



Hind Mohammad I Althib

POSITION: Associate Professor

Personal Data

Nationality | Saudi

Department | Physics

Official IAU Email | halthib@iau.edu.sa

Office Phone No. | 0133332575

Academic Qualifications (Beginning with the most recent)

Date	Academic Degree	Place of Issue	Address
2010	PhD in Theoretical Physics (Solid State)	Imam Abdulrahman bin Faisal University	Dammam, Saudi Arabia.
2003	MSc. in Theoretical Physics (Solid State)	Imam Abdulrahman bin Faisal University	Dammam, Saudi Arabia.
1995	BSc. in physics	The Girls College of Science in Dammam	Dammam, Saudi Arabia.

PhD, Master or Fellowship Research Title: (Academic Honors or Distinctions)

PhD	Laser short-pulse heating and modeling of nonequilibrium energy transport in lattice and electron sub-systems
Master	Theoretical study of laser-induced thermal effects in the irradiated solid targets considering the laser pulse parameters



Professional Record: (Beginning with the most recent)

Job Rank	Place and Address of Work	Date
Associate Professor	Imam Abdulrahman bin Faisal University-Girl College of science- Department of Physics	May 2023 - Present
A research visitor	King Abdullah University of Science & Technology-Materials - Photonics Lab	Jul 2012 – Jul 2013
Assistant Professor	Imam Abdulrahman bin Faisal University-Girl College of science- Department of Physics	Jul 2010 – May 2023
Teaching Assistant (Lecturer)	Imam Abdulrahman bin Faisal University-Girl College of science- Department of Physics	Mar 2005 - Jul 2010
Teaching Assistant (Demonstrator)	Imam Abdulrahman bin Faisal University-Girl College of science- Department of Physics	Sep 1998 - Mar 2005

Administrative Positions Held:

Administrative Position	Office	Date
Vice-Dean, Graduate Studies	Deanship of Graduate Studies, Imam Abdulrahman bin Faisal University, Dammam. Saudi Arabia.	2016 - Present

Scientific Achievements

Published Refereed Scientific Researches

#	Name of Investigator(s)	Research Title	Publisher and Date of Publication
1	Hind Althib	Resonant Tunneling of Electrons and Holes through the $In_xGa_{1-x}N/GaN$ Parabolic Quantum Well/LED Structure	Crystals (2022)
2	Hind Althib , Tahani H Flemban, AI Aljameel, Abeer Mera, MGB Ashiq, Q Mahmood, Bakhtiar UI Haq, Syed Awais Rouf	First-principle study of electronic, optical and transport properties for $(Zn/Cd) Sc_2Se_4$ spinel chalcogenides	Bulletin of Materials Science (2021)
3	Tahani H Flemban, Hind Althib , S Bouzgarrou, Syed Awais Rouf, MH Alhossainy, AI Aljameel, Abeer Mera, MGB Ashiq, Q Mahmood	First Principle Analysis of Lead-free Variant Perovskites Iodides for Optical and Thermoelectric Applications	Journal of Materials Research and Technology (2021)
4	G Farid, G Murtaza, Tahani H Flemban, Hind Althib , Abeer A AlObaid, Tahani I Al-Muhimeed, Abeer Mera, Bakhtiar UI Haq, Q Mahmood	Structural, Magnetic, and Dielectric Properties of Sn-Doped $BiFeO_3$: Experiment and DFT Analysis	Journal of Superconductivity and Novel Magnetism (2021)
5	Q Mahmood, Umm-e Hani, Tahani I Al-Muhimeed, Abeer A AlObaid, Bakhtiar UI Haq, G Murtaza, Tahani H Flemban, Hind Althib	Study of optical and thermoelectric properties of $ZYbI_3$ ($Z= Rb, Cs$) for solar cells and renewable energy;	Journal of Physics and Chemistry of Solids (2021)



		Modelling by density functional theory	
6	Muhammad Yaseen, Haris Shafiq, Javed Iqbal, Farwa Batool, Adil Murtaza, Munawar Iqbal, Hind Althib , Shahid M Ramay, Asif Mahmood	Pressure induced electronic, optical and thermoelectric properties of cubic SrZrO ₃ : DFT investigation	Physica B: Condensed Matter (2021)
7	Muhammad Saeed, Zubaida Noor, Amel Laref, Hind Althib , Tahani H Flemban, G Murtaza	Insights into the structural, electronic and optical properties of MgA ₂ B ₄ (A= Sc, Y; B= S, Se) spinel compounds: Direct energy band gap materials	Materials Science in Semiconductor Processing (2021)
8	Q Mahmood, Ghulam M Mustafa, Manal Morsi, Hind Albalawi, Tahani H Flemban, M Hassan, Hind Althib , MI Khan, T Ghrib	Theoretical investigations of optoelectronic and thermoelectric properties of halide based double perovskite halides: K ₂ TeX ₆	Physica Scripta (2021)
9	Muhammad Saeed, Zubaida Noor, Roshan Ali, Amel Laref, Hind M Althib , Tahani H Flemban, Ghulam Murtaza	Prediction of novel X ₂ ZnZ ₄ (X = Sc, Y; Z = S, Se) spinels materials for renewable energy applications	International Journal of Energy Research (2021)
10	G Murtaza, Thamraa Alshahrani, RM Arif Khalil, Q Mahmood, Tahani H Flemban, Hind Althib , A Laref	Lead Free Double Perovskites Halides X ₂ AgTiCl ₆ (X= Rb, Cs) for solar cells and renewable energy applications	Journal of Solid State Chemistry (2021)
11	Rehan Ullah, Ali H Reshak, Malak Azmat Ali, Afzal Khan, Ghulam Murtaza, Murefahmana AL-Anazy, Hind Althib , Tahani H Flemban	Pressure-dependent elasto-mechanical stability and thermoelectric properties of MYbF ₃ (M = Rb, Cs) materials for renewable energy	International Journal of Energy Research (2021)
12	Malak Azmat Ali, Ali H Reshak, Ghulam Murtaza, Murefahmana AL-Anazy, Hind Althib , Tahani H Flemban, Jiri Bila	Optoelectronic and transport properties of Rb/Cs ₂ TeI ₆ defective perovskites for green energy applications	International Journal of Energy Research (2021)
13	Q Mahmood, MH Alhossainy, MS Rashid, Tahani H Flemban, Hind Althib , Thamraa Alshahrani, M Rashid, A Laref	First-principles study of lead-free double perovskites Rb ₂ TeX ₆ (X= Cl, Br, and I) for solar cells and renewable energy	Materials Science and Engineering: B (2021)
14	Abdul Ahad Khan, Ali H Reshak, Zubaida Noor, Ghulam Murtaza, Murefah Mana Al-Anazy, Hind Althib , Tahani H Flemban, Amel Laref, AM Mustafa Al Bakri, Jiri Bila	First-principles calculations of structural, electronic, optical, and thermoelectric properties of ternary d-metal sulfides Sc ₂ CdS ₄ and Y ₂ CdS ₄ compounds	International Journal of Energy Research (2021)
15	Hind Althib	Effect of Quantum Barrier Width and Quantum Resonant Tunneling Through InGaN/GaN	Results in Physics (2021)



		Parabolic Quantum Well-LED Structure on LED Efficiency	
16	Thamraa Alshahrani, Ghulam M. Mustafa, Tahani H. Flemban, Hind Althib , Samah Al-Qaisi, Nessrin A. Kattan, Q. Mahmood	Probing of Optoelectronic and Transport Properties of Zinc Based ZnY ₂ X ₄ (X = S, Se) Spinels for Renewable Energy	ECS Journal of Solid State Science and Technology (2020)
17	Q. Mahmood, Tahani H. Flemban, Hind Althib , Thamra Alshahrani, M.G.B. Ashiq, Baktiar Ul Haq, Yasmeen Tahir, Aroob Surrati, Nessrin A. Kattan, A. Laref	The study of optical and thermoelectric properties of lead-free variant iodides (K/Rb) ₂ TiI ₆ ; Renewable energy	Journal of Materials Research and Technology (2020)
18	M.K. El-Adawi, H.M.Al-Theeb	Heating Two-Layer System with Pulsed Laser	International Journal of Science and Research (IJSR) (2015)
19	H. M. Al-Theeb and B. S. Yilbas	Analytic Solution of Laser Short-Pulse Heating of a Metallic Surface: Exponential Pulse Case	Lasers in Engineering 2012
20	H. M. Al-Theeb and B. S. Yilbas	Analytical solution for electron and lattice site temperatures due to laser induced non-equilibrium energy transport in metals	Canadian Journal of Physics 2011
21	El-Adawi MK, Al-Theeb HM	Heating one-dimensional homogeneous slab with pulsed laser in relation to the laser pulse parameters	The Arabian Journal for Science and Engineering 2008

Scientific Research Papers Presented to Refereed Specialized Scientific Conferences

#	Name of Investigator(s)	Research Title	Conference and Publication Date
1	Chao Shen, Tri B. Susilo, Irfan Khan, Pawan Mishra, Bilal Janjua, Tien Khee Ng, Hind Althib , Mohammad A. Alsunaidi, and Boon S. Ooi	Emission characteristics in soft potential profile InGaN/GaN quantum well Emission characteristics in soft potential profile INGAN/GAN quantum well	Submitted in 11th International Conference on Nitride Semiconductors (ICNS-11) is approaching (deadline on April 5th, (2015)



Completed Research Projects

#	Name of Investigator(s) (Supported by)	Research Title	Report Date
1	Felemban, Tahani Althib, Hind Ashiq, M Gul BAHAR Ghulam Mustafa, Qasim	Exploration of new efficient solar cell materials as an alternative for unstable hybrid organic-inorganic perovskites	2020 - 2021
2	Felemban, Tahani Althib, Hind Ashiq, M Gul BAHAR Ghulam Mustafa, Qasim	Quantum ferromagnetism in Double perovskites and transport characteristics for Spintronic and quantum computing	2020 - 2021
3	Dr. Reem Al-khairiy and Dr. Hind Althib	Study the dual-phase-lag heat conduction in a two-dimensional medium by a heat laser source with Gaussian distribution in both the spatial and temporal	2011-2013
4	Hind Althib	Effects of InGaN/GaN Quantum Well-LED Structure Shape on Thermal Conductivity and Efficiency	2022 - 2023

Contribution to Scientific Conferences and Symposia

#	Conference Title	Place and Date of the Conference	Extent of Contribution
1	Workshop: KAUST Saudi Leadership Program	Kaust University, 1-3-2022	Attending and training
2	Symposium 7th Annual National Academic Talent Development Program (NATDP)	Kaust University, 24-3-2022	Attending
3	Webinar INTERNATIONAL WEBINAR, SUSTAINABLE DEVELOPMENT AND ECOSYSTEMS IN SAUDI Arabia	Science college - Imam Abdulrahman Bin Faisal University, 14-2-2022 to 17-2-2022	Attending
4	Researchers accounts for reference citation services: Google scholar, Researcher ID, Scopus	Imam Abdul Rahman bin Faisal University, 2020	Attending
5	Academic booking as one of the quality practices for making learning resources available	Imam Abdul Rahman bin Faisal University, 2019	Attending
6	Laser safety training	Kaust University, 2013	Attending
7	Laboratory safety training	Kaust University, 2013	Attending
8	Hazardous waste training	Kaust University, 2013	Attending
9	A lecture entitled: Linking scientific research to education, and education to scientific research in institutions of higher education	Imam Abdul Rahman bin Faisal University, University of Dammam previously, 2011	Attending



10	Graduate studies development workshop	Imam Abdul Rahman bin Faisal University, University of Dammam previously, 2011	Attending
11	The (first) scientific meeting entitled: Results of the Scientific Pioneers	Imam Abdul Rahman bin Faisal University, University of Dammam previously, 2008	Attending

Teaching Activities

1- Undergraduate

#	Course/Rotation Title	Extent of Contribution
1	Quantum mechanics 1	Teaching PHYS 401 (Old plan)
2	Quantum mechanics 2	Teaching PHYS 510 (Old plan)
3	Experimental physics 1	Teaching PHYS 303 (Old plan)
4	Selected Topics	Teaching PHYS 552 (Old plan)
5	Classical Mechanics 1	Teaching PHYS 402 (Old plan)
6	Electromagnetic theory 1	Teaching PHYS 403 (Old plan)
7	Electromagnetic theory 2	Teaching PHYS 403 (Old plan)
8	Advanced Quantum mechanics	Teaching PHYS 510
9	Modern Physics and Introduction to Quantum Mechanics	Teaching PHYS 401
10	Physics 2 (Mechanics and Waves)	Teaching PHYS 201
11	Project	Supervision PHYS 509

2- Postgraduate

#	Course/Rotation Title	Extent of Contribution
1	Thermodynamics and statistical physics (Master)	Teaching PHYS 542
2	Advanced Quantum Mechanics (Master)	Teaching PHYS 503
3	Computational physics (Master)	Teaching PHYS 518
4	Mathematical Physics ((Master)	Teaching PHYS 541
5	Mathematical Physics I ((PhD)	Teaching PHYS 619
6	Mathematical Physics II ((PhD)	Teaching PHYS 620

Student Academic Supervision and Mentoring

#	Degree Type	Title	Institution	Date
---	-------------	-------	-------------	------



1	Master	Effect of Annealing and Tunneling on the efficiency of InGaN/GaN Multiple Quantum Well (MQW) LEDs	Physics Department, College of science, Imam Abdulrahman Bin Faisal University.	2014 - 2016 (Thesis)
---	--------	---	---	----------------------

Administrative Responsibilities, Committee and Community Service

Administrative Responsibilities

#	From	To	Position	Organization
1	2016	present	Vice Dean	Deanship of Graduate studies, Imam Abdulrahman Bin Faisal University, Khobar, Saudi Arabia.

Committee Membership

#	From	To	Position	Organization
1	2010	present	Member - physics departmental board - college of science	College of Applied Medical Sciences. The Imam Abdulrahman University, Dammam. Saudi Arabia.
2	2021	present	Member of Intellectual Awareness Unit Committee	Imam Abdulrahman University
3	2020	Present	Member - faculty board - college of nurse	college of nurse - The Imam Abdulrahman University, Dammam. Saudi Arabia.
4	2020	Present	Member -Supervisory Committee for Financial Affairs for Postgraduate Programs	Office of the Vice President for Postgraduate Studies and Scientific Research - The Imam Abdulrahman University, Dammam. Saudi Arabia.
5	2020	Present	Member - Committee of teaching assistants, lecturers, language teachers and research assistants Affairs	Office of the Vice President for Postgraduate Studies and Scientific Research - The Imam Abdulrahman University, Dammam. Saudi Arabia.



6	2019	Present	Member - Standing Committee for Scholarship and Training	Office of the Vice President for Postgraduate Studies and Scientific Research - The Imam Abdulrahman University, Dammam. Saudi Arabia.
7	2010	2011	Member - Committee of quality	Physics department
8	2010	2015	Member - Development Committee for Postgraduate Programs	Physics department
9	2015	2016	Member - Committee of affairs academic	Physics department
10	2010	2015	Member - Supervisory Committee academic	Physics department

Personal Key Competencies and Skills: (Computer, Information technology, technical, etc.)

1	Mathematica software
2	MATLAB software

Last update August ~~2022~~