Proposal preparation and writing, Project financial management, and Project administrative principles: procurement of equipment, staffing and subcontracting), the Higher Council for Science and Technology, Sep. -Oct., 2011
- Ultra-Pressure HPLC, Amman, Jordan, Oct. 2011

- Administrative and financial Workshop, the Higher Council for Science and Technology, June 2011
- WIPO National workshop on patent drafting, The World Intellectual Property Organization (WIPO) in cooperation with The Jordanian Association of Pharmaceutical Manufactures (JAPM) and El Hassan Business Park, Amman, Jordan, November 2010.
- 11th Eurasia Conference on Chemical Sciences, Dead sea, Jordan Oct 2010
- 10th Jordanian Chemical Conference, Jordan University of Science and Technology Irbid, Jordan, May 2010
- Training Course " FP7 week " presented by Irine Larroy organized by SRTD at HCST, Amman, May 2010
- The Technology Transfer Conference: Accelerating the Knowledge Economy through the Commercialization of R&D, iPARK/ the Higher Council for Science and Technology in collaboration with the US Patenting and Trademark Office (USPTO), Royal Scientific Society, EL Hassan Science City, Amman, Jordan, Oct. 2009
- 7th Jordanian Chemical Conference, Al al-Bayt University, Jordan, March2007
- 8th Jordanian Chemical Conference, Petra University, Amman Jordan, April 2008
- Scientific day of Chemistry and Art, JUST University Jordan May 2007
- 5th Jordanian Chemical Conference, University of Jordan, Amman, Jordan, Oct. 2004

Research Projects/ Principal investigator

1. Investigation of the Effects of Silica Nanoparticles on the Germination and Growth of Tomato Seeds (*Lycopersicum Esculentum*) Under Stress. Deanship of Research, JUST, Irbid, Jordan, 2024, 4000 JD
2. Cellulose acetate / graphene-oxide, silver nanoparticles nanocomposite membrane for high saline water desalination. Deanship of Research, JUST, Irbid, Jordan, 2024, 5000 JD

3. Development of metal oxides-graphene based nanostructure modified screen-printed carbon electrodes in targeting superoxide anion, Mutual Fund, **Universiti Malaya, Malaysia, 2023**
4. 2-D Transition Metal Dichalcogenides (TMD) Integrated Tapered Optical Fiber Sensor for Water Pollution Monitoring, Mutual Fund, **Universiti Malaya, Malaysia, 2023**
5. Fabrication and Characterization of Solid Polymer Electrolyte for Energy Conversion Applications, Deanship of Research, JUST, Irbid, Jordan, 2022-2023, 7100JD
6. Preparation and Investigation of Ceramic Filter with Nanofiller for the Removal of Radioactive Pollutants from Polluted Water, JUST, Irbid, Jordan, 2022-2023, 8050JD
7. Improving the Ceramic Filter With Nanofiller for the Removal of Radioactive Elements from Groundwater, Approval for the first stage and submission the full proposal, SRSF, 2021-2024, 63000 JD.
8. Polymeric nanocomposite membrane for water treatment, Deanship of Research, JUST, Irbid, Jordan, 2019-2021, 8900JD.
9. Production of starch nanocomposites films for food packaging, Deanship of Academic Research, UJ, Amman, Jordan, 2016-2018, 9400JD.
10. Preparation and Characterization of Natural-Based and biodegradable Nanocomposites for food packaging, HMCSR, UJ, Amman, Jordan, 2016-2018, 7000JD.
11. Production of fuel from waste plastics using nano catalysts, Showman, Amman, Jordan, 2015-2017, 15000 JD.

Participation in Research Projects (Co-PI)

1. Water-Energy-Food Nexus Learning Platform for Implementing the Sustainable Development Goals, ERASMUS-2024-CBHE project, Submitted 2024
2. Antifouling green membrane for brackish water treatment, SRSF, 2018-2020, 55800JD
3. Heterogeneous photocatalysis and electrochemical treatment of textile wastewater by nano-sized $\text{M}_2\text{Zr}_2\text{O}_7$, SRF, 2016-2018.
4. Coupling Magnetite Nanoparticles with Sorbent Materials for Olive Mill Wastewater Remediation, Deanship of Academic Research, UJ, Amman, Jordan, 2016-2018, 1500JD.

5. The First Stage of the proposed study and research for Dead Sea pre final product modification, Arab Potash Company, Jordan, 2013-2015
6. Production of Polymeric Nanocomposite Membranes for waste water treatment, HMCSR, UJ, Amman, Jordan, 2012-2014
7. Jordan Conservation of Cultural Heritage in ERA, FP7 project, 2011-2013

Participation in Research Projects (Research Assistance)

1. Spontaneous Emulsification of the System Water Ethanol and Benzene, 2012
2. Three-Phase Surfactant-Less Emulsion, 2011
3. Surfactant Enhanced Remediation of polluted and wastewater, 2010
4. Geranyl Acetate Emulsion Equilibrium and Inversion, 2009

Teaching Experience

1. Chemistry of Nanomaterials / Graduate
2. Electrochemical Nanomaterials and Devices / Graduate
3. Fundamentals of Science and Nanotechnology / Graduate
4. Nanostructures and Nanomaterials / Graduate
5. Seminar / Graduate
6. Water Desalination Using Nanotechnology / Graduate
7. Nano-Science Chemistry / Undergraduate, Senior
8. Geranyl Chemistry / Undergraduate, Freshman
9. Special Topics, Chemistry and Technology of Surfactant / Undergraduate, Senior

Master Students Supervision:

1. **Esraa AlQuran**, Unveiling the Performance of Novel Nanomaterials in Alleviating Stress Corrosion Cracking in Boiling Water Reactor's Nuclear Cladding Material via Physical Vapor Deposition Technique (**Main Advisor**)

2. **Osma Alkhasoneh**, Cellulose acetate / graphene-oxide, silver nanoparticles nanocomposite membrane for high saline water desalination. Feb. 2023- Present **(Advisor)**
3. **Jafar Rababah**, Investigation of Tribological properties of engine oil by using Tin(IV) oxide as nano additive, Feb. 2023- Present **(Advisor)**
4. **Reema Albsharat**, Investigation of the effects of silica nanoparticles on the germination and growth of tomato Seeds (*Lycopersicum esculentum*) under stress. 2023- Present **(Co-Advisor)**
5. **Maryam Abughader**. The effectiveness of a Nano halloysite ceramic membrane in removing heavy metals from groundwater in Jordan, Feb. 2023-Present **(Co-Advisor)**
1. **Tasneen Al Dabas**, Simulation of Injectable Reduced Graphene Oxide-based Nanocomposite Hydrogel Scaffold for Spinal Cord Injury Regeneration using COMSOL, May 2021-June 2023. **(Advisor)**
2. **Zaid Sawalmeh**. Synthesis and characterization of biofouling resistant polymeric nanocomposite membranes for brackish water treatment, Jordan University of Science and Technology, May 2021-August 2022. **(Co-Advisor)**
3. **Ashraf Al-Gorae**. Design, Fabrication, and Characterization of Ultrasensitive Strain-Temperature Sensor Utilizing Flexible Electronics, May 2021-August 2022. **(Co-Advisor)**
4. **Laith Ali Issa Al Mezead**. Investigation of the mechanical and thermal properties of a dispersion of amide-multi-walled carbon nanotubes within an Ultra high molecular weight polyethylene matrix by using wet ball milling method, May 2021-August 2022. **(Co-Advisor)**
5. **Haneen Abu Hammam**. Investigation of ultra-high molecular weight polyethylene modified with silicon carbide nano-particles as a reinforcement material, May2020-June 2021. **(Co-Advisor)**
6. **Tariq Rawashdeh**. Investigation of the tensile strength and thermal stability of ultra-high molecular weight polyethylene and multi walled carbon nanotubes as a reinforcement material, May 2020- June 2021. **(Co-Advisor)**

7. **Oraib Al-Momani**. Green synthesis of silver nanoparticles using Prosopis juliflora extracts and effect on plant pathogenic fungi and plant disease management. 2019- June 2021. **(Co-Advisor)**
8. **Ibrahim Alnasra**. Investigation of the tensile strength and thermal stability of ultra-high molecular weight polyethylene and single walled carbon nanotubes as a reinforcement material, May 2020- June 2021. **(Co-Advisor)**

Master Thesis Examining Committees:

1. **Hala Alsarhan**, Investigation of the mechanical properties of polyamidoamine dendrimer hydrogel with and without introducing Nano-hydroxyapatite. Just. Jan. 2024.
2. **Shatha Khraisat**, Photocatalytic Degradation of Methylene Blue Using Zinc Oxide-Graphene Oxide Nanocomposite Hydrogel. JUST. Sep. 2023
3. **Shima Alawneh**, Fabrication of A Nanogenerator Based on ZnO Nanostructure on ITO Coated Glass Substrate. JUST. Sep 2023
4. **Razan AL-Zghoul**, Graphene Oxide-Based Hydrogel in Phenol Sensor, JUST. August, 2023
5. **Zakarya bani Domi**, Jan 2023
6. **Ibrahim Alkhalidi**, Atomic Force Microscope Tip Modified with Zinc Oxide Nanostructures: Design and Characterization. JUST. Sep. 2022
7. **Manar Ajlouni**, A biosensor using carbon nanotube/gold nanoparticles to detection HER2 protein in breast cancer August, 2022
8. **Sara Hijazi**, Detection of HER2 breast cancer biomarker using biosensor based on screen printed carbon electrode modified with silver nanoparticles August, 2022
9. **Mojahed Al Momani**, Design and Simulation of A Nano Ultraviolet Shield for Radiation Protection Application, JUST. August, 2021
10. **Diaa Al-Domi**. Development of an insulin nano-delivery system for buccal administration, JUST. May 2021

11. Nancy Momani. Investigation of the antibacterial activity of Polydimethylsiloxane loaded with Titanium dioxide nanoparticles and zinc oxide nanoparticles with/ without Ciprofloxacin antibiotic. JUST. June 2021

12. Allawi Al Araydah. Investigation of the efficacy of enhanced polydimethylsiloxane polymer loaded with nanoparticles sprayed on greenhouse polyethylene cover film for Ultraviolet irradiation protection and hydrophobicity properties, JUST. June 2021

13. Tasnim Dalal'ah . Design and characterization of perovskite solar cells' layers. JUST. June 2021

14. Salsabel Al mushet. Developing of a Nano Biosensor for Early Detection of Hepatocellular Carcinoma. JUST. June 2021.

Personal Details:

Nationality	Jordanian
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Religion	Islam
Languages	Arabic (mother language), English

Relevant Skills

- Particle size analyzer
- NMR
- HPLC
- ICP
- FTIR
- Optical Microscopy
- Ultraviolet-Visible Absorption Spectrophotometer
- Tensiometer
- Tube Furnace
- Tensile test