



Mohammad Hasan Abu Mhareb

FACULTY FULL NAME: Mohammad Hasan Abu Mhareb

POSITION: Assistant Professor

Personal Data

Nationality | Jordanian

Date of Birth | ٢٩/٩/١٩٨٤

Department | Physics

Official UoD Email | mhsabumhareb@iau.edu.sa

Office Phone No. |

Language Proficiency

Language	Read	Write	Speak
Arabic	√	√	√
English	√	√	√
Others	-	-	-

Academic Qualifications (Beginning with the most recent)

Date	Academic Degree	Place of Issue	Address
2015	Medical Physics/ Ph.D.	University Technology Malaysia	Johor - Malaysia
2009	Medical Physics/ MSc.	University of Jordan	Amman - Jordan
2006	Physics/ B.Sc.	Hashemite University	Zarqa - Jordan

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

PhD	“Dosimetric Properties of Lithium Magnesium Borate Glasses Doped with Dysprosium and Phosphorus Oxide for Radiation Dose Measurement” University Technology Malaysia, Department of Physics, Malaysia.
Fellowship	-

Professional Record: (Beginning with the most recent)

Job Rank	Place and Address of Work	Date
----------	---------------------------	------



Assistant Prof.	KSA	Imam Abdulrahman Bin Faisal University - Girl College of Sciences, Department of Physics	Dammam	1/12/2017
Assistant Prof.	KHJ	Isra University – Faculty of Science, Department of Physics	Amman	01/10/2016
Radiation and Nuclear Inspector	KHJ	Energy and Minerals Regulatory Commission- Radiation Protection Directorate	Amman	17/12/2015
Radiation and Nuclear Inspector	KHJ	Jordan and Nuclear Regulatory Commission- Radiation Protection Directorate	Amman	14/12/2009

Administrative Positions Held: (Beginning with the most recent)

Administrative Position	Office	Date
Leader of the research unit "medical application in nanomaterials"		2018

Scientific Achievements

Published Refereed Scientific Researches

(In Chronological Order Beginning with the Most Recent)

#	Name of Investigator(s)	Research Title	Publisher and Date of Publication
1	MHA Mhareb , M Maghrabi, YSM Alajerami, S Hashim, SK Ghoshal, MA Saleh, KM Abushab	Glow curve analysis of glassy system dosimeter subjected to photon and electron irradiations	Results in Physics/ Elsevier Vol. ١٠, ٢٠١٨
2	S. Hashim, M.H.A. Mhareb , S.K. Ghoshal, Y.S.M. Alajerami, M.I. Saripan, D.A. Bradley.	Luminescence features of dysprosium and phosphorus oxide co-doped lithium magnesium borate glass	Radiation Physics and Chemistry/ Elsevier Vol. ١٣٦, ٢٠١٧
3	YSM Alajerami, KM Abushab, SI Alagha, MHA Mhareb , A Saidu, FS Kodeh, Kh Ramadan	Physical and optical properties of sodium borate glasses doped with Dy ³⁺ ions.	International Journal of Modern Physics B / World Scientific Vol. ٣١, ٢٠١٧
4	MKA Karim, S Hashim, KA Bakar, DA Bradley, WC Ang, NA Bahrudin, MHA Mhareb	Estimation of radiation cancer risk in CT-KUB.	Radiation Physics and Chemistry / Elsevier Vol. ١٣٧, ٢٠١٧
5	M.H.A. Mhareb , S. Hashim, S.K. Ghoshal, M.J. Bqoor, A.I. Hamdan, Y.S.M. Alajerami, M.A.Saleh, M.K.B. Abdul Karim	The effect of Dy ³⁺ impurities on the physical, optical and thermoluminescence properties of lithium borate glass.	Journal of Luminescence / Elsevier Vol. ١٧٧, ٢٠١٦
6	N.A. Razak, S.Hashim, M.H.A. Mhareb , Y.S.M. Alajerami, S.A. Azizan, and N. Tamchek	Impact of Eu ²⁺ ions on physical and optical parameters of Li ² O-Na ² O-B ² O ³ glass	Chines Journal of Chemical Physics / IOP Science Vol. ٢٩, ٢٠١٦.
7	Mhareb, M. H. A. , Hashim, S., Ghoshal, S. K., Alajerami, Y. S. M., Saleh, M. A., Azizan, S. A. B., and Karim, M. A.	Influences of dysprosium and phosphorous oxides co-doping on thermoluminescence features and kinetic parameters of lithium magnesium borate glass.	Journal of Radioanalytical and Nuclear Chemistry / Springer Vol. ٣٠٥, ٢٠١٥.



8	Mhareb, M. H. A. , Hashim, S., Ghoshal, S. K., Alajerami, Y. S. M., Saleh, M. A., Razak, N. A. B., & Azizan, S. A. B.	Thermoluminescence properties of lithium magnesium borate glasses system doped with dysprosium oxide	Luminescence / Wiley Vol. ٣٠, ٢٠١٥
9	Hashim, S., Mhareb, M. H. A. , Ghoshal, S. K., Alajerami, Y. S. M., Bradley, D. A., Saripan, M. I., & Alzimami, K	Luminescence characteristics of Li ₂ O–MgO–B ₂ O ₃ doped with Dy ³⁺ as a solid TL detector	Radiation Physics and Chemistry / Elsevier Vol. ١١٦, ٢٠١٥
10	Razak, N. A., Hashim, S., Mhareb, M. H. A. , & Tamchek, N.	Photoluminescence and thermoluminescence properties of Li ₂ O–Na ₂ O–B ₂ O ₃ glass	Luminescence / Wiley Vol. ٣١, ٢٠١٥
11	Mhareb, M. H. A. , Hashim, S., Ghoshal, S. K., Alajerami, Y. S. M., Saleh, M. A., Maqableh, M. M. A., & Tamchek, N.	Optical and erbium ion concentration correlation in lithium magnesium borate glass	Optik-International Journal for Light and Electron Optics / Elsevier Vol. ١٢٦, ٢٠١٥
12	Saleh, M. A., Ramli, A. T., Bin Hamzah, K., Alajerami, Y., Mhareb, M. H. A. , Aliyu, A. S., & Hanifah, N. Z. H. B. A.	Natural environmental radioactivity and the corresponding health risk in Johor Bahru District, Johor, Malaysia	Journal of Radioanalytical and Nuclear Chemistry / Springer Vol. ٣٠٣, ٢٠١٥
13	Saleh, M. A., Ramli, A. T., bin Hamzah, K., Alajerami, Y., Mhareb, M. , & Saeed, I.	Prediction of terrestrial gamma dose rate based on geological formations and soil types in the Johor State, Malaysia	Journal of environmental radioactivity / Elsevier Vol. ١٤٨, ٢٠١٥
14	M.H.A. Mhareb , S. Hashim, S.K. Ghoshal, Y.S.M. Alajerami, M.A. Saleh, R.S. Dawaud, N.A.B. Razak, S.A.B. Azizan	Impact of Nd ³⁺ ions on physical and optical properties of Lithium Magnesium Borate glass	Optical materials / Elsevier Vol. ٣٧, ٢٠١٤
15	M.H.A. Mhareb , S. Hashim, A.S. Sharbirin, Y.S.M. Alajerami, R.S.E.S. Dawaud, N. Tamchek.	Physical and Optical Properties of Li ₂ O–MgO–B ₂ O ₃ doped with Dy ³⁺ .	Optics and Spectroscopy / Springer Vol. ١١٧, ٢٠١٤
16	Y.S.M. Alajerami, S. Hashim, S.K. Ghoshal, D.A. Bradley, M. Mhareb , M.A. Saleh	Copper doped borate dosimeters revisited	Journal of Luminescence / Elsevier Vol. ١٥٥, ٢٠١٤.
17	Hashim, S., Alajerami, Y. S. M., Ramli, A. T., Ghoshal, S. K., Saleh, M. A., Kadir, A. A., & Mhareb, M. H. A	Thermoluminescence dosimetry properties and kinetic parameters of lithium potassium borate glass co-doped with titanium and magnesium oxides	Applied Radiation and Isotopes / Elsevier Vol. ٩١, ٢٠١٤
18	Muneer Aziz Saleh , Ahmad Termizi Ramli, Yasser Alajerami, Mohammad Hasan Abu Mhareb , Abubakar Sadiq Aliyu, Hamman Tukur Gabdo, Nuraddeen Nasiru Garba	Assessment of radiological health implicat from ambient environment in the Muar district, Johor, Malaysia	Radiation Physics and Chemistry / Elsevier Vol. ١٠٣, ٢٠١٤
19	S.A. Azizan, S. Hashim, N.A. Razak, M.H.A. Mhareb , Y.S.M. Alajerami, N. Tamchek	Physical and optical properties of Dy ³⁺ : Li ₂ O–K ₂ O–B ₂ O ₃ glasses.	Journal of molecular structure / Elsevier Vol. ١٠٧٦, ٢٠١٤
20	Raghda Saeif Eddin Said Dawaud, Suhairul Hashim, Yasser Saleh Mustafa Alajerami, M.H.A.	Optical and structural properties of lithium sodium borate glasses doped Dy ³⁺ ions	Journal of Molecular Structure / Elsevier Vol. ١٠٧٥, ٢٠١٤



	Mhareb , N. Tamchek		
21	R.S.E.S. Dawaud, S. Hashim, Y.S.M. Alajerami, M.H.A. Mhareb , M.M. Maqableh, N. Tamchek	Structural and optical properties of lithium sodium borate glasses doped with Sm ³⁺ ions	International Journal of Modern Physics B / World Scientific Vol. 28, 2014
22	M.M.A. Maqableh, S. Hashim, Y.S.M. Alajerami, M.H.A. Mhareb , R.S. Dawwud, A. Saidu (2014).	The effect of europium oxide impurity on the optical and physical properties of lithium potassium borate glass.	Optics and Spectroscopy / Springer Vol. 117, 2014
23	A Reduan, S Hashim, Z Ibrahim, YSM Alajerami, MHA Mhareb , M Maqableh, RSES Dawaud, N Tamchek	Physical and optical properties of Li ₂ O–MgO–B ₂ O ₃ doped with Sm ³⁺	Journal of Molecular Structure / Elsevier

Scientific Research Papers Presented to Refereed Specialized Scientific Conferences

#	Name of Investigator(s)	Research Title	Conference and Publication Date
1	M.H.A. Mhareb , Y.S.M. Alajerami, S. Hashim, S.K. Ghosha	Thermoluminescence responses of photon and electron irradiated lithium magnesium borate glasses co-doped with dysprosium and phosphorus oxide	First International Conference on applied medical sciences (ICAMS 2017), Gaza Strip-Palestine, 2017
2	M. H. A. Mhareb , A. Hamdan, A. Adayleh	Radiation Protection for Worker in Nuclear Gauges	Arab Potash Conference “Keep It Safe”, Dead Sea-Jordan, 2017
3	S. Hashim, M. H. A. Mhareb, S. K. Ghoshal, Y. S. M. Alajerami, M. I. Saripan, D. A. Bradley	Luminescence features of dysprosium and phosphorus oxide co-doped lithium magnesium borate glass	13th International Symposium on Radiation Physics (ISRP13), Beijing, China, 2015
4	S. Hashim, M. H. A. Mhareb , S. K. Ghoshal, Y. S. M. Alajerami, R. S. Dawaud, N. A. Razak, S. A. Azizan, D. A. Bradley, M. I. Saripan, N. Tamchek, K. Alzimami.	Luminescence Characteristics of Li ₂ O–MgO–B ₂ O ₃ Doped with Dy ³⁺ as a Solid TL Detector	9th International Tropical Meeting on Industrial Radiation and Radioisotope Measurement Applications (IRRMA-9). Valencia, Spain, 2014.
5	Mohammad Abu Mhareb , Suhairul Hashim, Sib Ghoshal, Yasser Alajerami.	Optical and physical properties of lithium magnesium borate glass co-doped with Er ³⁺ and Sm ³⁺	2nd International Science Postgraduate Conference (ISPC2014), Johor- Malaysia, 2014.
6	M.H.A. Mhareb , S. Hashim, S.K. Ghoshal, A.R.A. Hamid, Y.S.M. Alajerami, M.M.A. Maqableh, R.S. Dawaud.	Optical and Physical Properties of Lithium Magnesium Borate Glasses Doped with Er ³⁺ .	The 4th International Conference and Workshops on Basic and Applied Sciences and 11th Regional Annual Fundamental Science Symposium (ICOWOBAS-RAFSS 2013), Johor- Malaysia, 2013.

Current Researches

#	Research Title	Name of Investigator(s)
1	Effect of co-doping of lithium on the dosimetric properties of Dysprosium-doped sodium borate glass system.	Y.S.M. Alajerami, K.M. Abushab, M.H.A. Mhareb



2	Physical, Structural, Optical and photon attenuation Attributes of Lithium-Magnesium-Borate Glasses: Role of Tm ³⁺ Doping	M. H. A. Mhareb , M. A. Almessiere, M.I.Sayyed, Y.S.M. Alajerami
3	Dosimetric, kinetic parameter and attenuation properties of glassy system based on borate	M. H. A. Mhareb , Y.S.M. Alajerami
4	Physical, Structural, Optical and Attenuated Attributes of Lithium-Magnesium-Borate Glasses: Role of Sm ³⁺ Co-doping	M. H. A. Mhareb
5	Role of Modifier (Al ₂ O ₃ , PbO) on physical, structure, magnetic and photon attenuation properties	H. Zahraldeen, M. H. A. Mhareb

Membership of Scientific and Professional Societies and Organizations

- Member, Jordanian Association for Medical Physics (JAPM) since 2009.

Undergraduate

#	Course/Rotation Title	No./Code	Extent of Contribution (no. of lectures/Tutorials. Or labs, Clinics)
1	Introduction to Medical Physics	PHYS000	15 lectures
2	Electricity and Magnetism	PHYS301	15 lectures
3	Physics 1		
4	Physics 2		
5	Radiation Physics		

Brief Description of Undergraduate Courses Taught: (Course Title – Code: Description)

Introduction to Medical Physics- PHYS000: This course covers the medical physics concept and explain the role of physics in medicine. This course contains five chapter (Diagnostic X-ray, MRI, Ultrasound in Medicine, Nuclear Medicine and Radiotherapy).
Electricity and Magnetism- PHYS301: This course covers the theoretical concept of the electric and magnetic such as electric force, electric field, potential, capacitor, resistance, source of magnetic, induction of the magnetic field
Physics 1: This course contains different topics includes motion in one and two dimensions, vector, Newton law, motion in a circular path and mechanical energy.
Physics 2: This course presents the basic concepts of electric and magnetic field like electric force, electric field, potential, capacitor, resistance, source of magnetic, induction of the magnetic field
Radiation Physics: This course covers introduction in radiation physics, this course includes the structure of the atom, radioactive decay, half life, half value layer, dosimetric quantity, activity and some calculation.

Postgraduate

#	Course/Rotation Title	No./Code	Extent of Contribution (no. of lectures/Tutorials. Or labs, Clinics)
1	Laser Application in Medicine	MP-061	15 lectures



2	Ultrasound in Medicine	MP-042	15 lectures
3	Physics of Radiation Therapy	MP-023	15 Lectures

Brief Description of Postgraduate Courses Taught: (Course Title – Code: Description)

1	Laser Application in Medicine- MP-041: this course covers the using of laser in medicine. This course contains basic concepts of laser, interaction light with matter, interaction laser with biological tissue, laser safety and the different application for laser in medicine.
2	Ultrasound in Medicine- MP-042: This course presents the main concept for ultrasound in medicine, this course includes the physics of sound, types of sound transducer, component of ultrasound equipment, Doppler effect, imaging artifact and quality control.
3	Physics of Radiation Therapy MP-023: The course provides the necessary practical and theoretical background for the support of day-to-day Radiotherapy Physics activities. It is aimed primarily at recently qualified radiotherapy physicists or physicists wishing to enroll in the medical field.

Course Coordination

#	Course Title and Code	Coordination	Co-coordination	Undergrad.	Postgrad.	From	To
1	Electricity and Magnetism- PHY	√		√		9/2018	1/2019
2	Introduction to Medical Physics	√		√		9/2018	1/2019
3	Laser Application in Medicine	√			√	1/2018	1/2019
4	Ultrasound in Medicine	√			√	1/2018	1/2019
5	Physics of Radiation Therapy	√			√	9/2018	1/2019

Guest/Invited Lectures for Undergraduate Students

#	Activity/Course Title and Code	Subject	College and University or Program	Date

Student Academic Supervision and Mentoring

#	Level	Number of Students	From	To
1	7-8	7	1/2018	5/2018

Supervision of Master and/or PhD Thesis



#	Degree Type	Title	Institution	Date
1	Master	Establishment Institutional Diagnostic Reference Levels for Nuclear Medicine in King Fahad Hospital at Al Khabar	Imam Abdulrahman Bin Faisal University	Now

Ongoing Research Supervision

#	Degree Type	Title	Institution	Date

Administrative Responsibilities, Committee and Community Service (Beginning with the most recent)

Administrative Responsibilities

#	From	To	Position	Organization

Committee Membership

#	From	To	Position	Organization
1	2018		Member in safety and security lab committee	Imam Abdulrahman Bin Faisal University

Scientific Consultations

#	From	To	Institute	Full-time or Part-time

Volunteer Work

#	From	To	Type of Volunteer	Organization

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

1	Computer
2	Origin



Last Update
20/11/2018