CURRICULUM VITAE

1st: PERSONAL DATA

Name Assistant Professor. Alaa Atef Nassif

National No. 05190025765

SURNAME/FAMILY Name: Nassif **First name:** Alaa **Middle name(s):** Atef

Place of birth (*City and Country*): Hama- SYRIA **Present nationality:** SYRIAN

Full name/address of present Institution:
Faculty of Pharmacy, Al-Wataniya Private University, Hama, Syria
E-mails: alaa.nassif@wpu.edu.sy, nassifalaa85@gmail.com
Cell phone: 00963988460098

2nd: EDUCATION (higher degrees)

University Name and place	General Specialization	domain	Years attend. From	to	Degrees
Homs University, Syria	Physics	Physics	2004	2010	Bachelor
Homs University, Syria	Dense Matter Physics	Dense Matter Physics	2012	2015	Master
Homs University, Syria	Plasma Physics	Dense Matter Physics	2016	2019	Ph. D

Subject of doctoral thesis:

A Study of Radiation Emissions from A Dense Plasma Focus (DPF) and some Applications Using Simulation According to Sing Lee's Model

3rd: My proficiency in languages

Language	Speaking			Reading			Writing		
	Poor	Average	Good	Poor	Average	Good	Poor	Average	Good
Arabic			x			x			x
English			x			x			x

4th: EMPLOYMENT HISTORY (ACADEMIC EXPERIENCE)

From	to	Place	Employment and duties (from the Newest)
2022	Up to now	Al-Wataniya Private University, Hama, Syria.	Lecturer of medical physics course -faculty of Pharmacy
2022	Up to now	Al-Wataniya Private University, Hama, Syria	Lecturer of medical physics course -Faculty of Dentistry
2018	Up to now	Al-Wataniya Private University, Hama, Syria.	Supervisor of the Medical Physics Laboratory - Faculty of Pharmacy
2018	Up to now	Homs University, Homs, Syria.	Supervisor of the Medical Physics Laboratory - Faculty of Dentistry
2018	2023	Homs University, Homs, Syria.	Physics Lab Supervisor - Practical Section - Faculty of Engineering
2020	Up to now	Homs University, Homs, Syria.	Lecturer for Physics 1 course - College of Mechanical and Electrical Engineering
2020	Up to now	Homs University, Homs, Syria.	Lecturer for Physics 2 course - College of Mechanical and Electrical Engineering
2019	2020	Homs University, Homs, Syria.	Lecturer for Advanced Experiments Course - Master of Physics - Faculty of Science
2015	2016	Homs University, Homs, Syria.	Physics Lab Supervisor - College of Mechanical and Electrical Engineering
2015	2019	Homs University, Homs, Syria.	Supervisor of the Solid State Physics Laboratory -

			Faculty of Science
2012	2015	Homs University, Homs, Syria.	Physics Lab Supervisor - Chemistry Department - Faculty of Science
2012	2015	Homs University, Homs, Syria.	Supervisor of the Biophysics Laboratory - Department of biology - Faculty of Science

5th: Research Interests

Dense Plasma focus, wave propagation in plasma, Plasma simulation, application of dense plasma focus, Using Lee 'code to simulation plasma focus

Scientific Production- Refereed Publications

https://scholar.google.com/citations?user=EpQKjcMAAAAJ&hl=en&citsig=AC8hv-oR04_EdTCe1JsGMpzwDKXR

Total 21 full-length research papers

- **5 publications in the last 5 years, in which I'm the first author.**
- **17 full-length research papers (not extracted from MS thesis or Ph. D dissertation) , published in refereed journals.**
- **4 full-length research papers extracted from MS thesis or Ph. D dissertation.**
- **18 Full-length research papers published in local and international conferences.**

1. The Effect of a Gas Type on The Soft X-ray Yield from a Plasma Focus, **Alaa Nassif, Walid Sahyouni, Ola Zeidan,** St. Petersburg State Polytechnical University Journal. Physics and Mathematics. 2025. Vol. 18. No. 1.
2. Effect of Gas Type on Characteristics of Ion Beam Emitted by Plasma Focus, **Alaa Nassif, Walid Sahyouni**, Iraqi Journal of Applied Physics. Vol. 20 No. 2A. 2024
3. Discussion of Plasma Focus Parameters and Gain/Loss Energy Processes for a Designed Plasma Focus Device, **Alaa Nassif, Walid Sahyouni, Ola Zeidan,** St. Petersburg State Polytechnical University Journal. Physics and Mathematics. 2024. Vol. 17. No. 2.
4. Effect of capacitor bank parameters on argon ion beam energy emitted by AECS-PF1 plasma focus device, **Walid Sahyouni, Alaa Nassif, Arwa Alhammod,** Journal of Homs University, Vol. 46, 2024.
5. Effect of capacitor bank static induction on soft X-ray yield of nitrogen plasma, **Walid Sahyouni, Alaa Nassif, Merry Al hajji,** Journal of Homs University, Vol. 46, 2024.
6. Effect of Gas Type on Characteristics of Ion Beam Emitted by Plasma Focus, **Alaa Nassif, Walid Sahyouni,** Iraqi Journal of Applied Physics, vol.20, 2024.
7. Determination of conditions for obtaining radioactivity of 13N isotope for medical use by NX2 dense plasma focus device, **Sahyouni.W, Nassif. A, Zeidan. O, and Kafa, N**, St. Petersburg State Polytechnical University Journal. Physics and Mathematics, vol. 16, no. 2., 2023 .
8. Dense plasma focus device as a promising method for thin film deposition – a numerical study of Ion beam features from Dense Plasma Focus device, **Alaa Nassif, Walid Sahyouni,** Al-Wataniya Private University Journal, vol.1, 2024.
9. Possibility of Using Dense Plasma Focus Devices to Produce Short-Lived Radioisotopes Used in PET - Numerical Study, **Alaa Nassif, Walid Sahyouni,** Al-Wataniya Private University Journal, vol.1, 2024.
10. Radiography of the Biological samples by X-rays emitted from plasma focus, **Alaa Nassif, Walid Sahyouni,** Al-Wataniya Private University Journal, vol.1, 2024.
11. Effect of Atomic Number on Plasma Pinch Properties and Radiative Emissions, **Walid Sahyouni and Alaa Nassif,** Advances in High Energy Physics, Volume 2021, Article ID 6611925, 5 pages, https://doi.org/10.1155/2021/6611925
12. Synthesis and Characterisation of Structural and Electrical Properties of CuMn2O4 Spinel Compound, **Rasha Yousef , Alaa Nassif , Abla Al-Zoubi and Nasser Saad Al-Din ,** The Scientific Journal of King Faisal University: Basic and Applied Sciences , 22(2), 47–50. DOI: 10.37575/b/sci/210028

13. Theoretical Design of a Dense Plasma Focus Device to Increase Soft X-rays Yield, **Walid Aldayoub, Walid Sahyouni , and Alaa Nassif**, Journal of Homs University, Vol. 45, 2023.
14. Effect of the change of density of deuterium gas in dense plasma focus device NX2 on the value of the radioactivity of the isotope N13, **Noha Kafa, Walid Sahyouni , and Alaa Nassif**, Journal of Homs University, Vol. 44, 2022.
15. The effect of the difference of atomic number on soft X-rays yield in the dense plasma focus device PF400, **Amani Alakari, Walid Sahyouni , and Alaa Nassif**, Journal of Homs University, Vol. 44, 2022.
16. The effect of the atomic number of gas used in the dense plasma focus device on the properties of the plasma pinch and the radiation emissions, **Razan Nour-Aldeen, Walid Sahyouni , and Alaa Nassif**, Journal of Homs University, Vol. 43, 2021.
17. Study the Flux and Energy of the Helium Ions Beam Produced by two Different Dense Plasma Focus Devices When Gas Pressure Changes, **Walid Sahyouni, Alaa Nassif , Ola Zeidan ,** American Journal of Mechanics and Applications 2020; 8(1): 16-20 doi: 10.11648/j.ajma.20200801.13 ISSN: 2376-6115 (Print); ISSN: 2376-6131 (Online).
18. Nitrogen Soft X-Ray Yield Optimization from UNU/ICTP PFF Plasma Focus Device, **Walid Sahyouni, Alaa Nassif,** American Journal of Modern Physics. 2019; 8(6): 86-89 doi: 10.11648/j.ajmp.20190806.12. ISSN: 2326-8867 (Print); ISSN: 2326-8891 (Online).
19. Ions Beam Properties Produced by NX2 Plasma Focus Device with Helium and Nitrogen Gas , **Sahyouni Walid, Nassif Alaa ,** American Journal of Modern Physics.2019; 8(1): 1-4 doi: 10.11648/j.ajmp.20190801.11. ISSN: 2326-8867 (Print); ISSN: 2326-8891 (Online).
20. Neon Soft X-Ray Yield Optimization from NX2 Dense Plasma Focus Device , **Walid Sahyouni , Alaa Nassif,** Jordan Journal of Physics. Volume 11, Number 3, 2018. pp. 167-172.
21. A Theoretical Study of the Possibility of Obtaining the Radioisotope 13N for Medical Applications using Dense Plasma Focus Device , **Walid Sahyouni , Alaa Nassif,** Jordan Journal of Physics. 2019.
22. The role of solar radiation and collisions in the chromospheric and coronal heating in the sun, **Sahyouni W., Melhem A. And Nassif A**., Homs University Journal for medical, engineering, basic and Applied Sciences, Vol. 36, 2014.

6th: Thesis supervisions

Supervision of doctoral dissertations:

1- Co-Supervisor of the doctoral dissertation of the student **Ola Zaidan** at Homs University, entitled "**The Use of Numerical Modelling and Analysis of the Characteristics of Electronic and Ionic Beams Resulting from Dense Plasma Focus**", it was Discussed and awarded Doctorate Degree in "Physics of Dense Matter" in 2026.

Master's theses supervision (completed):

2- **" A Numerical study of The Properties of Ion Beams Generated by Dense Plasma Focus Device",** Ola .M. Zeidan, Homs University, it was Discussed and awarded Master Degree in "Physics of Dense Matter" in 2020.

3- **" Numerical Experiments Using Lee's Code To Study Properties Of The Plasma's Pinch And Its Relationship With Gas Pressure ",** Razan Nour-Aldeen, Homs University, it was Discussed and awarded Master Degree in "Physics of Dense Matter" in 2022.

4- **"Numerical Study for Soft X-ray Emission from Plasma Focus According to Atomic or Molecular Gas Pressure",** Amani Al-Akari, Homs University, it was Discussed and awarded Master Degree in "Physics of Dense Matter" in 2022.

5- **"The Investigation Capability of producing the radioactive isotope 13N by a deuteron beam from the dense plasma focus device"**, Nouha Kafa, Homs University, it was Discussed and awarded Master Degree in "Physics of Dense Matter" in 2024.

6- **"A theoretical study of the design of a dense plasma focus device and the investigation of the various parameters that effect of the soft X-rays yield",** Walid Al-Dayuob, Homs University, it was Discussed and awarded Master Degree in "Physics of Dense Matter" in 2024.

7- **" Study of the effect of capacitor bank parameters on the ion beams of dense plasma focus devices",** Arwa Alhammod, Homs University Discussed and awarded Master Degree in "Physics of Dense Matter" in 2025.

8- **" Study of the effect of static inductance of a capacitors bank on soft X-rays yield on nitrogen plasma focus"** Merry Alhaja, Homs University Discussed and awarded Master Degree in "Physics of Dense Matter" in 2025.

Supervision of master's theses (in progress):

1. **" A numerical study of the dependence of the soft X-ray yield on the energy stored in a capacitor bank"** Nada Issa, Homs University, it was recorded as Master Thesis in 2022. It is in progress.
2. **"A numerical study of using medium-energy dense plasma focus devices in short-lived radioisotopes production "** Asem Mohammad**,** , Homs University, it was recorded as Master Thesis in 2024. It is in progress.
3. **" Testing of wall materials for thermonuclear fusion reactors using deuterium plasma focus"** Taimaa Byzouk, Homs University, it was recorded as Master Thesis in 2025. It is in progress.
4. **" A numerical study of the effect of focus plasma on the thermal and mechanical properties of selected materials using the Lee code and SRIM program"** Shadia Berro, Homs University, it was recorded as Master Thesis in 2025. It is in progress.
5. **" Analysis of thermal reactions and damage caused by dense plasma focus ion beams"** Yamama Mansour, Homs University, it was recorded as Master Thesis in 2025. It is in progress.

7th: Workshops, Seminars, summer schools, conferences attended

No	Year	Place	Name
1	2025	6th International Scientific Conference of Alkafeel University **Iraq**	Effect of Capacitor Bank Parameters on Helium Ions Beam Properties from Plasma Focus
2	2025	6th International Scientific Conference of Alkafeel University **Iraq**	Effect of Gas Type and Pressure on Ion Source Properties from Plasma Focus
3	2024	14th International Scientific Conference Faculty of Science - Damascus University **Syria**	Thermal effect of helium ions emitted by AECS-PF1 dense plasma focus device
4	2024	2th International Conference on Physical and Technical Sciences Faculty of Science - Homs University- **Syria**	Loss of Helium Ions Energy Emitted by Plasma Focus within Tungsten
5	2024	the annual scientific conference at Faculty of Science - Lattakia University- **Syria**	Production of N^{13} radioactive isotope used in PET by dense plasma focus devices
6	2024	The annual scientific conference at Faculty of Science - Lattakia University- **Syria**	ion source properties from plasma focus

8h: Training courses

No	Year	Place	Course Name
2	2026	Jordan	Al-Noor Winter School on Fusion Energy
1	2022	Homs - Syria	Workshop **"ISO 9001:2015 Quality Management System"** - Al-Baath University
2	2022	Malaysia	Workshop **"Numerical Experiments in Plasma focus"** - Asian-African Plasma Training Association
3	2022	Homs - Syria	Workshop **"Quality Management Systems According to ISO 9001:2015"** - Al-Baath University
4	2021	Homs - Syria	**"The first national conference for the development of higher education within the framework of quality standards"** - Al-Baath University
5	2021	Homs - Syria	Workshop **"Managing Energy Systems According to ISO 50001:2018"** - Al-Baath University
6	2019	Homs - Syria	Workshop "**Physics Horizons in Radiation Protection and the Environment**" at the College of Science - Homs University.
7	2019	Homs - Syria	Workshop **"Optimum Description of Programs and Courses According to Academic Reference Standards"** - Al-Baath University
8	2019	Homs - Syria	Workshop **"Skills of the University Education Process"** Homs University
9	2018	Homs - Syria	Workshop **"Physics in Community Service"** - Homs University
10	2016	Homs - Syria	Scientific Research Day workshop for the College of Science within the scientific harvest event of the College of Science - Homs University
11	2016	Malaysia	Workshop **"Numerical Experiments in Plasma focus"** - Asian-African Plasma Training Association

Dr. Alaa Atef Nassif