

Brief Curriculum Vitae

December 18th, 2023

Hanan M. Sa'adeh

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Academic Qualifications

- **Ph.D. degree in Physics/ Experimental Atomic Physics (Accelerator-Based), 2010.**

The University of Jordan, Faculty of Graduate Studies, Amman, Jordan, 2002-2010.

With an average of 3.95 out of 4, rating excellent and ranking first of the students of the Department of Physics.

Dissertation Title: Correlation of Backscattered and Recoil Ions in Violent Ion-Atom Collisions by Coincident Rutherford Backscattering Spectrometry.

Dissertation Advisors: Prof. Dr. Dia-Eddin Arafah and Dr. Rami M. Ali.

- **B.Sc. degree in Physics, 2002.**

The University of Jordan, Faculty of Science, Department of Physics, Amman, Jordan, 1999-2002.

With an average of 3.97 out of 4, rating excellent and ranking first of the students of the Department of Physics and the Faculty of Science as well.

- **General Secondary Education Certificate Examination, Scientific Stream, 1999.**

Ministry of Education, Amman, Jordan, 1998-1999.

With an average of 93.0%, rating excellent and scored in the 99th percentile (i.e., the top 1%) of the students of the scientific stream in Jordan.

Academic and Teaching Experience

- *Associate Professor of Physics* (Tenured as of March 2020), Department of Physics, School of Science, The University of Jordan, Amman, Jordan, June 2019 to Present.
- *Assistant Professor of Physics* (Tenure Track), Department of Physics, School of Science, The University of Jordan, Amman, Jordan, September 2013 to June 2019.
- *Assistant Professor of Physics*, Physics Department, Rabigh-Faculty of Science and Arts, King Abdulaziz University, Rabigh, Saudi Arabia, October 2010 to August 2013.
- *Part-time Lecturer*, Department of Physics, The University of Jordan, Amman, Jordan, September 2002 to January 2010.

Administrative Experience

- *Jordan National Coordinator*, TC Projects of the International Atomic Energy Agency (IAEA) in ARASIA regional network, 2016 to Present.
- *Head of Physics*, Physics Department, Rabigh-Faculty of Sciences and Arts (Females Branch), King Abdulaziz University, Rabigh, Saudi Arabia, 2011 to 2013.

Research Experience

- *Guest Researcher*, working at FinEstBeAMS beamline, MAX IV Laboratory, Lund, Sweden, February to May 2023.
- *Research Fellow*, working mainly at GasPhase beamline, Elettra-Sincrotrone Trieste, Basovizza, Italy, 2015 to Present.
- *Principal Researcher*, working mainly at PIXE-RBS beamline, The University of Jordan Van de Graaff Accelerator (JUVAC) Laboratory, Department of Physics, The University of Jordan, Amman, Jordan, 2013 to Present.
- *PhD Candidate*, building the Coincident Rutherford Backscattering Spectrometry (CRBS) apparatus at JUVAC under the supervision of Dr. Dia-Eddin Arafah and Dr. Rami M. Ali, Atomic Physics Lab, Department of Physics, The University of Jordan, Amman, Jordan, 2005 to 2010.

Professional Memberships

- European Physical Society (EPS), Atomic, Molecular and Optical Physics Division (AMOPD), 2021 to Present.
- American Physical Society (APS), Division of Atomic, Molecular and Optical Physics (DAMOP), 2017 to Present.
- Friends of ICTP Association, 2017 to Present.
- SESAME Users Committee (SUC), Representative of Jordan, 2016 to Present.

Scholarships, Fellowships, Honors, and Awards

24. **SESAME-MAX IV Exchange Scholarship at MAX IV Laboratory**, Swedish Institute (SI), Stockholm, Sweden, 1 February to 31 May 2023.
23. **TRIL Fellowship at Elettra-Sincrotrone Trieste**, ICTP, Trieste, Italy, 1 September 2022 to 31 August 2023.
22. **One-Year Sabbatical Leave (2022-2023)**, The University of Jordan, academic year 2022/2023.
21. **One-Year Scientific Leave (2021-2022)**, in recognition of being awarded an international research fellowship in Atomic and Molecular Physics, The University of Jordan, academic year 2021/2022.
20. **TRIL Fellowship at Elettra-Sincrotrone Trieste**, ICTP, Trieste, Italy, 1 September 2021 to 31 August 2022.
19. **One-Year Scientific Leave (2018-2019)**, in recognition of being awarded an international research fellowship in Atomic and Molecular Physics, The University of Jordan, academic year 2018/2019.
18. **TRIL Fellowship at Elettra-Sincrotrone Trieste**, ICTP, Trieste, Italy, 1 September 2018 to 31 August 2019.
17. **Scholarship for Intensive Latin Course**, The University of Jordan and the Italian Institute for Classical Studies (IISC) in Italy, The University of Jordan, 30 June to 2 August 2018.
16. **TRIL Fellowship at Elettra-Sincrotrone Trieste**, ICTP, Trieste, Italy, 21 June-20 August 2017.
15. **TRIL Fellowship at Elettra-Sincrotrone Trieste**, ICTP, Trieste, Italy, 8 July-7 August 2016.
14. Nominated to attend the **66th Lindau Nobel Laureate Meeting**, The University of Jordan & COMSTECH, December 2015.
13. **TRIL Fellowship at Elettra-Sincrotrone Trieste**, ICTP, Trieste, Italy, 1 June-29 August 2015.
12. **Grant for a Short Scientific Visit to LABEC Laboratory of INFN at Florence, Italy**, IAEA RAS/0/072 Project, February 2015.
11. **The 1st Position in Poster Presentation Contest**, First ICTP-NCP International College on Plasma Physics, NCP, Pakistan, November 2013.
10. **Grant for a Short Scientific Visit to ESRF (European Synchrotron Radiation Facility) at Grenoble, France**, SESAME and LinkSCEEM Project (SCORE Program), October 2013.
9. **Distinguished Poster Award**, Hands-On Research in Complex Systems School, Shanghai Jiao Tong University, China, June 2012.
8. Nominated for the **Best Ph.D. Dissertation Award in the Scientific Field**, Department of Physics, The University of Jordan, 2010.
7. **Teaching Scholarship**, The University of Jordan, Faculty of Graduate Studies, 2003-2010.
6. **Academic Distinction Scholarship**, The University of Jordan, Faculty of Graduate Studies, 2007.
5. Appeared on the **University's President's Honor List for Academic Distinction**, The University of Jordan, 2003.
4. **Scientific Distinction Award in Science**, The University of Jordan, July 2003.
3. **Scientific Distinction Award in Physics**, The University of Jordan, July 2003.
2. **Higher Education Grant for the Top Students in Physics Department**, Ministry of Higher Education and Scientific Research, Jordan, 2000.
1. **Higher Education Grant for the Top Students in Tawjihi Exam**, Ministry of Higher Education and Scientific Research, Jordan, 1999.

Publications

18. Photoemission and X-ray Absorption Investigation of Ammonia-Borane in the Gas Phase. <https://doi.org/10.1021/acsomega.3c06797>
17. Quantification and Speciation of Lead in Air Particulate Matter Collected from an Urban Area in Amman, Jordan. <https://doi.org/10.1016/j.nimb.2023.03.030>
16. A Photoelectron Spectroscopic Investigation of Aspirin, Paracetamol and Ibuprofen in the Gas Phase. <https://doi.org/10.1039/D2CP05810C>
15. Spectroscopic and Quantum Mechanical Study of a Scavenger Molecule: N,N-diethylhydroxylamine. <https://doi.org/10.1016/j.saa.2022.121555>
14. Photoemission and Photofragmentation of Butanoic, Hexanoic and Octanoic Acids in the Gas Phase. <https://doi.org/10.1016/j.elspec.2022.147172>
13. Positional and Conformational Isomerism in Hydroxybenzoic Acid: A Core-Level Study and Comparison with Phenol and Benzoic Acid. <https://doi.org/10.1021/acs.jpca.1c07523>
12. Carbon and Nitrogen K-Edge NEXAFS Spectra of Indole, 2,3-Dihydro-7-azaindole, and 3-Formylindole. <https://doi.org/10.1021/acs.jpca.1c02570>
11. Chlorination and Tautomerism: A Computational and UPS/XPS Study of 2-hydroxypyridine \rightleftharpoons 2-pyridone Equilibrium. <https://doi.org/10.1039/D0CP02304C>
10. Experimental and Theoretical Soft X-ray Study of Nicotine and Related Compounds. <https://doi.org/10.1021/acs.jpca.9b11586>
9. Experimental and Theoretical Photoemission Study of Indole and Its Derivatives in the Gas Phase. <https://doi.org/10.1021/acs.jpca.0c02719>
8. An Assessment of the Impact of Construction Work on Fine Particulate Matter in The University of Jordan: A PIXE Study. <https://doi.org/10.1002/xrs.3105>
7. Atmospheric Aerosol Analysis at the PIXE-RBS Beamline in the University of Jordan Van de Graaff Accelerator (JUVAC). <https://doi.org/10.1002/xrs.3014>
6. Dissociation Kinetics of Excited Ions: PEPICO Measurements of Os₃(CO)₁₂-The 7-35 eV Single Ionization Binding Energy Region. <https://doi.org/10.1063/1.5018719>
5. Communication: "Position" Does Matter: The Photofragmentation of the Nitroimidazole Isomers. <https://doi.org/10.1063/1.4967770>
4. Evaluation and Mapping of PM_{2.5} Atmospheric Aerosols in ARASIA Region Using PIXE and Gravimetric Measurements. <https://doi.org/10.1016/j.nimb.2015.12.034>
3. Electromagnetic Reduced Transition Properties of the Ground State Band of Even-Even ¹⁰²⁻¹⁰⁶Pd Isotopes by Means of Interacting Boson Model-I. <https://doi.org/10.1007/s12648-013-0374-5>
2. Charge-State Distributions of Energetic ⁴He Ions Backscattered from Kr Gas Target. <https://doi.org/10.1016/j.nimb.2011.10.013>
1. Coincident Rutherford Backscattering Spectrometry: A Novel Technique for Measuring Charge State Distributions in Violent Ion-Atom Collisions. <https://doi.org/10.1016/j.nimb.2011.06.020>