Curriculum Vitae

Fawzeia M. Khamis
Doctor of Solid State Physics
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Faculty of Science, Department of Physics
University of Tripoli, Tripoli 13220, LIBYA
E-mail: f.khamis@uot.edu.ly
khamesf@gmail.com

Personal Details
Sex: Female
Nationality: Libyan
Marital status: Single.

Academic Qualifications:

3. Ph.D. degree in Physics/ Experimental Solid State Physics, 2014.

The University of Jordan, Faculty of Graduate Studies, Amman, Jordan, Sep. 2009- May 2014.
Dissertation Title: Synthesis, Characterization and Thermoluminescence Properties of as Prepared and Doped SiO_2-Glass.
Advisor: Prof. Dr. Dia-Eddin Arafah.

2. M.Sc., Experimental Solid State Physics, 2005, Mu'tah University, 2003-2005.

Dissertation Title: Morphology and Melting Behavior of Poly (3,3-bis-chloromethyloxybutylene).
Advisor: Prof. Dr. Ismail Gharaibeh.

1. B.Sc., Physics, University of Az Zawiyah, Libya, 1996-2000.

Academic and Teaching Experience:

8 From Oct. 2021 to present: Associated Professor, Department of Physics, Faculty of Science, University: of Tripoli, Tripoli, Libya.
7 From Oct. 2017 to Oct. 2021: Assistant Professor, Department of Physics, Faculty of Science, University: of Tripoli, Tripoli, Libya.
6 From Oct. 2014 to Oct. 2016: Lecturer, Department of Physics, Faculty of Science, University: of Tripoli, Tripoli, Libya.
5 From 2009 to 2014 Study a PhD at Department of Physics, Faculty of Science, University of Jordan.
4 From 2005 to 2008: Assistant Lecturer, Department of Physics, Faculty of Science, University: of Tripoli, Tripoli, Libya.
3 From 2003 to 2005 Study A MSc at Department of Physics, Faculty of Science, Mu'tah University, Jordan.
2 From 2001 to 2003: Demonstrator, Department of Physics - Faculty of Science - University of Jafara, Libya.

1 From 2000 to 2003: Physics Teacher, Al-Ma'Murah Secondary School, Al-Ma'murah, Libya.

Administrative Experience

3. From February 2022 to October 2022: A Head of Quality and Performance Evaluation Department/ Faculty of Science/ University of Tripoli.
2. From 12 Sep. 2020 to April 2022: Coordinator of the Quality Office, Department of Physics.
1. From Fall 2015 to Fall 2021: Member of the Study and Examination Committee, Department of Physics.

Research Experience:

1) From 2012 to 2014 researcher at Atomic Physics Lab, Department of Physics, The University of Jordan under supervision of Dr. Dia-Eddian Arafah.
2) From Jun 2016 to Sep. 2016 work at Atomic Physics Lab, Department of Physics, The University of Jordan under supervision of Dr. Dia-Eddian Arafah.
3) From Sep. to Oct. 2019 work at Atomic Physics Lab, Department of Physics, The University of Jordan under supervision of Dr. Dia-Eddian Arafah.
4) A good practice in Jordan University of Van de Graff Accelerator JUVAC operation and vacuum technique.

Publications:

I ***Conference Articles***

8 Manikandan Rethinam, Senthilkannan..k., **Fawzeia Khamis**, and Suganya Ks. **Peptide Linkage of KDP Crystals**. Conference: NCRTMSA 2023. April 2023.

7 Suganya Ks, Manikandan Rethinam, Senthilkannan..k., and **Fawzeia Khamis**. Studies of Calcium D- Glucorate Tetrahydrate Nano Crystals (CDGTH). Conference: NCRTMSA 2023. April 2023

6 Suganya Ks, Manikandan Rethinam, Senthilkannan..k., and **Fawzeia Khamis**. **Biomedical application of KDP nano crystals**. Conference: NCRTMSA 2023. April 2023

5 **Fawzeia Khamis**, **Arokkiya Vincy. G., Guruprasath M. and Senthilkannan..k.** Filter and Biological uses of MgO Nano particles by Co-precipitation Method. Conference: ncnano, Mach 2023.

4 **Fawzeia Khamis,** Arokkiya Vincy. G., Guruprasath M. and Senthilkannan..k. **Nano Crystal generated from Arundina graminifolia for Electronic and Biological Applicaions**.Conference: 2023 RTMSGA, March 2023.

3 Howa A. Howash, Youssef A. Abdulla, **Fawzeia Khamis**, Abdullah M. Noh. **Structure and Thermoluminescence Properties of Magnesium Oxide Doped with Silicon Oxide Extracted from Natural Clay.** Conference: International Symposium on Advanced Materials and Nanotechnology (iSAMN2022). At: UPM Malaysia, January 2022.

2 **F. Khamis**, and D.E. Arafah. **Temperature Effects on the Glow Curve and Kinetic Parameters of a Potential Soil Salt Thermoluminescent Phosphor.** The International Conference of the Faculty of Sciences and Faculty of Pharmacy at Mutah University, October 1st, 2022.

1 **F. Khamis**, M. M. Deggeg and F. N. Zaggout. **Effect of Doping with Copper on Optical Properties of Zinc Oxide Thin Films Prepared by Sol-Gel Method.** The 4th Annual

Conference on Theories and Applications of Basic and Biosciences, September 5th, 2020. Vol. 4(4), Misurata University.

II *Journal Articles*

23. **F. Khamis**, and D.E. Arafah . …(TL-Natural New Work!)…. **In Preparation**
22. **F. Khamis**, and K. Sadoud. …(TL-Natural Libyan Quartz)…. **In Preparation**
21. **F. Khamis**, and D.E. Arafah. …(TL- NaCl(commercial) doped Eu, Mn)…. **In Process**
20. **F. Khamis**, and D.E. Arafah. …(TL-White Rock)…. **In Process**
19. **F. Khamis**, and D.E. Arafah. …(TL-NaCl(MDS) doped Eu, Mn, Dy and codoped)… **In Process**
18. **F. Khamis**, and N. Sawsi. …(TL-Feldspar)…. **In Process**
17. **F. Khamis**, and D.E. Arafah. …(TL-RE-doped Dead Sea Salt(DSES))…. **In Process**
16. **F. Khamis**, and D.E. Arafah. …(TL-White Rock)…. **In Process**
15. **F. Khamis**, D.E. Arafah and M. Ehmouda. …(TL-Cement) **In Process**
14. **F. Khamis**, and N. M. Deggeg. **Structure properties of pure and doped ZnO thin films prepared by sol-gel**. **In Process**
13. **F. Khamis**, and N. M. Deggeg. **Effect of Co-Doped Cu/Co on Structural and Optical Properties of Zinc Oxide Thin Films Prepared by Sol-Gel Method**. **In Process**
12. **F. Khamis,** N. M. Degig, Mohammad M. Allaham, and Marwan S. Mousa. **Effect of Doping with Cobalt on Structure and Optical Properties of Zinc Oxide Thin Films Prepared by Sol-Gel Method**. **In Process**
11. Rabah BOURAS, **Fawzeia Khamis**, Ahmed KADARI, Mokhtar HALIMI, Abdelkader AZAIZ and Helena ALEXANDERSON. **Investigation of thermoluminescence properties of $Li_2B_4O_7$: Ag, Cu, Ni nano-composites**. J. Clust Sci (2022); Springer Nature, https://doi.org/10.1007/s10876-022-02388-2
10. **F. Khamis**, and D.E. Arafah. Dead Sea, DS-salt as a thermoluminescent phosphor for beta irradiation dosimetry. Applied Physics A (2021) 127:539, DOI:10.1007/s00339-021-04463-3.
9. Abeer Z. Abraheem, **F. Khamis** and Youssef Abdulla. TL characteristics and dosimetric aspects of Mg-doped ZnO. EJ-Physics. 2684-4451. Vol. 3(1), Jan. 2021/ DOI:10.24018/ejphysics.2021.3.1.37
8. **F. Khamis**, and D.E. Arafah. Radiation induced defects and thermoluminescence characteristics in Eu, Dy and Eu/Dy doped-quartz sol-gel by 2 Gy beta and 2 MeV $^4He^+$ irradiations. EJ-Physics. 2684-4451. Vol. 2(5), Oct. 2020/ DOI:10.24018/ejphysics.2020.2.5.21
7. M. M. Deggeg, **F. Khamis** and F. N. Zaggout. Study Optical Properties of Zinc Oxide Thin Films Prepared by Sol-Gel Method. Special Issue for The 4th Annual Conference on Theories and Applications of Basic and Biosciences, Sep., 5th, 2020.
6. **F. Khamis**, and D.E. Arafah. (2020). Improved Thermoluminescence Properties of Natural NaCl Salt Extracted From Mediterranean Sea Water Relevant to Radiation Dosimetry. EJ-Physics. 2506-8016.Vol.2(3), May 2020. DOI :10.24018/ejphysics.2020.2.3.8
5. **F. Khamis**, and D.-E. Arafah. Thermoluminescence Characteristics of Natural Quartz and Synthesized Silica Glass Prepared by Sol-Gel Technique. AJOPACS, 3(1): 1-16, 2017.
4. **F. Khamis**, and D.-E. Arafah. Synthesis, Characterization and Thermoluminescence Properties of Rare Earth Ions Doped Silica Glass Prepared by Sol-Gel Technique. AJOPACS, 3(2): 1-12, 2017.
3. **F. Khamis**, and D.E. Arafah Efect of Storage on the TL Properties of Glow Curve of Synthesis: Dy, Tm and Dy/Tm Doped $CaSO_4$. M. Dahab. AJOPACS, 2(2): 1-16, 2017.
2. **F. Khamis**, and D.E. Arafah. Thermoluminescence Characteristics of Different Types of Natural Marble and the Effect of Annealing Temperatures. AJOPACS, 2(2): 1-16, 2017.

1. A.M. Sadek, **F. Khamis**, Georgy S. Polymeris, E. Carinou, and G. Kitis. Similarities and differences between two different types of the thermoluminescence dosimeters belonging to the LiF family. Phys. Status Solidi C 14, No. 1-2, 2017/DOI 2016.

Committees, Tasks and Volunteer Work

- April 8, 2023 Giving an online lecture entitled "Self-evaluation of Academic Programs According to International Accreditation Standards - Concepts and Implementation Mechanisms" for Al-Furat Al-Awsat Technical University / Institute of Technology / Kufa; At the invitation of the National Council for Accreditation of Colleges and Institutes of Health and Medical Technologies; Iraq.
- A workshop on academic courses and programs descriptions according to quality standards to Coordinators of the Quality Offices, ElMergib University., 12/03/2023.
- A workshop on academic courses descriptions according to quality standards to Coordinators of the Quality Offices, department of Aeronautical Engineering, University of Tripoli., 09/03/2023.
- A workshop on academic programs descriptions according to quality standards to Coordinators of the Quality Offices, faculty of Pharmacy, University of Tripoli., 10/10/2022.
- A workshop on academic courses descriptions according to quality standards to Coordinators of the Quality Offices, faculty of Engineering, University of Tripoli., 24/09/2022.
- A workshop on academic courses and programs descriptions according to quality standards to Coordinators of the Quality Offices, faculty of Pharmacy, University of Tripoli., 24/09/2022.
- A workshop on academic courses and programs descriptions according to quality standards to Coordinators of the Quality Offices, faculty of Education- Janzour, University of Tripoli., 31/07/2022.
- Present a scientific lecture for the students of the Department of Mathematics, University of Jordan on "Applied Differential Equations of Physics". 20/11/2022.
- A workshop on courses descriptions according to quality standards to Coordinators of the Quality Offices of science faculty, University of Tripoli,. 11/04/2022 & 25/04/2022.
- From Nov. 2020 to Oct. 2022: Member of the Accreditation Committee for the Faculty of Science, University of Tripoli, Libya.

Scholarships:

- Scientific Research Grant from The University of Jordan, Deanship of Academic Research for The best research 2013, Jordan.
- Nominated for the Ph.D. study in the Scientific Field, Department of Physics, University of Tripoli, 2008. Nominated for the Ph.D. Dissertation Award in the Scientific Field, Department of Physics, University of Tripoli, 2008.
- Nominated for the MSc study in the Scientific Field, Department of Physics, Higher Education, University of Jafara, 2002.

RESEARCH INTERESTS

- Synthesis and Characterization of Luminescent Materials, Thermoluminescence, Photoluminescence, Crystal Structure by different techniques including sol-gel method.
- Synthesis and Characterization of Thin films by different techniques including spin coating, spray pyrolysis, thermal evaporation, & electron beam..
- Synthesis and Characterization of Optical fibers by sol-gel method
- Thermoluminescent dosimeters (TLDs.) of material.
- Spintronic
- Crystalline solids, some nano-crystals, nano-materials, and all sort of materials.

Experimental Techniques Used

- Harshaw TLD Reader.
- Toledo TLD Reader.
- Rutherford Backscattering Spectrometry (RBS) and Particle-Induced X-ray Emission (PIXE).
- Analysis of thermoluminescence and Photoluminescence properties.
- Structural Analysis (XRD, XRF, SEM and EDS).
- Spin coating technique.
- Sol-gel method.
- Magnetic and magnetism.
- UV/vis.
- Doping and co-doping garnet nano-particle with RE.
- Heat treatment.

Thesis/Dissertation Supervision

7 "Study of Doping Effects on Structural and Optical Properties of SnO Thin Films Prepared by Sol-Gel Technique". Hajer El Sheref, **M.Sc. Thesis**, University of Tripoli, Libya. In preparation, to be defended in December 2024, (***Single Supervisor***).

6 "Study Thermoluminescence Dosimetry (TLD) Characteristics of TLDs Crystals''. Hosam Abdullah Abu Shaalah, **M.Sc. Thesis**, University of Tripoli, Libya. In preparation, to be defended in April2024, (***Single Supervisor***).

5 "Study of Doping Effects on Structural and Optical Properties of NiO Thin Films Prepared by Sol-Gel Technique". Hud Salem Ali Aeleejah. **M.Sc. Thesis** ElMergib University, Physics Department, Lbya,. In preparation, to be defended in October 2024, (***Single Supervisor***).

4 "Study Thermoluminescence Dosimetry (TLD) Characteristics of Feldspar Crystals". Nwal Swisy ElAfi, **M.Sc. Thesis**, University of Tripoli, Libya. In preparation, to be defended in May 2023, (**Single Supervisor**).

3 "Study effect of radiation on the thermoluminescence characteristics of insulator material". Mabrouka Ahmouda, **M.Sc. Thesis**, University of Tripoli, Libya. In preparation, to be defended in May 2023, (***Single Supervisor***).

2 "Thermoluminescent Properties of Natural Silicon Oxide Extracted from Clay and Doped with Magnesium Oxide and its use in Radiation Measurements", Hawa Hawash, **M.Sc. Thesis**, Sebha University, Libya. In preparation, to be defended in March 2023, (***Co- Supervisor***)**.**

1 "Study of Doping Effects on Structural and Optical Properties of ZnO Thin Film Prepared by Sol-Gel Method". Maghlih M. F. Daqiq, **M.Sc. Thesis** Misurata University, Physics Department, September 23, 2021, **(*Co- Supervisor*).**

Computer Skills:

Microsoft Office, Software-Win-REMS, WinGCF, OpenFilters, Adobe Photoshop, Mathematic, MatLab, Maple, Origin, Kmax, PeakFit, PIXE Analysis and CasaXPS and X-Pert Sotware.

Languages:

Arabic: Mother tongue
English: Excellent, written and good spoken

Teaching:

In addition to the previous activities, I have frequently taught the following courses:

B.Sc. Programs:

Subject	Course No.	Subject	Course No.
Physics-I[Science](4)	PH111	Modern Phys[Nuclear Engineering](5)	PH317
Physics-II[Science](2)	PH112	General physics[Pharmacy](2)	P122T
Lab-Physics-I(3)	PH116	Quantum Mech. –I(5)	PH312
Physics-II[Engineering](3)	GS112	Nuclear-I(2)	PH413
Lab-Physics-II[Engineering](5)	GS112L	Quantum Mech. –II(4)	PH411
Electricity & Magnetism(3)	PH213	Solid State Physics-I(2)	PH415
Intermediate Mechanics-II	PH311	Solid State Physics-II(1)	PH416
Modern Phys[Science](4)	PH317		

M.Sc. Programs:

Subject	Course No.
Thermoluminescence dosimetry (TLD)- Elective curse	PH685

Papers Reviewer

1- Synthesis and thermoluminescence characterization of self-agglomerating CaSO4 exposed to beta radiation. Ms. Ref. No.: **ARI_2018_1062** has been submitted to the Applied Radiation and Isotopes journal (**Impact factor 1.343**) Published by Elsevier **(2019).**

2- Nanoshaped CeO2 and SiO2 Supported Ru Catalyst for Plasma Catalysis Chemical Looping Reactions. Ms. Ref. No.: **10.5923/j.ijee.20201003.01** has been submitted to International Journal of Energy Engineering (**ICV 84.2**) Published by SAP **(2020)**.

3- Theoretical Study for Some Physical Concepts. Ms. Ref. No.: **JNPP-102900204**. Journal of Nuclear and Particle Physics. SAP **(2020)**.

4- The Process of Magnetic Flux Penetration into Superconductors. Ms. Ref. No.: **AJCMP-1023010526**. American Journal of Condensed Matter Physics (**Impact factor 1.057**) SAP**(2020)**.

5- First Principles Studies of $Ca_xSr_{1-x}F_2$ Ternary Alloys. Ms. Ref. No.: **10.5923/j.ajcmp.20201002.01.** American Journal of Condensed Matter Physics (**Impact factor 1.057**) Published by SAP**(2020)**.

6- Application of The Transmission Line Method to Calculate The Energy Bands for An Electron in One Dimensional Lattice. The Libyan Journal of Science, LJS**. (2020)**.

7- Frequency and temperature dependence of ethanol using the Cole-Cole Relaxation Model. Ms. Ref. No.: **10.5923/j.ajcmp.20201002.03.** American Journal of Condensed Matter Physics (**Impact factor 1.057**) Published by SAP **(2020)**.

8- The Role of Symmetry in Obtaining Lower Excited States of Some Potentials in Two Dimensions Using the Diffusion Method, LJS. **(2021)!!**.

9- Septal Destruction enhances Chaotic Mixing and Increases Cellular Doses of Nanoparticles in Emphysematous Acinus. Ms. Ref. No.: **NANOX-100335**. Nano Express. IOPJ(2021).

10- Dynamics of A Coherently Driven Degenerate Three-Level Atom In A Closed Cavity. **OPTICS-107800138**. International Journal of Optics and Applications, 2021

11- Evaluating the scientific researches participating in the "Libya Innovation Award Competition 2020/2021

12- Laws of the Universe with Dark Matter & Dark Energy. **ASTRONOMY-108800110.** International Journal of Astronomy, 2021

13-

Participation in Conferences, Workshops, and Meetings

- An introductory seminar at the International Center for the Use of Synectron Rays in the Field of Experimental Sciences and Their Applications in the Middle East(SESAME), and how to write a research project to obtain approval, accreditation and funding. Association of Arab Universities. By Zoom Application **18 Oct. 2020**
- Research activities and innovation technology transfer workshop. "Network for the Modernization of the Higher Education Sector In Libya" **22 Oct. 2020.**
- Principles of administrative organization and strategic planning workshop. Research, Consulting and Training Center, University of Tripoli.**18-19 Oct. 2020.**
- Attending an online panel discussion on "The Importance of Publishing Science in the Arabic Language" 6/16/2021.Mohammed Bin Rashid Al Maktoum Knowledge Foundation.
- Attending knowledge dialogues entitled: "Developing skills towards a new reality" 6/23/2021. Mohammed Bin Rashid Al Maktoum Knowledge Foundation.
- Participation of the National Biosafety and Bioethics Committee in a workshop on: "Scientific Research Ethics" 11/7/2021
- Attending a training course entitled: "Writing Scientific Research Between Methodology and Professionalism". King Khalid University, Deanship of Scientific Research. Saudi Arabia. 7/12/2021.
- Attending an international scientific symposium entitled: "The Quality of Medical Education and Future Prospects". Scientific Association for Education Quality and Academic Accreditation. 7/31/2021.
- Attending the international virtual forum on: "Coexisting with the Coronavirus". 7/31/2021
- Participation in "Arab Nuclear Business Platform Lite 2021 (ARNBP Lite)". Held via the electronic platform from 2-5/2021/8 -. International Atomic Energy Agency - Vienna / Austria.
- Attending an international scientific symposium entitled: "The quality of higher education has been affected in light of the Corona pandemic, the United Kingdom as a model." Scientific Association for Education Quality and Academic Accreditation. 10/2/2021.
- Participation in the training workshop titled: "H index". held via the electronic platform. 10/7/2021.
- Participation in a scientific lecture entitled: "The conspiracy theory from the perspective of

scientific research." held via the electronic platform. 10/8/2021.

- Attendance Lecture: "**CT Radiation Dosimetry**" Radiology Department at King Fahd Hosiptal Jeddah. 8/10/2021.
- Participation in the Middle East Forum for Opinion Leaders in Education. Held via the electronic platform from 10/27/2021-25. Association of Arab Universities.
- Attending an international scientific symposium entitled: "Quality Assurance in Education: Is it a studied methodology or a seasonal phenomenon?" Scientific Association for Education Quality and Academic Accreditation. 11/13/2021.
- Participation in the training course entitled "Management of the Moodle e-learning platform", the Association of Arab Universities. 11/22/2021..2021/11/22
- Participation in the training course entitled "Digital Content Industry Using the Moodle Platform" Association of Arab Universities. 11/23/2021.

References:

1. **Dr. Dia-Eddin Arafah**
   Professor of Experimental Solid State Physics.
   University of Jordan, Amman, Jordan.
   E-mail: darafah@ju.edu.jo
2. **Dr. Sami H. Mahmood**
   Professor in Experimental Condensed Matter Physics.
   University of Jordan, Amman, Jordan.
   E-mail: s.mahmood@ju.edu.jo
3. **Dr. Mohamed Mansor**
   Professor of Theoretical Solid State Physics.
   University of Tripoli, Tripoli, Libya.
   E-mail: m.mansor@uot.edu.ly