Curriculum vitae

PERSONAL INFORMATION

NAME:
ABDULLAH MOHAMMED ALDUKHAYEL

EMAIL:
a.aldukhayel@mu.edu.sa

ADDRESS:
Department of Physics
College of Science
Majmaah University
Majmaah
Saudi Arabia

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NATIONALITY: Saudi

LANGUAGES
Arabic
English

EDUCATION

Bachelor of Science
King Saud University, Riyadh
Jun 1995 - Jul 1990

Master of Science
King Saud University, Riyadh
specialist in laser
Sep 2001 - Feb 2006

Doctor of Philosophy in Science
University of Surrey, Guildford/ UK
Photonic devices including lasers and their applications. **SEP 2009 - SEP 2014**

WORK EXPERIENCE

General physics teacher
Ministry of education, Riyadh
Teaching general physics in several high schools
Sep 1995 - Sep 1998

lecturer
Ministry of high education \Teacher College, Dammad
working at teacher college as lecturer teaching related materials and researching in laser subjects
Sep 1999 - Sep 2005
Lecturer

Ministry of education \Teacher College, Riyadh
working at teacher college as lecturer teaching related materials and researching in laser subjects
Sep 2005 - Sep 2007

Lecturer
University of Majmaah, Majmaah
Community College Sep 2008 - Sep 2015 (At that time I related to a scholarship to obtain PhD from the university of Surrey in the UK)

Professor assistant
University of Majmaah, Majmaah
Sep 2014 – now
Working at Majmaah University as a faculty member (professor assistant participating in teaching, researching and other scientific and management activities

Vice dean
Applied College, Majmaah
Feb 2015 -Dec 2022
Vice dean for education affairs for several seasons at the community college then the applied college

Vice dean committee
Majmaah University, Majmaah
Jul 2016 - Sep 2022
Member of general vice deans committee

Head of department
Community college, Majmaah
Sep 2016 - Sep 2018

Head of the administrative and human sciences

Faculty member
Sep 2022 - now
Physics department committee / College of Science

SKILLS

Microsoft office
PC hardware and software installation
operating laser devices
safety in lasers

GOOGLE SCHOLAR LINK:

https://scholar.google.com/citations?user=kCfDULEAAAAJ&hl=en

RESEARCHGATE LINK:

https://www.researchgate.net/profile/Abdullah-Aldukhayel-2

TEACHING COURSES:

1. General physics
2. EM waves
3. Optics
4. Modern physics
5. Solid state
6. electronics
7. lasers and applications
8. electromagnetism.

COMMITTEE MEMBERSHIP:

1. physics department
2. Electronic education in physics department

PUBICATIONS:

Papers

1. Manel Amara, Anouar Jbeli, Nouf Ahmed Althumairi, Abdullah M. Aldukhayel, J. Dhahri & E. K. Hlil. . Electronic structure, optical properties, and thermistor characteristics of BaFe0.5Nb0.5O3 (BFN). J Mater Sci: Mater Electron 36, 1865 (2025)

2. Aldukhayel, Abdullah M. "Tailoring the dielectric properties of Fe2-xCoxO3 nanoparticles for high-frequency energy storage applications." Journal of Materials Science: Materials in Electronics 36, no. 16 (2025): 927.

3. Aldukhayel, A.M. “Sol–gel synthesized BaMn0.5Ti0.5O3 perovskite: structural, dielectric, and electrical properties with temperature-dependent analysis”. Journal of Sol-Gel Sci Technol (2025).

4. Soltani, Sonia, Najwa Idris A. Ahmed, Anouar Jbeli, Abdullah M. Aldukhayel, and Nouf Ahmed Althumairi. "Recent advances in sol–gel synthesis of oxide perovskites for energy and functional applications: a mini review." Journal of Sol-Gel Sci Technol 115, 663–687 (2025).

5. Helali Saloua, Mohamed Hsini, Ines Hilali Jaghdam, Abdullah M. Aldukhayel, and Nouf Ahmed Althumairi. "Simulation of magnetic effect in Al-doped GdGa compounds." Appl. Phys. A 131, 752 (2025).

6. Soltani, Sonia, Mokhtar Hjiri, Sherif S. Aly, E. A. Elghmaz, Abdullah M. Aldukhayel, Nouf Ahmed Althumairi, and Anouar Jbeli. "Tailoring frequency-dependent electrical and dielectric properties of ZnO nanoparticles via diverse chemical syntheses for advanced electronic applications." Journal of Materials Science: Materials in Electronics 36, no. 18 (2025): 1075.

7. Mahmoud, I. S., A. M. Aldukhayel, Elham A. Aldufeery, M. Ahmad, M. M. Mahasen, M. M. Soraya, and M. I. Eman. "Structural, optical, and shielding investigation of PVA/Te composite for technological applications." Optical Materials 157 (2024): 116177.

8. Soltani, Sonia, Mokhtar Hjiri, Najwa Idris A. Ahmed, Anouar Jbeli, Abdullah M. Aldukhayel, and Nouf Ahmed Althumairi. "Metal halide perovskites for energy applications: recent advances, challenges, and future perspectives." RSC advances 15, no. 27 (2025): 21811-21837.

9. Hsini, Mohamed, Ines Hilali Jaghdam, Abdullah M. Aldukhayel, Nesrine Zahi, Nouf Ahmed Althumairi, and Anouar Jbeli. "Modelling the Magnetocaloric Effect in Te-Doped LaMnO3 within the Framework of Mean Field Theory." Physica B: Condensed Matter (2025): 417623.

10. Ounis Amina, Ahlem Ksouri, Menasra Hayet, Haroun Houicha, E. A. Elghmaz, Nouf Ahmed Althumairi, Abdullah M. Aldukhayel, and Anouar Jbeli. "Phase structure, microstructure, and photocatalytic performance of (Ta/In)-doped Bismuth Sodium Titanate ceramics synthesized via the molten salt method." Ceramics International (2025).

11. Mahmoud, I. S., A. M. Aldukhayel, Elham A. Aldufeery, M. Ahmad, M. M. Mahasen, and M. M. Soraya. "Preparation and investigation of polyvinyl alcohol: CeO2/Cu2O composite films for UV shielding." Journal of Inorganic and Organometallic Polymers and Materials 34, no. 1 (2024): 131-143.

12. Ahmed Althumairi, Nouf, Mokhtar Hjiri, Abdullah M. Aldukhayel, Anouar Jbeli, and Kais Iben Nassar. "Recent Advances in Dielectric and Ferroelectric Behavior of Ceramic Nanocomposites: Structure Property Relationships and Processing Strategies." Nanomaterials 15, no. 17 (2025): 1329.

13. Sonia Soltani, Mokhtar Hjiri, Sherif S. Aly, E. A. Elghmaz, Abdullah M. Aldukhayel, Nouf Ahmed Althumairi & Anouar Jbeli. "Ceramic perovskites via sol–gel processing: progress, challenges, and applications". Journal of Sol-Gel Sci Technol (2025)

14. Benamara Majdi, Mokhtar Hjiri, Anouar Jbeli, Sana Ben Moussa, Nouf Ahmed Althumairi, Abdullah M. Aldukhayel, Abdullah Yahya Abdullah Alzahrani, S. Soreto Teixeira, Manuel Almeida Valente, Hassen Dahman, Essebti Dhahri. "Tailoring electrical and dielectric properties of ZnO thin films via oxygen vacancy engineering: evidence from impedance and spectroscopic analyses." Inorganic Chemistry Communications (2025): 115401.

15. Soltani, Sonia, Mokhtar Hjiri, Sherif S. Aly, E. A. Elghmaz, Abdullah M. Aldukhayel, Nouf Ahmed Althumairi, and Anouar Jbeli. "Structural, morphological, and optical properties of Zn1-xCuxO (x= 0; 0.02; 0.04): a comparative study of nanoparticle and ceramic states via sol–gel and spark plasma sintering." Journal of Materials Science: Materials in Electronics 36, no. 21 (2025): 1324.

16. Soltani, Sonia, Mokhtar Hjiri, Abdullah M. Aldukhayel, Manel Essid, Anouar Jbeli, and Nouf Ahmed Althumairi. "Effects of silver doping at the A-site on the structure, surface morphology, and magnetic behavior of La 1− x Ag x SrMn 2 O 5+ δ (x= 0.1 and 0.2)." RSC advances 15, no. 28 (2025): 22616-22628.

17. Hjiri, Mokhtar, Sonia Soltani, Anouar Jbeli, Nouf Ahmed Althumairi, Abdullah M. Aldukhayel, Majdi Benamara, Nazir Mustapha, and Manuel Almeida Valente. "Tailoring Gd substitution in iron oxide (GdxFe2− xO3, x= 0–0.1) via the sol–gel method for enhanced structural stability and reduced dielectric loss in energy storage applications." Indian Journal of Physics (2025): 1-17.

18. Al-Dwayyan, A., Aldukhayel A, et al., *Polarization Instability of Vertical Cavity Surface Emitting Lasers*, Journal of King Saud Univ., Vol. 21, Science, pp. 93-101, Riyadh (2009)

19. K.J. Cheetham, A. Krier, I.P. Marko, A. Aldukhayel, S.J. Sweeney, Direct evidence for suppression of Auger recombination in GaInAsSbP/InAs mid-infrared light-emitting diodes, Appl Phys Lett, 99 (2011).

20. A. Aldukhayel, S.R. Jin, I.P. Marko, S.Y. Zhang, D.G. Revin, J.W. Cockburn, S.J. Sweeney, Investigations of carrier scattering into L-valley in □=3.5 m nGaAs/AlAs(Sb) quantum cascade lasers using high hydrostatic pressure, Phys Status Solidi B, 250 (2013) 693-697.

Conference proceeding articles

1. I.P. Marko, A.M. Aldukhayel, A.R. Adams, S.J. Sweeney, R. Teissier, A.N. Baranov, S. Tomic, Physical properties of short wavelength 2.6 mu m InAs/AlSb-based quantum cascade lasers, 22nd Ieee International Semiconductor Laser Conference, (2010) 95-96.

2. I.P. Marko, A.M. Aldukhayel, A.R. Adams, S.J. Sweeney, R. Teissier, A.N. Baranov, S. Tomić, High temperature limitations of short wavelength InAs/AlSb-based quantum cascade lasers, MIOMD-10-cn, (2010).

3. I.P. Marko, A.M. Aldukhayel, A.R. Adams, S.J. Sweeney, R. Teissier, A.N. Baranov, S. Tomic, Physical properties of short wavelength 1.1 μm InAs/AlSb-based quantum cascade lasers, 22nd Ieee International Semiconductor Laser Conference, (2010) 95-96.

Conferences:

1. K. J. Cheetham, A. Krier, I. P. Marko, A. Aldukhayel and S. J. Sweeney, High Pressure Studies and Auger Suppression in GaInAsAbP Mid-infrared LEDs". UK Semiconductors 1100, Sheffield, UK.

2. A. Aldukhayel, S. R. Jin, I. P. Marko and S. J. Sweeney, D. G. Revin and J. W. Cockburn, the influence of inter-valley scattering on 3.7μm InGaAs/AlAs(Sb) quantum cascade lasers. MIOMD-XI (Infrared Optoelectronics: Materials and Devices) 2012, Chicago, USA.

3. A. Aldukhayel, I. P. Marko, S. J. Sweeney, Auger suppression in GaInAsSbP/InAs mid-infrared light emitting diodes for gas sensing. The 6th Saudi Scientific International Conference 2012 in *Brunel University*, London.

4. A. Aldukhayel, S. R. Jin, I. P. Marko and S. J. Sweeney, D. G. Revin and J. W. Cockburn, Temperature dependence of 3.5-3.7 m InGaAs/AlAs(Sb) quantum-cascade lasers. SIOE2012 Semiconductor and Integrated OptoElectronics, Cardiff, UK.

5. A. Aldukhayel, S. R. Jin, I. P. Marko and S. J. Sweeney, D. G. Revin and J. W. Cockburn, The effect of inter-valley scattering on 3.6 m InGaAs/AlAs(Sb) quantum cascade lasers. UK Semiconductor lasers 2012, Sheffield. UK.

6. I.P. Marko, A. Aldukhayel, K.J. Cheetham, A. Krier, S.J. Sweeney. Suppression of Auger recombination in GaInAsSbP/InAs mid-infrared LEDs determined using high pressure techniques. HPSP15 (International Conference on High Pressure in Semiconductor Physics) 2012, Montpellier, France.

7. A. Aldukhayel, S. R. Jin, I. P. Marko and S. J. Sweeney, D. G. Revin and J. W. Cockburn, Investigations of ~3.5 μm InGaAs/AlAsSb/InP-based quantum cascade lasers using high hydrostatic pressure. HPSP15 (International Conference on High Pressure in Semiconductor Physics) 2012, Montpellier, France.

8. S. Jin, A. Aldukhayel, I. Marko, S. Zhang, D. Revin, J. Cockburn, S. J. Sweeney. The influence of inter-valley scattering on 7.1μm InGaAs/AlAs(Sb) quantum cascade lasers. Physics and simulation of optoelectronic devices XXI 2013, San Francisco, USA.

Conferences

EMN Meeting on Quantum Technology Energy Materials Nanotechnology April14-172015, Beijing, China

Workshops

1. Scientific courses, seminars and workshops: Attending a training course on team development and leadership in Manchester, United Kingdom, 2010

2. A workshop entitled Outcomes of Academic Program Development in 2015 at Majmaah University

3. A course in the use of one of the rules of the Saudi Digital Library (Manahil) on 2015

4. A course in the use of electronic information resources and the Saudi Digital Library in 2015

5. Attending a practical seminar entitled “Work Conflict” in the period 2015, which was held at the Institute of Administration branch in the city of Abha.

6. Attending a course affiliated with the Leadership Centre at the Ministry of Education regarding student affairs in 2016
7. Attending the program for preparing trainers in the field of intellectual deviations, which was held at Majmaah University in 2017.

8. Attending an applied seminar entitled “Balanced Scorecard” during the 2019 which was held at the main Institute of Public Administration in Riyadh.

9. Attending a practical seminar entitled “Management of Meetings” in 2019, which was held at the Institute of Public Administration branch in the city of Abha.

10. Attending a training course in the program (Workshop for Academic Leaders in Support of Quality Assurance in Higher Education) 2019 held in Vienna Attending the practical seminar on strategic planning held at the Institute of Public Administration in Riyadh 2020

11. Attending the applied seminar on strategic leadership held at the Institute of Public Administration - Riyadh in2020

12. Attending the applied seminar on creative thinking in solving problems held at the Institute of Public Administration in Dammam 2022

Community participation

1. Conducting a workshop titled “World Ozone Day.”

2. Developing the administrative performance of employees.

3. Conducting a workshop titled “Diseases Caused by Smoking.”

4. Conducting a workshop titled “The Importance of Smoke Detectors.”

5. Conducting a workshop titled “The Importance of Following Civil Defense Instructions.”

6. Preparing a brochure on key guidelines for those lost in the desert.

7. Preparing a poster on the main causes of car accidents.

8. Preparing an awareness poster on safe driving practices during rain.

9. Preparing a poster on the importance of fire extinguishers.

10. Conducting a workshop on the dangers of recklessness and risk-taking during floods.